WIN Water Integrity Network 20 YEARS

GUIDELINE FOR LOCAL GOVERNMENTS

Integrity in Water and Sanitation Climate Adaptation

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About WIN

The Water Integrity Network (WIN) advocates for integrity in the water and sanitation sectors to reduce corruption risks and improve services, for the benefit of all. Access to safe water and sanitation are fundamental human rights. Our goal is to contribute to the realisation of these rights, as well as ensure the sustainable use of water resources in the face of the climate crisis.

https://www.waterintegritynetwork.net

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What's Inside this Guideline

1. INTRODUCTION

While a growing number of guidelines and tools exist to help local governments and WASH actors plan and implement climate adaptation efforts, few address the critical question: how can these projects be carried out with integrity and accountability? Climate adaptation is not just technically complex—it is also deeply political, resource-intensive, often urgent, and vulnerable to corruption and other integrity failures. In this context, ensuring transparency, accountability, and inclusive decision-making is essential to avoid mismanagement, protect scarce resources, and deliver meaningful and lasting outcomes for those most vulnerable to climate change. This is especially true in the water and sanitation sectors, where climate risks are visibly and immediately felt, and which are highly vulnerable to corruption and integrity failures.

> This guideline has been developed to practically support local governments to implement climate adaptation projects with integrity. With real-world examples, it outlines the dominant integrity approaches across each stage of the adaptation project cycle: from participatory planning and transparent budgeting to accountable procurement, inclusive implementation, and community-led monitoring and evaluation.

The guideline emphasises that while adaptation is inherently complex and context-specific, integrity is a cross-cutting enabler that can improve outcomes, especially for marginalised communities who are often excluded from formal planning processes but most affected by climate impacts. It does not intend to provide a complex overview of adaptation strategies or approaches and have been developed for contexts where funding has already been secured.

The content is especially relevant for water and sanitation-related adaptation projects. Water is the medium through which climate change most often affects other sectors such as agriculture, health, forestry, and/or ecosystems. Water insecurity and water-related risks due to droughts, floods, or infrastructure failure have cascading impacts across development priorities. And water is the fundamental natural resource upon which life and well-being most directly depend, serving as the essential medium that sustains us daily. While focused on water resources and WASH, this guideline offers insights that could apply more broadly to other local-level adaptation initiatives, acknowledging that climate adaptation projects and programmes are often applied across multiple sectors/domains. Above all, it encourages local government actors to contextualise lessons based on the unique risks, capacities, and governance realities of their own locality, recognising that there is no one-size-fits-all approach—but that integrity must always be part of the solution.

To ensure practical utility and alignment with local governance, this guideline underwent a review by county government officials in Makueni, Kenya. These officials validated technical content and provided strategic input for embedding this guideline into local administration practices. Based on their feedback, local governments are encouraged to:

- Formally adopt this guideline within Municipal or County Climate Change Acts.
- Incorporate the standards into the policies of diverse departments—including Agriculture, Water, and Environment—to ensure a unified approach to climate resilience.
- Use the information as a mandatory checklist for all incoming climate adaptation projects.

Climate Change, Water Resources, and WASH

Climate change's impacts on water are profound, reshaping how communities and natural systems access, manage, and safeguard water resources. Rivers, lakes, wetlands, and groundwater reserves are increasingly under stress, with ecosystems losing their capacity to regulate floods, filter pollutants, and provide habitats for biodiversity. As these ecosystems degrade, the risks to human populations intensify, whether through a loss of clean drinking water, food security, flood and storm protection, or otherwise. Freshwater sources are becoming less reliable as rainfall patterns shift and temperatures rise, rivers dry up or flood unpredictably, and groundwater reserves are depleted faster than they can be replenished.

Alongside the changes to water ecosystems, the physical threats linked to water are becoming more severe and dangerous to safety. Floods, droughts, and storms are growing in intensity and unpredictability, often overwhelming communities with little time to prepare. Flooding can wash away homes, damage schools and hospitals, and destroy critical infrastructure such as roads, bridges, and electricity networks—placing lives at immediate risk and slowing recovery efforts. Fast-moving floodwaters and storm surges are especially deadly, leading to drowning, injuries, and the displacement of entire communities. Prolonged droughts not only threaten water and food security but can also spark conflict over scarce resources. Extreme weather events disrupt agricultural systems, devastate livelihoods, and increase the likelihood of forced migration. Historical records of rainfall can no longer be relied on to predict future availability, making planning and water management increasingly uncertain and heightening the vulnerability of communities already living in precarious conditions.

The systems that deliver safe water, sanitation, and hygiene (WASH) are also being disrupted, undermining public health and community well-being across the globe. WASH systems, which are foundational to human health, dignity and development, are deeply vulnerable to climate extremes. Droughts, floods, storms, rising sea levels, and increasing temperatures are already affecting the delivery of clean water and decent sanitation whether through drinking water sources drying up, damage to water infrastructure and overflow of sanitation systems during flooding, or sea-level rise causing saltwater intrusion, contaminating once-safe water supplies. In informal settlements and rural areas where poverty rates are high and populations are often marginalised, climate impacts often exacerbate existing gaps in service delivery, deepening inequalities.

Where adaptation and risk management fail, climate related impacts may result in disasters, such as the destruction of water and sanitation systems due to floods, or slow onset disasters such as droughts. On November 6, 2025, President Masoud Pezeshkian warned that Tehran could face devastating shortages if rains continue to fail, a level of urgency rarely voiced by Iranian authorities.

> **"If it doesn't rain in Tehran by late November, we'll have to ration water. And if it still doesn't rain, we'll have to evacuate Tehran."**
>
> President Masoud Pezeshkian, November 2025

2025 marked the sixth consecutive year of arid conditions in Iran, driven by rising temperatures that have accelerated water insecurity in vital basins. Human-caused climate change has been a primary factor in making Iran's prolonged drought significantly more probable and intense.

In this context, adaptation is a necessity, not a luxury. Protecting and restoring water ecosystems such as wetlands, floodplains, and mangroves is critical, as these natural systems act as buffers by absorbing excess water, reducing flood risks, and filtering pollutants. At the same time, robust planning and physical infrastructure—including resilient drainage systems, flood barriers, elevated water supply facilities, and climate-smart irrigation—are needed to safeguard both communities and essential services. Equally important are climate-resilient WASH systems, which provide reliable access to safe water and sanitation, even under extreme conditions. Integrating WASH into ecosystem management and infrastructure planning ensures that essential water and sanitation services are carried out under a broad approach that considers the wider natural and built environments to retain public health, dignity, and resilience.

Ultimately, adapting water-related and WASH systems to climate change is both an urgent public health imperative and a critical pathway toward sustainable development. Local leadership, backed by adequate resources and policies, as well as inclusive planning, will determine whether communities can thrive in a changing climate, or struggle to survive.

Photo: Gangopaddhyay Puranjit, Water Integrity Network photo competition entry

2. THE ROLE OF LOCAL GOVERNMENT IN CLIMATE ADAPTATION

As climate change increasingly disrupts water ecosystems, infrastructure, and WASH systems, the role of local governments in leading climate adaptation has never been more critical. While national governments set policies and global donors provide funding, it is local governments that are closest to the communities experiencing these impacts—and are best positioned to respond with practical, context-specific solutions. Ultimately, it is also local actors that are most directly accountable to local people. While climate change is indeed a global challenge, its impacts manifest locally (Giordano, 2013) and the main benefits of adaptation are also perceived most directly at the local level (Snover et al, 2007).

Local governments are central to tackling these challenges because they are often responsible for planning, operating, and maintaining much of the grey and green infrastructure that responds to climate threats, safeguards ecosystems, and delivers water and sanitation services. They also play a leading role in processes such as land use zoning and permitting, which means they have a major influence on how adaptation is carried out in their localities (OECD, 2023). Beyond infrastructure, local governments also play a critical role in setting service standards, regulating providers, and ensuring inclusive access—especially for the poor and marginalised.

Local governments play a critical role in disaster risk management (DRM) in the context of climate change, particularly when addressing water and sanitation challenges. As frontline authorities, they are responsible for planning, implementing, and coordinating strategies that protect communities from the multifaceted impacts of climate variability. In relation to water, local governments must ensure sustainable supply and equitable distribution during periods of drought, while also managing excess water during floods. They are tasked with maintaining and upgrading water infrastructure, such as reservoirs, pipelines, and treatment plants, to withstand extreme weather events. Additionally, they oversee sanitation systems, ensuring that sewage and waste management facilities remain operational during disasters, thereby preventing waterborne diseases and environmental contamination, which often surge during climate-induced emergencies.

Infrastructure & Services

Disaster Risk Management

Land Use & Zoning

Stakeholder Coordination

Beyond direct infrastructure concerns, local governments must address the broader social and environmental risks posed by floods and droughts. Flooding can contaminate drinking water sources, destroy water and sanitation facilities, and increase the risk of disease outbreaks, while prolonged droughts exacerbate water scarcity, force rationing, and compromise hygiene practices. Local authorities, therefore, have a role in risk assessment, early warning systems, community awareness campaigns, and emergency response coordination. By integrating climate change projections into local planning, investing in resilient WASH infrastructure, and promoting adaptive water management practices, local governments can reduce vulnerability and enhance community resilience to climate-induced water and sanitation challenges. Their proactive involvement is essential not only for infrastructure protection but also for safeguarding public health and ensuring equitable access to essential water and sanitation services during extreme weather events.

All together this means that local governments are uniquely positioned to plan, invest in, and implement context-specific solutions. Whether it is through strengthening infrastructure, updating service delivery models, engaging communities in risk awareness, or enforcing environmental protections, their actions shape the resilience of entire populations. Moreover, local institutions are closest to the realities on the ground. They have key information that helps to better understand and identify local vulnerabilities, respond rapidly to emerging risks, and ensure that no one is left behind.

8 February 2018 - Capetonians queue for water as their taps threaten to run dry. (istockphoto: fixepointsix)

In many cities local authorities are leading the way in integrating climate resilience into urban water and sanitation systems. In **Cape Town, South Africa**, after facing a historic drought and near-total water shutdown, the city government launched a series of water conservation and demand management initiatives—restructuring tariffs, promoting greywater reuse, and diversifying water sources to reduce dependency on rainfall (Brühl et al., 2020; Hill-Lewis, 2023; Otto et al., 2018). These actions, rooted in local leadership and governance, have become a global example of adaptive, climate resilient water management.

Similarly, in **Dhaka, Bangladesh**, where floods regularly overwhelm sanitation infrastructure, the municipal government has partnered with NGOs to develop decentralised faecal sludge management systems (Huq et al., 2024). These systems are designed to be more flood-resilient than conventional sewers, providing safer sanitation in densely populated and climate-vulnerable areas. The success of this approach lies in the government's ability to engage local communities, plan across sectors, and mobilise resources at the ground level.

As climate risks grow more complex and urgent, the importance of local leadership will only increase. To succeed, local governments need not just technical capacity and funding, but also the political space and institutional capacity to lead boldly. Investing in their capacity is one of the most effective ways to build resilient water and sanitation systems, and, ultimately, resilient communities. A key element of this investment is governance capacity, and within that, integrity and accountability.

2.1. National vs Local Roles in Climate Adaptation

Across most countries, climate adaptation responsibilities are shared between national and local governments. While specific mandates vary depending on legal systems, decentralisation levels, and institutional capacity, the overall division of labour tends to follow a common pattern: national governments create the enabling environment—through policy, finance, data, and standards—while local governments serve as the frontline implementers, planning and delivering services in ways that respond to local risks and community needs. The table below summarises these broadly consistent functions in relation to water and sanitation as seen across diverse governance systems worldwide.

Table 1: Generic Functions of National vs. Local Government in Climate Adaptation

Function Area	National Government	Local Government
Overall Policy & Strategy	Sets national climate policies, National Adaptation Plans (NAPs), legal and institutional frameworks, and other adaptation priorities; Aligns adaptation with national development plans	Develops local adaptation plans aligned with national frameworks; Integrates local climate risks into climate and development actions; Develops county/city/municipal specific policies
Regulation & Standards	Establishes and enforces national standards and regulations.	Enforces national standards through permitting, inspections, and local regulations.
Climate Data, Science & Early Warning	Provides climate projections, hazard mapping, and national early warning systems via meteorological and scientific agencies	Disseminates early warnings to communities and incorporates Indigenous early warning approaches; Contributes local risk data; Maintains local early warning and monitoring systems; Conducts ongoing local hazard mapping and participatory scenario planning
Finance & Resource Mobilisation	Mobilises donor funds, international climate finance, and national budget allocations; Manages large-scale investment projects; Manages major partnerships.	Prepares local budgets for adaptation; Implements projects with national or donor funding; Mobilises local revenue (where possible).
Infrastructure	Implements major infrastructure, such as large dams and coastal defences, critical for climate resilience	Plans, builds, upgrades, and maintains local infrastructure (small and medium dams, drainage, small bridges, water supply, sanitation, and irrigation systems)

Water & Sanitation (WASH) Governance	Sets and enforces national water policies, WASH standards, safety regulations, and national monitoring systems	Establishes, operates and maintains water supply, sanitation, and storm water services (via water service providers); Identifies local risks and prioritises vulnerable communities; Sets local policies that align with national policies
Disaster Risk Reduction (DRR)	Develops national DRR strategies, codes, and financing mechanisms; Coordinates cross-regional and transboundary risk management	Conducts local risk assessments; Prepares community DRR plans; Manages local early warning dissemination and promotes preparedness
Disaster Risk Management (DRM) & Response	Coordinates national emergency responses; Mobilises resources and provides support capacity to affected regions	Leads immediate response (evacuation, shelters, first repairs); Coordinates with local organisations; Restores essential services
Land-Use & Settlement Planning	Sets national spatial planning guidelines and regulates protected areas and national land allocations; Manages surveys and titling (cadastral mapping)	Controls zoning, land permits, building placement, local spatial plans, and local development decisions
Community Engagement & Accountability	Sets participation policies and requirements; Ensures rights-based approaches; Oversees compliance mechanisms; Provides technical support	Conducts community consultations, engages stakeholders, ensures inclusion of vulnerable groups, and provides local transparency; Sets local policy and establishes community structures; Develops and implements local grievance redress mechanisms
Monitoring, Reporting & Learning	Establishes and oversees national monitoring systems: Aggregates local data; Reports progress to international mechanisms (UNFCCC, SDGs); Provides technical support	Establishes local monitoring systems; Collects and reports local adaptation data; Tracks implementation; Evaluates project outcomes and ensures feedback from communities

3. HOW INTEGRITY IMPROVES CLIMATE ADAPTATION OUTCOMES

As climate change intensifies, local governments are under increasing pressure, but are also being given more agency and support, to adapt water and WASH systems to withstand extreme weather, protect public health, and serve growing populations. These responsibilities come with large flows of climate finance, high capital investment, and policy-making authority. In this context, the core pillars of integrity—the presence of transparency, accountability, participation and anti-corruption (TAPA)—is not just a desirable value. It is a critical foundation for effective and equitable water and WASH-related climate adaptation.

An integrity approach in practice starts with embedding the above pillars into every stage of project planning, financing, and implementation. Transparency involves making budgets, procurement processes, and project decisions open and accessible to the public and oversight bodies. Accountability requires clear reporting lines, monitoring mechanisms, and consequences for misconduct or unethical behaviour. Participation ensures that communities, civil society, and other stakeholders have meaningful input into decisions that affect them, while anti-corruption measures actively prevent, detect, and address bribery, fraud, or other instances of corruption. Beyond the TAPA framework, integrity means consistently acting ethically and honestly, making decisions that prioritise the public interest over personal or political gain.

Without integrity, climate adaptation efforts risk falling short or even making things worse. Corruption, mismanagement, or lack of transparency in project planning or procurement can lead to poorly built or poorly designed infrastructure, wasted resources, and communities left without vital services. Political favouritism can result in adaptation projects that benefit a few, while vulnerable populations continue to face unsafe water and inadequate sanitation exacerbated by climate change. In the worst cases, lack of integrity in climate adaptation can cause maladaptation, either by exacerbate existing vulnerabilities, creating new ones, and/or shifting vulnerabilities from one group to another (Green Climate Fund, 2021). These are just a few of the many examples where poor integrity and/or unethical practices result in adaptation objectives not being achieved. The consequences are not just financial, they are deeply human, affecting health, trust in public institutions, and the resilience of entire communities.

Photo by Prashanta Hdridoy, Water Integrity Network photo competition entry

Local governments sit at the frontline of both climate impact and adaptation response. They are often responsible for translating national climate commitments into local action, allocating public funds, engaging service providers and external experts, and ensuring the delivery of safe, inclusive, climate resilient services. This proximity to communities means they are well placed to know what is needed, but it also means they must be held to the highest standards of integrity. Transparent planning, fair procurement processes, and open engagement with residents are just some of the ways that local adaptation investment and implementation must truly meet community needs and build public trust.

Moreover, integrity strengthens resilience. When communities can trust that decisions are made fairly, that resources are used wisely, and that services are delivered without discrimination, they are more likely to engage, collaborate, and support long-term adaptation goals. Inclusive decision-making and open data can help identify risks early and ensure that solutions are sustainable, not short-term fixes.

In an era where adaptation funds and climate-related projects are growing, integrity is the safeguard that ensures climate adaptation delivers what it promises. For water and WASH services—so deeply tied to local ecosystems, physical safety, human dignity and public health—this is especially urgent. Local governments must lead with integrity, not only to build infrastructure but to build confidence, fairness, and resilience in the face of a changing climate.

Where adaptation fails or has not been implemented, local government may have to deal with disasters arising from floods, extreme storm events and droughts. In responding, emergency procedures may need to be put in place. The use of emergency or disaster-related procedures, while necessary, can create opportunities for corruption and malfeasance because expedited procurement, relaxed oversight, and urgent disbursement of funds often bypass standard accountability mechanisms. This can be exploited for misallocation of resources, inflated contracts, or favouritism in awarding relief and reconstruction projects.

Transparency

Making budgets, procurement processes, and project decisions open and accessible to the public and oversight bodies

Accountability

Clear reporting lines, monitoring mechanisms, and consequences for misconduct or unethical behaviour

Participation

Ensuring communities, civil society, and other stakeholders have meaningful input into decisions that affect them

Anti-Corruption

Actively preventing, detecting, and addressing bribery, fraud, or other instances of corruption

⚠ Without integrity, climate adaptation efforts risk falling short or even making things worse. Corruption, mismanagement, or lack of transparency can lead to poorly built infrastructure, wasted resources, and communities left without vital services—a phenomenon known as **maladaptation**.

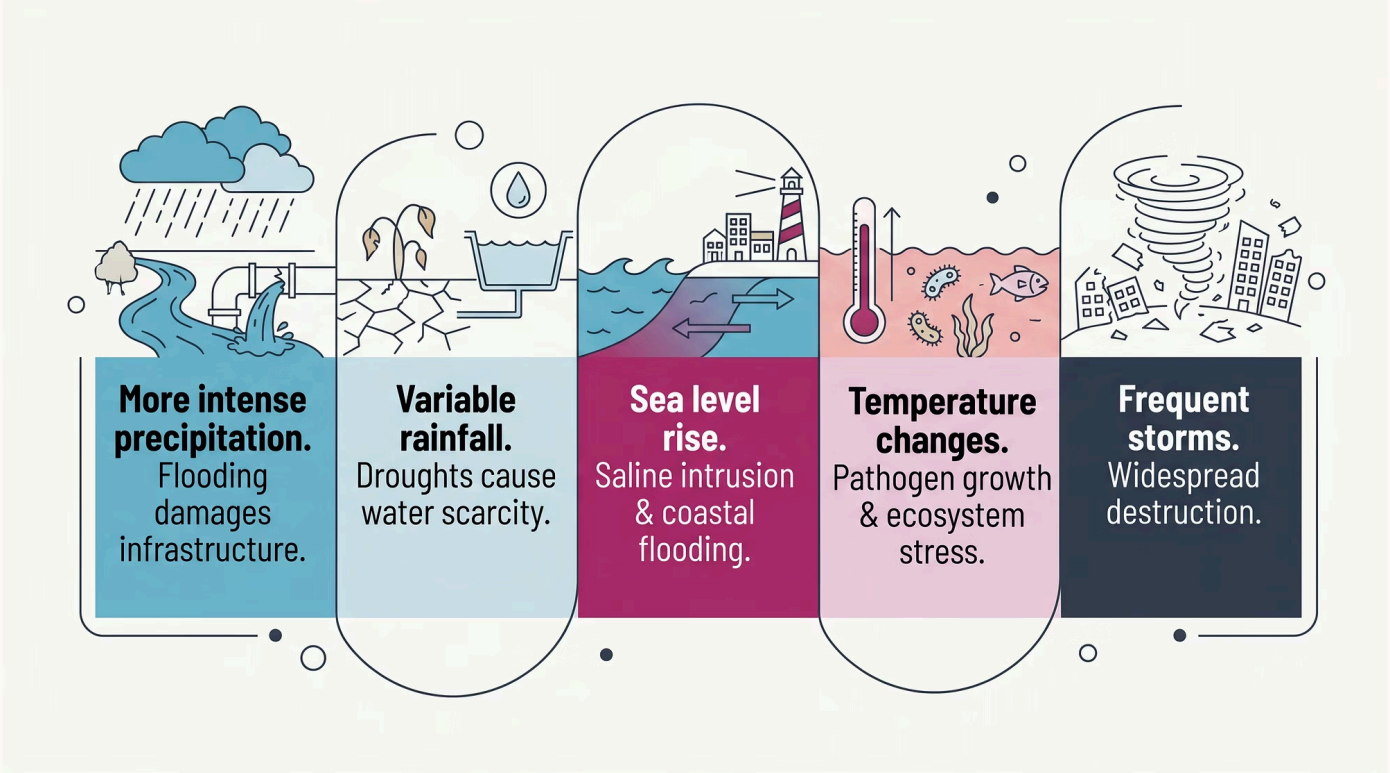
4. Climate Change Impacts on Water and Sanitation

Local government is charged with the provision of water and sanitation services, despite the climate crisis. This requires that local governments keep pace with the challenges of adapting to a changing climate.

> Water and sanitation adaptation is the process of adjusting water resources management and water supply and sanitation management and systems to minimise the potential negative impacts of climate change and to improve development outcomes.

It may require modifying infrastructure, policies, regulations and practices, or adjusting interactions with the natural environment in anticipation of the expected impacts or challenges resulting from increased water scarcity, flooding, rising temperatures, and unpredictable rainfall patterns.

The sections below provide non-exhaustive lists of how climate change can impact on water resources and water and sanitation services, and of the risks that emerge.



More Intense or Prolonged Precipitation

More Intense or prolonged rainfall due to climate change poses significant challenges for local governments and water service providers and often causes particular hardships for residents of informal settlements and low-income urban areas. Local authorities face increased pressure to manage and adapt overwhelmed drainage systems, prevent flooding of water and sanitation infrastructure, and maintain safe water supplies. At the same time, informal settlements—often located in flood-prone areas with limited access to formal WASH services—experience disproportionate impacts, including contaminated water, disrupted sanitation, and increased risk of waterborne diseases.

Table 2: Examples of climate variability and change effects on water resources, water supply and sanitation systems: More intense or prolonged precipitation (WIN, expanded from IPCC, 2022 and WHO, 2019)

Potential hazards and changes	Examples of risks for sanitation systems	Examples of risks for water supply systems	Examples of risks for water resource systems
Increased flooding	Destruction and damage to sanitation infrastructure	Destruction and damage to water supply infrastructure	Destruction and damage to water resources infrastructure (e.g. irrigation, dams, etc.); Possibility of storage of flood waters to increase water availability in dry periods; Changes in ecosystem functioning
Increased erosion, landslides	Damage to other infrastructure / systems on which sanitation systems rely (e.g. electricity networks for pumping; road networks used by FSM vehicles)	Damage to other infrastructure / systems on which water supply systems rely (e.g. electricity for pumping; roads used by water tankers)	Damage to other infrastructure / systems on which water resource systems rely (e.g. electricity networks for opening dam gates; monitoring devices)
Contamination of and damage to surface water / groundwater supplies	Flooding of on-site systems causing spillage and contamination	Contamination of water supply	Contamination of water resources; redistribution of pollutants
Changes to groundwater recharge and groundwater levels	Flooding and collapse of pit latrines, including via groundwater	Increased groundwater recharge	Increased groundwater recharge
	Overflow and/or obstruction of sewerage and septic systems	Increased suspended solids loads in rivers, reducing effectiveness of chlorination / other disinfection systems	Increased pollution of freshwater systems with impacts on human and ecosystem health
	Floating of septic systems due to groundwater levels	Increased suspended solids loads in rivers, reducing effectiveness of chlorination / other disinfection systems	Increased pollution of freshwater systems with impacts on human and ecosystem health
	Treatment plants receive flows that exceed their design capacities, bypassing the treatment processes	Increased suspended solids loads in rivers, reducing effectiveness of chlorination / other disinfection systems	Increased pollution of freshwater systems with impacts on human and ecosystem health

More Variable or Declining Rainfall or Runoff

Changes in rainfall patterns, including more variable or declining precipitation and reduced runoff, create critical challenges for ecosystems, water security and sanitation management. Local governments and service providers must contend with diminished water availability, stressed supply systems, and the need for rationing or alternative sources. Informal settlements and low-income populations are particularly vulnerable, as limited infrastructure and reliance on precarious water sources amplify the impacts of scarcity, compromise hygiene, and increase the risk of disease outbreaks.

Table 3: Examples of climate variability and change effects on water resources, water supply and sanitation systems: More variable or declining rainfall or runoff (WIN, expanded from IPCC, 2022 and WHO, 2019)

Potential hazards and changes	Examples of risks for sanitation systems	Examples of risks for water supply systems	Examples of risks for water resource systems
Longer dry seasons / periods	Declining water supply impeding function of water-reliant sanitation systems (e.g. flush toilets, sewerage, treatment)	Reduced water availability	Reduced water availability and related impacts to ecosystems; deficits in water storage
Droughts (both seasonal and longer-term)	Greater distance between pit latrine pollutants and groundwater levels, beneficially allowing for pathogen attenuation	Increased concentration of pollutants	Increased concentrations of pollutants
Reduced or variable surface water flows	Obstruction creating reduced capacity in rivers or ponds that receive wastewater	Abstraction points above water level, reduced water availability	Reduced water availability and/or increased winter stream flow and impacts on ecosystem functioning
Reduced groundwater levels / resources	Increased reliance on wastewater for irrigation which, if not adequately managed, can increase health risks	Water table below abstraction levels, reduced water availability	Reduced base flow in rivers; deficits or variability in water storage; threats to groundwater-dependent ecosystems
	Increased corrosion of piped sewers	Leakage of sewage with potential cross-contamination of potable water	Increased pollution in ground surface water with impacts on human and ecosystem health
	Higher pollution concentration in wastewater and reduced capacity of receiving water bodies to dilute wastewater	Increased suspended solids loads in rivers reducing effectiveness of chlorination and other disinfection systems	Increased pollution of freshwater systems with impacts on human and ecosystem health
	Ground movement in soils with high clay content leading to broken pipes and joints	Leakage of sewerage with potential cross-contamination of potable water	Increased pollution in ground surface water with impacts on human and ecosystem health

Sea Level Rise

Sea level rise poses a significant and growing threat to water and sanitation systems in coastal communities, with implications for both service continuity and public trust. Local governments are on the frontlines of managing these risks, as rising seas can damage infrastructure, contaminate freshwater sources, particularly groundwater sources, and disrupt sanitation networks, creating urgent demands for repair, relocation, and adaptation.

Table 4: Examples of climate change effects on water resources, water supply and sanitation systems: Sea level rise (WIN, expanded from IPCC, 2022 and WHO, 2019)

Potential hazards and changes	Examples of risks for sanitation systems	Examples of risks for water supply systems	Examples of risks for water resource systems
Saline intrusion in coastal / low-lying zones	See impacts from flooding above Reduced effectiveness of biological treatment processes due to saltwater exposure from saline intrusion into wastewater influent	See impacts from flooding above	Saline intrusion in coastal groundwater resources
Rising groundwater levels in coastal / low-lying zones	Damage to underground infrastructure from rising groundwater levels	Saline intrusion in coastal groundwater resources	Saline intrusion in coastal groundwater resources and estuaries
Higher risk of inundation, especially from extreme weather events (potentially contributing to flooding, erosion, landslides)	Damage to wastewater treatment works (low-lying / coastal) from exposure to saltwater	Damage to water treatment works (low-lying / coastal) from exposure to saltwater	Damage to water resources infrastructure and freshwater systems

Changes in Temperature

Rising temperatures due to climate change have direct and cascading impacts on water and sanitation systems. Higher temperatures increase evaporation rates, reduce surface water availability, and can exacerbate drought conditions, placing stress on water supply for households, agriculture, and industry. In sanitation, heat can accelerate the breakdown of waste in treatment systems, increase the risk of pathogen growth, and worsen odours and service conditions, particularly in informal or under-resourced communities. These pressures create both operational and ethical challenges for local governments, who must balance scarce resources, maintain service reliability, and ensure equitable access while protecting public health.

Table 5: Examples of climate change effects on water resources, water supply and sanitation systems: changes in temperature. (WIN, expanded from IPCC, 2022 and WHO, 2019)

Potential hazards and changes	Examples of risks for sanitation systems	Examples of risks for water supply systems	Examples of risks for water resource systems
Higher freshwater temperatures	Reduced efficiency of biological wastewater treatments (if temperature exceeds or falls below operational limits)	Enabled survival of pathogens or extension of their range and development of biofilms containing pathogens such as mycobacteria, Legionella, and Pseudomonas.	Negative impacts on freshwater ecosystems; altered vectors of water-borne diseases; changes in pollution interactions
Hot and cold temperature extremes	Proliferation of algal blooms or microbes carried by vectors in water	Increased risks of cyanobacterial blooms requiring more advanced water treatment; wildfires affecting turbidity, which pose challenges to treatment of drinking water	Increased risks of cyanobacterial blooms; permafrost degradation leading to an increased flux of contaminants
	Increased corrosion of sewers	Increased maintenance requirements for water supply infrastructure	Negative impacts on freshwater ecosystems e.g. death or migration of species, drying, increased erosion and runoff, invasive species, etc.; increased maintenance requirements for water resources infrastructure
	Quicker drying of faecal sludge in waterless latrines if increasing temperature is matched with drying conditions	Increased water scarcity	Reduction of water levels
	See impacts from flooding above	See impacts from flooding above	See impacts from flooding above

More Frequent or Intense Storms or Cyclones

Increasingly frequent and intense storms and cyclones are among the most visible and disruptive impacts of climate change, particularly for coastal and low-lying communities. Beyond the risks to physical safety, for water and sanitation systems, these events can cause widespread flooding, damage infrastructure, contaminate water sources, and overwhelm sewage and drainage networks, creating immediate public health risks. The speed and scale of these events often put local governments under extreme pressure to act quickly, making transparent decision-making and ethical management of resources critical and both more challenging and more critical.

Table 6: Examples of climate change effects on water resources, water supply and sanitation systems: More frequent or intense storms or cyclones. (WIN, expanded from IPCC, 2022 and WHO, 2019)

Potential hazards and changes	Examples of risks for sanitation systems	Examples of risks for water supply systems	Examples of risks for water resource systems
Increased flooding	See impacts from flooding above	See impacts from flooding above	See impacts from flooding above
More extreme winds	Damage to latrine superstructures and other infrastructure	Damage to infrastructure	Damage to infrastructure
	Damage to other infrastructure / systems on which sanitation systems rely (e.g. electricity networks for pumping; road networks used by FSM vehicles)	Damage to other infrastructure / systems on which water supply systems rely (e.g. electricity networks for pumping; road networks used by water tankers)	Damage to other infrastructure / systems on which water resource systems rely (e.g. electricity networks for pumping; monitoring systems)

The above analysis of potential impacts of climate change focuses on technical areas, but water and sanitation adaptation is deeply embedded in a specific social and political context, often referred to as the hydro-social cycle (Linton and Budds, 2014). Power dynamics mean that climate impacts are experienced differently by different social groups, through the intersection of, for example, gender, race, class, religion, disability and age. Water scarcity, for example, is driven not just by climate and environmental factors, but also by inadequate or substandard infrastructure that can result from corruption and mismanagement, an unjust distribution of limited water to specific social or economic sectors, or the poor implementation of water allocation priorities.

For adaptation interventions to be effective, they must therefore address not only the risks outlined in the tables above, but also governance, integrity risks, and power dynamics. Given the limited funding for water and sanitation adaptation, resources must be used strategically and with integrity to ensure impact. While some projects may fail or have minimal effect (a common challenge in development), addressing integrity risks significantly increases the chances of effective adaptation.

5. CLIMATE ADAPTATION AND DISASTER RESPONSE

While national governments often set broad policy priorities and budget allocations to sub-national entities, local authorities can have a significant say in how public investment is carried out. In an OECD study that sampled 30 countries, local authorities were responsible for more than half (55%) of environment and climate related public spending, on average, between 2000 - 2016 (OECD, 2019).

Municipalities or other local government actors respond to water and WASH adaptation needs in a variety of ways. One key mechanism is through the development of local climate adaptation plans or local resilience strategies, which localise National Adaptation Plans (NAPs) based on area-specific adaptation needs and realities. Through such plans, water and WASH specific risks, amongst many other climate related risks, are addressed via a range of adaptation interventions.

Water adaptation may also be embedded in urban development and land-use planning. City master plans, comprehensive land-use plans, and/or integrated urban development plans increasingly incorporate water and WASH-related adaptation objectives such as storm water management codes, zoning restrictions on flood-prone or coastal areas, and requirements for green infrastructure to reduce runoff (UN-Habitat, 2015; Pieterse et al., 2024). At the operational level, sectoral and utility-led plans address the critical need to factor in climate change to safeguard essential public services. Water utilities are pivoting to boost institutional capacity, technical expertise, and access climate adaptation funding, quickly becoming leading actors in local level climate adaptation planning and implementation.

Beyond city limits, local authorities participate in watershed and basin-level planning, where catchment management plans address both water security and climate adaptation objectives. These activities could include, for example, protecting upstream forests and wetlands, creating groundwater recharge zones, or establishing riparian buffers to reduce erosion and safeguard water quality (UNEP 2021).

Finally, emergency and disaster risk plans remain vital for urgent water and WASH adaptation measures, such as drought contingency measures, emergency water supply, flood evacuation protocols, and rapid repair systems for critical water and sanitation infrastructure (WASREB, 2013).

Local Climate Adaptation Plans

Localising National Adaptation Plans (NAPs) based on area-specific adaptation needs and realities.

Urban Development & Land-Use Planning

Storm water management codes, zoning restrictions on flood-prone areas, and requirements for green infrastructure.

Watershed & Basin-Level Planning

Address both water security and climate adaptation objectives, including protecting upstream forests and wetlands.

Emergency & Disaster Risk Plans

Drought contingency measures, emergency water supply, and flood evacuation protocols.

The shape that water and WASH adaptation ultimately takes depends on the specific circumstances of each locality. Some communities may need to invest in new infrastructure designed to withstand extreme climate events, while others may focus on retrofitting aging systems or adopting smart management technologies to improve efficiency and resilience. In places where natural ecosystems already provide critical buffers against floods, droughts, or water quality threats, conservation and ecosystem protection may be top of the list to safeguard resilience. Across contexts, a wide range of response measures can support water and WASH adaptation, often embedded within broader climate or development plans that address multiple risks beyond just water. Importantly, local governments cannot implement climate adaptation measures in isolation—they must collaborate with a wide range of actors, including local communities, private sector partners, NGOs, and regional agencies.

The Adaptation Project Cycle

Adaptation initiatives are generally implemented according to a project/programme planning and implementation cycle. Effective project planning and implementation sets out what steps to take, when to take them, and with whom, ensuring that adaptation measures are context-specific and responsive to local needs and capacities.

Local governments pursue diverse adaptation policy and implementation approaches that reflect their varying internal capacities, political economies, and perceptions of climate risks. As a result, their processes may not align perfectly with the cycle shown below. Nonetheless, Figure 1 summarises integrity risks across the adaptation project cycle.

Enabling Environment

- Clear roles and responsibilities
- Strong inter-governmental coordination
- Transparent coordination and communication
- Clear decision-making processes
- Comprehensive pre-feasibility studies

Assessment and Planning

- Identified impacts, vulnerabilities, risks and opportunities
- Evidence-based and transparent planning and decision-making
- Consultations with affected communities
- Information transparency

Project Execution

- Open procurement and contracting
- Transparent and accountable construction and operation
- Clear reporting lines
- Independent oversight mechanisms

Monitoring and Evaluation

- Regular output monitoring, also through third parties
- Evaluation of impacts with publicly available results
- Integration of lessons into future planning
- Clear communication with affected communities

Figure 1: The adaptation project cycle (drawing from ISO, 2020 and UNFCCC, n.d.)

The first phase of **enabling environment** sets the foundation for the entire process and is critical for establishing norms of integrity and good governance. At this stage, roles, responsibilities, and institutional arrangements must be clearly defined and documented to ensure that everyone involved understands their duties and limits/powers of authority. This clarity helps prevent overlap, confusion, and opportunities for corruption or manipulation later on. Establishing transparent coordination and communication mechanisms promotes trust among all actors, from local authorities and implementing agencies to community representatives and funders. Clearly outlining how decisions will be made and how information will be shared reinforces accountability and ensures that all subsequent actions are guided by fairness, legality, and ethical standards. Finally, ensuring comprehensive pre-feasibility studies help to ensure impact and a right fit for decisions to be taken.

The second phase, which focuses on **assessment and planning**, is where evidence-based and transparent decision-making begins. It involves identifying and analysing climate-related risks, vulnerabilities, and opportunities, integrating high-quality scientific data with local knowledge and lived realities. By openly sharing findings and engaging communities, this process ensures inclusivity and reduces the likelihood of bias or elite capture of information. Local governments should carry out assessment in collaboration with key stakeholders - technical experts, local communities, and development partners, to guarantee that all voices are heard and no group is overlooked. In doing so, decisions become more legitimate and better aligned with actual conditions on the ground. By also assessing related social and economic risks, this phase helps prevent inequitable outcomes. Strong integrity in the assessment phase builds confidence in the process and discourages manipulation of results to favour particular interests.

This phase also transforms assessment results into concrete targets, strategies, and financing arrangements. Integrity at this stage is essential to ensure that planning decisions are fair, transparent, evidence-based, and serve the public good. When trade-offs arise—such as balancing the needs of different communities or resource users—these must be discussed openly, with full disclosure of potential impacts. Inclusive consultations, workshops, and citizen assemblies should be organised early and repeated regularly, providing channels for meaningful participation and oversight. These mechanisms help prevent hidden agendas, increase the sense of shared ownership, and promote choices that reflect community priorities. Transparent documentation of planning decisions and funding allocations reinforces accountability and deters corruption.

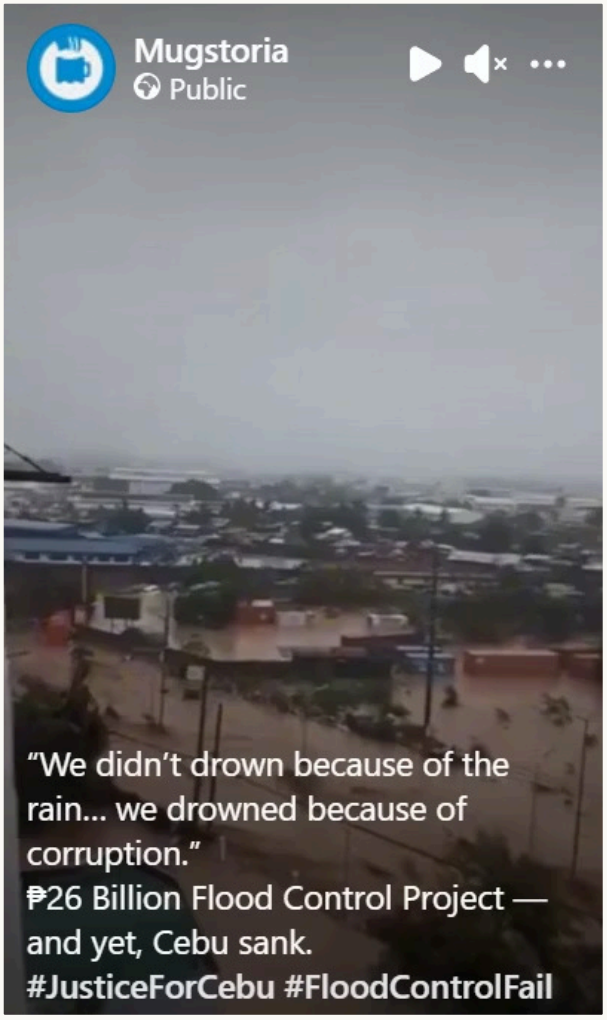
Undue influence or malfeasance during the planning phase of climate-adaptation projects can steer decisions away from genuine resilience and toward outcomes that actually increase vulnerability—what scholars call maladaptation (Barnett & O'Neill, 2010; Juhola et al., 2016). When powerful actors manipulate assessments, exaggerate risks, or suppress evidence to favour particular technologies, locations, or contractors, the resulting plans often fail to meet community needs. Corruption can also distort the allocation of funding, prioritising highly visible or profitable projects over those that address underlying social or environmental vulnerabilities (Khan et al., 2020; Schneider & Buser, 2018). Because adaptation planning often involves long time horizons and technical complexity, these distortions can go unnoticed until the harms are locked in.

Real-world examples show how easily this can happen. In some coastal cities, developers have lobbied for protective seawalls that allow continued high-end waterfront construction, even though such infrastructure accelerates erosion in neighbouring, less wealthy communities, effectively shifting risk rather than reducing it (Pelling & Garschagen, 2019).

In parts of South Asia, irrigation projects billed as climate-resilience investments were cited to benefit politically connected landowners, resulting in water shortages and increased heat stress for downstream farmers (Nagoda & Nightingale, 2017). Similarly, poorly overseen relocation programs—sometimes influenced by land-speculation interests—have moved vulnerable communities to sites lacking economic opportunities or basic services, worsening their long-term resilience (Wilmsen et al., 2018). In each case, undue influence in early planning created adaptation measures that appeared effective on paper but ultimately made people and ecosystems more exposed, less flexible, and more dependent on costly future interventions (Eriksen et al., 2021; Sovacool et al., 2015).

The third phase of **project execution** is where plans are translated into tangible action. This phase includes procurement, contracting, construction, and operations. Transparent procurement procedures and open competition for contracts are vital to prevent favouritism, kickbacks, and misuse of public funds. Clear reporting lines, supervision systems, and independent oversight mechanisms should be established to track progress and spending. Public disclosure of contract awards, budgets, and timelines can further strengthen accountability. Ethical conduct from all implementing partners—including contractors and consultants—should be required and enforced through codes of conduct and anti-corruption clauses. Maintaining honesty, fairness, and professionalism during implementation ensures that resources are used efficiently and project outcomes are credible and sustainable.

The final phase of **monitoring, evaluation, learning, and impact** is the phase that ensures continuous accountability, learning, and improvement. Regular monitoring helps identify early signs of deviation from the project's intended objectives, as well as integrity risks such as misuse of funds or sub-quality work. Evaluation provides an opportunity to assess the effectiveness and fairness of implemented measures, feeding lessons back into future planning cycles. Integrity in M&E relies on transparent reporting, open data sharing, and participation of independent bodies and community representatives in oversight. Publishing results publicly demonstrates honesty and accountability, while encouraging citizen engagement and trust. When this phase is conducted ethically and transparently, its separate elements serve not only as control mechanisms but also as tools for long-term institutional credibility, integrity-driven performance, and opportunities to share best practices with other stakeholders.



6. INTEGRITY RISKS IN WATER AND SANITATION ADAPTATION AND DISASTER MANAGEMENT

Understanding integrity risks is a critical step toward being able to mitigate them. By identifying and addressing these risks, local government can improve adaptation outcomes, ensure more effective use of adaptation finance, and reduce the risks of maladaptation. Strengthening integrity is not only about preventing corruption, it is about embedding ethical, transparent, and accountable practices in decision-making and implementation to deliver more effective, inclusive, and sustainable adaptation outcomes that genuinely enhance resilience and equity.

The tables below set out a list of integrity challenges across the various phases of the project cycle, including a description of the risk and an example of how it might transpire. Some risks in the tables may appear similar or overlap; this reflects the reality that integrity challenges can manifest at multiple points throughout the adaptation cycle and in different forms depending on local governance contexts. Recognising these intersections helps to better understand where vulnerabilities arise and how they can be systematically mitigated.

Photo: Screenshot of a Mugstoria Facebook post related to the controversy over fraud in flood control projects in the Philippines and widespread storm damage from Typhoon Cebu in November 2025.
https://www.facebook.com/reel/1541457830189459

PHASE 1: ENABLING ENVIRONMENT

Integrity Risk	Description	Examples
Unclear, conflicting, fragmented, or overlapping institutional mandates/roles between actors	Lack of clear mandates and/or roles and responsibilities blurs accountability, duplicates or siloes work, and creates loopholes for corruption or inaction	The city's water office and the public works department both claim authority over a new project, making it difficult for residents to know who to complain to about apparent corruption. Technical teams assume leadership will organise community consultations, while leadership expects the technical teams to do it, so consultations never take place
Absence of integrity risk assessment or control mechanisms	Failure to identify and manage integrity risks early allows integrity failures to occur throughout the process	No integrity review is done before project planning, enabling a consultant involved in design to influence procurement without conflict-of-interest oversight
Political/policy and/or regulatory capture	Decision-making is steered by vested interests rather than public need	The mayor's office creates an adaptation task force, filling key positions with lobbyist and/or powerful allies rather than qualified individuals
Nepotism and corruption in staff appointments	Failure to appoint staff based on qualifications and merit results in poor ability to deliver; staff appointed corruptly may be expected to participate in further corrupt activities	The general manager requires that his nephew is appointed as the WASH manager, even though his nephew does not have the appropriate qualifications and expertise
Lack of communication with the public/transparency mechanisms	Poor access to information on decision-making processes, criteria, budgets, and roles fosters mistrust and prevents authorities being held accountable by the public	Criteria for the selection of consultants are kept hidden, preventing the public and civil society from understanding or being involved in the process
No mechanisms to resolve institutional disputes	Without clear procedures to manage conflicts between institutions, coordination breaks down, accountability is limited, delaying projects and wasting resources	A regional water agency and municipal government dispute control of a flood adaptation fund, stalling implementation and leaving communities at risk

Integrity Risk	Description	Examples
Missing, biased, or manipulated data in technical, environmental, social, and/or economic assessment	Lack of assessments or biased findings are skewed to favour certain interests, areas or technical solutions	Reports overstate benefits of a dam to justify local approval
Inadequate technical capacity	A lack of technical know-how can prevent effective oversight and monitoring and creates space for nepotism, corruption, and/or non-impactful projects to occur	A local government without the capacity to model flood risks might be forced to rely on a single contractor's biased data
Lack of or weak participation/inclusion of local communities	Excluding communities from decisions weakens legitimacy and invites inequity or favouritism	The decision to build a berm to protect an area from increasing flooding is taken without consulting local communities. When the next flood hits, the berm directs flood water towards a nearby community resulting in deaths and destruction of property.
Manipulation of community's engagement in public participation	Use of bribes, threats, ethnic or tribal incitements, or otherwise to influence community decisions	A local official uses ethnic incitement to blame a specific minority group for resource scarcity, effectively bullying a village into accepting a poorly planned dam project that enriches the official's private business partners
Undue political interference	Political pressure distorts assessments or project priorities	The mayor strongly suggests the implementation of flood infrastructure in his home district, despite lower need than other areas
Political capture	Appointments, resources, and decisions are allocated based on loyalty, political connections, or strategic voting locations rather than merit or public interest	Local officials revise the water adaptation plan to prioritise new irrigation canals for commercial farms after lobbying from agribusinesses, diverting funds from community drought-resilience projects.

Integrity Risk (cont.)	Description (cont.)	Examples (cont.)
Mislabelling non-adaptation projects as adaptation	Projects are falsely presented as climate adaptation to attract funding or political credit (climate-washing)	The municipality labels a routine water pipe replacement as a "climate resilience project" to qualify for adaptation grants
Bribery, corruption, and/or collusion in selection of projects, beneficiaries or technologies	Officials solicit or accept payments to prioritise certain projects or areas	A contractor pays municipal staff to list their pipeline proposal as a top priority
Undue influence of special interest groups	Powerful actors or lobby groups shape project choices to serve private interests	A large agribusiness lobbies the local council to fund irrigation upgrades that mainly benefit its estates

PHASE 2: ASSESSMENT AND PLANNING | SUB-PHASE: DEVELOPING AN M&E PLAN

Integrity Risk	Description	Examples
Manipulation of target setting process	Targets are adjusted to enable claims of false progress and hide potential wrongdoing	Officials lower water conservation targets to claim early and false success
Lack of baseline data	Without baseline data, it is easier to set targets influenced by external interests rather than local needs	Because a regional water board has no baseline data on groundwater depletion, officials can approve a massive irrigation project for a politically connected landowner

PHASE 2: ASSESSMENT AND PLANNING | SUB-PHASE: BUDGETING

Integrity Risk	Description	Examples
Undue political interference	Funding allocations are diverted or adjusted to serve political goals	A council member pushes to fund a new water reservoir in his/her ward ahead of elections
Undue influence	External pressure skews resource allocation and budget priorities	Local business owners persuade officials to increase budget lines for water supply near their factories
Bribery and extortion in the budgeting process	Bribes determine which projects or contractors receive funding	A finance officer accepts payments to approve inflated water infrastructure budgets
Budget proposal and enacted budget not publicly available	Hidden or unclear budgets make it difficult to monitor or contribute to how money will be allocated/spent	The municipal budget for WASH adaptation is not disclosed to the public or council members
Distortion of budget proposals	Budget data is intentionally manipulated to prioritise politically motivated projects over technically sound ones	A city planning director deliberately inflates the projected cost of a new rainwater harvesting system by 40% in the official budget proposal, intending to skim the surplus funds to finance a political ally
Deviation from public financial management systems	Bypassing established financial management procedures weakens oversight, increases opportunities for misconduct and corruption, and reduces accountability	The municipal adaptation program allocates funds directly to local contractors without following national PFM procurement or reporting rules
Lack of O&M budgeting	Allowing projects to go ahead without budgeting for O&M undermines sustainability of service delivery and public trust. It can also be a red flag for ghost projects.	A water point is established in an informal settlement but collapses within 12 months due to lack of O&M

PHASE 3: PROJECT EXECUTION | SUB-PHASE: PROCUREMENT AND CONTRACTING

Integrity Risk	Description	Examples
Procurement corruption, fraud and/or collusion	Bidding and/or contracting processes are manipulated through bribery, false or forged documentation, misrepresentation of qualifications, or collusion amongst/with suppliers	Bidders coordinate prices on a municipal water tank tender to ensure a particular company wins
Lack of emergency procurement procedures or procurement controls bypassed in emergency situations or disasters	When standard procurement rules are bypassed due to an emergency or disaster, and no clear emergency procurement procedures are established in advance, this creates opportunities for corruption, favouritism, and misuse of funds to occur	After severe flooding, the local government lacks predefined emergency procurement rules and awards emergency water trucking contracts to politically connected suppliers
Favouritism, nepotism, and/or conflict of interest	Officials give preferential treatment to relatives, friends, or politically connected firms	A councillor's family business is awarded a drainage project contract without competition
Failure to conduct proper due diligence on bidders	Inadequate assessment of contractors or suppliers increases the risk of awarding contracts to unqualified or conflicted parties, leading to poor-quality work, delays, or misuse of funds	The city awards a contract for flood infrastructure to a company linked to high level political allies without verifying its technical capacity or past performance

PHASE 3: PROJECT EXECUTION | SUB-PHASE: IMPLEMENTATION AND O&M

Integrity Risk	Description	Examples
No mechanism to report wrongdoing	Lack of mechanisms to report wrongdoing of staff, contractors, implementers, etc. contributes to a culture of impunity	Local communities notice contractors are stealing materials but have no way to report the issue
Corruption, fraud, and/or collusion	Officials or contractors engage in bribery, falsify invoices, or collude to inflate project costs or secure approvals / permits and disbursements	A municipal engineer approves payments for a pipeline project that was only half completed after receiving a kickback from the contractor
Misuse/theft of resources	Funds are diverted or stolen instead of being used for their intended purpose	Part of the project budget is withdrawn for unrelated administrative expenses
Deficient monitoring of execution	Poor supervision of contractors or inadequate resources for oversight allows delivery of substandard or incomplete work	Water storage tanks are built below standard, and no inspections are carried out before payment
Undeclared or unapproved deviation from design specifications	Contractors or officials alter project designs or use substandard materials without approval, compromising quality, safety, and long-term resilience	During construction of a drainage system, the contractor replaces specified reinforced pipes with cheaper, thinner materials, leading to system failure after the first heavy rains
False or manipulated progress reporting	Project data are falsified to show better outcomes or mask failures	The local water department reports that 20 new wells are being completed, even though only 12 will actually be built
Neglect of environmental and social safeguards	Failure to monitor and maintain environmental and social safeguards over time.	The municipality quickly stops maintaining the restored wetland that supports flood control, leading to renewed flooding in nearby areas
Disruption of works to extort favours or gain	Local groups disrupt projects to demand jobs, contracts, or other benefits, causing delays, higher costs, or coerced concessions. Legitimate subcontractors may be blocked, skewing procurement in favour of disruptors.	A local gang blocks access to a sanitation infrastructure project, threatening workers and forcing the contractor to hire gang-linked intermediaries, delaying the installation of water pipelines and inflating project costs.

Integrity Risk	Description	Examples
Manipulation of monitoring data and project reports	Monitoring data are intentionally altered to exaggerate project performance or conceal/obfuscate results	Officials adjust rainfall and groundwater data to exaggerate the effectiveness of a new water recharge project
Lack of complaint and feedback mechanisms	Without accessible channels for citizens or stakeholders to report issues or provide feedback, problems go unaddressed and accountability is weakened	Residents notice poor workmanship in a new water harvesting project but have no formal way to file complaints
Exclusion of beneficiary communities in project monitoring and/or complaints / feedback mechanisms	Communities excluded from providing feedback on service quality or maintenance gaps	No mechanisms for residents to report malfunctioning sanitation facilities
Falsification of financial documentation and manipulation of accounts	Finance and accounting staff may falsify documents or manipulate accounts to divert funds and cover up theft and embezzlement	Accountants create fake receipts for pipe materials to enable them to steal funds
Weak financial oversight and auditing	Inadequate tracking and/or review of expenditure allows misuse of resources to go undetected	The municipal finance office lacks proper cash reconciliation procedures, resulting in untracked withdrawals from the WASH adaptation budget and stalled project activities
Audit fraud	Audit processes may be interfered with, or bribery of / extortion from auditors or inspectors to obtain favourable results and hide illicit payments, tax evasion, and corrupt practices	An auditor is pressured to omit discrepancies in flood defence spending from the final report
Inadequate and/or incomplete expenditure assessment (e.g. planned vs actuals)	Spending is not properly compared against plans, concealing inefficiencies and cost overruns; normal financial controls and approval procedures are bypassed in an emergency	The municipality never reconciles actual costs of a drainage project with the approved budget, allowing overspending to go unchecked

SUB-PHASE 4: MONITORING, EVALUATION, LEARNING & IMPACT ASSESSMENTS

SUB-PHASE: EVALUATION & IMPACT ASSESSMENTS

Integrity Risk	Description	Examples
Lack of transparency/access to information	Lack of evaluation or limited disclosure of evaluation results prevents public scrutiny and accountability	Evaluation reports on a city's flood protection project that raise concerns are deliberately not shared with the public or local councils.
False outcomes reporting	Project results are falsified to show better outcomes or mask failures	Officials report that all villages now have reliable water access, though several still face frequent shortages
Greenwashing, climate-washing	Authorities double report or overstate specific environmental or climate benefits to enhance reputation or attract funding	A city report claims a drainage project reduced flood risk due to "green infrastructure," though no such measures were implemented

7. MITIGATING ACTIONS ACROSS THE PROJECT CYCLE

This chapter outlines practical, integrity-enhancing measures for local governments seeking to strengthen the governance, effectiveness, and accountability of water and WASH-related climate adaptation. The recommendations follow the adaptation cycle outlined above —**enabling environment**, **assessment and planning**, **project execution**, and **monitoring, evaluation, learning, and impact assessments**—and emphasise solutions to integrity risks that frequently undermine adaptation outcomes. Each recommendation describes what the measure entails, how it responds to common integrity challenges, and key steps that local governments can take to operationalise it.

While contexts differ widely, the underlying goal across all recommendations is the same: to ensure that adaptation finance for water and WASH is used efficiently, transparently, and in the public interest, and that adaptation measures genuinely contribute to resilience rather than reproducing existing governance failures.

Photo: Imtiaz Mahbub - Dhaka Bangladesh, Water Integrity Network photo competition entry

Clarify roles and responsibilities

Responds to: Unclear mandates or processes; institutional disputes; political/regulatory capture

In many local governments, overlapping roles between water, public works, environment, and finance departments create confusion, invite conflict, and create opportunities for manipulation or political capture. By mapping responsibilities, defining and documenting processes, and establishing dispute-resolution mechanisms, local governments reduce discretion, prevent delays caused by institutional disagreements, and ensure accountability before planning for specific adaptation projects even begins.

Steps for implementation

- Map out and clarify mandates for each department (water, public works, environment, finance, etc.) in relation to WASH-related *adaptation* projects, where objectives and tasks may be more cross-cutting in nature than as compared to purely water or sanitation related projects.
- Issue simple Standard Operation Procedures (SOP) for key decisions along the project cycle (planning approval, consultation steps, design reviews, etc.). An SOP is a written guide that ensures routine tasks are carried out consistently and efficiently. When kept up to date and used in practice, SOPs document key processes, support knowledge transfer and continuity, clarify roles and expectations, improve consistency and quality of results, speed up onboarding of new staff, and reduce the time spent on supervision and coordination.
- Establish an interdepartmental coordination committee with defined meeting schedules.
- Create a protocol for resolving disputes between departments/agencies, including: who will be the neutral authority within the local government structure to convene and mediate disputes; a practical procedure that sets out how disputes are raised, reviewed, and resolved; defined escalation and decision rules; linkages between the protocol and project management processes; a means to log disputes and ensure that processes are documented and records are available to oversight bodies or council committees.
- Use competency-based hiring standards for all roles and provide documented criteria for recruiting staff or appointing experts. Involve HR or external observers during hiring.

Improve governance and accountability structures

Responds to: Lack of integrity controls; political capture; nepotism; conflict-of-interest

Embedding ethical safeguards at the earliest stages of a project helps prevent elite capture, insider influence, and conflicts of interest. Integrity scans and clear role definitions ensure that decisions are traceable and defensible.

Steps for implementation

→ Introduce a pre-planning "integrity scan" or risk assessment, which helps identify priority corruption and integrity risks across the project cycle and define practical measures to mitigate them. Local governments may consider setting a minimum project value above which an integrity risk assessment is mandatory. While focused on integrity, the approach mirrors standard risk assessment processes. A small cross-departmental team—drawing from line functions, finance, HR, legal, and compliance—should lead the assessment, with optional input from civil society or other external stakeholders to provide independent perspectives.

The team identifies potential integrity risks through workshops, brainstorming, expert input, and lessons from past projects. The assessment can draw on existing information (such as legal or institutional reviews) and primary inputs (surveys, interviews, or focus groups), with the depth of analysis proportionate to the project's value and risk. Identified risks are then prioritised based on likelihood and impact, using qualitative judgment or simple quantitative tools such as a risk heat map. For high-priority risks, the team defines response measures, responsibilities, and documents key actions. Risk responses are implemented and monitored throughout the project lifecycle, with periodic reviews to adjust priorities as conditions change.

→ Establish a policy to disclose conflicts of interest that all staff involved in planning and procurement must follow. For this, use a standard disclosure form, update it regularly, and store declarations securely, with summaries made available for oversight. This helps identify and manage conflicts early and reduces the risk of biased decisions.

Enhance transparency and public engagement

Responds to: Hidden decision-making; political capture; exclusion of communities; mistrust; manipulation of priorities

Transparent information and early engagement—particularly with intended beneficiaries and vulnerable groups—creates public oversight that deters manipulation and increases legitimacy. Publishing roles and criteria reduces opportunities to misrepresent responsibilities or distort priorities.

Steps for implementation

- Publish planning criteria, institutional roles and responsibilities, and an outline of decision-making steps in accessible public spaces, resources and forums. Place a particular emphasis on ensuring that key information reaches marginalised groups, for example by holding meetings in informal settlements, making use of Whatsapp communications, or by collaborating with CSOs and grassroots organisations for information dissemination.
- Prioritise consultation with communities in pre-planning phases and ensure that all inputs are documented and published/circulated, illustrating how early-stage community feedback influences decisions.
- Develop a stakeholder engagement plan for each phase of the adaptation cycle that determines how different groups will be engaged and communicated with.

Strengthen evidence and data integrity

Responds to: Biased assessments; data manipulation; undue influence

Reliable data is essential for legitimate planning. Simple validation procedures and external review reduce opportunities for political or special interest manipulation and ensure that prioritisation reflects actual climate adaptation risks and needs of project areas.

Steps for implementation

- Provide adequate how-to resources for baseline data collection and environmental, social, and/or economic assessments.
- Require basic data validation steps (cross-checks, photographic evidence at sites, geotagging, etc.) in all environmental, social, and/or economic assessments. (see **https://www.gwp.org/globalassets/global/toolbox/publications/technical-briefs/gwp_unicef_tech_b_appraising-and-prioritising-options.pdf**)
- Use an independent and external reviewer (university or research centre, CSO, expert consultant, etc.) for assessments that could potentially be politically sensitive.
- Document all data sources and methods so they can be checked retrospectively. To do this, use standardised templates that record the source, methodology, assumptions, responsible officers, and limitations, and store them in secure, access-controlled systems with version tracking. Share methods and summary results openly, but keep sensitive raw data restricted and backed up. This allows data to be checked later while keeping it safe and confidential.

Ensure inclusive and participatory planning

Responds to: Lack of or weak participation/inclusion of local communities; manipulation of community's engagement in public participation; undue political interference; political capture; undue influence of special interest groups

Limited, flawed, or absent consultation with affected stakeholders in project planning is a common weakness in climate adaptation that increases the risk of corruption, integrity failures, and/or inequitable outcomes, while meaningful participation helps reduce these risks. Effective adaptation—and the avoidance of maladaptation—requires empowered stakeholder engagement throughout the project cycle, from planning to implementation and monitoring, with communities treated as active participants rather than passive beneficiaries. This often means meeting people in their own spaces, building their capacity to engage on adaptation issues, and addressing barriers to participation such as language, meeting formats, agenda control, and unequal opportunities for marginalised groups to voice their needs.

Steps for implementation

- Apply a simple participation checklist to all assessments (who was consulted, when, how, and what were the outcomes). Such a tool helps ensure consultation is systematic, inclusive, and documented rather than ad hoc. It strengthens integrity by making participation visible, comparable across projects, and auditable, reducing the risk that consultations are skipped, tokenistic, or selectively reported.

- Prioritise inclusion of high-risk and marginalised groups and develop a strategy for how they will be included throughout the project. As a part of inclusion efforts when consulting and getting input, ensure that communities are provided with plain-language briefing notes on project options, trade-offs, and constraints.

- Ensure that public participation and consultations are backed up by reliable data. This means that resources such as hazard maps, vulnerability assessment documents, feasibility studies, etc. need to be shared with community members and clarified, if necessary, during consultations.

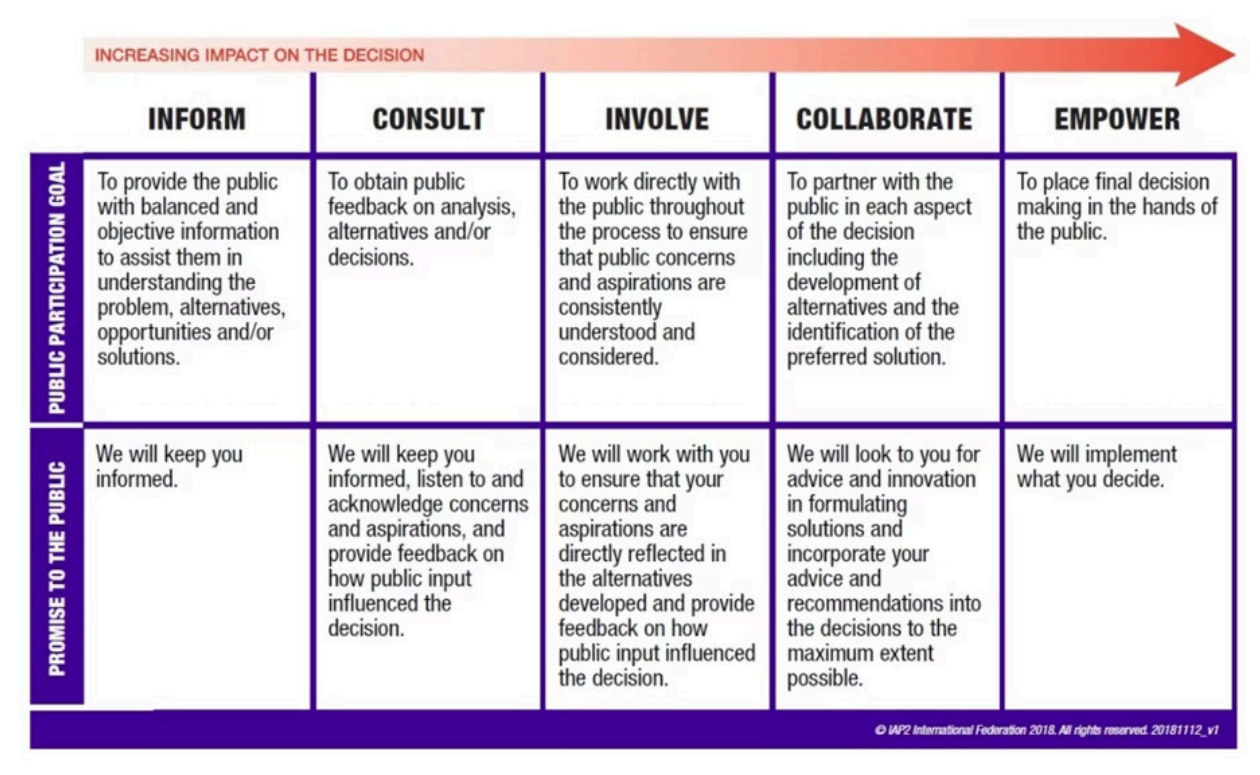


Figure 3: The International Association for Public Participation spectrum of public participation (IAP2, 2018).

A useful resource in relation to participation is outlined in Figure 3. Developed by the International Association for Public Participation, the IAP2 spectrum of public participation sets out five levels of participation: inform, consult, involve, collaborate and empower. It recognises the legitimacy of the different levels of participation depending on purpose, goals, time frames and resources. The figure includes a description of what the 'promise to the public' is for each level of participation.
(see **https://iap2.org.au/resources/iap2-published-resources/**)

Safeguard against undue influence and opaque project selection

Responds to: Political pressure; capture; climate-washing; bribery

Requiring documentation and justification for project decisions and/or changes to priorities reduces space for manipulation. Publishing assessment scores, matrices, and summaries enables oversight and reduces suspicion or misinformation about how projects were selected.

Steps for implementation

- Require technical teams to justify project rankings using previously agreed upon and published criteria, either via a checklist for verification or by some other method. They must document how each project meets agreed criteria, clearly stating the climate risk addressed, adaptation objectives, and expected outcomes.
- Require written explanations if and when political inputs change project priorities. Any changes to project rankings should be documented in writing, explaining what was changed and why. This increases transparency, discourages undue influence, and allows oversight bodies to assess whether proposed decisions remain aligned with adaptation goals.
- Publish assessment results, project scores, and prioritisation matrices in accessible formats. Share plain-language summaries for communities, showing why certain projects ranked higher and demonstrating the ways in which their inputs were integrated into final decisions.
- Ensure that preliminary community and project beneficiary feedback is incorporated into the assessment framework.

Case Study: Nelson Mandela Bay
How Desalination Dreams Derailed Water Security

Nelson Mandela Bay Metropolitan area faced severe water shortages during a prolonged drought, similar to Cape Town's Day Zero crisis. However, the underlying issue was not the drought itself but years of failure to implement long-planned water-security measures. The area already had access to substantial Orange River water via an apartheid-era transfer scheme, and its own 2006 water plan identified the need to complete a 40 km pipeline to the Nooitgedacht treatment works by 2015. Yet by 2017, this vital connection was still not delivering water to the city.

Instead, a group of local entrepreneurs and senior municipal officials had, from around 2005, aggressively promoted an extremely costly desalination plant—despite its water being far more expensive than the available Orange River supply. The proposal offered significant opportunities for private profit at public expense but required either guaranteed municipal off-take or central government subsidies. The city's poor financial track record and national scepticism meant the desalination scheme was never funded. Only after years of delay did authorities return to the Nooitgedacht project, by which time drought had again forced extreme water restrictions.

These delays had serious consequences. Nelson Mandela Bay had a reputation for systemic corruption, with major projects reportedly stalled unless politically connected individuals benefited. As the Nooitgedacht infrastructure remained incomplete, industries shut down due to water shortages, agricultural jobs were lost, and by 2016 a black market emerged in stolen water. By 2019, with drought intensifying, local businesses warned of a looming "jobs bloodbath."

The case illustrates the high cost of corruption and misaligned interests: essential, affordable water-security infrastructure was postponed in favour of an unsuitable, profit-driven proposal, leaving the city dangerously exposed. It underscores the critical importance of safeguarding public institutions from capture and ensuring that climate and water-security decisions are based on public need, not private gain.

Source: Corruption Watch and WIN, 2020. *Money down the Drain: corruption in South Africa's water sector*

Budget with integrity

Responds to: Political interference; bribery; hidden budgets; deviation from PFM; missing O&M budgeting

Transparent, rule-based budgeting is essential for reducing corruption and ensuring that adaptation funds achieve their intended purpose. Public-facing processes deter misallocation and reinforce financial accountability.

Steps for implementation

- Publish proposed and approved budgets online and physically, such as at notice boards or other community meeting points. Prepare clear, plain-language budget summaries and use visual aids, like charts or tables, to make allocations easy to understand. Update these summaries promptly when changes occur and provide contact information for the public in case of further questions, clarifications, or requests for full budget information. In the event of budget reallocation, justification must be published.

- Require the presence of community or CSO observers at budget hearings or allocation meetings to observe discussions, recording concerns or irregularities. Ensure that observers are briefed on items in advance and that their feedback is formally documented and considered in decision-making. Ideally, community representatives should sign against budget proposals.

- Align adaptation budgets with national/local PFM procedures to prevent bypassing controls. This usually means that all adaptation budget processes are mapped against existing national and/or local PFM rules. Create a checklist to ensure compliance at each stage and ensure finance staff are trained on proper procedures and approvals needed for all allocations.

- Mandate O&M budgeting for all infrastructure assets and document lifecycle costs. Include estimated operations, maintenance, and replacement costs when preparing project budgets. Create a simple table linking each asset to its expected lifecycle costs and funding source. Review and update these estimates annually to ensure sustainable service delivery.

- Ensure that key integrity checks (conflict of interest disclosure, integrity scan, assessment validation, proof of community consultation, etc.) have been conducted before budget(s) are approved.

Improve procurement systems

Responds to: Procurement fraud/collusion; emergency procurement abuse; favouritism

Procurement integrity is crucial because this stage involves large financial flows and high corruption risk. Standardised due diligence and risk-based monitoring can help to prevent collusion and fraud. Typically, national legislation sets the rules, standards, and procedures for the public procurement process of acquiring goods and services, to which public institutions, including local government, are usually bound. Where no national public procurement regulation is in place, local governments may need to set up their own procurement guidelines. If national public procurement regulations are vague, or if local governments see opportunities to strengthen procurement processes, this can bolster integrity and save financial resources.

Steps for implementation

Abide by a standardised and publicly available procurement procedure that roughly follows these core elements [1]:

1. Carry out and document a mandatory needs assessment before any procurement occurs;

2. Create and publish procurement plans that include realistic timelines and budgets;

3. Develop and publish a specification of requirements that details the goods, services, or infrastructure to be procured, including quantity, quality, delivery timing, and technical requirements, and how the requirements respond to the needs assessment;

4. Follow the country's procurement laws to determine the bidding method. Where no laws exist, provide proper justification for the use of any procurement method which deviates from open competitive bidding;

5. Follow a fair invitation to bid process which includes: all tenders are publicly advertised widely and early, complete and free bid documents with clear requirements, timelines, and contacts are provided, all clarifications are published in one place, and sufficient time for bidders to prepare competitive submissions is given;

6. Open all bids at the stated time and place, record and publish the full list of bidders and key bid details immediately, and ensure clear, documented procedures that prevent delays, undisclosed submissions, or manipulation of the bid opening process;

7. Ensure bid evaluation and adjudication are carried out by separate, qualified, and conflict-free committees that strictly apply published criteria, document and justify all decisions, and publicly disclose committee membership and final award decisions to prevent undue influence and ensure value for money;

8. Publicly announce all contract awards, ensure the final signed contract and any post-award amendments are disclosed, and verify that the winning bidder matches the adjudication decision and meets eligibility and performance requirements.

→ Ensure all relevant staff are trained on procurement guidelines/procedures,

→ Have an emergency procurement plan in place by identifying critical emergency needs and risks, setting clear emergency procurement rules and approval thresholds, and maintaining a pre-vetted list of ready suppliers (including backup options and framework agreements) to enable fast, controlled, and transparent purchasing during crises. [2]

→ Develop a catalogue of prices for common goods and services for standardisation of prices.

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[1]
For a more detailed overview on implementing the below steps, see:
https://asivikelane.org/wp-content/uploads/2025/12/2025-11-Public-procurement_a-guide-to-common-risks-and-how-to-address-them.pdf
https://www.transparency.org/en/publications/curbing-corruption-in-public-procurement-a-practical-guide

[2]
For a full guide on emergency procurement, see
https://thedocs.worldbank.org/en/doc/315691568908208946-0090022019/original/EmergencyProcurementforReconstructionandRecoveryToolkit.pdf

Strengthen oversight and supervision

Responds to: Deficient monitoring and supervision; design deviations; substandard work; false reporting

Consistent contract and site monitoring with evidence trails reduces the risk of shortcuts and fraud. Independent verification adds a layer of protection for high-risk or high-value projects.

Steps for implementation

→ Strengthen contract monitoring by assigning a range of qualified internal or external monitors to oversee administrative, financial, legal, and technical compliance; verify delivery quality, timelines, and lawful execution (including periodic site inspections with photo and GPS evidence); formally approve or reject outputs; maintain regular reporting and communication; and promptly flag and document any corrupt, discriminatory, or non-compliant conduct. Training may need to be conducted for staff acting as monitors if capacity needs to be improved e.g. training finance officers to better verify supporting documents and invoices. As a part of this, procedures must be developed for reporting on irregularities.

→ Create a simple deviation-reporting process to flag changes to designs or materials by requiring contractors and site engineers to submit a short, standardised form whenever any change to approved designs, materials, or specifications is proposed or observed. The form should explain the reason for the change, cost and quality implications, and be reviewed and approved in writing by a designated technical authority before work continues. All approved deviations should be logged, stored with project records, and periodically reviewed to detect patterns that may signal quality or integrity risks.

PHASE 3: PROJECT EXECUTION

Enhance community involvement in progress

Responds to: False reporting; inability for public to oversee execution

Public visibility of contracts and progress empowers communities to detect irregularities and increases accountability for contractors and officials.

Steps for implementation

- Publish key project documents such as contracts, bills of quantities, milestones, and progress reports on an official website or physical notice boards at municipal offices and project sites. Information should be presented in clear, non-technical language where possible and updated regularly as the project progresses. Assigning responsibility to a specific department or officer helps ensure documents are posted consistently and remain accessible to the public.
- Establish an anonymous hotline or channel for residents to report potential wrongdoing.
- Establish community based project management and sustainability committees that support with joint and participatory monitoring.

Strengthen M&E governance and accountability

Responds to: Data manipulation; audit fraud; weak oversight; weak climate indicator tracking; inability to detect false reporting

Strong internal controls and independent verification safeguard the integrity of reported results and prevent manipulation for political or financial gain. Climate-sensitive M&E ensures that adaptation outcomes, not just outputs, are accurately measured and protected from manipulation.

Steps for implementation

→ Establish a complete M&E system. This includes tools, processes, responsibilities, outputs, outcomes, impacts, and key adaptation indicators.

Internally, responsibilities should be clearly separated so that the staff collecting data, validating or approving it, and compiling reports are different individuals or units, which limits opportunities for collusion and strengthens accountability. In practice, this can be implemented through simple role-mapping, written procedures (e.g. SOPs), and rotating verification responsibilities for high-risk projects. Where staff are tasked with monitoring, ensure that there is adequate capacity to carry out investigation of climate-relevant indicators.

Key data (e.g. expenditure, outputs, and outcome indicators linked to project objectives) must be subject to periodic independent audits or external verification by auditors, universities, CSOs, or oversight bodies to reduce the risk of manipulation and false reporting.

→ Establish a financial management system. This includes documentation, internal audits, project expenditures, and financial reporting.

→ Establish basic but robust financial controls, including clear separation of duties (authorisation, payment, and record-keeping), dual sign-off for expenditures, sequentially numbered and traceable financial documents, and restricted access to financial systems, can ensure that financial monitoring is carried out with integrity.

Regular bank reconciliations, spot checks, and internal audits should be conducted to verify that reported spending matches actual expenditures and project progress. Together, these controls reduce the risk of document tampering, misreporting, and misuse of funds, and ensure credible financial reporting for adaptation projects.

Improve access to information

Responds to: Hidden evaluation results; false reporting; greenwashing

Transparent results build trust and help communities, donors, and oversight bodies detect inconsistencies or misreporting.

Steps for implementation

→ Commit to publishing monitoring, evaluation, and learning (M&E) reports and evaluation findings within a defined timeframe after completion, using low-cost tools such as municipal websites, open-data portals, or simple digital dashboards (e.g. spreadsheets or basic web pages). Key indicators, budgets, and progress updates should be presented in clear, consistent formats and updated regularly, with responsibility assigned to a specific unit to avoid delays.

→ Provide short, plain-language summaries of project goals, progress, spending, and outcomes and share them through community meetings, notice boards, local radio, or messaging platforms. These summaries should clearly explain what was promised versus what was delivered and include instructions on how communities can raise concerns or provide feedback. This practical step enables communities to remain informed and act as an additional layer of monitoring, helping to identify gaps, errors, or integrity risks early.

Institutionalise community feedback mechanisms

Responds to: Lack of complaints channels; exclusion of beneficiaries

Accessible grievance and monitoring channels allow communities to flag issues early and contribute to continuous improvement.

Steps for implementation

- Put in place grievance redress. Simple channels such as an SMS number, hotline, WhatsApp line, a centralised office, and dedicated time in public meetings should be set up so that residents/beneficiaries can report problems, misconduct, or service issues/failures. Clear procedures should define who receives complaints, how they are logged, investigated, and resolved, with regular public reporting on the number of complaints received and actions taken. Tracking and disclosing complaint resolution builds trust, deters wrongdoing, and shows that reporting leads to real outcomes.

- Set up community monitoring groups to observe service quality, maintenance issues, and project performance over time. Members should receive basic guidance on what to monitor, how to record observations, and how to report concerns using grievance channels. This approach provides ongoing, ground-level oversight at low cost and helps detect integrity and performance/outcome issues that may not be visible through official monitoring alone.

Case Study: Ward Climate Change Planning Committees (WCCPCs), Kenya

In Kenya, the establishment of Ward Climate Change Planning Committees (WCCPCs) has occurred not only to strengthen participation in planning and prioritisation, but also to support ongoing oversight of climate adaptation investments, including water and WASH projects. By embedding communities within formal governance structures, WCCPCs have helped link project delivery more closely to accountability and intended adaptation outcomes.

In counties such as Makueni, Kitui, Isiolo, and Marsabit, WCCPCs have been legally recognised, trained, and integrated into county climate planning and financing processes. Committee members engage communities to identify local climate risks, develop and prioritise project proposals, and follow projects through implementation. Once projects are approved, ward committees remain involved as a local interface, helping communities understand what was promised, when delivery should occur, and what standards are expected. This continuity from planning through implementation strengthens accountability and reduces the risk that projects drift from their original objectives.

Monitoring by WCCPCs has been particularly important for safeguarding delivery and integrity. Committee members often observe construction and service delivery on the ground, track progress against agreed milestones, and raise concerns about delays, substandard work, or deviations from agreed designs. Because they are based in the community and are regularly present at project sites, they can detect issues such as incomplete works, poor-quality materials, or inactive contractors that may not be immediately visible through formal reporting systems. These observations are then communicated to county officials, creating an additional, practical layer of oversight.

This ward-level monitoring has helped improve adaptation outcomes by encouraging timely corrective action. When problems are identified early, counties are better able to intervene by requiring contractors to fix defects, adjusting implementation approaches, or withholding payments before failures become entrenched or resources are wasted. The visibility of community monitoring also acts as a deterrent to corruption and misreporting, as contractors and officials are aware that project progress is being scrutinised from multiple angles.

Importantly, WCCPC monitoring strengthens downward accountability by enabling communities to verify whether projects deliver the outcomes they were designed to achieve, such as improved water access, reduced flood risk, or more reliable sanitation services. By providing feedback on whether assets are functional and services are actually improving resilience, ward committees help bridge the gap between reported results and lived experience. This reduces the risk of false progress reporting and climate-washing and supports learning about what adaptation measures work in practice. When the ward committees are properly empowered, trained, and formally linked to county response mechanisms, they help ensure that climate adaptation projects not only comply with rules but also deliver meaningful, lasting resilience outcomes on the ground.

Source: International Institute for Environment and Development. (2021). *Principles for locally led adaptation*.

8. ADDITIONAL RESOURCES

This section offers additional resources that local governments can use to address integrity risks in climate adaptation projects or programmes. These resources are designed to be adaptable to different capacities and local contexts, and many can be implemented using low-cost or no-cost approaches.

Infrastructure Anti-Corruption Toolbox (I ACT) – OECD: A handbook to help stakeholders prevent, detect, and report corruption across the infrastructure project lifecycle. Covers pre-tendering risks, procurement design, contract management, and monitoring.

Curbing Corruption in Public Procurement – Transparency International: Provides principles and minimum standards for procurement integrity. Explains corruption risks at each procurement phase and practical steps to mitigate them.

InWASH and Water Integrity Management (IM) Toolbox – WIN, GIZ, cewas: A participatory tool for water-sector organisations to identify operational integrity risks and mitigation measures. Helps improve integrity across utility or local government functions.

Integrity Pacts Implementation Guide – Transparency International: Describes how governments and bidders can sign a pact to commit to fair, transparent procurement. Includes advice on monitoring, sanctions, dispute resolution, and stakeholder engagement.

Guide to Corruption-Free Local Government – Local2030: Offers integrity pillars, risk management strategies, and anti-corruption planning steps for local councils. Covers ethics, procurement, budgeting, transparency, and audit systems.

Strategies to Tackle Corruption in Local Government Procurement – Transparency International Helpdesk: Describes practical strategies for local governments in Asia and Africa to reduce procurement corruption. Includes inputs on digitising procurement, independent oversight, citizen monitoring, and legal reform.

Public Procurement Topic Guide – Transparency International Knowledge Hub: Lists anti-corruption tools and approaches, including complaint mechanisms and whistleblower protection.

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