WIN Water Integrity Network

WATER INTEGRITY GLOBAL OUTLOOK 3

Improving Integrity in Water and Sanitation Finance

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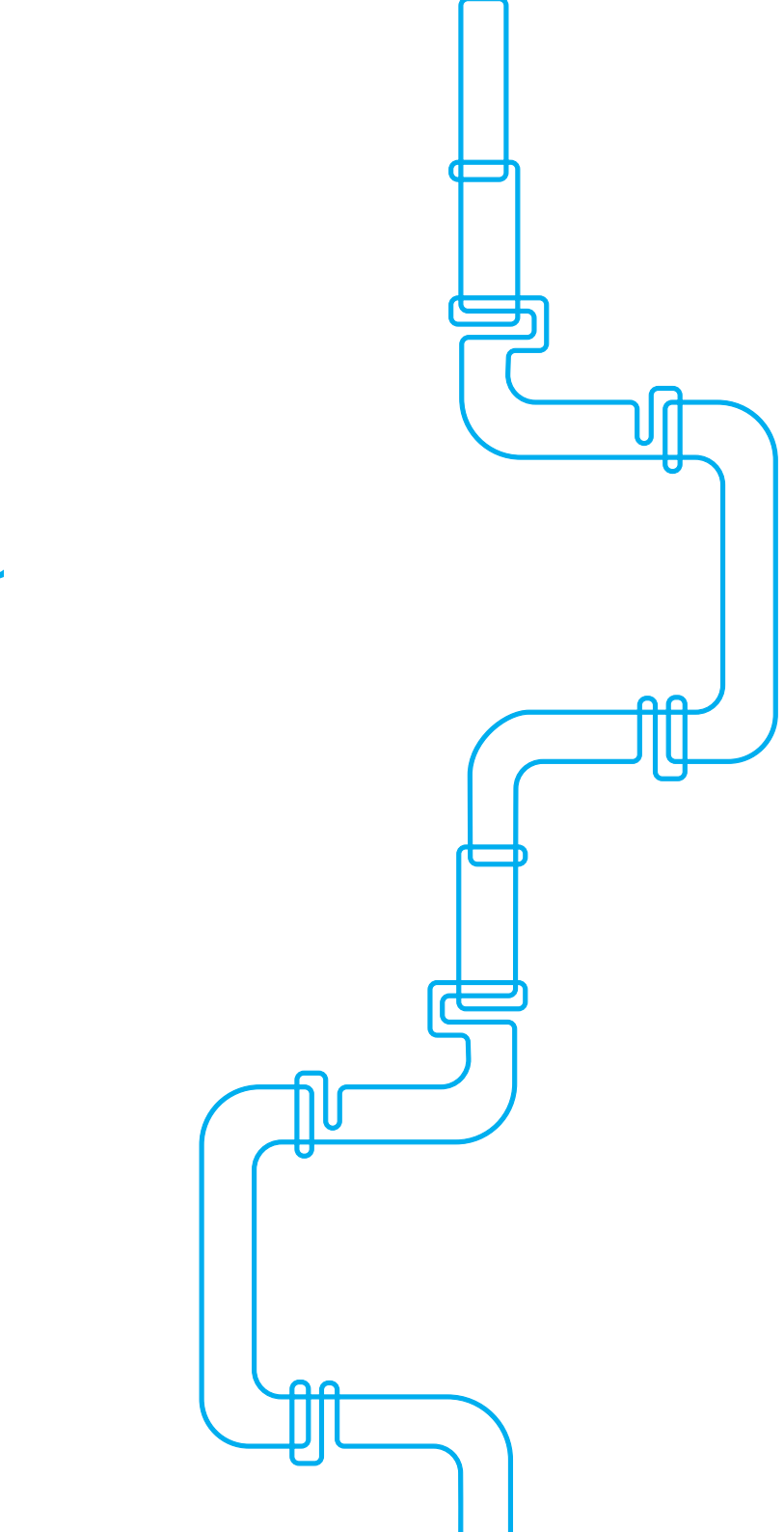
Water Integrity Network (WIN)

The Water Integrity Network (WIN) is an international research and advocacy organisation, working jointly with a global network of partners in the water and anti-corruption sectors. WIN focuses on training for integrity and risk prevention in water and sanitation programmes and institutions worldwide. The aim is to make sure water, and water governance, are clean, just, and accessible, for all.

https://www.waterintegritynetwork.net



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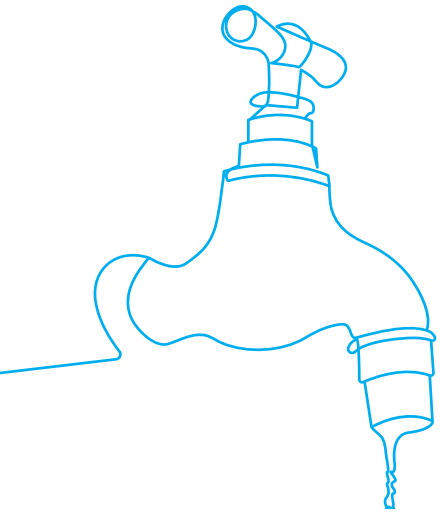


Acronyms

AGSA – Auditor-General of South Africa
ANA – National Water Agency (Brazil)
CEO – Chief Executive Officer
CoST – The Infrastructure Transparency Initiative
CPI – Corruption Perception Index
CSO – Civil Society Organisation
EACC – Ethics and Anti-Corruption Commission (Kenya)
EIB – European Investment Bank
ESAWAS – Eastern and Southern Africa Water and Sanitation Regulators Association
GDP – Gross Domestic Product
GLAAS – UN-Water Global Analysis and Assessment of Sanitation and Drinking Water
GSMA – Global System for Mobile Communications
IDB – Inter-American Development Bank
IDI – INTOSAI Development Initiative
INTOSAI - International Organization of Supreme Audit Institutions)
IGEM – Inspector-General for Emergency Management
IMT-SWSS – Integrity Management Toolbox for Small Water Supply Systems
INTOSAI – International Organization of Supreme Audit Institutions
INWASH – Integrity in WASH (Integrity Management Toolbox)
KES – Kenyan Shilling
KEWASNET – Kenya Water and Sanitation Civil Society Network
LGUGC – Local Government Unit Guarantee Cooperation
MDB – Multilateral Development Bank
MYR – Malaysian Ringgit
NGO – Non-Governmental Organisation
NRW – non-revenue water
NWASCO – National Water Supply and Sanitation Council
NWSC – National Water and Sewage Corporation
OCDS – Open Contracting Data Standard
OCP – Open Contracting Partnership
OECD – Organisation for Cooperation and Development
OHCHR – Office of the United Nations High Commissioner for Human Rights
OCSAS - Community Drinking Water and Sanitation Organisations (Ecuador)
PEFA – Public Expenditure and Financial Accountability
PEN – Peruvian Sol
PFM – Public Financial Management
PPP – Public-private partnership
PPWSA – Phnom Penh Water Supply Authority
SABESP – Basic Sanitation Company of the State of Sao Paulo
SAI – Supreme Audit Institution
SDG – Sustainable Development Goal
SIU – Special Investigating Unit
SPAN – National Water Services Commission
SPV – Special Purpose Vehicle
USAID – United States Agency for International Development
WASH – Water, Sanitation and Hygiene
WASREB – The Water Services Regulatory Board, Kenya
WIGO – Water Integrity Global Outlook
WIN – Water Integrity Network
WIRI – Water and Sanitation Sector Integrity Risk Index
ZAR – South African Rand

Foreword

"WIGO2024 is forging a resilient future, where accountability and ethical practices safeguard our most vital resource. Through its exploration of the synergy between water, finance, and integrity, WIGO2024 will inspire you to cherish water, fortify decision-making, and promote transparency and good governance. Together, we create a world where water thrives and generations flourish."

Amgad Elmahdi, Regional Manager, Green Climate Fund

"Over 300 million Africans do not have access to clean drinking water and over 700 million do not have access to decent sanitation. The negative impacts are felt all the way from the individual and household level to the national economic level. Climate change is exacerbating droughts and floods, leading to higher food insecurity, disease burdens, conflict and migration.

African leaders have pledged to leverage over USD 30 billion in SDG6 investments by 2030 to achieve water security and sustainable sanitation through private-public partnerships, improving sector governance, and higher allocations from national budgets. One third of this will come from efficiency gains and cost savings. This must, amongst other things, address corruption, mismanagement and malfeasance which currently hinder the delivery of water and sanitation and substantially increase the costs of such services.

This issue is addressed in the timely Water Integrity Global Outlook: Integrity in Finance in Water and Sanitation. The report brings an important analysis to the financing discourse in the sector and offers practical actions for sector stakeholders, including ministries, regulators and utilities, to take to reduce corruption and improve integrity in water and sanitation finance. Implementing the recommended actions will take us a huge step forward in the delivery of equitable and sustainable water and sanitation services for all."

Rashid Mbaziira, Executive Secretary, AMCOW

"The water sector is an ideal prism through which to see both the means by which corruption blights lives and some of the potential approaches for confronting it, which could be transferable to other sectors. Reliance on water as a basic commodity means that disruption of access to it from corruption has devastating social impacts, and disproportionately so for the poor. WIGO24 casts a fresh look at how the systems for financing the water sector can be affected and proposes new ways of approaching the problem."

Philip Mason, former anti-corruption adviser to UK Department for International Development

"This pivotal document explores the vital roles of transparency, accountability, and citizen engagement in ensuring fair and effective funding for water and sanitation. It serves as an indispensable guide for policymakers, stakeholders, and advocates dedicated to combating corruption and enhancing resource allocation efficiency in water and sanitation. Addressing key issues for achieving SDG6 and the human right to water, the report aligns strongly with OGP's mission to fight corruption and promote open governance. This report is crucial for ensuring that limited financial resources are used most effectively to bring about better water and sanitation services for all.

Sanjay Pradhan, CEO, The Open Government Partnership

"This edition of the Water Integrity Global Outlook on integrity in water and sanitation finance is of the utmost interest to local authorities in Africa, as the continent's local governments are without doubt, of all the regions in the world, the one where the issue of people's access to water and sanitation services is of greatest concern. Indeed, access to water and sanitation is one of the sustainable development goals whose targets set for 2030 will not be met, largely because the financial resources to build the necessary infrastructure and make access to these services affordable for the majority of inhabitants are not being put in place. Nor are the resources mobilised spent with the desired effectiveness and efficiency, due to inappropriate organisation and management practices. This is particularly true of local governments, which are ill-prepared to deal with illicit practices, particularly in the case of the delegation of the supply of such services.

Combating corruption and promoting integrity in the provision of water and sanitation services within local authorities is particularly sensitive in Africa, given the scarcity of financial resources and the size of the population that does not have access to these services either absolutely or at an affordable cost. Integrity should therefore be a must if we are serious about leaving no one and no place behind. This should not be relegated to mottos and statements to be spelt out in conferences, but implemented in the real world.

Equipped with the handbook on the OECD principles on water governance, and with the data, approaches and methodologies developed in the present edition of the Water Integrity Global Outlook, and following the decision to involve further African local government in water and sanitation management, UCLG Africa is ready to work with Public Service International (PSI) on a pilot project on the way to promote integrity and fight corruption in the delivery of water and sanitation for all in African cities and territories."

Jean Pierre Elong Mbassi, Secretary General, UCLG Africa

"Corruption costs money. A lot of it. Money that could be used to improve services to those that don't have it. I really like that WIGO2024 goes into depth identifying the major integrity risks related to different sources of funding and financing across budget cycles. It then gives concrete options to try to prevent them. Incredibly useful for all of us that track funds, work in accountability, and try to reduce the finance gap for the sector."

Catarina Fonseca, Director, Pulsing Times; Associate, IRC

"WIGO makes a compelling case for the essential role of integrity in the financing of the water and sanitation sector. There is often a reluctance to confront issues of transparency, accountability, and corruption head-on. Shying away from integrity or failing to name it explicitly does not help our cause and only perpetuates inefficiencies and injustices. Integrity and its principles and pathways for systemic change are not merely optional extras but foundational elements that ensure the effective and equitable use of resources, ultimately leading to more successful and impactful projects."

Sareen Malik, Executive Secretary, African Civil Society Network for Water and Sanitation (ANEW)

"When it comes to water and sanitation finance, it's not just about the provision of infrastructure, but systems for the ongoing delivery of sustainable, accountable services with full participation that matters. And that's what water integrity, and this WIGO2024, is about."

Alana Potter, Head of Research & Advocacy, Equality Collective

Executive Summary

Insufficient funding is undermining governments' ability to meet the human rights to water, sanitation and a clean and healthy environment. The World Bank estimates that countries need to increase their current spending by around USD 140 billion annually—tripling current expenditure—to achieve the Sustainable Development Goal 6 targets on drinking water, sanitation, and hygiene (WASH) (Joseph et al., 2024). Additional and increasing finance is needed to improve the resilience of water and sanitation systems and to support water and sanitation adaptation.

Corruption, mismanagement and other integrity failures contribute significantly to the overall finance shortfall, wasting up to 26% of money invested in the water sector, according to WIN and the Inter-American Development Bank (Adam et al, 2020). They undermine the effective use of funds, weaken sector institutions, drive significant financial losses in the sector, and misdirect and bias new investment away from key priorities and from those who need it most.

The water and sanitation sectors are particularly susceptible to corruption due to fragmented and complex institutional arrangements, natural monopolies, and high infrastructure capital, maintenance and refurbishment costs. The infrastructure sector, on which water and sanitation depend heavily, is one of the most corrupt sectors globally. The IMF estimates that 30-50% of general infrastructure costs (not just water and sanitation) are lost due to poor management, including corruption (Schwartz et al, 2020).

Addressing corruption and integrity failures within water and sanitation finance is critical to ensuring the efficient use of available funds—and the improvement of service delivery.

This Water Integrity Global Outlook (WIGO) delves into the most important ways that integrity influences financing in the water and sanitation sectors. It aims to prompt dialogue and action and to inspire actors at every level to become champions for integrity.

WIGO focuses on:

- Building understanding of the problem in water and sanitation finance and the main vulnerabilities and risk drivers (Parts 1 and 2);
- Highlighting major integrity risks related to different sources of funding and financing across the budget cycle (Part 3);
- Explaining different pathways for tackling corruption and integrity risks (Part 4); and
- Providing recommendations for different actors on taking action to improve integrity (Part 5).

The Cost of Doing Nothing

Corruption and poor integrity divert resources, contribute to major financial losses and widen the funding gap. But it is not just about the money. Integrity failures in water and sanitation financing have devastating social, economic and environmental impacts and profoundly affect people's lives in a multitude of ways. And the impact falls disproportionately on the marginalised and powerless.

While the cost of action to improve integrity is relatively low, the cost of inaction is unacceptably high, playing out in poor service delivery, inflated infrastructure costs, and deteriorating water quality—costs which are exacerbated by the impacts of climate change. We must change course. Unless we take action, corruption and integrity failures will continue to slow us down, drive up costs, and undermine the effectiveness of our work.

These considerations are set **against a backdrop of shrinking civic space, climate change, and rapid developments in the digital world**.

Civic space enables individuals, organisations, and communities to participate in political, economic, and social life. Open civic space facilitates access to information, collective action, dialogue, and the expression of dissent. It is crucial to hold governments and the private sector accountable and to uncover and address corruption and other integrity issues that undermine water and sanitation delivery.

Climate change is bringing new challenges to the delivery of water and sanitation and the management of water resources. Along with this come a range of new sources of finance, particularly climate adaptation finance, which carry new integrity risks.

The rapid expansion of digital technology and machine learning systems can assist in reducing corruption risks while also potentially introducing new vulnerabilities.

More on risk drivers in Part 2

The Integrity Opportunity

Now is the time to act. There are real opportunities to strengthen the financing of water and sanitation by creating and promoting a culture of integrity. This requires taking specific steps to promote integrity through and alongside existing work, with commitment and new alliances for action.

WIGO suggests practical steps that stakeholders can take to strengthen integrity in sector financing. While these apply globally, as evident in the wide range of examples provided, the primary aim of WIGO is to support stakeholders championing integrity in developing countries where the majority of people lacking adequate water and sanitation live.

Framing Integrity in Water and Sanitation Sector Finance

Multiple finance flows for water and sanitation

Funding for water and sanitation comes from tariffs, taxes, and transfers, known as the 3Ts. By far the greatest source of funding is from water users, followed by government, although there are significant regional variations. In Latin America and the Caribbean, tariffs cover over 80% of sector costs. In Asia, most sector expenses (over 60%) are funded by government. Oceania (excluding New Zealand and Australia) is the only region highly dependent on repayable finance.

Repayable finance, although only a small portion of the total investment, is an important tool for managing the capital costs of infrastructure investment, but it needs to be carefully managed since it contributes to debt-levels at country or institutional level. There are unique risks related to the deployment and management of repayable finance, especially related to the complexity and opacity of financing mechanisms, as well as power plays affecting negotiations (see section 3.2.3). These risks also apply to blended finance, which takes different forms but relates to the use of public funding to attract private finance. Despite significant efforts to attract private financing to the water and sanitation sectors, such investment remains very low compared to other sectors like transport and energy.

Investment gaps are often covered by self-supply when users, either households or enterprises, provide and/or pay for their own water and sanitation supply. While this covers some important investment gaps, in many cases it shifts the burden of paying for services onto the poor.

Integrity risks jeopardise all these financial flows. WIGO looks at those integrity affecting how water and sanitation finance is estimated, collected, allocated, and spent. Government entities generally play a leading role for all these processes—through public investment and public financial management—even if they are not the only players. Assessing integrity risks is therefore relevant for most private, public, and other players involved across the budget cycle.

More on budget cycle integrity risks for different stakeholders in sections 3.2 and 3.3.

Challenging institutional arrangements

The institutional arrangements in the water and sanitation sectors present significant challenges to ensuring financial integrity. One key aspect is that these sectors generally operate as natural monopolies, given the high fixed costs associated with sourcing and delivering water and removing sewerage via built infrastructure. Monopolistic conditions create opportunities for capture, where public boards and commissions may be influenced by individuals with vested interests.

Sector fragmentation and decentralisation further complicate the institutional landscape. There are often a large number of institutions responsible for the delivery of water and sanitation from national to local level, sometimes with conflicting or overlapping mandates. The lack of clear roles and responsibilities makes accountability a challenge.

Decentralisation can localise service provision, but it does not inherently increase accountability and can instead shift corruption or poor accountability from national to local levels. It can also create inefficiencies in public financial management, increasing the complexity of financial flows and the difficulty of tracking funds. These complex institutional arrangements necessitate robust regulatory frameworks to ensure efficient use of available funds and fair user charges.

Diverse service delivery and regulatory models

Different service delivery models, from full private sector provision to public-private partnerships, carry specific integrity challenges. Guidelines on tendering and conflict of interest aim to improve procurement processes and limit risks of collusion or bid rigging, yet enforcement remains difficult, especially in contexts of systemic corruption. The power and information imbalances between governments and large private companies, increasing financialisation, along with the challenges of contract enforcement and conflict resolution, further complicate regulation and oversight and raise the potential for integrity failures.

While elected governments and officials are most often under public scrutiny, the magnitude of corruption within private companies, from the very large to the very small, must also be recognised and addressed. Small private sector players are important players in the provision of water and sanitation, often reaching the most marginalised. However the lack of clear regulatory frameworks leaves scope for exploitative practices by less scrupulous providers, including high costs of water and sexual corruption. Improved oversight and accountability are needed.

Extensive customer interactions, with room for discretion

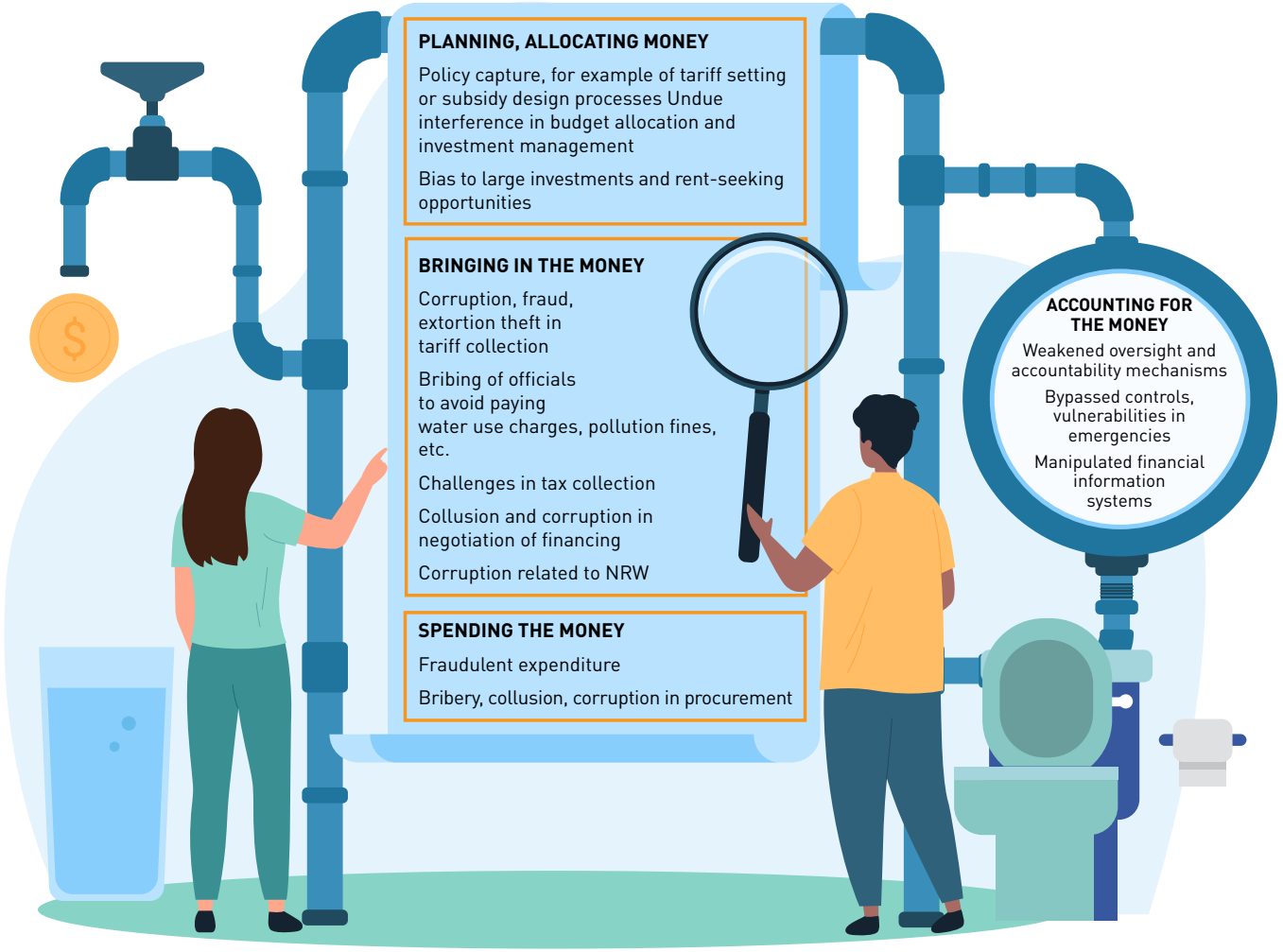
Customer interaction in the water and sanitation sectors is extensive and regularly happens in informal settings—in the field, in people's homes, at sanitation facilities, at faraway kiosks—for activities like meter reading, connection applications, billing, and licensing. Bribes are not uncommon. Sexual corruption, or "sextortion," can occur in these transactions, with significant impacts on the well-being of affected women. Such corruption undermines the overall financial sustainability of service provision, creating a vicious cycle of underfunding and underperformance. It can also further marginalise the poor, who cannot afford to pay bribes.

More on water and sanitation specificities that drive finance risks – Part 3.1

Integrity Risks across the Budget Cycle

There are integrity challenges at each stage of the budget cycle.

Figure 1: Examples of water and sanitation integrity risks across the budget cycle



Planning, estimating, and allocating the money

Policy and regulatory capture or influencing by politicians or other powerful stakeholders can lead to the manipulation of standards, regulations, or capture of subsidy and tariff-setting processes. This has consequences down the road: it distorts how much money can be collected, how needs are estimated and projects prioritised, how much projects will cost and require repayable financing, how much end users have to pay—especially the poor, and how much capacity is in the sector to track and manage expenditure. While affordability is difficult to establish, particularly in contexts with extensive numbers of poor users, integrity means that tariffs need to be progressive, with necessary and adequate subsidies for poor households.

High levels of discretion in project decisions and budget allocation processes, combined with opaque budget and project preparation processes, enable corruption and undue influence in budget allocation and project planning. Politicians and senior officials responsible for water sector policies may seek to direct investment priorities in a way that sets up opportunities for rent-seeking or other forms of corruption, which entrenches inequalities. One attempt to address the challenge of biased allocation of public resources is Citywide Inclusive Sanitation, which requires sanitation providers to ensure that sanitation planning and allocation of funds includes poor areas with non-sewered sanitation.

Bringing in the money

Utility revenues are undermined when there is corruption, fraud and theft in tariff collection. This may take the form of ignoring unauthorised connections, meter tampering, or accepting bribes not to disconnect or to offer exemption from tariffs.

Non-revenue water (NRW) poses a major challenge to the financial sustainability of water services. Although closely linked to corruption and integrity issues, these aspects are insufficiently addressed in NRW reduction programmes. Technical losses and leaks can be symptoms of issues in quality of infrastructure or of biased and inadequate planning and budgeting related to corruption. Commercial losses can be fed by integrity issues related to billing, meter-tampering, manipulation of financial systems, staff misconduct, and more. Establishment of effective regulatory frameworks and stringent anti-corruption measures—such as whistleblower mechanisms—can help address these weaknesses.

Non-payment for water is often blamed on poor water users and illegal connections. What is often less visible is the number of large water users who find ways to avoid paying for their water use, including industrial customers, government entities, and well-linked individuals who can use their political clout or elite connections to appropriate water and avoid paying their bills. This should open up debates about the affordability of tariffs and the adequacy of subsidies and utility affordability programmes. Integrity approaches can make the risk assessment more thorough, strengthen NRW programmes, and help address root causes.

Collusion and corruption in negotiation of financing from external sources is often overlooked. How water concessions and public private partnerships are structured at the outset can provide opportunities for bribery, fraud and distorted pricing over decades. Collusion in negotiations on the financing of new investments, especially when off-budget project-specific financing is involved, affects the cost of capital and impacts the affordability of future tariff charges and subsidies.

Spending and accounting for the money

Public Financial Management (PFM) systems operationalise the management of funds, salary payments, the actual commitment of budget releases from central treasuries to one set of activities or project rather than another. They also cover procurement, delivery verification, and payment of third-party inputs. PFM also

covers financial reporting, auditing, and oversight. Despite high investments by governments and donors in system reforms and improvements, PFM systems are often weak. In highly corrupt countries weak PFM systems can be a deliberate outcome of corruption machinations. Mechanisms are needed to clearly address integrity risks that appear within all areas of PFM, from inadequate data and processes and weak institutions to poor enforcement.

Procurement is the site of the greatest corruption in public expenditure. Corruption and fraud occur on the side of both contracting authorities and contractors through bribes, collusion and kickbacks. This affects water ministries, local government, utilities and community-based delivery of water and sanitation infrastructure and services. Corruption often manifests through inflated estimates for capital works and supplies and manipulation of procurement processes to favour particular suppliers.

Accountability and oversight institutions, such as sector regulators, anti-corruption bodies, and public auditors, are crucial in identifying and sanctioning corruption in water and sanitation financing, but they are often under-resourced and poorly capacitated, and reliant on weak Integrated Financial Management Systems (IFMIS). There have been reports of deliberate manipulation of the IFMIS to conceal information from auditors, for example from Kenya. Enforcement is especially weak, especially when supreme audit institutions are limited in their mandates.

The influx of substantial funds into water and sanitation for disaster relief and climate adaptation is worth examining as a special case. Emergency exceptions in procurement regulations, intense competition among humanitarian organisations, and the lack of coordination among donors, government institutions, and CSOs add to the general integrity risks facing the sectors. In response, dedicated integrity mechanisms, for disbursement of funds and for auditing of funds in emergencies, must be explored more thoroughly.

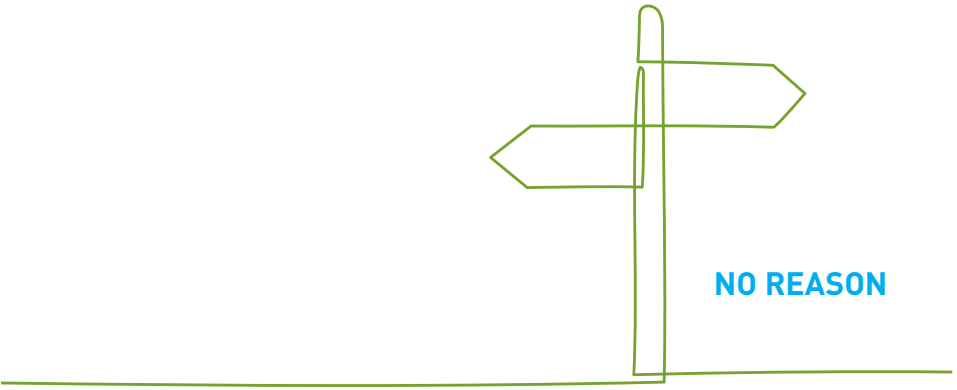
More on integrity risks in water and sanitation finance – Part 3

Developing Effective Integrity Strategies for Water and Sanitation Finance: No Reason, No Room, No Reprieve

Failing to address the many integrity risks in financing of water and sanitation carries enormous economic, human, and environmental costs. However, there is no one-size-fits all solution. **Context matters in developing anti-corruption programmes.** WIGO therefore proposes an integrity approach that can be used to **develop plans at different levels—in organisations, in programmes, in policy—to address specific risks and the norms that drive them**.

The approach is based on a combination of three broad pathways: No reason, No room, and No reprieve for corruption or integrity failures. This approach recognises the value of an assessment of integrity risks and social norms, to target and prioritise action. Such an assessment is ideally participatory and inclusive. **The end goal is better management of sector finances, leading to improved service delivery, not for the few but for all.**

The three pathways stem from latest research on the effectiveness of anti-corruption, integrity, and open government initiatives. The understanding of strategies to combat corruption have evolved significantly over recent decades. Between 1990 and 2010, the emphasis was on technical solutions such as new legislation, regulations or monitoring systems. The tendency was to treat corruption as a series of isolated incidents and to neglect the underlying political and social phenomena that facilitated it. Over time, however, evidence mounted to suggest that narrow 'technocratic' interventions, while necessary, are insufficient on their own, and require systemic and more context specific strategies, such as those aimed at strengthening accountability and changing social norms.



The 'no reason' pathway looks at the mutual expectations and relationships that underpin corruption. Social norms can serve to support the functioning of corrupt networks. They can include cultural, religious, or even gender expectations on how corruption is rationalised. Practices of organisations and individuals are located within these broad social norms, which makes them difficult to identify and to change. The 'no reason' pathway seeks to influence social and institutional norms at all levels, to **weaken the rationalisation of wrongdoing, as well as strengthen the collective commitment to integrity**.

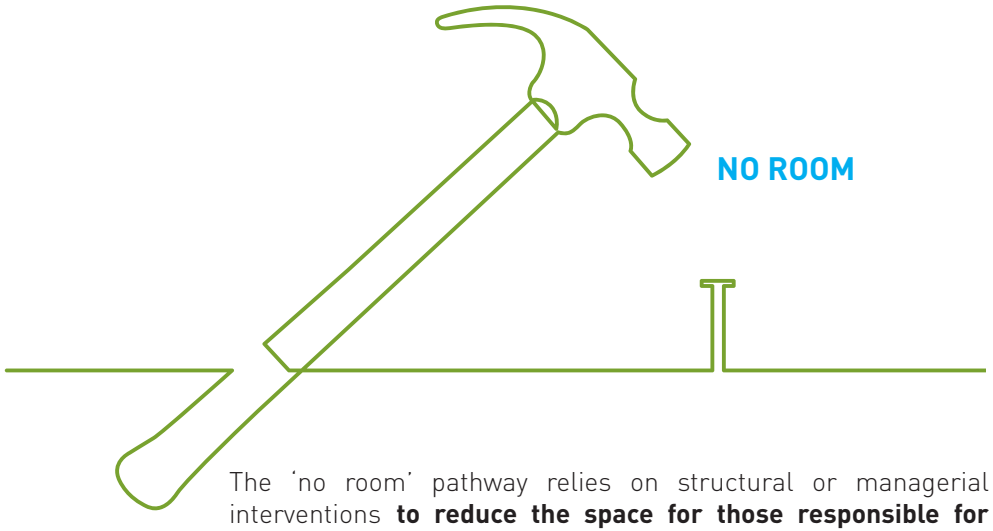
Changes **within organisations or specific sectors** provide an important starting point to surface and question the norms underlying and shaping behaviour and can be expected to gradually have a wider impact. Addressing norms can be driven through ethical leadership and the rewarding of behaviour demonstrating accountability and integrity; awareness campaigns emphasising the negative impact of corruption on communities and peers; training and capacity development for staff and leadership on social and institutional norms and how to address them; and multi-stakeholder partnerships requiring commitment to integrity.

Examples:

A well-known example of transformation at the organisational level that involved changing institutional norms is that of the Phnom Penh utility (PPWSA) in Cambodia, in the mid-1990s. The transformation began with new leadership driving anti-corruption and transparency measures, including awareness raising on the impact of corruption. Customer engagement was prioritised and a strong ethical culture was promoted, also by management directly. As a result, PPWSA increased billing collection, water availability and service coverage and it remains a widely cited example of good practice.

Integrity pacts and multi-stakeholder coalitions like the Maritime Anti-Corruption Network are examples of collective commitments to integrity that have influenced the behaviour of sector players.

More on 'No Reason' - Part 4.1



The 'no room' pathway relies on structural or managerial interventions **to reduce the space for those responsible for water and sanitation delivery to act corruptly**.

It may include taking steps toward **limiting the discretion of officials**, closing loopholes, and the adoption of digital tools. E-procurement or mobile phone bill payments, for example, have been shown to be of benefit. **Clear roles and responsibilities are the starting point** for reducing the opportunities for undue influence on decision-making. Additional elements of the 'no room' pathway include making the criteria and assumptions underpinning key decisions, such as tariff setting and subsidy allocations, publicly available.

Controls and oversight mechanisms limit the space for misconduct, reducing the scope for corruption in general while increasing the likelihood of detecting it. Both internal and external audits can play a critical role in strengthening the 'no room' pathway, as can strengthening avenues for **feedback and redress mechanisms.** Many water and sanitation service providers have had success by improving customer relations and focusing on communication to users, introducing ways to receive and track responses to complaints, and using technology to reduce risk during meter reading and bill payment.

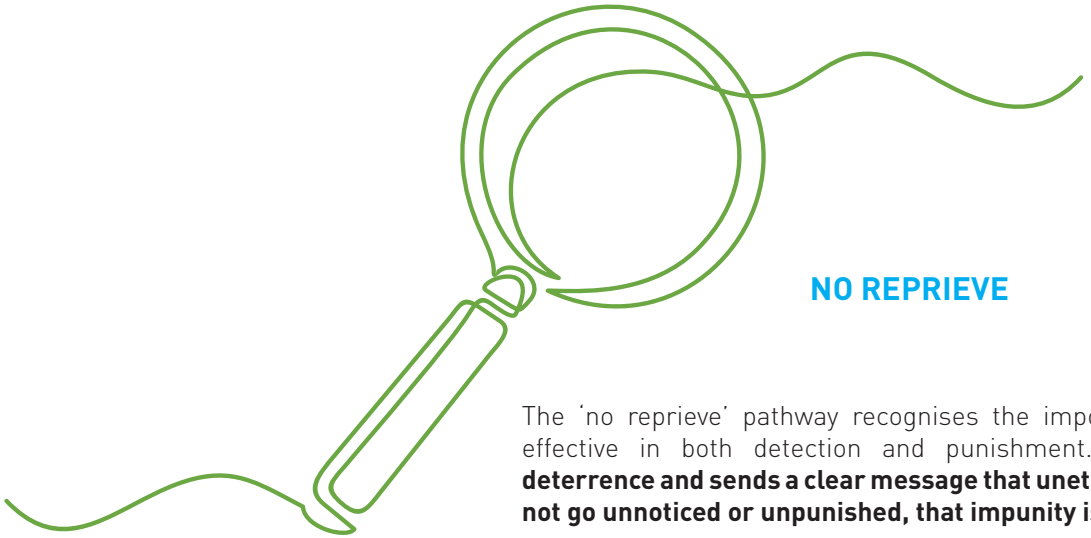
Civil society organisations play a key role in the 'no room' pathway, by demanding accountability from government and responsible water and sanitation providers. They can participate in—or create—avenues for public participation, for example through participatory local budgeting or budget monitoring,

Examples:

Regulators can play an important role in designing regulatory measures leaving 'no room'' for corruption or integrity failures. NWASCO in Zambia enforces guidelines for tariff setting that require public participation. It also has service level agreements with utilities to monitor performance, and reports on utility performance and corporate governance.

The Auditor General of South Africa used real-time audits of disaster relief funds disbursed in the KwaZulu-Natal and Eastern Cape Provinces to report on flood relief after disastrous climate-linked floods. It found inadequate controls of payment processes as well as missing protections against overpricing, financial loss, and fraud.

More on 'No Room' - Part 4.2



NO REPRIEVE

The 'no reprieve' pathway recognises the importance of being effective in both detection and punishment. It focuses **on deterrence and sends a clear message that unethical actions will not go unnoticed or unpunished, that impunity is not an option.**

The era of **big data offers opportunities** to analyse data related to, for example, investment decisions, procurement, billing and payroll, for the detection of red flags that might indicate corruption or other integrity failures. Expenditure tracking, and the strengthening of collaboration with Supreme Audit Institutions, are important elements of this pathway.

Whistleblowing is a major source of information on corruption and integrity breaches, and is critical to the no reprieve pathway, making **whistleblower protection mechanisms** critical for all water and sanitation organisations.

Examples:

The Independent Evaluation Unit of the Green Climate Fund, the world's largest dedicated climate fund managing USD 45 million of total assets, has been capitalising on innovations in the digital space by developing machine learning modules to assist in identifying integrity risks. It has developed an Integrity Due Diligence Platform (IDDP) which employs machine learning and natural language processing (NLP) to identify "red flags" from text extracted from project documents.

More on "No Reprieve' - Part 4.3

Taking Action

All actors have an important role in taking actions that combine the pathways—'no reason', 'no room', and 'no reprieve'—and in working together to improve integrity. That may mean working with new partners: cooperating and building linkages with anti-corruption agencies and mechanisms and Supreme Audit Institutions, working with allies across sectors and building relations with other types of stakeholders.

WIGO considers three broad action areas as the most relevant to enhancing financial integrity in the water and sanitation sectors and creating a culture of integrity:

- strengthening public financial management,
- promoting stakeholder engagement, civil society input and oversight, and social accountability, and
- influencing social norms.

Through these entry points, integrity champions across the globe can move forward in their own journeys, adapting them to the various contexts and challenges faced, and finding fruitful grounds for discussion and, above all, action. WIGO shares key recommendations (here and in more detail with actions per stakeholder group in Part 5) without being an exhaustive manual.

Strengthening Public Financial Management (PFM) in water and sanitation

Effective PFM is essential for a well-functioning administration, sustainable resource management, and service delivery, also in times of emergency. Above all, effective PFM requires more transparency (especially in high-processes like procurement), data tools and robust processes to swiftly detect corrupt practices, and strong multi-stakeholder oversight.

- **Ensure fairness in tariffs and subsidies**, with input from affected parties and safeguards against capture.
- **Introduce open contracting and e-procurement**, making sure to train stakeholder and make data useable.
- Publicly **blacklist corrupt contractors** and stop working with them.
- **Encourage and protect whistleblowers.**
- **Ensure financial transparency**, including on private and other external loan financing of infrastructure.
- **Use big data analytics** and build capacity for data collection and analysis.
- **Strengthen partnerships with Supreme Audit Institutions.**
- **Institute integrity safeguards for disaster management**, with clear standards and multiple monitoring mechanisms, like real-time auditing or citizen monitoring.

Enabling stakeholder engagement in water and sanitation

Stakeholder engagement in financial decision-making in water and sanitation is crucial for reducing corruption and improving integrity. This is especially the case for high-risk decisions, related to tariff setting, subsidy policies, and the long-term financial impacts of loans. Such engagement requires dedicated and inclusive avenues for participation and social accountability, alongside capacity building to make them effective.

- **Involve the public in financial decisions**, with attention to the most marginalised, and in particular for those decisions relating to budget allocation, repayable finance, tariff setting, and subsidies.
- **Promote integrity in the private sector**, assessing risks and requiring and monitoring compliance and management practices.
- **Empower civil society and media, strengthen social accountability** from local to national levels, enabling the analysis of budgeting, expenditure, financial management, and auditing, and the communication of results.

Promoting a culture of integrity for water and sanitation

Sector reforms can be undermined by social norms that privilege corruption. A culture of integrity can make the difference and can be built effectively within institutions, organisations and projects. This works through the promotion and rewarding of integrity, and by setting expectations for integrity and collaboration from all stakeholders, including private sector players and participants in multi-stakeholder initiatives. Careful assessments of risks that surface underlying norms can be an important first step.

- **Build multi-stakeholder platforms**, for better input to decision-making, to build momentum through collective action, and to strengthen oversight.
- **Influence social norms related to integrity**, analysing norms and highlighting their impact on peers, training for and rewarding integrity from all players, both formal and informal.

More examples of first steps individuals stakeholders can take – Part 5

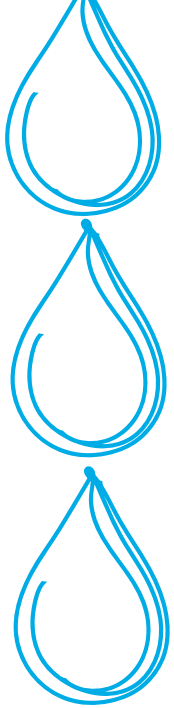
Conclusion

Addressing integrity failures in the financing of water and sanitation sectors is not merely a financial necessity but also a social imperative. The costs of inaction—manifesting as poor service delivery, inflated infrastructure costs, and compromised water quality—disproportionately affect marginalised communities and undermine broader development goals.

By fostering a culture of integrity, we can ensure that available funds are used effectively, projects are prioritised correctly, and services are delivered equitably and sustainably. This approach requires the commitment and cooperation of all stakeholders, from government agencies to civil society organisations and private sector partners, each playing a pivotal role in promoting transparency, accountability, and ethical practices.

The Water Integrity Global Outlook (WIGO) provides a comprehensive framework for tackling the integrity challenges in water and sanitation finance. Through the 'no reason', 'no room', and 'no reprieve' pathways, stakeholders can develop tailored strategies that address the root causes of corruption and integrity failures. By strengthening public financial management, encouraging civil society oversight, and shifting social norms, we can create resilient water and sanitation systems that serve everyone, especially those most in need.

Now is the time to act decisively and collaboratively to ensure that the right to water, sanitation, and a clean environment is realised for all.



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PART 1

Introduction

Two dams that were never built cost the Kenyan government at least KES 19.7 billion (USD 149.2 million) and the intended beneficiaries—half a million people—did not gain access to either electricity or water (Nyanchama, 2019). Allegations of corruption around the planning and financing of the Arror and Kimwarer dams resulted in President Kenyatta cancelling their construction in 2019.

Unpacking the financing arrangements and understanding exactly who did what is complex. Italian-registered firms CMC di Ravenna and Itinera (joint venture) won the bid to construct the dam. They undertook to borrow from private banks backed up by the Italian credit agency to finance, build, and operate the dams before handing them over to the Kerio Valley Development Authority. The Kenyan government was to borrow funds to cover the KES 63 billion (USD 480.9 million) cost of the dams. (Inman, 2023)

According to the former Director of Public Prosecutions, the money paid out was about 30% of total estimated project costs and was used for debt insurance, as well as advance payments to contractors before the project even began (Nyanchama, 2019). Paying these directly (not through the consolidated Central Bank account as required by law) provided easy scope for bribes and kickbacks (Guguyu, 2021; Inman, 2023).

This loss contributed to Kenyan debt. In the time between signing the contracts and their cancellation, Kenya's external debt rose from KES 4.1 trillion (USD 23.91 billion) to KES 5.6 trillion (USD 32.88 billion). Perhaps due to funds tied up with this case, Kenya has already defaulted on the first instalment of payments to Italian Bank Intesa San Paolo for the new dams contract (Guguyu, 2021). Debt servicing is now crippling—estimated at 57% of government revenues in 2022-2023. Edward Ouko, Kenya's former Auditor General, attributed half of Kenya's debt to corruption. "You are asking me a ballpark calculation? I think it is about 50%" (Inman, 2023).

The former Director of Public Prosecutions, Noordin Haji, called the incident around the two dams a "well-choreographed scheme" by top government officials in collusion with private institutions and individuals (Nyanchama, 2019). In Kenya's *Daily Nation*, experts set out 15 ways in which officials plotted to defraud dam funds (Gisesa, 2019). How the money was shared among the involved individuals and companies for supplying goods and services for the project was revealed by Citizen TV, which reported in detail how that KES 19.7 billion (USD 149.2 million) —and related costs that increase the estimate to KES 21 billion (USD 159.1 million)— was lost (Nyanchama, 2019).

Several officials and companies were charged with abuse of office, conspiracy to defraud, and misuse of public funds, including the Treasury Cabinet Secretary and the Italian CEO of CMC di Ravenna (Mwangi, 2023; Mpungu, 2019; Inman, 2023). In December 2023, charges against the Treasury Cabinet Secretary and eight others were dropped on the basis of insufficient evidence. The Kenyan Human Rights Commission, Transparency International, the Katiba Institute and the Africa Centre for Open Governance, are now trying to hold prosecutors to account for bungling the case. This further illustrates the vulnerability of big infrastructure projects to corruption, malfeasance and mismanagement, as well as the challenges of proving and prosecuting corruption.

What happened in Kenya is not an isolated event. **Widespread corruption in the water and sanitation sectors is costing vast sums of money and undermining efforts to secure water and sanitation for all.**

This Water Integrity Global Outlook (WIGO) explores such integrity breaches in water and sanitation finance, because they divert financial resources away from work that needs to be done. Effective finance is crucial to meeting the Sustainable Development Goal (SDG) for water and sanitation, the human rights to water and sanitation, and obligations under international and domestic law to provide water and sanitation services to all.

1.1 About the Water Integrity Global Outlook (WIGO) on Finance

Water and sanitation sector leaders within government, funding agencies, and civil society know that there is insufficient funding to achieve SDG6. The World Bank estimates that an annual investment of USD 131.4 billion to USD 140 billion is required to meet global water, sanitation, and hygiene (WASH) needs, three-times the current spending (Joseph et al., 2024).

The estimated annual spending gap between 2017 and 2030 to achieve these targets ranges from $131.4 billion to $140.8 billion, with a middle estimate of $138.0 billion ... . These figures represent between 0.45 percent and 0.48 percent of the 113 countries' overall GDP. On average, countries will need to increase annual spending to between 2.7 and 3.0 times the current level to bridge this spending gap to meet the SDG targets by 2030.

Joseph et al., 2024 - Funding a Water-Secure Future (World Bank Report)

Other water infrastructure investments are also underfunded. The World Bank estimates a USD 3.5 billion annual spending gap for irrigation, even with a low-spending scenario (Joseph et al., 2024). Earlier figures suggest the global investment need for the whole water and sanitation sectors, including irrigation and flood protection, is USD 0.9-1.5 trillion a year (UN-Water, 2021).

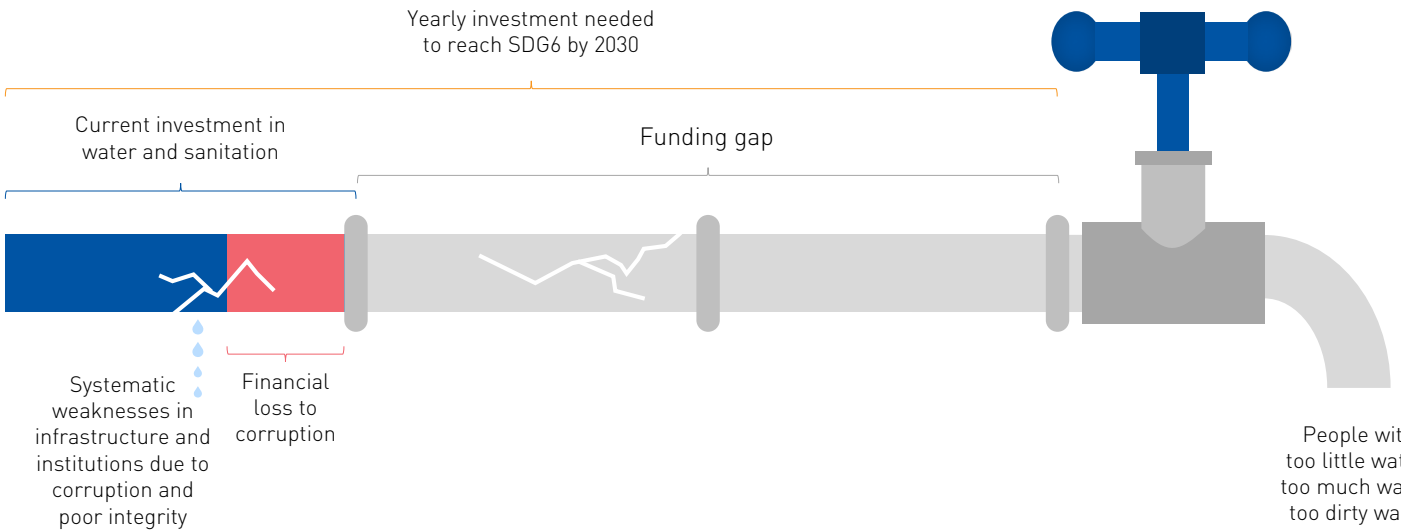
A significant proportion of water and sanitation costs are covered through **taxes** and users paying water **tariffs**, with additional funding from donor agencies providing grants (**transfers**). In the absence of government funding, households generally pay for their own water supply (**self-supply**) (GLAAS, 2022). In some cases, self-supply is also how industrial and agricultural water users access water. Self-supply is sometimes financed through private debt including micro-loans at the household level. For sanitation, self-supply is also relatively common. For example, the community-led total sanitation approach adopted by governments and international development agencies, pushes for households in a village to end open defecation and build their own toilet (Galvin, 2015).

Still few countries have sufficient resources to achieve SDG6. Governments are increasingly seeking finance through different types of repayable loans and innovative financing mechanisms, including blended finance and commercial financing.

Corruption and integrity failures contribute significantly to the overall finance shortfall and must be addressed. According to WIN/IDB, corruption in the water sector could amount up to 26% of money invested (Adam et al, 2020). More broadly, the IMF estimated that 30-50% of general infrastructure costs (not just water and sanitation infrastructure) are lost due to poor infrastructure management, including corruption (Schwartz et al, 2020).

But it is not just about the money. **Integrity failures in the water and sanitation sectors can have devastating social, economic and environmental impacts and hamper progress towards economic and environmental sustainability goals.** Apart from impacts on human health and well-being from lack of clean water and safely managed sanitation, integrity failures erode public trust, undermine social compacts, have a devastating impact on participatory and inclusive democracy, and result in increasing marginalisation of already marginalised groups.

FIGURE 2: Losses to corruption in water and sanitation



WIGO provides an overview of integrity issues and opportunities in water and sanitation finance, recognising that different regions face different challenges. It is not an exhaustive study but is meant rather as a prompt for dialogue, action, and further research. The report seeks to equip 'integrity champions' with practical ideas on how to assess and enhance financial integrity in the water and sanitation sectors. Integrity champions may be policymakers, senior managers in utilities or regulators, water and sanitation professionals, social activists, concerned citizens or others.

WIGO supports integrity in water and sanitation sector finance by:

- building understanding of the problem;
- highlighting major integrity risks;
- considering different approaches to tackling integrity risks; and
- providing recommendations for different actors to improve integrity.

In addition to this report, WIGO Latin America documents and analyses case studies from Brazil, Ecuador and Peru that exemplify many of the issues raised.

PART 1 introduces 'the basics' of water and sanitation finance, corruption, and integrity.

PART 2 describes global trends shaping the context and highlights some key learnings in the evolution of anti-corruption responses.

PART 3 considers the integrity risks in water and sanitation finance.

PARTS 4 and **PART 5** identify pathways for action and provide recommendations for taking action.

1.2 Defining Terms and Concepts

1.2.1 Finance

In this report, we use the term finance to mean all money obtained and used to deliver water and sanitation services and infrastructure.

There are three primary sources of finance in the water and sanitation sectors: **tariffs, taxes and transfers** (often called the 3 Ts). Tariffs are levied by water and sanitation providers on end users and are directly related to the delivery of the service. Taxes are levied by government and allocated to sectors by national or sub-national budgeting processes. Transfers cover grants and donations, whether from international organisations, the private sector or philanthropic individuals, or transfers from national government to subnational governments.

Public finance refers to the financial activities of government entities at different levels, whether international, national or sub-national, and their various means to finance expenditure in the water and sanitation sectors. It deals with how government raises or collects funds and how the funds are allocated and used. It covers budgeting, subsidies, tariff setting and collection of payments from end users. When households build and operate their own systems or pay for goods from private suppliers directly, this is called '**self-supply'**. In the past, this was poorly factored into finance discussions. Now there are attempts to include it into the general heading of tariffs, as it is a payment made by users—just not to government.

Repayable finance is not strictly speaking an additional source of income since it must be paid back, with interest—except in the very limited case of interest-free loans.

1.2.2 Corruption and integrity in water and sanitation

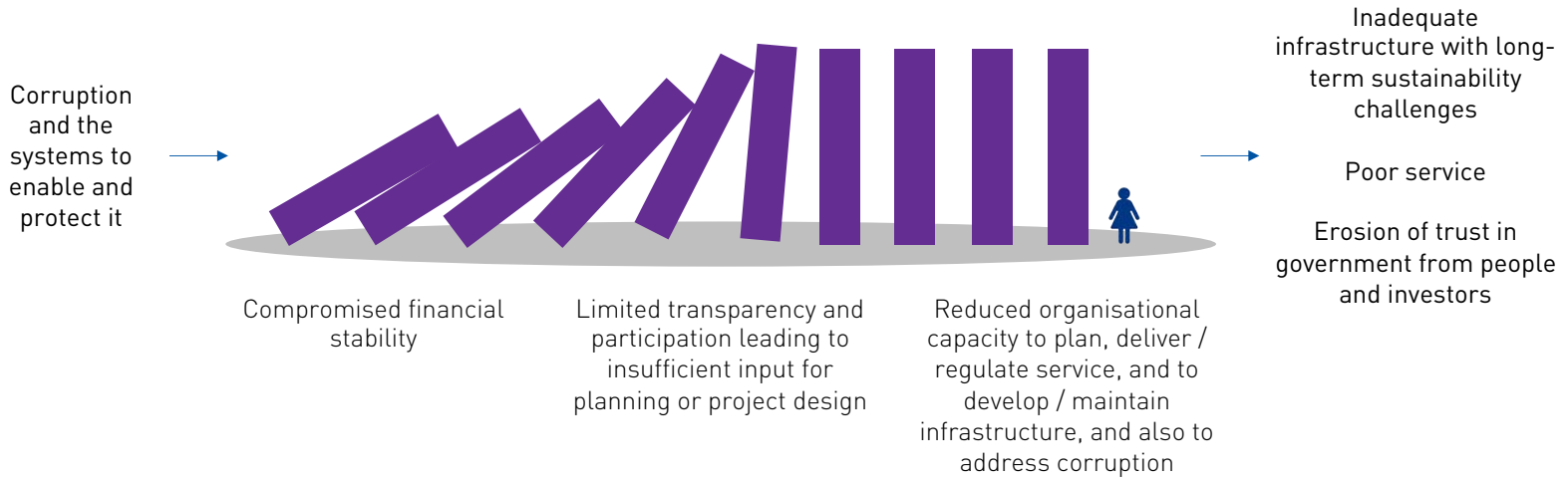
Transparency International defines **corruption** as the abuse of entrusted power for private gain. Private gain can include direct financial benefits or benefits to, for example, those with political power. Corruption takes place from the highest level to the lowest levels in organisations, whether in the public or the private sectors. By diverting resources and enabling systems to protect itself, corruption undermines water and sanitation institutions and goals (Figure 2).

Integrity in the water and sanitation sectors is the honest and fair use of vested powers and resources, for sustainable and equitable management of water resources and delivery of water and sanitation services. Integrity is supported by the principles of transparency, accountability and participation, adherence to anti-corruption measures, and compliance with human rights obligations and responsibilities (WIGO, 2021).

Acting with integrity goes beyond preventing corruption. It includes ensuring that water and sanitation are accessible to everyone, particularly the poor and the marginalised, in line with human right obligations. It requires that public officials pursue the purpose of their institution with deep commitment and report known wrongdoing. Integrity is part of the administrative justice laws and public service standards of many countries.

Corruption is often split into grand corruption (which includes state capture) and petty corruption. The reality, however, is that corruption and integrity failures occur along a continuum from 'petty' to 'grand' and no clear line can be drawn between the two.

FIGURE 3: How corrupt actors undermine water and sanitation institutions and goals: the downward spiral of corruption



At one end of the continuum, **grand corruption** can be defined as "politicians, senior officials or major companies [who] acquire public resources with the principal objective of maintaining or enhancing their power, wealth or status" (Evidence on Demand, 2013). Often involving senior officials and considerable sums of money, it can distort an entire sector. A single act of corruption can lead to significant financial spoils from the early stages of a project, for example during investment planning, project identification, project preparation and procurement. High-value uneconomical projects can be selected to allow for kickbacks and political patronage, project designs can be sought to favour particular firms, or, more directly, kickbacks can be given for contract awards (Evidence on Demand, 2013). Or officials might set up public-private partnership (PPP) arrangements with no assessment of value-for-money in order to ensure personal benefit from the arrangements.

An extreme form of grand corruption is **state capture**, where individuals or groups with significant financial resources or political power exert undue influence over state institutions, policies, regulations and decision-making processes (Pincus and Winters, 2002). This can involve bribery, extortion, or other illicit means of gaining access to and control over government institutions and officials. State capture is characterised by the subversion of state power and the manipulation of state institutions and resources for private gain, at the expense of the public interest. Corrupt leaders create the space to do this within

BOX 1: State capture and the water sector in South Africa

In South Africa, the details of state capture in the Giyani water project were revealed in the detailed findings of the Commission on State Capture, generally referred to as the 'Zondo Commission'. The project was intended to provide water to the town of Giyani and surrounding villages in Limpopo province, initially as an emergency response to the 2009 drought. Over the course of the project, costs ballooned from an initial ZAR 90 million (USD 4.5 million) to ZAR 2 billion (USD 100 million) and then to ZAR 4 billion (USD 200 million).

Not only were contracts for the initial pipeline work awarded irregularly and cancelled by court order, but new contractors—including a firm called LTE Consulting—were appointed non-competitively by the Minister of Water and Sanitation in contravention of a court directive. Costs spiralled yet further as additional works were undertaken by Lepelle Northern Water and other entities appointed by the Minister, despite lack of proper budgeting, planning or funded operational plans. Numerous allegations of tender irregularities and overpricing surfaced, typically linked to contractors who had political connections to the minister at the time (WIN and Corruption Watch, 2020). Despite billions of rands having been 'spent', by 2022 the villages still had no access to clean water.

An investigation by the Special Investigating Unit (SIU)—an independent statutory body established to investigate serious malpractice, maladministration, and corruption in the public sector—found significant irregular and unlawful payments. In 2022, the SIU initiated civil litigation against the former general manager of operations at Lepelle Water. He was dismissed in December 2022 for allegedly tampering with meeting resolutions and using incorrect cost estimates to motivate the appointment of LTE Consulting to the project. The SIU's investigation found the former general manager's conduct inconsistent with supply chain management rules, amounting to gross dishonesty and state financial losses (Moichela, 2021).

government departments by removing qualified staff, centralising power, and removing regulatory functions (Galvin and Roux, 2019). State capture results in a distortion of policymaking processes, the weakening of democratic institutions, and the erosion of public trust in government. It can take many forms and can occur over different timeframes. It undermines the ability of the state to act in the interests of the public and leads to widespread corruption and abuse of power.

At the other end of the continuum, **petty corruption** is relatively common in the water and sanitation sectors. It may include bribes being paid by consumers to public officials (sometimes on demand by the official) to install water connections, change meter readings, supply water, or speed up administrative or legal procedures in a water utility.

Evidence on Demand (2013) estimates that "20-35% of expenditure in the water and sanitation sector for service delivery in South Asia is on corrupt payments. This includes payments to expedite applications for new connections, for quick attention to water supply and sewer repair work, the falsification of water bills, and the provision of, or to ignore, illegal service connections". These apparently small amounts may make up a sizeable portion of the income of poor households, meaning that petty corruption

strongly affects people living in poverty. Cumulatively, these small individual amounts have significant financial impact and can undermine the financial sustainability of service providers and their ability to deliver services.

Petty corruption generally happens in a context of wider corruption, whether at the organisational, sectoral, national, or even international level. In such contexts, petty corruption can come to be seen as just the normal way of doing business.

One particularly nefarious form of petty corruption is that of **sexual extortion or 'sextortion'**, a gendered form of corruption in which sexual acts, rather than money, are the currency of a bribe. This act affects mainly women, who are asked to pay for water with their bodies. In 2020, KEWASNET and ANEW conducted research in Kibera and Embakasi South, in Nairobi, and found that one in five survey respondents had witnessed sextortion at a WASH facility (KEWASNET, ANEW 2020). In 2022, WIN, UNU-MERIT, Change Initiative and DORP, set out to examine the incidence and risk factors associated with sextortion in accessing WASH services by women in four regions of Bangladesh: two rural, water-stressed areas and two 'slum' areas in the capital, Dhaka. Findings from the research show that about 15% of the women surveyed had experienced sexual and gender-based violence (SGBV) when accessing water, toilets, or bathing facilities. About one-third of these cases constituted sextortion (Merkle Et al., 2023). Impacts of sextortion can include issues of shame, sexually transmitted diseases, unwanted pregnancies and stigmatisation at the household or community level. Sextortion is poorly addressed in the anti-corruption legislation of most countries, and seldom recognised or addressed at the utility level.

1.2.3 Water and sanitation sector vulnerabilities to corruption

The water and sanitation sectors are extremely vulnerable to corruption due to a combination of factors: **fragmented and complex institutional arrangements; natural monopolies; high infrastructure capital, maintenance and refurbishment costs; a large share of informal service provision, and increasing challenges due to climate change.**

The infrastructure sector is widely recognised as being one of the most corruption-prone and water and sanitation rely heavily on infrastructure, including large dams, hydropower projects, massive pipelines and transfer schemes, wastewater treatment works, water treatment works, reticulation systems, sewage treatment works and desalination plants. According to the UN-Water's (2021) report on 'valuing water', by 2030, an estimated USD 0.9–1.5 trillion will need to be invested annually in water and sanitation infrastructure. About 70% of this investment should be in the global South, particularly in rapidly growing urban areas. In economically developed countries, investments should be focused on refurbishment and upgrading.

Integrity challenges are as much a feature of the water and sanitation sectors as of any other large sectors. This is true whether one is concerned with outright corruption or with greyer issues of 'undue influence' (e.g. biased decisions around where limited financial resources are spent). Regardless of whether flagrant or obscured, lack of integrity in the water and sanitation sectors can have large and diverse impacts on individuals, society, the economy and the environment.

PART 2

Global Trends

Water and sanitation finance challenges are located within a rapidly changing global context. This section highlights major trends that are expected to impact on water and sanitation finance and integrity in the coming years: climate change (**section 2.1**), digital developments (**section 2.2**), and closing civic spaces (**section 2.3**). While digital technologies offer new opportunities for intervention against corruption, climate change and the closing of civic spaces may render some existing approaches less effective.

These developments are then examined in light of broader developments in anti-corruption work (**section 2.4**). There is a need for interventions that target the underlying drivers of corruption while acknowledging global power shifts and inequalities. A sector level approach can be particularly effective and practical, as it can build on insider knowledge and commitment, and importantly, lead to measurable impact on service delivery.

2.1 Climate Change and Climate Finance

"Climate change and corruption share many symptoms. They hit the poorest first and worst. They are caused by powerful individuals or entities seeking short term gain. In the long term, they put livelihoods at risk and threaten entire economies. They thrive on the flaws of national governments: you need strong global cooperation to stop them."

(Vania Montalvo, Transparencia Mexicana in Corruption Watch, 2015)

2.1.1 New costs

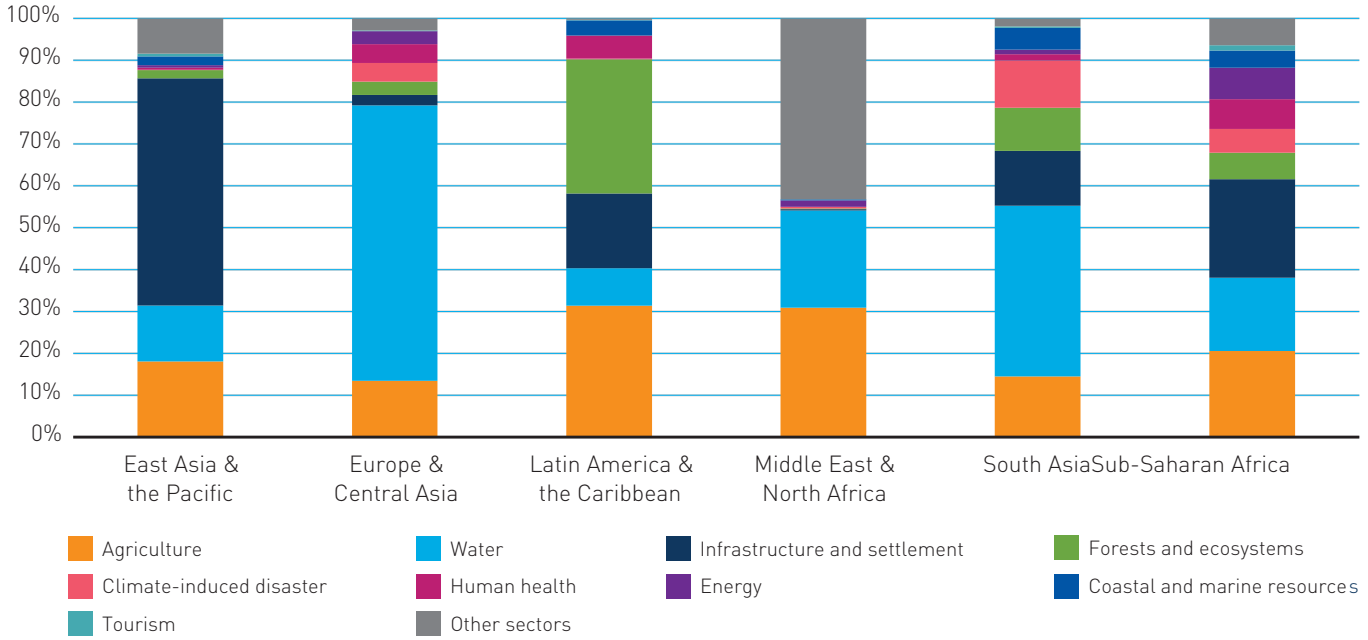
Climate change is already having a range of inter-related effects on water: increasing the frequency and extreme nature of weather events (floods and droughts), changing rainfall patterns, increasing temperatures and deteriorating water quality. These have a significant impact on water resources and water and sanitation infrastructure. They have severe repercussions on water availability, quality, and distribution.

And, **adapting to these changes costs money.** Figure 3 shows the significant proportion of funding that is required, by region, for water-related adaptation.

Overall water-related climate finance averaged around only 3% of total climate finance between 2016 and 2020 (Mason, 2022). Most of this funding is provided in the form of loans rather than grants, further adding to the debt burden of developing countries (Rahman and Verhagen, 2023). This said, access to climate finance offers an important opportunity for the water and sanitation sectors to improve the resilience and reach of services.

Of total climate finance, the water sector does receive a large share of climate adaptation finance. However, **climate adaptation finance for water is under threat** (Mason, 2022). Overall public and multilateral climate adaptation finance flows to developing countries declined by 15% in 2021 (UNEP, 2023). In addition,

FIGURE 4: Sectoral distribution of adaptation finance needs by world regions, presented as a percentage of total finance needs for the respective region (UNEP, 2023)



the proportion of adaptation finance earmarked for water has decreased: 56% of total adaptation finance was for water in 2013 and 2014, but that fell to 39% in 2020.

One of the major implications of climate change is increasing water scarcity. As available water resources dwindle, local competition among multiple water users necessitates new approaches to water management. At the same time, water demand is rising, due in part to population growth, rising incomes, and consumer demand for products (that may require much water in their sourcing and manufacturing). Responses typically aim to mitigate the impacts of scarcity and ensure a more sustainable and resilient water future, by for example increasing water storage, introducing more water-efficient practices, diversifying water sources, and developing or changing to more climate-resilient crops. There are also emergency responses, such as rapid construction of desalination plants or emergency pipelines.

Within the water and sanitation sectors, efforts are being made to become more resilient in the face of climate shocks. There is increasing interest from utilities and municipalities in green infrastructure and nature-based solutions, partly because such approaches are seen to be more adaptive than traditional 'grey infrastructure' and can cope better with uncertainty (as well as too much or too little rain runoff). 'Green projects' differ from traditional ones in their more decentralised, cross-sectoral nature. They often use financial models that blend public, private, and philanthropic funds, which means the integrity safeguards designed for more traditional projects may no longer be appropriate. For example, the Mangrove Breakthrough Project has developed a financial roadmap which aims to harness private, philanthropic and public finance to protect mangrove forests that not only sequester carbon, but also protect coastlines from erosion. (Ring et al, n.d.)

While existing climate finance aims to strengthen resilience and support adaptation, particularly in the developing world, it is clear that developing countries are experiencing devastating impacts from climate change already—and that this will continue. Populations least responsible for climate change are the ones that are most acutely affected, and are largely those with the fewest resources to respond. Following years of negotiations, the **Loss and Damage** Fund was recently established to respond to the negative consequences that arise from the unavoidable risks of climate change. Yet the pledges from wealthy countries reached only USD 700 million by late 2023, in contrast to an estimated USD 100-580 billion needed annually to cover the cost of climate change related damage. (Lakhani, 2023)

2.1.2 New risks

There are significant integrity challenges in the field of climate finance, from the highest level to implementation on the ground. The challenges are heightened by the need for speed in the global response to climate change (which may lead to shortcuts on oversight), the relative newness and complexity of financial mechanisms (from international climate funds to climate bonds and impact investing), and the difficulty of tracking climate finance across levels. When climate finance goes to countries with high levels of corruption, the capacity and desire to address integrity risks in the fragmented and complex world of climate finance is also often weak.

Photo: Sourav Karmakar - WIN photo competition 2021 - Disrupted water supply, Mathura, India.

At international level, donor countries are using 'dishonest and misleading accounting to inflate their climate finance contributions', according to Oxfam (Oxfam, 2022). Oxfam's analysis suggests that the real value of climate finance provided by rich countries is USD 21-24.5 billion rather than the USD 68.3 billion claimed. This is because of renaming development aid as climate finance, ignoring the repayment requirements on loans, and misreporting the climate focus of funded projects.

"Our global climate finance is a broken train: drastically flawed and putting us at risk of reaching a catastrophic destination. There are too many loans indebting poor countries that are already struggling to cope with climatic shocks. There is too much dishonest and shady reporting. The result is the most vulnerable countries remaining ill-prepared to face the wrath of the climate crisis."

(Nafkote Dabi, International Climate Policy Lead, Oxfam, 2022)

Whether at the national or local level, an influx of new finance from a range of sources has implications for its effective management and for the reduction of the risks of corruption and integrity failures. This is in addition to the general corruption and integrity risks present across all water and sanitation programmes. International climate finance is often disbursed to national government and then further disbursed to sub-national actors, making corruption risk management difficult.

The **tracking of climate finance is important to ensure accountability for its use, but it is generally weak**. The complex sources of climate finance (multilateral, bilateral, national, public or private) make it difficult to monitor where finance is coming from, who is making decisions on the use of the funding, who is benefitting and how effectively the funds are being used. Various **approaches to tracking climate finance have been developed however, such as by the Climate Policy Initiative** (CPI, n.d.).

Integrity and corruption risks occur across the project management cycle for climate mitigation and adaptation projects. In decision-making around the allocation of finance or the selection of climate finance projects, bribery, nepotism, and clientelism can result in the needs of specific interest groups being prioritised. Project implementation is subject to the same range of corruption and integrity risks as any other major project.

As it stands, **most safeguards around international climate funding are imposed at the 'project selection' phase. This is not sufficient.** Once the funding arrives 'in-country', the funding bodies tend to defer to existing sector structures and oversight mechanisms that may be weak and prone to corruption. In Bangladesh, for example, government and international development partners committed billions of dollars towards infrastructure to reduce the impacts of storms and flooding that have been made worse by climate change. Unfortunately, Bangladesh is not only extremely vulnerable to climate change, but is also considered a highly corrupt country. In 2023 it ranked 149 out of 180 countries in Transparency International's Corruption Perception Index, a new low for the country. Estimates are that around 35% of climate adaptation project funds were embezzled and in the region of 80% of the projects were poorly constructed. (Khan et al, 2020)

The need for post-disaster funding to replace or repair damaged water and sanitation infrastructure is likely to rise significantly

as the impacts of climate change deepen. Given that integrity is particularly challenged in the aftermath of disasters—with the need for fast-paced decision-making, high-pressure situations, strained human resources, and relaxed procurement controls—enhanced oversight and improved 'disaster governance' will be critical to minimise corruption and ensure the transparent, equitable, and efficient allocation of resources.

2.2 Harnessing Digital Developments

2.2.1 Big data

New developments in the digital space present both opportunities and risks for corruption in water and sanitation finance. **Big data and artificial intelligence offer opportunities to improve service delivery, to identify corruption risks and to enhance transparency and accountability** (UNDP, 2021). Governments, investors and anti-corruption agencies are increasingly using advanced data analytics tools and techniques to detect patterns and anomalies that may indicate corrupt or fraudulent activities, such as bid rigging or embezzlement. The Green Climate Fund, for example, is capitalising on artificial intelligence and machine learning systems to identify integrity risks in the projects they fund. However, new technologies can open doors for new corrupt practices. Moreover, harnessing digital developments for integrity will only be possible, if countries, utilities or civil society develop the technical capacity to use the tools effectively.

The water and sanitation sectors, like many others, are now awash with data, from sensor networks monitoring water quality to databases tracking financial transactions. Big data analysis can be used to track suspicious procurement practices and irregular water usage, while satellite data can track groundwater levels or levels of certain pollutants in surface water bodies. This data can reveal not only direct illegal activity (e.g. dumping chemicals in a lake) but also underlying patterns of clientelism and potential corruption. Predictive modelling techniques can also be used to analyse large datasets and identify areas that may be at higher risk of corruption or fraud.

For example, the Indonesian government has developed a **corruption risk mapping system that uses big data analytics** to identify areas that are at higher risk of corruption. The system combines data from various sources to highlight areas of concern and help the government anti-corruption agency to target anti-corruption efforts more effectively (UNODC, 2021; OCP, 2022).

WIN, in collaboration with the Government Transparency Institute, has developed a **Water and Sanitation Sector Integrity Risk Index** (WIRI), which uses big data analytics to measure corruption and integrity risk in the water and sanitation sectors at the city level. It has been piloted in several cities with open data on procurement and for larger cities in Kenya, Bangladesh, and Peru. The Index can detect changes in integrity risk levels between cities and over time and provides insight on which areas of risk may be more problematic.

In collaboration with the Infrastructure Transparency Initiative (CoST) and supported by the Inter-American Development Bank, WIN has also developed a **Framework for Integrity in Infrastructure Planning (FIIP).** FIIP is a set of indicators and data standards for integrity, focused on the early phases of water services infrastructure projects (strategic planning, screening and appraisal including feasibility studies, and budgeting and approval). It evaluates seven risk areas including undue influence in decision-making, misaligned priorities, and manipulated budget processes. It has been piloted in Latin America where it helped highlight possible areas of improvement for procuring entities related to feasibility studies, use and correlation of data on service levels to aid decision-making, and compliance with procedures (WIN et al, 2023).

Fully harnessing big data and predictive analytics remains challenging, however, for a number of reasons.

- Firstly, **data quality and completeness** directly affect the accuracy of analysis. Whilst rich countries may have fast internet and be able to afford the cost of collecting and using data sensors, these pose challenges in developing countries, especially outside large urban centres. There are also challenges in standardisation and interoperability, and in accessing information on how the data is collected and used (WIN, 2022).
- Secondly, **data privacy and protection** are significant concerns. Developing robust data protection frameworks and ensuring compliance can be a challenge in countries where such regulations are not yet in place or are not rigorously enforced.
- Thirdly, the **lack of technical capacity** can also be a barrier. Using these technologies requires a certain level of expertise in data analysis and machine learning, which might not be readily available in some countries. Users also need to be empowered to demand and use information, and to have the technology and skills to use emerging technologies. When applying tools and digital platforms it is important to understand the motivations, capabilities and incentives of users, as well as to consider who might be excluded by the technology being used. Capacity building can help, both in terms of technical training and understanding how to use the data effectively for decision-making, but other barriers may interfere.
- Finally, **algorithmic bias** is also a significant concern. For example, in 2016, Australia introduced a "robodebt scheme" which used a data-matching algorithm to identify overpayments that had been made to welfare recipients. Nearly half a million incorrect debt notices were sent to welfare recipients, leading to a major scandal and a Royal Commission to investigate the matter.

Increasingly, governments are introducing frameworks for accountability in the development and use of AI systems, covering aspects such as data quality, quantity and representativeness; governance, including transparency and accountability; monitoring to ensure reliability and relevance over time; and performance and results (OECD, 2023).

Despite the challenges, the potential benefits of big data and analytics for improving integrity in water and sanitation finance and governance are considerable. As technology and data literacy continue to improve, the ability for developing countries to

BOX 2: Learning from big data use in the forestry sector

The Targeting Natural Resource Corruption (TNRC) project—which includes WWF, U4 and USAID amongst its partners—used big data analytics in seven country pilot projects (Ecuador, Colombia, Madagascar, Mexico, Kenya, Nepal, and Vietnam) to identify corruption risks in the forestry sector.

Using advanced software tools for data collection and analysis, coupled with regional knowledge and expertise, TNRC identified potential conflicts of interest involving politically exposed persons in the timber sector.

Lessons from this project could inspire those in the water sector. By harnessing large datasets like procurement transactions, water abstraction licenses, and environmental changes, those responsible for water management can detect anomalies indicative of corruption, as well as more generally enhancing transparency and optimising efficiency. (WWF, 2021)

leverage these tools will increase. With the right infrastructure, regulations, and training, these technologies can play a significant role in enhancing transparency, accountability, and integrity in the water and sanitation sectors.

2.2.2 Universal digital access

Rapid expansion of digital connectivity, principally through mobile technology, is altering the landscape of the water and sanitation sectors. The penetration of mobile technology even in some remote and rural areas is introducing transformative change that directly influences water, sanitation, finance, and integrity. Yet challenges remain in ensuring truly universal access. Existing inequalities could worsen if not managed carefully.

Firstly, the proliferation of mobile technology is rapidly bringing about **financial inclusion and access to services,** such as insurance. In Africa, mobile money platforms like M-Pesa have brought banking services to millions of previously unbanked individuals, allowing them to make payments, including of water bills, without the need for intermediaries. This greatly reduces the potential for petty corruption, as it eliminates opportunities for bribery or mishandling of funds. (Harford, 2017; Faster Capital, 2024)

Secondly, **digital transactions leave a trail**, making it harder for illicit activities to go unnoticed. As such, digital payments have an impact not just for cash collection. They feed into digital systems that can further transparency around revenue collection, which can be critical in enhancing financial sustainability and integrity in the water sector.

Thirdly, the digital revolution has transformed the average citizen into a potential watchdog. Whether reporting a broken water pipe or flagging a suspicious transaction, mobile connectivity enables **real-time, grassroots oversight of public services and financial transactions**. This can be a potent tool for combating corruption and enhancing integrity.

Lastly, widespread digital access allows for **better distribution of crucial information**, whether about water conservation, health and hygiene, financial literacy, or the adverse impacts of corruption. This education and awareness building can reinforce the positive impacts of the digital revolution.

However, digital technologies are not without challenges. In repressive contexts and where civic space is being closed down, digital technology can be used for surveillance and control. While digital access is increasing rapidly, it is not yet available in many rural or impoverished areas of developing countries nor is it equally accessible to poor women and other marginalised groups. Women in low- and middle-income countries are 19% less likely than men to access the internet on mobile phones—around 310 million fewer women than men (GSMA, 2023). Where the benefits of digital transformation are skewed towards urban, wealthier populations, this can exacerbate existing inequalities. Even if individuals have access to digital technologies, they may not have the skills or knowledge to use them effectively.

2.3 Closing of Civic Space

Civic space is the environment that allows civil society, as individuals, organisations or communities, to play an active role in the political, economic and social life of society. It allows people to contribute to the policymaking and policy implementation that affect their lives. It includes such aspects as access to information, the space to engage in dialogue within civil society and with government, the right to express dissent or disagreement, and the right to come together to express their views (OHCHR, n.d). It is an important element of an accountable, democratic society. Yet it is increasingly at risk. Researchers have noted a "**worldwide regression in civic space**" that accompanies a gamut of anti-liberal practices (Joshi, 2020). These range from restrictions on media freedom to targeted attacks on opposition groups, alongside a rise in narratives that challenge democratic norms,

and an emboldened global stance by authoritarian regimes (Brechenmacher and Carothers, 2019).

CIVICUS, a global alliance dedicated to strengthening citizen action and civil society around the world, notes a rapid decline in open civil space. It reported an increase in the percentage of the global population living in countries with closed civic space—where fundamental rights such as freedom of expression, association and gathering are severely restricted—from 26% in 2018 to 30.6% in 2023. Further, only 2% of the world's population enjoyed the freedom to associate, demonstrate and express dissent without significant constraints (CIVICUS, 2023).

This contraction of civic space considerably hampers civil society's role as an oversight entity. It undermines the capacity of citizen groups, NGOs, journalists, and individual activists to hold government and the private sector to account. It leads to whistleblowers, investigative journalists and environmental rights defenders being at best discouraged, at worst threatened or assassinated. At least 177 environmental leaders were killed in 2022 (Global Witness, 2023).

The contraction of civic space not only limits the exposure of corrupt practices, but also lessens the pressure on those "with wilful intent to steal from the public purse" (Isilow, 2021). This dual challenge—of both revealing and addressing corruption—underscores the importance of **safeguarding civic space as a fundamental prerequisite for integrity and the reduction of corruption**. If dissent is suppressed and public discourse is manipulated, corrupt practices can become normalised, and efforts to promote integrity could be stigmatised or marginalised. Any closure of civic space can fuel a culture of fear and silence, where malpractice becomes the norm, and speaking out is risky.

2.4 The Evolution of Anti-corruption Approaches

2.4.1 From technical solutions and sanctions to system thinking

The history of anti-corruption efforts has useful lessons for actors seeking positive change and can reveal blind spots in current approaches.

"Most anti-corruption initiatives fail ... because of ... too great a mismatch between the expectations built into their design as compared to on-the-ground realities in the context of their deployment ... it is the politics of the situation that determine the drivers to anti-corruption success."
(Heeks, 2011)

Over the past several decades, the understanding of corruption and anti-corruption strategies have evolved significantly. The **emphasis of early anti-corruption initiatives was on technical solutions such as legislation, regulation, or monitoring systems**, alongside penalties for and sanctioning of wrongdoers. The tendency was to treat corruption as a series of isolated incidents rather than a systemic issue. Over time, however, evidence suggested that these 'technocratic' interventions, while necessary, are insufficient on their own, particularly where corruption is widespread. Anti-corruption specialists such as Bo

Rothstein argued that: "because corruption is itself a symptom of fundamental governance failure, the higher the incidence of corruption, the less an anticorruption strategy should include tactics that are narrowly targeted at corrupt behaviour and the more it should focus on the broad underlying features of the governance environment." (IMF, 2004).

The anti-corruption sector then **moved to a good governance focus on institutional controls** driven, inter-alia, by wealthy western countries and actors such as the World Bank. There were also positive developments in relation to international conventions, acknowledgement of the challenges by organisations such as multilateral banks, and the creation of civil society anti-corruption networks such as Transparency International and WIN. While the good governance framing brought an important shift, there was a tendency to apply it as a one-size-fits-all approach and it soon became evident that more attention needed to be paid to the wider societal and political context. Countries could comply with good governance expectations and still find corruption to be rife.

"The lack of effectiveness of conventional anti-corruption interventions is ... reflected in the implementation gap, whereby countries that have committed themselves to legal and organizational reforms as well as the implementation of anti-corruption best practices continue to experience very high levels of corruption."
(Camargo and Passas, 2017)

This drew the attention to the **importance of the country context** in formulating anti-corruption approaches, with differentiated anti-corruption approaches. Differentiated anti-corruption approaches are needed in response to corruption risk dynamics resulting from political and economic opportunities, state and society capacity, and economic institutions. Development scholars focused on the need for inclusive and accountable political orders, in which access to valuable resources and state institutions are not limited to elite groups (Acemoglu and Robinson, 2007). In many developing countries, where corruption is closely entwined with how the state functions, it is important to prioritise consistent law enforcement, legal rights and basic civil liberties, and to enhance pluralism by bringing more voices into the arena. Reforms for open and competitive economic and political arenas and robust civic spaces are important to build and preserve an environment of integrity. It is also important to ensure that anti-corruption rhetoric and institutions are not selectively deployed by oppressive regimes to target dissent and consolidate political power.


Photo: Sagar J. Gondaliya, WIN photo competition 2017

More recently, building on both focused interventions as well as a good governance approach, there was a significant shift towards **viewing corruption as a system**, deeply embedded within social, cultural, economic, and political contexts and structures. This approach, or systems thinking, looks at the underlying drivers and conditions that sustain corruption in a specific context (Søreide, 2014).It sees corruption as the result of a complex social phenomenon in which individuals may conform to corrupt norms particularly when perceiving that others in their group or society are engaging in the same behaviours. **This contrasts with a focus on individual wrongdoers, inadequately enforced regulations or even weak institutions, which all fail to address the underlying causes of corruption.** Corruption is often deeply ingrained and perpetuated by social norms, power imbalances, and weak institutions. Systems thinking considers the interconnectedness of these factors and seeks to tackle problems holistically, rather than in isolation. Engaging with corruption as part of a system can lead to more effective and sustainable changes in systems, increasing their resilience against corruption (U4, 2020; U4, 2021).

The fight against corruption also takes place within a shifting geopolitical context, which has important ramifications. The 'good governance' framing of the 1990s on was led by western governments and western-dominated institutions such as the World Bank. Since then, discontent with what is seen as the hypocrisy of the West in relation to human rights and global politics, combined with the rise of non-western powers, as evidenced through the BRICS for example, has shifted the focus.

John Githongo, veteran anti-corruption activist from Kenya, argues that large numbers of African youth are dissatisfied with the failure of democracy to deliver decent services and equitable economic development. There is also increasing discontent with the global financial system and how it supports the interests of the global North. Githongo argues that the **deep scepticism of the West and of causes associated with it demand a new approach to anti-corruption**. This new approach must make a "more compelling connection to solving the very real livelihood issues—such as unemployment, economic mismanagement, and the debt crisis" as well as to the redesign of the global financial system (Githongo, 2024). **Moving forward, the fight against corruption must take place in a context of greater political and financial equity between the global South and North**. It also has to adapt to respond to the challenges of opaque financial flows, fast-evolving technologies, and geopolitical challenges.

2.4.2 Sectoral approaches

Although corruption is embedded in the wider socio-political system, there is increasing evidence of the value of tackling corruption from a sectoral perspective, which is often more realistic and practical to implement (World Bank, 2020). Indeed, introducing anti-corruption reforms at a granular level (e.g. within a specific sector, location, or organisation) allows for practical change that can most easily make a real difference (Pyman and Heywood, 2020).

Initiatives like the Effective States and Inclusive Development (ESID) Research Centre study 'pockets of effectiveness' in addressing corruption and improving public services. The Anti-Corruption Evidence consortium also highlight conditions under which incremental sectoral reforms can be devised to effectively address corruption. Such an approach enables a focus on particularly vulnerable sectors, like water and sanitation, as well as specific corruption issues within the sectors. It **enables interventions in situations where there may be no anti-corruption commitment or interest at the macro level**, and it is not dependent on 'whole of government' programmes that are often difficult to implement.

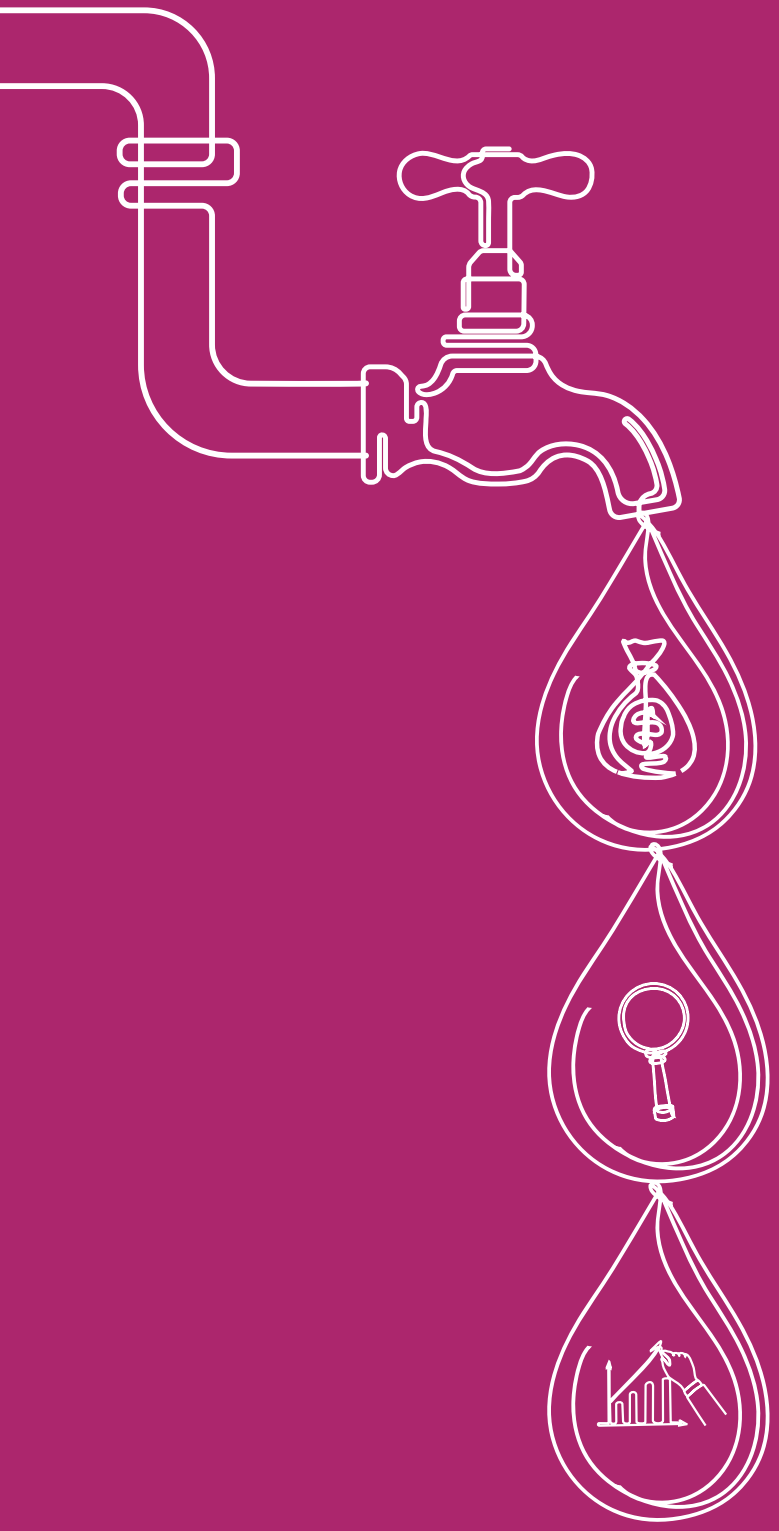
Working within the sector brings significant benefit for corruption reformers. When they operate inside a given sector (such as in health, construction or telecoms), the reformers understand the economic incentives that drive the sector, the social norms that govern peoples' behaviour, the political specificities in that sector".
(Pyman and Heywood, 2020)

Another reason to focus on sector-specific efforts is that they draw on relatively fewer stakeholders who typically understand the sector well. Their collective expertise and experience is valuable, particularly on the unique financial dynamics of the sector. **When anti-corruption efforts are spearheaded by those already in the water and sanitation sectors, and involving the meaningful participation of user communities, the chances of compliance rise** because:

- their sector-specific knowledge and familiarity with 'common business practices' aids in crafting more effective messages and actions;
- their professional standing lends credibility to reform initiatives;
- resources can be directed and optimised to deal with sector-specific issues, rather than being diluted across multiple sectors; and
- monitoring and evaluation become more streamlined and manageable with a sector-specific focus, improving the chances of identifying problems and adjusting strategies in a timely manner.

Photo: Nahason Molawa, WIN photo competition 2021, Non-functioning wastewater treatment plan, GA-Kgapane, South Africa

However, it is crucial that drawing on the 'expertise' of stakeholders does not result in excluding the concerns of users. This would be likely to undermine accountability and to open processes to additional integrity risks.



PART 3

Finance, Integrity and Water and Sanitation

This section uses an anti-corruption and integrity lens to look at specific characteristics of water and sanitation sector finance. It discusses the context for integrity work in water and sanitation sectors, focusing especially on institutional and regulatory characteristics of the water and sanitation sectors (**section 3.1**), the sources and nature of funding for the water and sanitation (**section 3.2**), and major integrity risks intrinsic to water and sanitation finance (**section 3.3**).

Among institutional and regulatory characteristics, fragmentation, decentralised decision-making for water, and technical complexities are features of water and sanitation that can lead to opacity and leave room for corruption, particularly for financing. Natural monopolies and the power imbalances they can contribute to also affect the way integrity work is needed and designed.

All sources of water and sanitation financing imply different integrity risks. Public finance is the most important source of financing in most regions and there are consequential risks across the budget cycle, from planning and allocating budget, to collecting revenue, and to spending and monitoring expenditure, including in emergencies. However, new or alternative sources of financing, especially repayable finance from different sources, don't erase these risks but instead have their own implications. In response, and to enable real change and adequate financing for water and sanitation, integrity must become a key feature.

The financing of water and sanitation projects face unique challenges in that these are often part of a bigger system aimed at delivering water or providing sewered sanitation services. As such, there is seldom a direct link between the project itself and a single line of revenue through tariffs. The revenue accruing to a project might be through a combination of tariffs, taxes or transfers from national government to local government or to water utilities and other entities managing infrastructure.

Photo: Mohajeri Behbood, WIN photo competition 2019

TABLE 1: Elements of water and sanitation sector interventions

Water resources management	Water services (bulk and retail)	Sanitation and waste
Water conservation and management: Conservation, management and rehabilitation of inland surface waters (rivers, lakes etc.), ground water and coastal waters; prevention of water contamination; allocation of water to users.	*Bulk water supply:* The production of water to be distributed to various end-users, including drinking water supply. Bulk water supply may be produced from the abstraction of surface or groundwater or through non-conventional sources.	*Wastewater collection and treatment:* The safe collection and treatment of sewage and wastewater. The treatment can be executed on several different levels: preliminary, primary, secondary and tertiary. May include waste to energy activities. May include the use of nature based solutions.
Flood protection (riverine, coastal): Interventions intended to manage the risk of flooding caused by coastal and river flooding. May include grey infrastructure or natural based solutions.	*Storage and conveyance:* The infrastructure required to store and transport bulk water supply to various end-users. This includes reservoirs (dams, urban reservoirs etc.), pipelines, channels and other forms of water supply distribution.	*Sanitation services:* Sanitation services consist of the provision of facilities and services for the safe disposal of human urine and faeces. Such services can be provided through on-site or sewered infrastructure.
Irrigation: The abstraction, distribution and application of water to land in support (mainly) of agricultural production.	*Water quality:* The production and treatment of water at standards required for consumption.	*Urban drainage:* Interventions to manage runoff from storm water.
Hydropower: the use of water to generate electricity. Can vary enormously in scale from very large hydropower dams to very small, local infrastructure		
Industrial and mining: The allocation and control of water for mining and other industrial uses, including both abstraction and pollution control		
Infrastructure: All constructed water systems, including dams, dykes, reservoirs, well-fields, pipelines and associated irrigation canals and water supply networks, which may be used for one or more purpose for economic, social and environmental activities.		

(Adapted from OECD, 2018; Dominique and Bartz-Zuccala, 2018)

Water and sanitation sectors projects are diverse, complex and multifaceted. They can include reticulated water and sewage systems, on-site sanitation provision, sophisticated sewage and water treatment works, complex irrigation systems, large and small hydropower provision, dams, and small-scale self-supply systems, or others, as in shown in Table 1. In addition to this technical complexity, each country (and sub-sector) context carries unique institutional, regulatory, financial, economic, operational, and management characteristics, shaping not only how integrity failures play out, but also the scope for finance-related integrity interventions.

Revenue from tariffs seldom cover both operational and capital expenditure for such projects. Indeed, in the case of service delivery for example, the UN-Water Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) report indicates that tariffs covered around 80% of operating costs in just over half of the countries surveyed. Utilities managing these projects also face challenges in accessing commercial loans and are perceived as high-risk borrowers. Poor regulation, operational inefficiency, low rates of cost recovery, and underdeveloped financial sectors contribute to these challenges (Pories et al, 2019).

In addition, the water and sanitation sectors are, as has been mentioned, especially vulnerable to corruption. **There is room for corruption** because the water and sanitation sectors involve providing services in a context of natural monopoly. The sectors' capital-intensive nature necessitates **hefty initial financing, often channelled through opaque, project-specific financial structures**. It also involves substantial **subsidies, a known site of capture by elites**. Wages in the public sector are often relatively low (especially in emerging markets and developing countries), which can provide a **rationalisation for corruption**. And finally, staff working in water and sanitation have **a lot of discretion and decision-making power** in an environment that is not always transparent. This provides opportunities for corruption and reduces the likelihood of being caught.

3.1 Institutional and Regulatory Arrangements

The water and sanitation sectors have several institutional and regulatory challenges that are directly relevant to the prevalence of corruption and the strategies for reducing it.

3.1.1 Natural monopolies

Whether a water scheme is intended for irrigation, industry or to provide potable water, it is typically considered to be a 'natural' monopoly. The main reason for this is that the fixed costs of sourcing and delivering water via built infrastructure are so high that it is more efficient to have one provider rather than several. This is the case whether the provider is public or private. The same applies to sewered sanitation. As a natural monopoly, providers in effect face no direct competition, which is a concern for regulators. In response, they may develop regulations to ensure that services are provided efficiently and equitably, and that user charges are fair.

Natural monopolies provide great opportunities for state capture. It is not uncommon for the public boards and commissions—whose job it is to ensure that the water sector is operated in the public interest—to be populated by individuals that seek to use power in their own or their cronies' interests.

3.1.2 Decentralisation, fragmentation and weak systems

The water and sanitation sectors are institutionally complex. Many public bodies, from national to local, have responsibility for the different interventions of the sectors (Table 1). **Effective distribution of responsibilities between these bodies, without overlap or gaps, is critical for accountability and integrity.** Fragmentation often makes it more difficult for civil society to hold institutions accountable. It also means that financial flows are complex and harder to trace, with significant diversity in who provides and who receives funds.

In many countries decentralisation has made the provision of water and sanitation services a local responsibility. This can mean many things, with the provision of water taking place at many different scales, from local-level provision in a village all the way up to supplies to a city or region. The sanitation sector is at least as complicated, with different providers from local to national, and different ministries often responsible for rural and urban sanitation. While decentralisation has brought many benefits, it has also created integrity risks.

Decentralisation does not necessarily increase accountability; it can simply shifts corrupt practices from national to local level (Crawford and Hartmann 2008 in Dyzenhaus 2018). As explained by Tambe et al (2016): *"Decentralisation is no silver bullet to end endemic corruption. Rather it is how we decentralise, how we align the action of the local governments and the voters' interests, and how we democratise the decision-making processes that determine the corruption levels."*

Photo: Antoine Delepiere, WIN photo competition 2018, Podor region, Senegal

Indonesia in the post Suharto era provides an example of decentralisation being done in a way that fed opportunities for corruption. The 'big bang' devolution passed responsibility for core government services to almost 300 third-tier municipalities, regencies and rural districts. One study argues that this contributed to regional corruption, with a significant negative impact on the origin and disposition of Indonesia's inward Foreign Direct Investment (McCormack, 2016).

When decentralisation took place in a more context-specific manner in Sikkim, India, Tambe et al (2016) reported how it had improved accountability, with a decrease in levels of corruption by three times and cost savings rising to 20%.

In Ecuador, where there are approximately 7000 rural water systems, the relationship between municipalities and OCSAS (Community Drinking Water and Sanitation Organisations) can play an important role in increasing accountability to water users. The State's role in strengthening municipal community alliances is provided for in the 2008 Constitution. In 2010 this was codified for municipal governments to delegate the provision of water and sanitation services to community organisations or to form **public-community partnerships** with OCSAS. In 2015, a Ministerial Agreement specified that OCSAS will progressively provide drinking water services and take on sanitation in areas where municipalities do not provide services. There is one lauded case of success of the municipal-community partnerships, the Center for Support to Drinking Water Management (CENAGRAP), but significant challenges remain. One such challenge is that OCSAS, as non-public legal entities, cannot access public funds but can only operate and expand their services through tariff collection in what are typically poor areas. This is sometimes supplemented by resources from donors, international cooperation organisations, local NGOs or in kind contributions from municipalities.

The importance of considering local contexts is evident in some surprising dynamics that emerge from decentralisation in two counties in Kenya, with positive integrity outcomes. One researcher reports on cases where the pursuit of patronage resources helped create more accountable local government. This occurred when self-serving county figures, who may otherwise lack integrity, checked each other's actions, resulting in a system of horizontal accountability. This, in turn allowed for improved local accountability to county electorates (Dyzenhaus, 2018).

Decentralisation has other implications for integrity, including: worsening of capacity deficits, institutional complexity, complex financial flows, and unclear roles and responsibilities. Many providers—whether water and sanitation or irrigation—suffer from significant capacity constraints, particularly where the operations are located within municipal structures. Weak revenue management, budgeting, reporting, and oversight systems translate into material risks of misuse of funds and/or power (WIN and KEWASNET, 2019).

Institutional complexities can take different forms. In South Africa, for example, decentralisation has created a complex system of transfers to municipalities, many of which are heavily indebted. This has contributed to real spending and official budgets being wildly at variance with each other. It then becomes difficult to distinguish whether shortcuts, such as in procurement, are being taken because of benign attempts 'to keep things working' or for nefarious reasons. A similar challenge may exist elsewhere, where unrealistic procurement legislation sees widespread variance in practice, making it hard to distinguish between benign and malign motives.

A lack of clear roles and leadership is evident in the institutional challenges in the sanitation sector, especially for on-site sanitation services, which are often poorly regulated and managed. There is a clear failure to engage effectively with the many informal providers providing sanitation services (Mitlin, 2015).

BOX 3: Integrity concerns for small water supply systems

Community-owned small water systems are traditionally found in rural areas where they supply surface and ground water for domestic use or irrigation, and more rarely for urban / peri-urban piped water supply. These systems may be initiated and owned by the community, or be built around state-funded infrastructure investment, to manage water provision and the operations and maintenance of the infrastructure.

Along with Kenya's regulatory agency WASREB, WIN used the Integrity Management Toolbox for Small Water Supply Systems (IMT-SWSS)—a participatory methodology developed by Caritas and WIN—in over 80 community-based schemes in Kenya. Some of the integrity-related finance challenges identified in the schemes included: concerns over the mismanagement of funds as revenue was unaccounted for, lack of information on financial flows, refusal to pay for water by some customers, and insufficient transparency on how water and funds were managed. These challenges occurred in a context of weak governance, including unclear roles and responsibilities of different actors, and lack of trust between water committees and customers

With the IMT-SWSS, management committees and community members working on small water supply systems carried out their own assessment of problems and compliance status, selected tools to address these, and agreed on a plan of action that focuses on integrity and its building blocks, including financial integrity.

(WIN and Caritas Switzerland, 2018)

3.1.3 Private service delivery

While water and sanitation are primarily provided by public providers, the private sector plays a range of roles in service provision. In terms of the actual provision of services by the private sector, there are a wide range of actors such as large utilities run by big international companies, local companies, and small to micro-scale providers. There are several models in play, from the fully private sector provision of services, through degrees of public private partnerships, to fully public services involving specific private services provision for such functions as pipe replacement, pump maintenance, telecommunication services, meter reading, energy or reagents provision and others. These models use a range of financial structures with different levels of private sector involvement, ranging from long term concessions; leasing; build, operate and transfer schemes; utility management contracts; or short-term service contracts. **All such models carry their specific integrity risks, many of which manifest in procurement.**

A number of organisations have produced guidelines on tendering, conflict of interest, and penalties that encourage countries to implement tighter procurement frameworks, whether for procuring specific works or services or outsourcing the entire water or sewerage service to a private operator. These guidelines are based on key principles applying to public procurement: freedom of access to public contracts, thresholds above which a tender procedure is mandatory, equality of treatment between bidders, transparency of tendering process, and collegial decision-making process. Although this has improved the quality of procurement processes in many countries, to the benefit of both public and private parties and the beneficiaries of water and sanitation, the enforcement of such guidelines remains demanding and brings its own difficulties. This is particularly the case in contexts of systemic corruption, where official rules are often bypassed, by both public and private parties.

Concerns reside in the power and information imbalances between government and large-scale private companies, the ability and willingness to enforce complex contracts and standards, and the resolution of conflicts of interest. **Further concerns exist regarding the prioritisation of the public good and delivery on the human rights to water and sanitation** over private or company profits.

Photo: Gaurav Dhwaj Khadka, WIN photo competition 2011, Incomplete and broken pipeline, Kathmandu, Nepal.

BOX 4 : Example of corruption in procurement involving a private water company

Aqualia is a prominent water management company based in Spain. It operates across various regions, providing WASH services. It is owned by FCC (a Spanish construction company) and by the Australian firm IFM Investors. In 2022 the company ranked as the fourth largest water company in Europe in terms of population served, and ninth globally.

In December of 2023 the Central Administrative Court of Contractual Resources (TACRC) invalidated the awarding of the public service contract for the supply of drinking water and sewage management in San Javier, Murcia to the company FCC Aqualia. The contract spanned 20 years and had a budget of EUR 247 million. It was terminated due to irregularities detected in the bidding process.

The irregularities that ended the contract were:

- Identities of the evaluators or experts on the assessment team were not disclosed. Without revealing their identities, there may be doubts about the objectivity of the evaluations.
- Training and professional experience of the evaluators was also not disclosed. Lack of transparency makes it difficult to understand if they are qualified to make informed decisions and to know about possible corruption scandals in their past.
- The municipality in Murcia established a confidentiality clause that restricted the disclosure of information regarding final scores and evaluation criteria.

This wasn't the company's first encounter with corruption scandals. In 2019, for example, the World Bank debarred Aqualia for one year in connection with a fraudulent practice during its participation in the World Bank-financed Río Bogotá Environmental Recuperation and Flood Control Project in Colombia.

(Source: Reche, 2023; Servimedia, 2023; Cabrera, 2016)

BOX 5: Integrity challenges in privatised water and sewerage in England

While frameworks for procurement of goods and services from the private sector have improved over the years, there are still significant **challenges in the regulation of large private companies, including the enforcement of contracts and standards.**

The recent water crisis across England and Wales is a case in point, where service providers have failed to meet contractual standards resulting in frequent sewage spills into river and coastal waters, high levels of leakage, and poor services. Some of the private water companies have amassed unmanageable debts over the past 30 years or so, while making significant pay-outs to shareholders.

Water and sewerage in England was privatised in 1989 by listing companies on the London Stock Exchange (LSE). Most of these companies have been bought out and a99re now owned by institutional investors such as private equity, sovereign wealth, and pension funds.

Users have had a consistent supply of safe water at a price that has not changed much, but the management of sewage has been generally poor across the whole of the UK. Even with experienced independent government regulators, the water system in England is now in crisis. Raw sewage is regularly spilled into rivers and the sea, some water companies are in a very fragile financial position, and many have failed to adequately invest in sewerage infrastructure. Consumers are angry about the prospect of substantial price increases given water company histories of pay-outs of shareholder dividends and director bonuses. Public trust is at an all-time low.

Both private and public companies perform badly, but there are specific integrity challenges relating to the actions of private companies. In England, risks result from an increasingly financialised, complex system of water governance that gradually deteriorated as investors in charge of water and sewerage changed:

1. **Accountability to shareholders over users.** Privately owned water utilities must balance their accountability to water users, the need to invest in refurbishment and new infrastructure, and their accountability to shareholders who are expecting a return on their investment. Several of the private water utilities in England have increased their debt significantly, while paying disproportionally high dividends to shareholders.

2. **Revolving doors between regulator and utilities.** Analysis by The Observer Newspaper (Ungoed-Thomas, 2023) found 27 former directors, managers and consultants from the independent regulator Ofwat are now working in the water industry that they used to regulate. Such revolving door relationships generally indicate a red flag in terms of regulatory capture.

3. Normalised **financialised extraction** (a process of wealth accumulation driven by managing water and sanitation companies primarily as financial assets rather than investing in productive activities). During the ten years that Macquarie controlled Thames Water, the company became highly indebted and was responsible for numerous raw sewage leaks, while billions were paid to shareholders in dividends. Yet despite wide criticism of their custody of Thames, just four years after they sold off their last shares in Thames in 2017, Macquarie came back to England's water sector, this time to bail out the ailing Southern Water.

4. **Weak transparency**. For those companies which entered into complex financialised ownership structures, funds flow around the corporate group in the form of dividends, intercompany loans, interest and other payments such that it is extremely difficult for outsiders to know what funds are flowing where, or how much investors are making from their water investments.

5. **Public regulatory systems that cannot keep pace**. The damage caused by financialised shareholder extraction has taken years to come to light and even longer for new regulatory measures to be introduced. The rules of the game change too quickly for Ofwat to keep up.

6. **Undermining of environmental regulation.** Regulatory energy was focused on efficiency and economic regulation while environmental regulation funding was cut, preventing effective monitoring. The fines levied on water companies for spills of raw sewage have been relatively small. Some firms are alleged to have deliberately misreported their sewage leaks, the focus of a criminal investigation of corruption.

The experience of England shows that regulation is not simply a case of establishing and policing a set of rules. Integrity challenges—demanding new approaches to regulation—are constantly evolving as new issues come to light.

Despite the expertise and resources available, regulation in England has not been able to effectively control the actions of water companies within a financialised system to ensure they act with integrity. If highly experienced, capable and independent regulators cannot cope with a privatised system with financialisation, countries with weak regulatory capacity are unlikely to cope.

(Bayliss et al, 2023; Bayliss and Galvin, forthcoming)

The inability of the regulator in England to keep pace with the private sector is relevant to developments elsewhere in the world. A WIGO Latin America case study examines how regulators in Brazil are coping with rapid extension of private sector participation enabled by the country's new legislation, the 2019 Sanitation Law (which also covers water supply). Private companies now serve nearly a fourth of Brazilians. Brazil has historically struggled with high-level corruption such as Operation Carwash. An anti-corruption probe beginning in 2014 uncovered how State-Owned Enterprises (SOE), often through political appointees, systematically extorted bribes from private-sector suppliers, particularly the oil giant, Petrobras. The private sector has improved its practices significantly over the last 10 years, especially larger companies, though challenges remain.

Regulation of water and sanitation services in Brazil has been decentralised and sub-national entities are responsible for overseeing the implementation of contracts. However, these entities differ significantly in technical and financial capabilities, as well as governance practices (Soares, 2024). Brazil's National Water Agency (ANA) has been tasked with implementing norms to strengthen sub-national regulators' transparency and integrity-related practices. According to the new Norms of Reference, published in January 2024, sub-national regulators are required to create internal control bodies, implement integrity programmes and codes of conduct, and develop open data plans and risk management policies. However, the fact that ANA cannot identify all of the sub-national regulators in the country demonstrates the **challenges of monitoring and harmonising norm interpretation and enforcement** (ANA, n.d.). **Weak governance rules for sub-national regulators leave them vulnerable to nepotism or cronyism** (Pretto, 2024) and the financial might of private companies may drown local officials (Whately, 2024). There are also significant concerns about undue political interference in regulatory agencies.

At a micro-level or at the community level, corruption is also an ongoing and significant concern. Here **small vendors and tanker owners that face little or no regulation of their pricing, can use financial and even sexual extortion in relation to households desperate for water**. So-called 'water mafias' sometimes work in conjunction with officials from water services providers to limit available water through 'broken' systems, forcing users to turn to private vendors. Some utilities and municipalities are taking action to address such corruption issues at the micro-level, for example in **Peru (**Box 6), or Tanzania. **Shinyanga Municipality,** located in northern Tanzania near Lake Victoria, is now using GPS on vehicles of both private and public service providers to detect the dumping of faecal waste in open fields (Aquaconsult, forthcoming).

BOX 6: SEDAPAL monitoring of water truck delivery of 'free water'

In Peru, where 10% of the population lacks access to drinking water networks, the government aimed to distribute free water by tanker trucks to settlements in urban areas during the COVID pandemic. The Ministry of Economy and Finance allocated an annual budget of PEN 111 million (approx. USD 29.3 million) for this purpose. In Lima, SEDAPAL, the water utility, contracted approximately 350 tankers to serve around 2500 human settlements across 28 city districts. Tankers obtained the drinking water from SEDAPAL at no cost and were paid for transport and delivery of the water.

Corrupt practices emerged quickly, in three ways. First, truckers sold the water to private entities, including restaurants, construction sites, private schools and universities, or for private swimming pools and others, rather than delivering it to vulnerable populations as intended.

Second, even when they reached the intended population, they often demanded payments from residents for water that should have been provided free of charge.

Third, through collusion between tanker owners and workers of a weighing company, falsified certificates were issued for the net weight of the tankers. They then billed SEDAPAL for the inflated volume of water. Random inspections uncovered 123 cases where the actual water payload differed from what was reported to and paid for by SEDAPAL. This resulted in an overpayment of PEN 7 million (approximately USD 18.5 million). Losses were no doubt much higher across the full 28 districts.

SEDAPAL invested significant funds to address these challenges through:

- compulsory weighing on SEDAPAL installed scales; this way the organisation ensured the verification of real load capacity and volume of water distributed.
- introduction of an online platform that served to capture and upload photographs of water deliveries to ensure documented proof of the service at each point.
- widespread use of WhatsApp as a communication tool to enable coordination among stakeholders, including tanker drivers, their assistants and SEDAPAL supervisory staff. This helped to address operational challenges, ensured timely delivery services and enhanced overall control of the programme.
- random supervision of water supply points and clear contractual penalties for fraud or any kind of integrity failures.

In addition, each tanker owner was required to install a GPS device to monitor the tanker's route in real time, to ensure compliance and detect deviations. Since this was put into place, there have been no reported incidents of truck diversion, positively impacting water delivery and financial management. Overall, the measures helped to reduce the opportunities for corruption and contributed to the success and integrity of SEDAPAL's water delivery operations.

3.1.4 Direct and extensive customer interface

A core feature of the water sector is that it involves large numbers of customers and significant interaction between these customers and officials, whether in relation to meter reading, applying for connections and reconnections, or effluent discharge permits. The extent of this interface, at least some of which takes place at the household level, opens the door to corruption, for instance where customers bribe officials to obtain repairs or connections faster. Or to get connected to the network. Or to reduce their water bill.

In such 'public-consumer corruption' a localised win-win is involved, as both those paying the bribe and those receiving it benefit (Bellaubi & Boehm, 2018). **Yet whilst there may be a localised benefit, the bigger picture sees the undermining of financial sustainability of service provision,** and various groups, particularly the poor who cannot afford to pay bribes, losing out.

In poor areas, the bribes that are demanded may be set at a level that the poor can pay, but in mixed income areas, the ability of wealthier households to pay more in bribes marginalises the poor further, pushing them to the end of the queue (Plummer and Cross, 2007). Petty corruption has knock-on effects. For instance, when customers perceive the system as highly corrupt, they may be less inclined to pay their water bills. This can lead to a vicious cycle of underfunding and underperformance—as services worsen, people are still less inclined to pay.

Sexual extortion, or sextortion, also occurs and has serious impacts for those coerced into providing sexual acts in return for access to water. It undermines the financial sustainability of water service providers. It is poorly addressed in the anti-corruption legislation of most countries, and seldom recognised or addressed at the utility level.

3.1.5 Wide range of regulatory models

With the institutional complexities set out above, regulation of the sector is important to ensure effective service delivery and use of finances. Regulatory models for water and sanitation include regulation by a government department(s) or by independent regulators. Either of these can use different regulatory tools, such as command and control, or regulation by contract, or a combination of various regulatory tools. How regulatory functions are designed and allocated across institutions can significantly impact effectiveness, as does regulatory capacity (Tremolet and Browning, 2002).

One of the most significant risks facing regulators is capture by powerful interest groups, either the very entities that they are intended to regulate, or political decision-makers, who wish to influence regulation to further their own interests. For example, in Australia, rent-seeking behaviour and regulatory capture affected public decisions regarding both purchases of water entitlements and irrigation infrastructure subsidies in the Murray Darling Basin (Grafton and Williams, 2019).

The establishment of independent regulatory bodies is often seen as a way to shield the regulator from undue political interference (Tremolet and Browning, 2002). Regulation through contract imposes binding constraints on the service provider through non-discretionary terms in the legal contract, which limits the discretion of the regulator. A hybrid model which brings independent regulation together with regulation by contract can have significant benefits. Such a model, however, involves a number of stakeholders, with potential challenges around roles, responsibilities and accountability (Guasch and Straub, 2009).

There is evidence that **well-resourced independent regulators increase public confidence in their objectivity and reduce the risk of undue political interference in regulatory decision making**. In the electricity sector, for example, a study across 47 countries in Sub-Saharan Africa shows that a combination of independent regulatory agencies and privatisation reduced corruption (Imam et al, 2019). Insufficient work has been done in this regard in relation to the water and sanitation sectors, but recent developments in England and Wales show how a financialised system poses particular challenges, even with independent regulation.

BOX 7: Sector regulator and anti-corruption in Malaysia

One example of a water regulator active in anti-corruption is the National Water Services Commission (SPAN) in Malaysia. SPAN is responsible for regulating and overseeing water supply and sewerage services. It has non-revenue water (NRW) reduction as one of its key focus areas. To tackle high levels of NRW, SPAN has set targets for water utilities to reduce water losses and improve efficiency. These targets are incorporated in their key performance indicators (KPI). SPAN closely monitors the progress of utilities and provides technical assistance and capacity building to help them achieve their NRW reduction goals.

In addition to setting NRW reduction targets, SPAN provides targeted capacity building and technical assistance to water utilities around integrity and internal control systems. SPAN also partners with the anti-corruption agency, international organisations, and other regulators to address corruption and integrity challenges. In August 2019 the then Chairman of SPAN, Charles Santiago, told a national newspaper, *"One of the things we will roll out next month is the integrity plan. Operators cannot choose to not follow or ignore it. This is one way to cut down leakages and corruption, which is a big problem in the industry"* (New Straits Times Online, 2019). He referred to challenges that come with water utilities being monopolies and thus not facing pressure to improve, and cited collaboration with the Malaysian Anti-Corruption Commission. He also mentioned plans for a public auditing exercise, citing concerns not just around financial performance but also environmental pollution.

Unfortunately, there was political pushback to SPAN's efforts to put pressure on utilities. In April 2020 all the SPAN commissioners received letters terminating their appointment and the crusading chairman was sacked (Hassan et al, 2020; Malaysia Today, 2020; Mohsen, 2020). After a change of government, Charlies Santiago was reappointed in March 2023 (Mahavera, 2023).

3.1.6 Technicality and opacity

The water and sanitation sectors are not only complex and fragmented, but also highly technical. Both elements can impact on transparency and accountability. Complex and unclear roles and responsibilities amongst institutions make it difficult to know who to hold accountable. And the technical nature of the sectors often means that, even if data is made publicly available, it may be difficult to understand, undermining the ability of the public to hold relevant institutions accountable. These challenges are exacerbated in major infrastructure projects where many contractors and sub-contractors are involved, each with their own contractual obligations and responsibilities.

Complicated projects can see a *"contractual cascade [that] could easily have in excess of 100 contractual links"* and each of these links provides *"an opportunity for bribery and/or fraud in relation, for example, to obtaining certification for work or extensions of time, obtaining payment, collusion, price fixing, or inflated claims"* (GIACC, n.d). There is a plethora of ways that corruption can take root in these contexts, including where public officials turn a blind eye to corruption, or are complicit; where sufficient due diligence is lacking or inadequate anti-corruption measures are applied; where there is insufficient transparency as to the terms of the funding and details of the project; when there is little monitoring by the public authority to determine whether funds have been properly used or integrity failures have transpired. Some of these measures apply to the construction phase, others go broader, but each can offer an entry point for specific interventions. (GIACC, n.d)

The water and sanitation sectors operate in a global context of improved open data. The Open Data Inventory (ODIN) 2022/23 provides evidence of a positive trend across all regions except Africa and Europe where a decline in data availability and openness was recorded (Open Data Watch, 2023). While some of this weak progress may be attributed to the impacts of the COVID-19 pandemic, it is still of concern.

3.2 Sector Finance

Investment in water resource management, water and sanitation services and the management of water-related risks is needed to avoid major economic loss and even the loss of lives due to shortages of potable water, inadequate or polluted water supplies, poor sanitation, and floods. This investment need is enhanced in the face of climate change. Access to clean water and decent sanitation is vital for health, for reducing incidences of diarrhoea and decreasing child mortality, and for allowing children to attend school and adults to work. Access to water also plays an important role in economic development including through food production, energy generation, construction, manufacturing, job creation and other activities. Generally, these societal benefits far outweigh the cost of water and sanitation provision (De Albuquerque, 2014).

Yet the **gap between sector needs and current funds is large**, estimated at three times current spending and approximately USD 0.9-1.500 trillion per year for all types of infrastructure (UN-Water, 2021). In 2022, 75% of 121 countries in the global South lacked sufficient funding to implement their water and sanitation plans and strategies (GLAAS, 2022).

The investment needs are rendered more complex by the need for large capital investments for the infrastructure to source, treat and distribute water or wastewater. According to a 2019 report, nearly 90% of public expenditure in the water services sector in Kenya was spent on capital projects (WIN and KEWASNET, 2019). Capital investment is usually embedded within projects. These are conceived and delivered at different levels—whether by national or provincial government, municipal governments, utilities, private operators, or communities themselves. In each case**, the large amounts of money required for water and sanitation infrastructure and the complex nature of the projects offer opportunities for those who wish to take undue advantage.**

Funding of capital projects requires particular financial arrangements, often addressed through loans. At the same time, operations and maintenance of water and sanitation services must be funded. At least some of this funding is provided through tariffs, although in many developing countries the full financing of operation and maintenance via tariffs is not feasible. Since poorer water users are often not in a position to pay the full costs of water provision, subsidy schemes are introduced—either to cross-subsidise from richer customers to poor customers or to reduce tariffs by bringing in revenue from other sources, either transfers or taxes.

Commonly, for political as well as equity reasons, politicians and regulators that determine tariff levels in the global South are inclined to keep tariffs low, which either leads to progressive under-investment in the system (particularly affecting already underserved populations living in peri-urban areas) or the need for external subsidy, which is often insufficient or poorly designed. As the World Bank and other observers acknowledge, an important knock-on effect is to keep the finances of the sector relatively weak. This makes the expansion of services to the many millions that lack it challenging. It can also open up a whole 'grey market' of services to the unconnected, a market often controlled by nefarious players (World Bank Group, 2007).

Subsidy schemes are commonly open to manipulation. Research from the World Bank finds that **many subsidy regimes are expensive, poorly targeted, and not transparent** (Water Global Practice, 2019). Part of the challenge relates to elite capture, with subsidies being diverted to interest groups that support the decision-maker. A common lack of input from the vulnerable—those that, in theory, should be most-deserving of subsidy—does not help. Challenges in subsidies apply in the WASH sub-sector as well in other water sub-sectors, for example irrigation, which is extremely vulnerable to elite capture of subsidies.

"...when water or energy is subsidized... the sizable rents from this subsidy — the benefits of below market- rate services — can be captured by politicians, who use them to curry favor with their rich clients rather than the poor".

Making Services work for Poor People, World Development Report (World Bank Group, 2004).

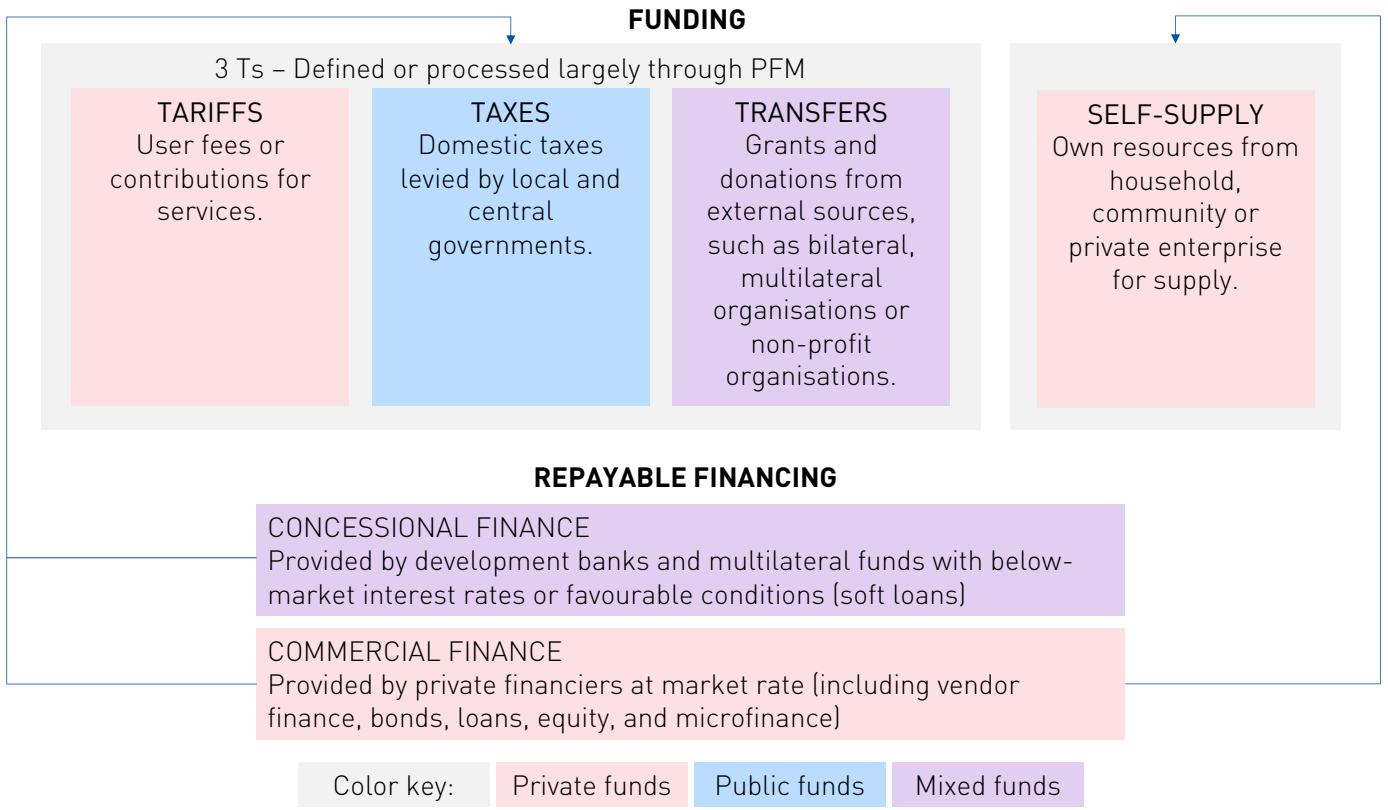
While considerable work has been done in how to improve subsidy regimes, there is ample evidence that flawed actors, with malign motives, will resist the implementation of such solutions, in part to protect their illicit gains.

3.2.1 Sources of finance

The three sources of finance for the water and sanitation sectors are tariffs, taxes and transfers, often referred to as the 3Ts.

- **Tariffs** refers to the fees and charges that are paid by households and companies that benefit from water and sanitation services;
- **Taxes** refers to the revenues that flow to the water and sanitation sectors as a portion of the taxes collected by government from individuals and companies; and
- **Transfers** are grants or payments often provided by bilateral or multilateral agencies. They can also be made by external or domestic private donors, foundations, international or national NGOs, businesses or individuals.

FIGURE 5: Sources of finance for the water and sanitation sectors (Source: SWA, 2020, as adapted from the World Bank)



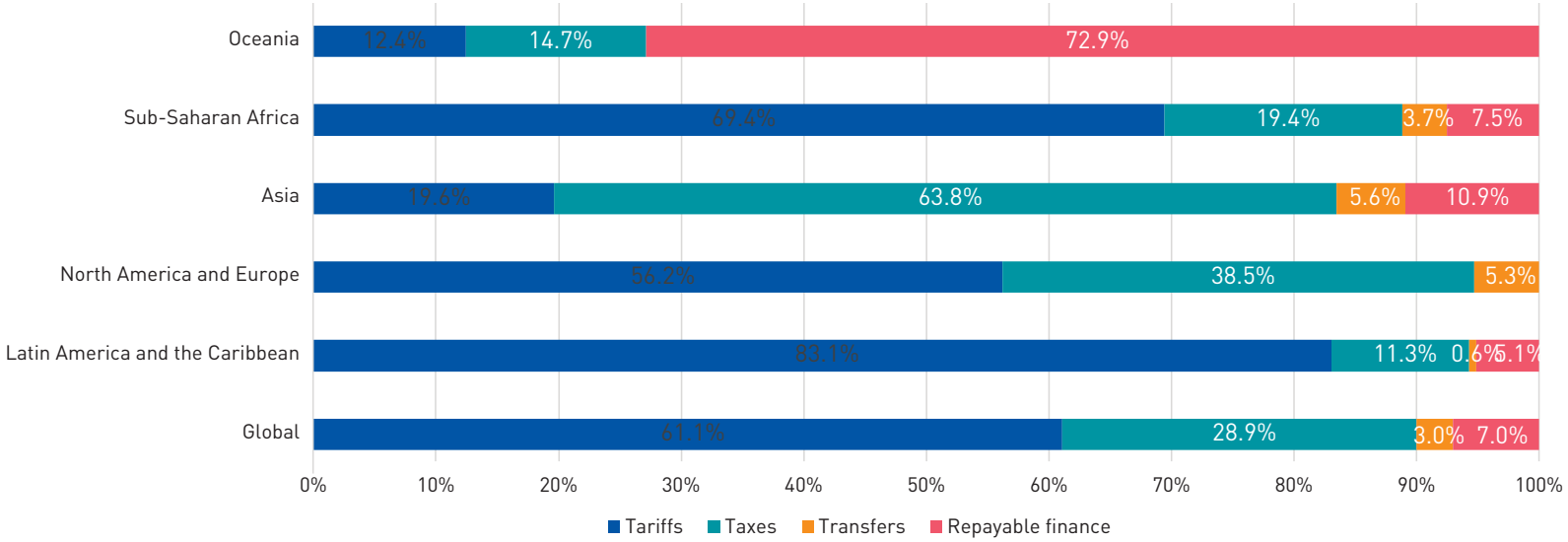
There are two other critical elements of the finance system, but neither adds to the total amount of finance in national systems.

Repayable finance is used by governments and water utilities in the form of loans, bonds and equity investments to finance infrastructure development. Repayable finance is a structuring instrument and does not bring additional funding into the sector, as it must be repaid from future tariffs, transfers and taxes. Most repayable finance *costs* money, since it attracts interest that must be paid in addition to the capital amount. It is generally used because the capital cost of infrastructure outweighs available tax and tariff revenue pools. **Repayable finance is, in effect, a way of managing cash flow.**

Self-supply is defined as the "construction of, or incremental improvement to water supplies and sanitation by households and small groups, largely using their own means" (Sutton and Butterworth, 2021:8 in Hofstetter et al, 2024). It is not a source of finance but is a necessity when there is insufficient investment of public funds in service delivery or where households cannot afford the high tariffs charged by vendors. More broadly, self-supply is when communities, households or private sector enterprises pay for water and sanitation infrastructure or management from their own sources. This may be through savings and investments, or it may be through loans, including, at the household level, through microfinance institutions. It may cover the development of dams and pipelines, buying or installing hardware; maintaining services, including pit emptying; or payments to an informal or community system. It is an area where states should be gathering further information (De Albuquerque, 2014). Self-supply might be the only option available to poor communities where corruption and undue influence drive water and sanitation investments away from such communities.

A number of publications point to household investment or co-investment as lowering cost to the sector and improving sustainability through ownership and simpler technology. However, self-supply is increasingly being recognised as problematic, as it "masks the failure of public service delivery systems by pimping local action as a successful alternative, allowing the absconding of constitutional obligations by public agencies" (Hofstetter, forthcoming).

FIGURE 6: Sources of finance for WASH across 45 countries globally, and per region (Source: GLAAS, 2022)



3.2.2 Regional patterns of the 3 Ts

The range of finance models in the water and sanitation sectors has increased rapidly, resulting in a complex environment of options. Still, **commercial investment in the water and sanitation sectors remains relatively low.**

For WASH specifically, the GLAAS 2021 survey provides an interesting breakdown of the sources. Globally, 29% comes from government sources and 61% of funding comes from households. Repayable loans and external sources make up only 10% of total financing. (WHO, 2021) (Figure 5). The GLAAS survey includes under household contributions: tariffs (households / commercial / industrial) and self-supply—but the latter only with very limited estimates from a handful of countries. Government sources comprises taxes by government or other public authorities at central, state / provincial, and local levels. Transfers includes grants only from bilateral / multilateral donor and donations, and grants from NGOs and others. Repayable financing includes both concessional and non-concessional loans.

There are significant regional differences (Figure 6). Most expenses are covered by government (over 60%) in Asia. In Latin America and the Caribbean, most expenses are covered by households (over 80%). In North America, Europe, and Sub-Saharan Africa, household contributions are crucial but are complemented with a larger share of government contributions. Oceania (excluding New Zealand and Australia) is the only region highly dependent on repayable finance (over 70% of its financing).

The numbers suggest that **the greatest effort in protecting finances from corruption risks and integrity failures should be focused on tariffs and government funding, the largest sources of funding overall.** Nonetheless, repayable loans and external sources also have integrity challenges that must be addressed.

The numbers also bring up integrity considerations in relation to self-supply, given that a high percentage of poor households pay for and provide their own infrastructure and services. This household contribution to the provision of their own services is poorly captured in current financial data. Neither the cost nor the financial impact on poor households of providing their own services are adequately considered in assessing the financing of water and sanitation. This raises a concern that promoting self-supply shifts a public responsibility onto poor households while privileging wealthier households.

3.2.3 Repayable finance

Governments often struggle to develop sustainable financing models for the water and sanitation sectors, and therefore seek repayable financing for a large range of activities, from financing large dams and bulk water supply systems, to financing local water reticulation systems. Repayable finance may come through international, regional or national development banks, commercial sector investment, or institution-specific instruments such as green bonds.

In the last two decades national governments and development partners have accelerated efforts to attract private finances into the water sector, with limited success. Of USD 81 billion of development funding mobilised from the private sector between 2014 and 2017, only 1.9% was for water (Horrocks OECD presentation at Stockholm Water Week 2018 in Pories et al, 2019: 7).

Reasons for the **low investment in the water and sanitation sectors, whether by public banks or commercial investors**, include:

- water resources and their benefits are often undervalued by the public and private sector;
- long-term strategic planning and prioritisation is weak;
- the enabling environment for investment is weak;

- water sector investment payback periods are much longer than periods preferred by commercial investors;
- fractured and small-scale investments raise transaction costs of commercial financing;
- water investments can lack distinct revenue streams and assets for collateral because the infrastructure is usually an integral part of larger water systems; and
- the risk-return profile is skewed in cases where water utilities, local governments and water service providers are not technically or financially efficient and/or their governance arrangements lack transparency, both a disincentive for commercial investors and a higher cost for taxpayers and water users. (UNWater, 2023; Kolker, 2022; OECD, 2022; OECD Environment, 2018).

In response, considerable effort has been put into addressing issues that include better aligning commercial bank risk profiles and WASH sector realities, and mechanisms that create market distortions such as inappropriate subsidy policies. Several mechanisms for attracting private finance to the sector have also been developed, including public private partnerships (PPPs), blended finance, green bonds and water funds.

However, there are integrity risks related to repayable financing that should also be considered. **The complexity of hard-to-track international finance arrangements opens a number of possible points of corruption, as does involvement of power actors**, including financial companies or major foreign companies, which can be hard to prosecute. Figure 7 illustrates this complexity in relation to a transaction in Kenya. Different standards for procurement or integrity may also apply for external funding and loans, which can be a challenge for oversight and accountability (Box 8).

Public Development Banks

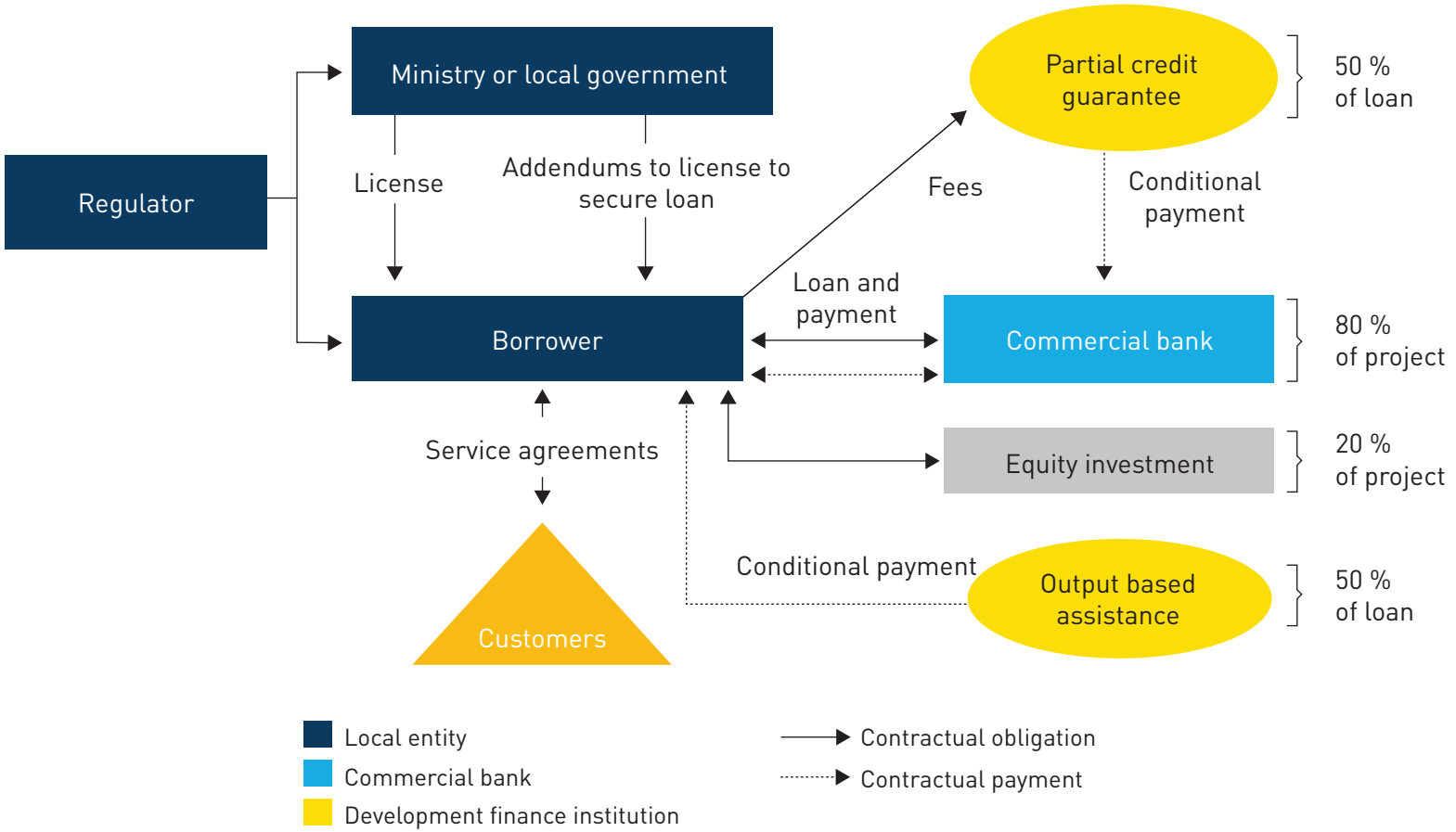
Public Development Banks (PDBs), whether multilateral, bilateral, regional, national or sub-national, play a critical role in financing water and sanitation. PDBs are mandated to provide financing to support the policy objectives of states or sub-national entities, unlike private sector finance, which generally have different interests. As a result, public banks have more flexibility in the structuring of concessional loans.

According to preliminary research by McDonald et al (2021), based on actual relationships between public banks and public water operators, public banks systems are often surprisingly simple and comprehensible to public scrutiny, avoiding the mystification of finance that can be perpetuated by private financial institutions and leaders who support them.

In 2020, over 400 public development banks came together to form a global network called Finance in Common. The declaration of Finance in Common (2020) commits these banks to:

- acting as responsible and transparent institutions and sharing best practices to improve the transparency of their financing;
- strengthening investment governance, openness and transparency, including with regard to anti-corruption programmes;
- paying particular attention to community-led development and respecting the rights of indigenous people; and
- enhancing access to financing while ensuring that sovereign debt remains on a sustainable path.

FIGURE 7: Example of the structure of a commercial finance transaction (Source: Bender, 2017)



BOX 8: Dasherkandi Sewage Water Treatment Plant criticised as wasteful (Bangladesh)

A new wastewater treatment plant was inaugurated by Bangladesh's Prime Minister in 2023, with the aim of treating 500 000m^3 of wastewater/day. This project, funded by the Chinese Government under a USD 320 million loan, was designed to tackle the challenge of a lack of sewage treatment plant in Dhaka. However, the plant has come under significant public criticism, as it was constructed without a corresponding sewer network to transport wastewater to the treatment plant. Consequently, the treatment plant is largely ineffective, and it is currently being used to treat surface water that is being contaminated by the wastewater that is collected in Dhaka's open drains.

This situation clearly reflects challenges in project planning, but it also could be indicative of several integrity challenges in procurement and execution, including collusion of contractors with public officials and approval of payments for substandard work. Furthermore, although mechanisms are currently in place for promoting transparency in procurement and project management, externally funded projects are not subjected to the same level of scrutiny as internally funded projects. Whilst the influx of external funding for sanitation projects addresses the historical underinvestment in sanitation infrastructure, it creates loopholes in oversight mechanisms, and has risks related to country-level borrowing (section 3.2.3).

(Aguaconsult, 2024)

Blended finance

Blended finance has become increasingly popular as an approach that could assist in closing the finance gap in the water and sanitation sectors. It involves the strategic use of public, and sometimes private concessional development finance, to leverage additional commercial finance for capital-intensive projects. Blended finance arrangements aim to change the risk-return profile of water investments for public and private commercial investors. Types of financial instruments used in blended finance deals include guarantees and other forms of credit enhancement tools, financial and technical assistance grants, and concessional loans.

In reality, the use of blended finance in the water and sanitation sectors is still limited. According to Pories et al (2019:7), "The few isolated experiences with blended finance in the water sector to date, supported by international donors, have mostly been in middle income countries and have so far failed to be replicated at scale."

Blended finance also has its own challenges, which include integrity risks. **Developing countries have increasingly limited fiscal space to take on additional loans; they face additional foreign exchange risks; blended finance may give preferential treatment to donor's own private-sector firms; and the arrangements are often weak on transparency and accountability.**

The use of blended finance is intended to free up limited public funds for investment in areas where private finance is not used, such as provision of services to poor communities. However, this is not always the case. Indeed, blended finance "does not necessarily support pro-poor activities, [and] often focuses on middle-income countries" (Pereira, 2017).

"Blended finance is not flowing into the sector. Overall, blended finance approaches mobilised aroundUS258 billion between 2012 and 2019 in emerging markets, but little of this was for water and sanitation. Between 2017 and 2019 water and sanitation accounted for less than 1.5% of the commercial finance mobilised—which covers less than 2% of the estimated funding gap."
(WIN, 2023)

BOX 9: Examples of vehicles used to leverage private finance

Guarantees and other credit enhancing vehicles:
The Philippine Water Revolving Fund was established to mobilise private funding into the water sector. It had a primary and secondary guarantee in place, the former granted by the private Local Government Unit Guarantee Cooperation (LGUGC), covering a maximum of 85% of a bank's exposure. This was backed by a second guarantee from the USAID Development Credit Authority (up to 50% of the LGUGC's exposure).

The Jamaica Credit Enhancement Facility placed a USD 3 million grant from the Global Environment Facility-funded Caribbean Regional Fund of Wastewater Management project (CReW) in a reserve account as a guaranteed fund. With a 4:1 leverage of financial resources, the fund was able to provide secondary collateral against the USD 12 million loans from the National Bank to the national water and sanitation utility of Jamaica.

Collective investment vehicles (equity funds):
The Water Facility Structure, called "Climate Investor 2", of the Dutch Fund for Climate and Development, blends finance from concessional and commercial investors. This equity fund consists of three financing elements: a EUR 50 million Development Fund, a EUR 500 million Construction Equity Fund and a EUR 500 million Refinancing Fund. Led by Climate Fund Managers, it finances investments in water and sanitation services, restoration and sustainable and climate-resilient management of wetlands, headwaters and floodplains and ocean infrastructure.

Microfinance leverages loans:
With an USD 240 000 grant by Water.org, the not-for-profit organisation, Gramalaya, was able to mobilise commercial financing to establish a microfinance institution called Gramalaya Urban and Rural Development Initiatives and Network (GUARDIAN). Commercial financing comes from a local public-sector bank, the Indian Overseas Bank and social investors Acumen and Milaap, and micro loans to households are provided solely for water and sanitation self-supply.

(Source: OECD, 2022)

Public Private Partnerships

Public-private partnerships (PPPs) are one form of blended finance, used to finance, build and/or operate a project, whether greenfield (new) or brownfield (upgrading and management of existing) assets. **They are based on the expectation that bringing in a private partner will leverage both private capital and the skills and expertise available to the private sector. Yet, they too face integrity risks.**

A PPP is a "long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and [its] remuneration is linked to performance"
(World Bank, 2017)

PPPs can take many forms, with different ownership structures and risk-sharing arrangements. PPP contracts are complex and long term, extending from design to the operation of assets. They often include the establishment of Special Purpose Vehicles (SPVs) to isolate financial risks, the mobilisation of significant private capital, and performance-based payment systems (World Bank, 2017).

Typical PPPs are based on Build-Operate-Transfer (BOT), Build-Own-Operate-Transfer (BOOT), Build-Transfer-Operate (BTO) or rehabilitate-operate-transfer (ROT) models (e.g. of an irrigation system or a water treatment plant) where the ownership of assets belongs to the private party until transferred to government at the end of the contract (World Bank, 2017). Or concessions, where the private party builds, maintains and collects user fees but the assets belong to government. Joint venture PPPs are cases where the contracting authority has an equity stake in the SPV. Long-term management and affermage contracts that bring private sector finance to water investments and services may also be considered PPPs. Affermage contracts involve private parties maintaining and operating water infrastructure and providing services to users, but with government remaining responsible for capital expenditure.

PPPs are not without corruption, fraud or integrity risks. Public officials may select a PPP option even if it is not the best approach, in the hope of attracting corrupt benefits. Corruption may also occur during procurement processes, project selection, and bid evaluation. The very process of setting up a PPP may be vulnerable to corruption when private actors try to influence the awarding of the contract.

The length of PPP contracts, typically for 20 or 30 years, offers a long timeframe for corruption to enter the system. Corrupt interest in PPPs may be driven by the fact that they are often used to finance megaprojects with huge financial value (SIWI, 2020). And the complexity of the projects and the contracting arrangements make it harder to ensure accountability. Often PPPs are opaque to the public and interested parties and are often intended to be flexible, to allow innovation to be introduced over the period of the contract. This may increase the discretion of relevant officials, thus increasing corruption risk, and contribute to lower levels of accountability.

Specific measures should be taken to reduce the risk of corruption in PPPs. **One such measure is the use of standardised contracts that reduce the discretion of contracting authorities** (Iossa and Martimort, 2016). **Ensuring transparency of contractual and financial information** is also critical, as is **limiting the use**

of revenue guarantees or monetary compensation (Iossa and Martimort, 2013, as cited in Cuadrado-Ballesteros and Peña-Miguel, 2022).

Green bonds

Green bonds are a fixed-income financial instrument specifically intended to fund projects with positive environmental and/or climate benefits. They can be issued by government entities at various levels, including water utilities, multinational banks, and by corporations. The first green bond was issued in 2007, and the value of green bonds reached nearly USD 270 billion in 2020.

There is no single standard for measuring the environmental status of a bond, although there are a range of voluntary guidelines such as those issued by the International Capital Market Association (ICMA) and the Climate Bonds Initiative (CBI). The European Union has issued a European Green Bonds Standard that comes into force in 2024.

Green bonds are an important tool in the drive towards a green economy. However, while many bonds are aligned with these voluntary standards, the **risk of greenwashing** still exists, where the bonds make misleading claims of their environmental benefits. For example, the Hong Kong Airport Authority raised USD 1 billion via a green bond to fund the construction of a third runway, on 650 hectares of seabed. It is questionable whether the bond is in fact 'green', given the contribution of aeroplanes to CO2 emissions and the expected impact on biodiversity, such as the Chinese white dolphins that are facing extinction. (Flood, 2022)

There are also concerns regarding the issuing of green bonds for particular projects which may appear to be environmentally friendly, when the other activities of the country or enterprise are decidedly not 'green'. For example, environmentalists questioned the green bonds issued by the Australian state of Queensland. While the projects targeted by the bond were environmentally friendly, such as preserving the Great Barrier Reef, opponents claimed that the bonds were a greenwashing of state activities, which included massive coal-related activities (Erlandsson, 2020).

Water Funds

To add confusion to a complex picture, water funds refer to two different mechanisms. The first relates to organisations established to bring together public, private and civil society stakeholders to enhance water security through watershed management and nature-based solutions. Examples include the Rio de Janeiro Water Fund, Brazil, which brings together stakeholders to protect the Guandu Watershed which supplies 80% of the water used by the 10 million residents of Rio de Janeiro; or the Upper Tana-Nairobi Water Fund, Kenya, where urban users are investing in upstream watershed conservation efforts. These conservation efforts include tree planting, protecting riparian zone and implementing terracing techniques. These interventions are aimed at reducing the silt levels in the river that provides water to Nairobi and improving the livelihoods of farmers. Such water funds access finance through several options, but key in many of them is payment from downstream water users, often industry and municipalities, for upstream actions to protect water resources on which they depend. Additional funding might come from public funding agencies or private foundations and donors (TNC, n.d.). Like many multi-stakeholder initiatives involving actors from different sectors with different power balances, they can face risks related to how they are structured and run (CEO Water Mandate and WIN, 2015).

The second refers to exchange-traded funds, such as the Nasdaq OMX Global Water Strategy index, created in 2011. In 2021 there were around 65 of these types of water funds globally with around USD 35 billion in assets under management (Blue, 2021). There are four broad categories that the holdings typically fall under:

water utilities, water distribution and service delivery companies, water technology companies and others that are leaders in water use efficiency within their own activities. Exchange-traded funds claim to invest in companies that encourage limiting water usage and present innovative solutions around water access. However, **lack of clear standards may make it difficult to assess the actual environmental or water-related value of the companies** to be invested in.

Many exchange-traded funds have shares in the three UK-listed water companies (Box 5), seeking dividends from the provision of water. Bayliss (2014) shows how they seek to **profit from water as a scarce resource.** She shows how environmental, social, and governance (ESG) certification makes them appear to be helping society, while their profit incentive undermines their interest in water as a public good.

Country-level borrowing and indebtedness

While no information exists on the level of debt in the water and sanitation sectors specifically, there are significant concerns regarding the overall debt situation for a number of developing countries. According to the World Bank, poor countries are facing "ballooning debt service payments, record high refinancing costs, limited access to markets, and severely reduced capital inflows" (Van Trotsenburg and Saavedra, 2024). If debt vulnerability continues to increase, it will potentially impact negatively on development outcomes. **Debt vulnerability** has been exacerbated by, amongst other things, the climate crisis, the war in Ukraine, the Covid-19 pandemic and the impact of increasing inflation on interest rates. It is also important to note that there is evidence that corruption increases public debt, a matter of significant concern for highly indebted countries in particularly. (Benfratello, et al 2018)

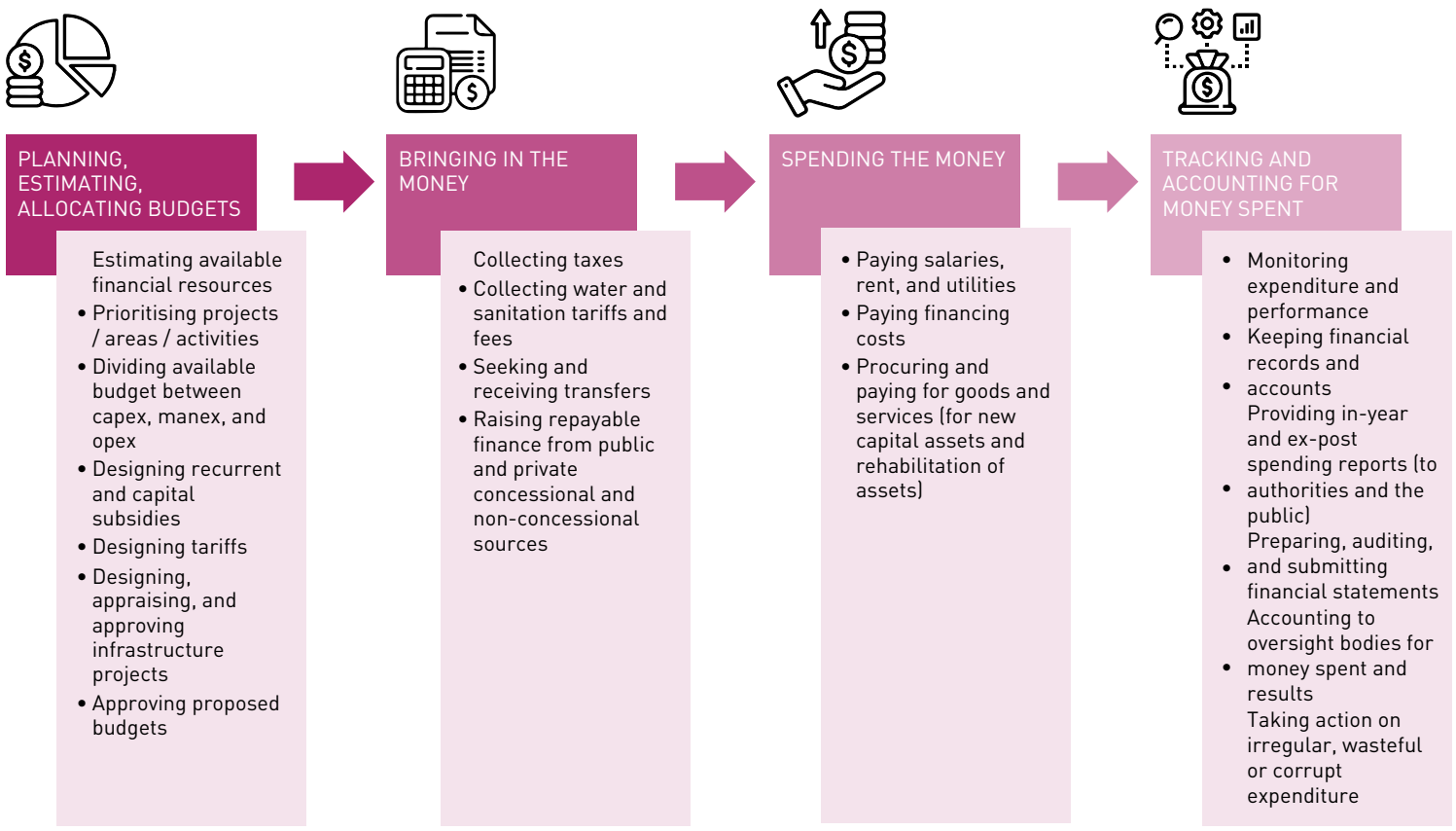
Debt in developing countries has increased, on average, from 35% of GDP in 2010 to 60% of GDP in 2021. Foreign debt and debt service payments of developing and emerging countries have more than doubled since 2008. A large majority (90%) of the extremely poor live in countries that carry the highest debt burden. The level of debt in the developing countries is at its highest since record-keeping began. In 2023 debt servicing consumed an average of 39% of government spending for low-income countries. If middle-income countries are included, the figure is 29% (Ramos et al, 2023).

Photo: Aerial overhead township and wealthy suburb in South Africa. Shutterstock

3.3 Integrity Risks Across the Budget Cycle

Different sources of and mechanisms for financing have particular integrity risks and opportunities for safeguards. These manifest in various phases of the water and sanitation budget cycle (Figure 7).

FIGURE 8: Water and sanitation budget cycle



3.3.1 Integrity challenges in planning, estimating, and allocating budgets

High levels of **discretion in project decisions and budget allocation processes, combined with opaque water and sanitation budget and project preparation processes**, enable corruption and undue influence into budget allocation and project planning. Poor transparency on funding flows, including development partner transfers to countries, create an environment for corruption to take hold (Plummer and Cross, 2006; Dorotinsky and Pradhan, 2007). However, transparency of financial information is generally on the increase (ODIN, 2023).

Policy capture

Distortions in water investments due to corruption can be driven at the highest level. **Politicians and senior officials responsible for water sector policies may try to influence policy, seeking to direct investment priorities in a way that sets up opportunities for rent-seeking or other forms of corruption**.

Regulators can be subject to 'regulatory capture' by politicians and other powerful stakeholders. They may manipulate standards, regulations, and tariffs, or allow projects to sidestep established procedures. Regulatory capture can also manifest in subtler ways. For example, utilities might offer jobs to regulatory officials who are sympathetic to their cause. Conversely, former utility managers may use their positions within regulatory bodies to favour their past employers. The setting of tariffs and the allocation of such revenues can present its own set of integrity challenges, particularly when these funds are used to support political patronage networks or tariffs are kept inappropriately low to support a politician's voter base.

"Grand corruption occurs among politicians and senior officials in the selection of WSS projects: during planning and budgeting processes, capital-investment projects are favoured over lower investment alternatives, sector investments that *guarantee higher levels of return, are favoured over those that do not. Public resources are diverted to WSS projects where there are greater levels of potential kickbacks, with the greatest incidence, at the lowest possible risk".
(Plummer and Cross, 2006)

Undue interference in budget allocation and investment management

Corruption and integrity failures often start in the planning phase. **Undue interference in how financial resources are allocated — whether taxes, tariffs, transfers or repayable financing—can affect the location and type of water and sanitation investments**. Such distortion can be introduced by politicians, public officials, managers and boards of water utilities, or by powerful lobby groups. It can also occur during the procurement of PPPs or the negotiations around blended finance arrangements. This can drive up costs and divert resources away from areas of highest need, such as informal settlements and rural areas that often face underfunding for water and sanitation services.

"Sourcing water from surface rather than ground water alternatives where they are available, is a typical illustration of decision-making that, while legal, creates opportunities for both grand and petty corruption. The need for the construction of costly water treatment plants and ongoing procurement of chemicals, (and thus opportunity for recurrent bribery, extortion and fraud) such as that seen in Kinshasa and elsewhere, is characteristic."

(Plummer and Cross, 2006)

Evidence shows that corruption can lead to an increase in public spending, while skewing the sectors that receive funding. In sub-Saharan Africa, corruption has been shown to reduce spending on education, mining and communications, in favour of spending in the military, health and transport sectors (Bazie et al, 2024). The **Citywide Inclusive Sanitation** initiative requires sanitation providers to ensure that sanitation planning includes poor areas with non-sewered sanitation, in order to address the challenge of biased allocation of public resources.

Within government entities, **malign collaboration between water departments and other departments such as finance, planning and public works can also contribute to distortion in the allocation of resources**. Equally, public legislative representatives may collude with their executive counterparts, diverting public resources for private gain (Aman and Murti, 2022). In many contexts, officials are expected to 'play the game' and their status and power base is dependent on their willingness to work within the established system (Plummer and Cross, 2006). Such practices can also become part of prevalent *social norms*.

Moreover, **where local government fails to ring-fence water tariffs from other revenue streams, the stage is further set for political meddling**. By asserting their influence, powerful actors can divert funds, which should have been reinvested in water and sanitation infrastructure and services, to other sectors or to specific locations.

In the absence of explicit incorporation of anti-corruption approaches during design of infrastructure projects—and without transparency in the bidding process, contract award and implementation—corruption can ripple through all areas of contracting. According to Plummer and Cross (2007), private-public negotiations in particular can over or underestimate capacity, over or undervalue assets, manipulate the level and process of tariff setting, and determine the targets and subsidies for serving the poor through public-private deals.

3.3.2 Integrity challenges in 'bringing in the money'

Corruption, fraud and theft in tariff collection

Water users may bribe officials to ignore unauthorised connections or meter tampering, a prevalent form of lower-level corruption. Similarly, tariff collectors may demand bribes akin to protection money from customers, assuring them that their water supply will not be terminated. At higher levels, regulators or other officials responsible for oversight can be part of the corruption, conveniently overlooking irregularities in the collection of water tariffs or disregarding consumer complaints about corruption.

For example, in Kampala, Uganda, an audit of non-revenue water losses (60%) found that some large water users had tampered with their meters to reduce bills and staff had responded through 'unconventional methods'. In response, the **National Water and Sewerage Corporation (NWSC)** held internal disciplinary

FIGURE 9: Planning and budget allocation – the knock-on effects of integrity issues at a crucial phase

hearings and installed ultrasonic meters that were less vulnerable to tampering (Thekr Team, 2023).

When it comes to the collection of water tariffs, implementing automated meter-reading systems and cut-off mechanisms can enhance transparency and accountability. However these **technological solutions need to be complemented by broader governance reforms that aim to achieve more effective and equitable water management.** In addition, the establishment of effective regulatory frameworks and stringent anti-corruption measures—such as whistleblower mechanisms—can further bolster the integrity of the tariff collection process.

Challenges in tax collection

The practice of offering exemptions from taxes and tariffs in exchange for bribes diminishes a government's revenue-generating potential. This is especially concerning when coupled with intricate and opaque tax legislation. Such legislation can be manipulated by tax and customs officials, particularly if administrative systems are weak. Furthermore, high-ranking political figures often exacerbate corruption by safeguarding or even creating corrupt tax collection systems where illicit gains are shared up the chain of command. In low-income countries, it is estimated that public budgets could lose up to 4% of GDP due to corruption in tax systems, a malaise not confined to the water sector alone (IMF, 2019). Tax evasion and illicit financial flows substantially erode the public finance available in developing countries. According to a report by the UN Conference on Trade and Development (UNCTAD), Africa loses about USD 88.6 billion, or 3.7% of its gross domestic product (GDP) annually in illicit financial flows (UNCTAD, 2020).

Turning to solutions, tax anti-corruption programmes involve a multifaceted approach. This entails simplifying tax laws while eliminating exemptions, curbing the discretionary powers of tax administrators, and overhauling tax agencies with a focus on professionalisation and adequate remuneration. Other remedial actions include instituting codes of conduct, providing ethics training, and setting up whistleblower mechanisms. The use of information technology to automate tax filing and payment procedures is also crucial, as are independent grievance and ombud mechanisms. Educating taxpayers on their rights and meting out severe penalties for corrupt officials can curtail corruption and set a precedent that can deter future malpractice.

Collusion and corruption in negotiation of financing

In water concessions and PPPs, how deals are structured at the outset can provide opportunities for bribery, fraud and distorted pricing (SIWI, 2020). The impacts of these decisions then play out over the 20 to 30 years of contract duration. Collusion in negotiations on the financing of new investments, especially when off-budget project-specific financing is involved, affect the cost of capital and impact the affordability of future tariff charges and subsidies.

A transparent legal framework, well-organised processes and robust multi-stakeholder checks and balances are critical for integrity in raising private finance for public sector investments. Ensuring expert advisory roles and specialised management capacity in the initial formulation, regular review, and monitoring of contracts is required to ensure integrity in financing.

Photo: Helvetas Guatemala, Guatemala Water Integrity Programme 2015, Explaining integrity issues in rural communities.

Non-revenue water

Non-revenue water (NRW), a major challenge to the financial sustainability of water services globally, is exacerbated by corruption in many ways, from issues in quality of infrastructure to billing practices and operational efficiency. Procurement, construction, and maintenance projects tainted by corruption often result in substandard infrastructure prone to leaks and breakages, contributing to increased NRW. Illegal connections and meter tampering (particularly by large water users or when facilitated by staff) further exacerbate commercial losses for utilities. Illegal connections can increase physical water losses as well, due to the often poor and leaking connections that are put in. Nepotism and cronyism within water utilities can lead to the appointment of unqualified personnel or contractors, compromising the effectiveness of NRW reduction initiatives. Corruption diverts funds intended for essential projects, impeding efforts to upgrade infrastructure and implement leak detection technologies. Furthermore, corrupt practices erode trust between water service providers and customers, reducing the willingness to pay for services.

There is a significant financial opportunity cost for the sector of failing to address non-revenue water and the integrity breaches that exacerbate it. In Brazil, for example, NRW rates average around 39%, translating to severe financial losses (Borges et al, 2022); in other countries NRW rates have reached up to 70%. Financial losses from non-revenue water have significant knock-on effects for service provision. This is money that could otherwise be invested in upgrading ageing infrastructure or expanding access to underserved communities.

Non-payment for water is often blamed on poor water users, opening up debates about the affordability of tariffs and the adequacy of subsidisation. What is often less visible is the number of large water users that find ways to avoid paying for their water use, including industrial customers, government entities and well-linked individuals who can use their political clout or elite connections to avoid payment.

3.3.3 Integrity challenges in spending, tracking and accounting for the money

Safeguarding the virtuous and efficient translation of taxes, tariffs, transfers and loans into equitable infrastructure and services is the domain of public financial management (PFM) rules and institutions. The PFM system operationalises management of funds, salary payment, the actual commitment of budget releases from central treasuries to one set of activities or project rather than another, and the procurement, delivery verification and payment of third-party inputs. But **PFM systems, particularly in poorer countries, are often weak despite high investments by governments and donors in system reforms and improvements. In highly corrupt countries, weak PFM systems are a deliberate outcome of grand corruption machinations**. PFM rules and procedures can also be deliberately bypassed or undermined by corrupt actors.

"The PFM system within countries is frequently weak, and public finance reforms do not translate sufficiently often into service delivery gains...Corrupt practices can exploit these systems yet some countries have tried to make the integrity of their finances more secure."
(WIN, 2016)

BOX 10: The Malawi cash gate scandal

The scandal involved the misappropriation of government funds through the transfer of funds from the government bank accounts to private companies, in disguise for payment of goods and services. It was uncovered in September 2013, when a government accounts clerk whose monthly income was less than USD 100 was found with huge sums of cash estimated at over USD 300 000 in his car. A week later, there was an assassination attempt on Malawi's budget director.

The government conducted a forensic audit revealing that, over four years, public officers had manipulated the integrated Financial Management Information System to steal USD 356 million. Public officers drew checks through the system in favour of private contractors on the pretext that they had supplied goods or services to the government when they had not. Once a check was issued, they would delete the transaction from the system. Seventy people in both the public and private sector were arrested, amongst them an ex-minister, an ex-army commander general, senior defence and police officers, politicians, public officers and businesspeople.

(Source: Chiwala, 2018).

Weaknesses in budget execution, including procurement risks

The budget execution process consists of several major elements:

- Funds are released to ministries or government entities according to the approved budget;
- Funds are allocated by the relevant agencies either for direct costs or for procuring goods and services, and payments are made for these expenditures;
- Expenditure transactions are recorded in accounting systems; and
- Regular execution reports are produced with a final closure of the accounting books and a year-end report.

In practice, budget expenditure seldom accords exactly with the approved budget. This may be due to legitimate reasons, including changes in priorities or changed conditions on the ground, but it may also be due to mismanagement, corruption, or broader failures of integrity (IBP, 2011). In many environments **approved budgets are poor predictors of actual spending**. This is especially the case especially where revenue collection is below expectation and the timing of budget releases are unpredictable. Accountability against approved budgets is thus weakened.

Budget execution opens many opportunities for corrupt practices, from the highest echelons of government down (Transparency International, 2014). Politicians and officials are often able to influence expenditure, diverting funds to projects that serve their personal or political interests. **Procurement is the site of the greatest corruption in public expenditure. Though internal processes are also affected, human resources in particular**, for example through absenteeism and non-fulfilment of tasks and obligations by water services public officials; ghost employees; and nepotism in appointments.

Regulators and civil society play a critical role in analysing budget allocation and expenditure. There are several tools available for them for this, **including budget execution reports, expenditure tracking, and community monitoring (IBP, 2011**). Building horizontal coalitions (across civil society) or vertical coalitions (with government officials) can enhance impact: they help to mobilise resources, create greater capacity and thereby result in higher quality products and greater credibility. Large coalitions are also more likely to be taken seriously, which can build willingness of government officials and entities to respond positively. The legal framework is also important, particularly in relation to access to information (Carlitz, 2013).

"At every stage of the procurement process, ranging from pre-tendering to order and payment, there are corruption risks. Reforms to the procurement process are aimed at fostering integrity, transparency, stakeholder participation".
(U4, 2021)

Globally, **public procurement** is a prime target of corrupt actors. Corruption and fraud occur on the side of both contracting authorities and contractors through bribes, collusion and kickbacks. This affects water ministries, local government level, utilities and community-based delivery of water and sanitation infrastructure and services. Corruption often manifests through **inflated estimates for capital works and supplies and manipulation of procurement processes to favour particular suppliers.**

In construction and service delivery, corruption can be seen in:

- failure to build or deliver to specifications;
- use of substandard materials;
- disregard for health and safety regulations;
- concealment of substandard work;
- fraudulent invoicing, marked-up pricing or overbilling by suppliers, account falsification; and
- incomplete projects.

"In implementation, efforts by community leaders to increase profit reflect typical public-private procurement and construction fraud and bribery ... and in project management involves malfeasance: fraudulent documentation, accounting and reporting by those tasked with managing finances. The cost of rural boreholes in Africa—up to fourfold the cost of some parts of Asia—is considered by sector professionals to be a prime hotspot for further investigation".
(Plummer and Cross, 2007)

In countries plagued by poor governance in infrastructure development—marked by lack of transparency and insufficient oversight—public construction contracts often suffer from integrity lapses and price distortions. These governance shortcomings tend to manifest similarly when private capital is introduced into water-sector investments (Leigland, 2020).

Photo by Wayne Conradie, Courtesy of WEDC, Luena, Angola.

Challenges in accountability and oversight

Accountability and oversight institutions play a critical role in identifying and sanctioning corruption, including sector regulators, anti-corruption bodies, and auditors. Finance ministries regard the adoption of integrated financial management systems—automating budget execution, accounting, and reporting while potentially incorporating human resource and procurement systems—as critical for reducing corruption risks. However, these **systems are not without their pitfalls**; there are ample instances where they are circumvented, particularly in contexts of systemic corruption.

"In July, Kenya's Auditor General Nancy Gathungu and Controller of Budget Margaret Nyakang'o appeared before the senate to confirm yet again what has been flagged by watchdogs for years: The government's procurement software system is prone to "fraud, error and non-disclosure of revenue." Gathungu went further, alleging that the Integrated Financial Management System is manipulated "deliberately to hide information" from auditors at the close of the financial year."
(Zalan et al, 2021).

Sector regulators are often ill-equipped to regulate complex financial transactions, including those relating to private sector delivery of services. Equally, the inability of Supreme Audit Institutions (SAIs) to keep pace with modernisations in financial crime enables the subversion of ostensibly improved systems. Despite legal frameworks extolling transparency, SAIs often wrestle with political and fiscal constraints that hamstring their resources and capabilities. Nor are SAI officials impervious to corruption; indeed, some may actively collude in hiding fraudulent or irregular transactions. Oversight of SAIs remains inadequate, a problem exacerbated when their reports remain unpublished, thus curtailing public scrutiny. (Jenkins, 2018)

Vulnerabilities in emergencies and disasters

Corruption, not only nature, kills during natural disasters. A recent comparative analysis looking at natural disasters, including hydrological, in 135 countries over a period of 40 years has found

that **corruption increases the number of disaster-related deaths**, particularly among developing countries struggling with high levels of corruption (Cevik and Tovar, 2023). Human lives are lost as a result of poor infrastructure and building quality as well as the vulnerability of risk and health management systems brought on by pervasive corruption.

Natural disasters can be different in their magnitude and impact on local life, but they all have some traits in common. To begin with, major calamities, such as major floods and droughts, are often followed by a substantial national, regional or global humanitarian response. Both internal and external funding can be mobilised to support emergency response efforts, including the provision of safe drinking water and sanitation services to affected populations. Disaster relief efforts often see national governments providing funds to local or regional authorities to support the delivery of relief services. Humanitarian relief involves very high amounts of money that relevant government agencies must disburse in a short and decisive way to assist the affected population.

Such situations present financial opportunities for corruption to flourish:

- The **likelihood of mishandling, diverting, and corrupt practices increases with the abrupt and significant inflow of funds.**
- There is sometimes pressure to give relief fast and to ensure swift reconstruction, which can easily result in a tendency to **circumvent conventional procedures**, particularly when it comes to procurement regulations like open competition and contract allocation transparency. Many nations' procurement rules foresee an emergency exception clause.
- The humanitarian relief industry is fiercely competitive, much like any other industry in this regard. As long as donors are willing to offer the funding, a large number of assistance organisations are prepared to supply their services in the event of a disaster. This can create the right conditions for undue influencing.
- Institutions often lack the capacity to manage corruption risks and are focused on other priorities such as the high speed delivery of water and sanitation services. The strain on human resources in emergencies can be particularly severe.
- Poor or non-existing cooperation among donors, government institutions, CSOs, and the private sector can result in a project being funded twice or affected by fraud.
- **Countries that are more severely affected by corruption during disaster responses are generally those who were grappling with integrity failures in the pre-crisis**. In this regard, an emergency situation can have detrimental effects on existing anti-corruption bodies and policies, as the government attention shifts towards other priorities. (Fenner & Mahlstein, 2008)

Managing transfers for disaster relief therefore poses unique challenges in maintaining integrity. For example, in India the state of Bihar faced floods in 2008. This was followed by allegations of corruption, including the diversion of funds meant for relief efforts. Ten years later, both individuals and organisations in Kerala were found to have siphoned off funds meant for flood victims. Nepotism in the distribution of relief materials and funds was also identified (Yamamura, 2014).

Combatting corruption in disaster response requires focus on improving transparency and accountability in the allocation and use funds. It can include special oversight mechanisms to ensure funds are used for their intended purpose, or specific transparency and reporting requirements are met. Robust auditing and evaluation mechanisms are also needed to assess the effectiveness of disaster relief efforts and to inform stronger procedures for future challenges.

PART 4

Pathways to Systemic Change

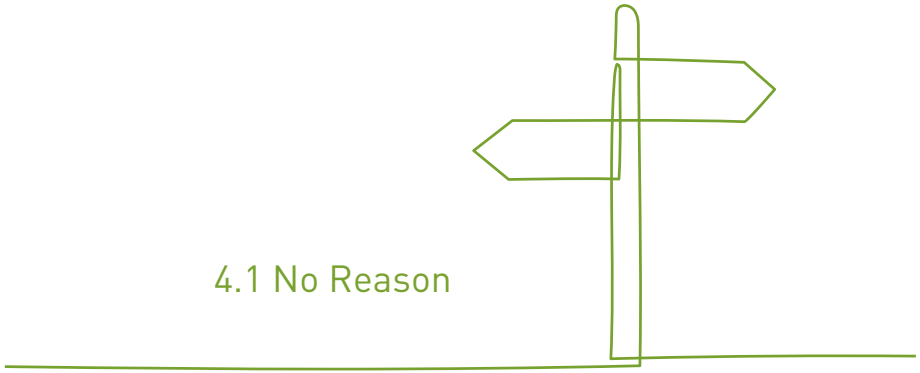
This section delves into three strategic 'pathways'—'No Reason,' 'No Room,' and 'No Reprieve'—aimed at promoting integrity and diminishing corruption in the water and sanitation sectors. No Reason (**section 4.1**) refers to the 'bigger picture,' particularly the influence of social norms, and explores how they can be changed. No Room (**section 4.2**) discusses how structural reforms and technological interventions can restrict opportunities for corruption. No Reprieve (**section 4.3**) hones in on methods to enhance detection and sanctioning.

Each pathway opens up many possible interventions: from minimum sentencing for procurement fraud, to printing posters lauding ethical behaviour, from engaging NGOs in 'civic audits' to using big data to sniff out irregularities. While effective individually, the pathways gain robustness when applied jointly, especially given the evolving complexities of corruption. With the pathways combined, those who seek to safeguard integrity or reduce corruption can make a tangible difference, and at a scale that matters.

Integrity champions are individuals or groups of people who promote integrity and step up to lead the fight against corruption. They may come from any walk of life and find themselves in supreme audit institutions, water and sanitation service providers, professional bodies, the private sector, the media, academia or civil society organisations. Or they may be in international organisations that can play an important role in safeguarding integrity in the sector—including development banks, bilateral donors, private investors, and philanthropic organisations, all of whom have a vested interest in safeguarding integrity in the use of their financial contributions.

An integrity champion is someone who understands the importance of integrity in the water and sanitation sectors, not as an end in itself, but as a significant contributor to improved service delivery and effective use of limited resources.

The three pathways for integrity, 'no reason', 'no room', 'no reprieve' can serve as blueprints for those integrity champions who are pushing for positive change across a range of contexts and in a diversity of geographies. By tackling the challenge of corruption from a variety of angles through the three pathways together, a series of relatively small actions can add up and create positive change within the sector. Over time this should compound, bringing about widespread improvements .



4.1 No Reason

The 'no reason' pathway is based on insights into social norms and social sanctioning. It aims to undermine the accepted ubiquity of corrupt practices and seeks to disrupt the ways in which pressure and rationalisation drive integrity failures. The pathway addresses relationships and mutual expectations around corruption; as such it is boosted by partnerships and ethical leadership.

4.1.1 Changing social norms

Corrupt actors often justify their actions based on the belief that such behaviour is common practice—'everyone else is doing it'. This belief that corrupt behaviour is not only tolerated but is, in fact, quite 'normal', or even expected, is a strong predictor of integrity failures. Social norms approaches to corruption and poor integrity seek to intervene systemically and transform these beliefs. This work requires sustained effort and evidence of transformation is rarely immediately clear, but it is key to successful integrity programmes.

Social norms are mutual expectations held by members of a group about the right way to behave in a particular situation. They are different from personal attitudes and behaviour. These mutual expectations express what is considered appropriate behaviour and are comprised of what we see or believe others do and what we think others expect us to do. If the social norm is that acts of corruption are both accepted and expected, **approaches that do not address the powerful, unconscious social pressure arising from these social norms are unlikely to be successful** (Chigas and Scharbatke-Church, 2019). The consequent strategies must take into consideration the unique cultural, political, and socio-economic factors that influence corruption in specific settings.

From this perspective, corruption is not simply a matter of individual moral failings or inadequately enforced regulations, but a complex social phenomenon shaped by collective attitudes and behaviours. Conversely, addressing corruption isn't just about tackling illicit activities—it's also about creating an enabling environment that supports and rewards integrity and transparency. This involves promoting, strengthening moral imperatives, and fostering a culture of transparency and accountability. Such measures can help reshape the expectations of individuals, incentivising them to act with integrity and follow formal legal frameworks.

Changing the norms surrounding corruption seeks not only to change the perception that corruption is acceptable or expected, but also to reduce the pressure on individuals to take part in corruption. It is necessary and possible at all levels, whether at the national, sectoral or institutional level. Interventions focusing on social norms also tend to enhance the chances of detecting corruption, often due to increased likelihood of vigilance for certain practices and of whistleblowing.

Research has shown that even in very corrupt contexts, most people are firmly opposed to corruption; however, they also believe that other people are much more willing to engage in corrupt activities than is the case. In **Mexico**, researchers provided people with information showing that most people were opposed to corruption. This increased trust in other people's views and made participants more likely to reject the idea that corruption was an inherent part of Mexican culture. It ultimately decreased the likelihood of paying a bribe. These findings are hugely important, implying that **the correct messaging can significantly affect participation in corrupt activities** (Agerberg, 2022).

Another important **element of addressing social norms lies in managing human resources in organisations, particularly who gets promoted or rewarded from within organisations**. Promotion of individuals with integrity sends a strong signal to other staff of organisational norms and is a key action in fighting corruption. In some circumstances, those who refuse to take part are stigmatised or even threatened. Some argue that one way to reduce such pressure is to directly address financial pressures on employees, such as paying staff better, alleviating the incentives for corruption. Cultivating a culture of transparency and open dialogue can also provide a powerful counterbalance. Employees encouraged to discuss ethical dilemmas openly may find it more challenging to justify wrongful actions to themselves, let alone to their peers. (Manara et al, 2020)

A concern regarding social norms approaches is that, since norms are society-wide, one institution or actor is powerless to shape them. Yet within a sector, or within an organisation, proactive measures—that go beyond merely limiting the opportunity for integrity breaches or focussing on detection and sanction— have proven themselves effective in changing prevailing norms.

Recent research from **Kenya** provides some insights into the potential of harnessing social norms to combat corruption. The study delved into three different scenarios to explore how public perception of who benefits from corruption affects the actions of individuals. The research showed that people are marginally less likely to engage in corrupt practices if they feel that the harm will affect those they have a social connection with (Box 10).

For entities working in finance in the water and sanitation sectors, this suggests a **potential strategy: highlight the societal costs tied to corruption**. This strategy leverages social norms and peer influences, encouraging individuals to consider the wider implications of their actions. If individuals are encouraged to think of corruption as not simply a victimless crime, but rather one that can have detrimental effects on their community and peers, they might be less inclined to engage in such activities. For instance, a water company could highlight the impacts on service delivery of meter tampering, or bribes to avoid payment for water. By linking corruption to negative impacts on the community, such a campaign would seek to evoke empathy and a stronger sense of community, thereby deterring corrupt actions.

BOX 11: Leveraging social norms for ethical behaviour – Findings from Kenya

Research into social norms and corruption in Kenya shed light on why people believe small-scale corruption occurs. Starting from the perspective that petty bribes are paid to resolve problems, the study examined three scenarios: one where an official creates a problem, another where the citizen's misdeed creates the problem, and a third where resource shortages create the problem. A noteworthy discovery is that residents of Nairobi County view corruption as morally wrong, yet simultaneously believe others are more prone to engage in it than they are themselves.

The study moved beyond finger-pointing to explore who stands to gain or lose when corruption happens. It emerged that citizens and officials are perceived to equally benefit from bribes that resolve problems caused by citizens, and these bribes are also judged more acceptable compared to bribes that solve problems caused by abusive officials or resource shortages. But these self-interested bribes by citizens are also judged to be disproportionately harmful to public institutions and, to a lesser extent, on society at large.

A particularly compelling part of the research reported on an ethical dilemma that was presented to participants in the form of a financial incentive to act unethically. While a majority took the bait, their choices varied depending on the victim of their action. If the loss were to affect an institution, 70% opted for the unethical choice; this number decreased to 60% when their peers stood to lose.

The nuanced conclusion is that people are marginally less likely to engage in corrupt practices if they are reminded that the harm will befall people they have a social connection with, as opposed to an impersonal entity like an institution. The 10% difference between the two scenarios offers a window into leveraging social norms for ethical conduct (Yenkey et al, 2024).

The efficacy of emphasising this 'societal loss' can be seen in different sectors across the globe. For example, in the healthcare sector in the **United Kingdom**, there have been anti-fraud campaigns emphasising the societal cost of prescription fraud. By communicating that false claims reduce the resources available for other patients—peers of the fraudulent individual—such campaigns have helped to reduce instances of prescription fraud (NHS, 2018). Similarly, in the energy sector in **India**, campaigns to curb electricity theft have emphasised the harm inflicted on the entire community. By making it clear that such theft leads to increased tariffs for other consumers and compromises the reliability of the supply, these initiatives managed to reduce instances of unauthorised electricity usage.

4.1.2 Ethical leadership

Strong, ethical leadership is a powerful tool in transforming institutions. The transformation of the Phnom Penh Water Supply Authority (PPWSA) in Cambodia showcases how ethical leadership and strong anti-corruption measures can lead to successful outcomes, including improvement in financial sustainability (Box 12).
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Photo: Nicole Guzenski, WIN photo competition 2019, Chingudai lives outside of Osmanabad, Maharashtra in India. She has been working for change in her community for years, supporting the development of wells, public tap, and accessible toilets. She documented her work in the book she is holding up, by dictating the information to someone who could write for her.

PPWSA's experience also shows that changes in management permit a 'window of opportunity' that can be coupled with the introduction of effective measures against corruption, leading to significant improvements. It highlights the importance of addressing all the aspects of the challenge to create an environment that safeguards integrity. This experience mirrors similar success stories from other parts of the world where corruption within an organisation was curtailed through systematic interventions.

BOX 12: Learning from the reform of a utility in Phnom Penh, Cambodia

In 1993, PPWSA was crippled by inefficiency and corruption, and had an alarmingly high amount of non-revenue water. Motivation for corruption was high, given poor salaries and a non-meritocratic administration, weak systems and low levels of accountability. People could easily rationalise their actions in a system where corruption was commonplace.

The journey of PPWSA to overcome these challenges began with a dramatic change in leadership and direction that initiated a robust drive towards combating corruption and promoting transparency and accountability. PPWSA put in place technological solutions to systematically diminish the opportunities for corrupt behaviour.

This was accompanied by other measures:

- Fair and competitive salaries, reducing the perceived need for employees to resort to corrupt practices;
- Performance-based incentives, rewarding honesty and productivity over any dishonest means of personal gain; and
- A strong emphasis on ethical conduct and company culture to tackle the process of rationalisation.

Management set a precedent with their own actions, encouraging honesty. Employees were educated on the impacts of corruption, making it harder for them to justify any unethical actions.

PPWSA also prioritised customer engagement and service, disseminating information about water financing to customers, particularly the poor. Regular performance reports and activity updates were published, fostering trust among consumers. Billing collection efficiency now stands at an impressive 99.7%, and water is available 24/7 in served areas.

Today, the PPWSA stands as a model of good practice, having successfully increased its coverage to 90% of the service area (with regular provision to informal settlements), reduced non-revenue water to less than 10%, and established a culture of transparency, accountability, and service excellence.

(Source: Biswas et al, 2021)

4.1.3 Shaping norms through multi-stakeholder processes

In earlier decades, many anti-corruption programmes were based on the principal-agent theory which focuses on individual behaviour and how to affect it. This approach saw an increase in sanctions and administrative reforms, such as rotating personnel or internal audits (Lambsdorff, 2009). However, this approach proved to be of limited impact in contexts of systemic corruption. An alternative approach has been taking hold: using multi-stakeholder partnerships (MSPs), or collective action, to jointly fight corruption.

"[Collective action is] a collaborative and sustained process of cooperation between stakeholders. It increases the impact and credibility of individual action, brings vulnerable individual players into an alliance of like-minded organizations and levels the playing field between competitors. Collective action can complement or temporarily substitute for and strengthen weak local laws and anti-corruption practices."

(World Bank, 2008, p. 4)

This approach considers the fight against corruption to be a shared responsibility, where everyone benefits from collaborating with each other. Multi-stakeholder partnerships simply refer to collaboration from at least two different types of stakeholders; they can take many shapes and forms. They can come from the government, private sector, and/or civil society. Such partnerships are often dynamic, quite flexible in their adaptation and implementation, and can change over time (UNGC, 2021).

Evidence on the impact of multi-stakeholder partnerships in changing social norms in the water sector is still quite limited. Nevertheless, they should be considered a complementary approach to interventions that are based on the principal-agent theory. Some examples from the water and sanitation sectors include multi-stakeholder coalitions, joint declarations, and pacts.

Multi-stakeholder partnerships can play an important role in ensuring participation in budget allocation, in monitoring expenditure and performance in the water and sanitation sectors and in holding government accountable for finance-related decisions. Designing successful multi-stakeholder partnerships takes time, passion, and resources. It requires an initiator to convene the right type of stakeholders to prepare, introduce, and develop the partnership. Important aspects to keep in mind are the balancing of sometimes conflicting interests of various stakeholders, the development of a shared common vision, the avoidance of policy capture and undue influence, and the equal representation of various stakeholders. The implementation and the evaluation of a partnership's impact are also important, and challenging, as they should provide enough evidence to scale and sustain the initiative.

Multi-stakeholder coalitions

The **Water Integrity Network** is a good example of an international multi-stakeholder network that involves very different water and sanitation stakeholders through formal and informal arrangements—utilities, regulators, relevant ministries, media, civil society organisations, academia, multilateral organisations, and foundations. These different stakeholders are united by the joint goal to increase integrity within water management and service delivery, for all. One of the ways in which this is done is by inserting integrity within sectoral discussions and debates as a means of changing social norms.

Another good example is the **CoST Infrastructure Transparency Initiative**. Its work brings government, the private sector, and civil society together to promote the disclosure, validation and interpretation of data from infrastructure projects, including water. This has the potential to affect change in social norms around the transparent use of data.

The maritime sector offers inspiration on a private-sector driven multi-stakeholder partnership. The **Maritime Anti-Corruption Network (MACN)** is a "global business network working towards the vision of a maritime industry free of corruption that enables fair trade to the benefit of society at large" (MACN, 2024). Currently it features around 200 companies globally, but it also

seeks collaborations with governments, NGOs, and civil society to help change the narrative in the maritime sector. MACN members implement Anti-Corruption Principles, co-develop and share best practices, and build each other's capacities to prevent corruption. The benefits of a similar initiative among private water and sanitation providers/utilities could have an important influence on water and sanitation social norms and thereby on integrity in water and sanitation financial management.

Anti-corruption declarations

These ethical commitments bind signatories to refrain from corrupt practices in the framework of a particular project, programme, or sector. These are usually public commitments without a clear sanctioning regime, but they include a peer-pressure element that can act as additional deterrent (UNGC, 2021). A good example is the development of an **anti-corruption agreement with pipe manufacturing companies in Colombia** dating back to 2005. This partnership saw the involvement of civil society, the Colombia chapter of Transparency International, and the Colombian Association of Environmental and Sanitary Engineers (ACODAL). At that time, the pipe manufacturing companies affiliated with ACODAL represented 95% of the national market and 100% of the bids in public tenders for water supply and sewer systems. The organisations worked together to create an Agreement amongst the piping companies based on Transparency International's Business Principles to Counteract Bribery. Transparency International Colombia observed that, as a result, there was a decrease in the awarded prices for public contracts involving the signatories to the agreement, so the risk of paying bribes also decreased (Stålgren, 2006).

Integrity Pacts

Integrity Pacts align with the work around changing social norms, creating a formal agreement or pact among a group of stakeholders stating a commitment to maintaining high standards of integrity and ethical behaviour, especially during procurement and contract implementation. The approach aims to override existing social norms and to harness collective power to rebuff corrupt practices. They were developed by Transparency International as a tool to inject greater accountability, transparency and fairness into public procurement processes, thus protecting the use of public finances. The logic behind the Integrity Pact is to create a level playing field for all parties involved, to foster fair competition, and to enhance public trust in public procurement processes. This multi-stakeholder arrangement involves three parties—a government body responsible for a procurement process, bidding firms, and an external monitor.

The core commitment included in an Integrity Pact is to abstain from bribery, collusion, and other corrupt practices throughout the contract. Integrity Pacts differ from anti-corruption declarations, because they foresee an observer, often a civil society organisation, to monitor that both the contracting authority and the bidders comply with their commitments under the pact. The observer provides an independent layer of scrutiny that can pre-empt irregularities and enhance trust in public processes through external oversight. The monitor also provides recommendations on how to strengthen transparency throughout the procurement cycle and compiles publicly available periodic monitoring reports.

Integrity Pacts are effective under specific preconditions. They are an important illustration of the need to tailor all approaches to the local context. Pre-existing corruption risks together with the type and size of the project to be monitored must be carefully considered. Although applied in several countries over the last three decades, including on different types of projects in the water sector, for example in **Greece, Hungary or El Salvador** (Box 12), the scalability and financial sustainability of this tool remains a topic for discussion.

BOX 13: Integrity Pacts in the water sector

In Hungary an Integrity Pact was applied to the construction of a flood reservoir at the Tisza and Túr river junction—an area historically susceptible to flooding—seeking to shield the region's approximately 130 000 inhabitants from flood-induced evacuations and damage, previously costing hundreds of millions of Euros. With USD 94.55 million in EU project funding, Transparency International Hungary played an oversight role, starting in 2016, to guarantee transparency in the complex contract procedure. The monitoring team participated from the planning phase; with a hydro-engineering expert for in-depth knowledge and on-site checks. The monitoring team also delivered anti-corruption training for managing and contracting authorities' staff, which was then adopted in their official training curriculum. The Integrity Pact was used to convey citizens' concerns and for the review of contract modifications during implementation.

In Greece, a project focusing on flood protection was initiated in response to recurrent flooding in Athens, with EU funding of over USD 13.3 million. The flood damage, exacerbated by urbanisation, population growth, and poor planning, had led to the loss of lives and property, with a particularly devastating incident in 2015. Transparency International Greece partnered with the Attica Region to implement an Integrity Pact to provide oversight from the tendering process through to construction. While this played a positive role during the tendering process, the winning bidder terminated the contract, citing insurmountable difficulties in the implementation of the project.

In El Salvador the National Water and Sewerage Administration (ANDA) signed three Integrity Pacts in 2015 for pipe replacement tenders in San Salvador. The Pacts complemented other ANDA interventions, including organisational change activities, to establish more open, transparent and accountable management and build trust around public procurement.

(TI, 2022)

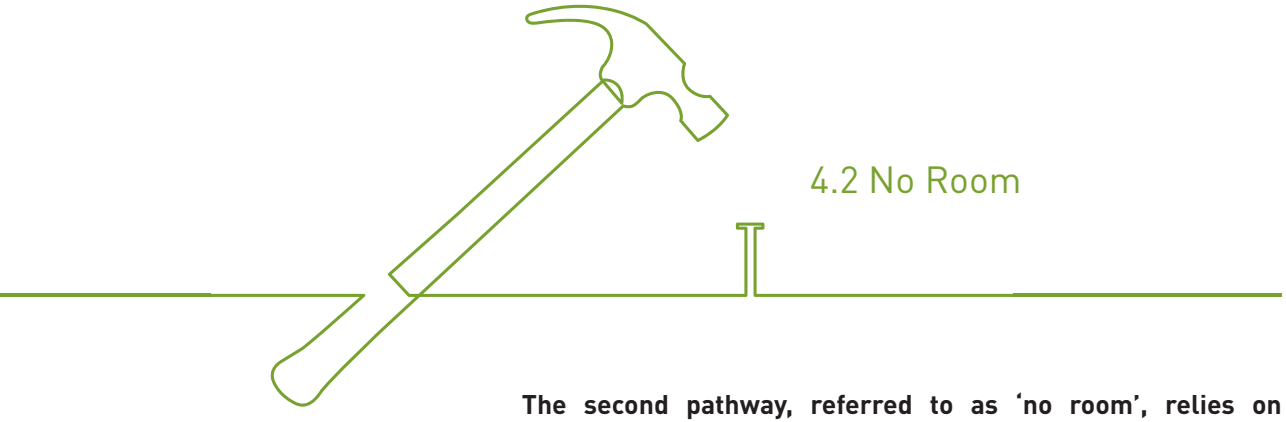
4.1.4 Summary: No reason

Anti-corruption research shows the significant role of the belief that corruption is normal or widely accepted behaviour on levels of corruption. Social norm interventions address this, aiming to transform perceptions and behaviours.

Experience in the electricity sector has shown that progress can be made by emphasising the impact of electricity theft on the wider community. Recent research in Kenya has also confirmed that encouraging individuals to view corruption as detrimental not only to impersonal institutions, but also to their peers and communities can change behaviour. Shifting perspective from the 'impersonal' to 'personal' can decrease rationalisation that corruption is a victimless crime. (Yenkey et al, 2024)

Actions to promote and reward a culture of integrity, even within just one institution or one sector, can leverage these insights to change the landscape of integrity issues, as the example of PPWSA in Cambodia shows.

By partnering to address corruption or integrity issues, the participants of multi-stakeholder partnerships can shift their norms and those of people and organisations impacted by their action. They can also amplify collective commitment to ethical practices.



4.2 No Room

The second pathway, referred to as 'no room', relies on structural, legislative, regulatory or managerial interventions to narrow the opportunities available to corrupt actors. The focus is on controls, oversight mechanisms, and institutional reforms to reduce discretion and rebalance resource allocation, that, applied together, curtail the 'room' for misconduct in water and sanitation sector finance.

An important area is Public Financial Management (PFM), where new approaches can be introduced, such as the automation of revenue collection, procurement and payment procedures. Improving PFM systems is critical in reducing 'room' for corruption. Some PFM reform needs to happen transversally, across all sectors, where government-wide systems are in place. But changes can also take place in the financial management systems at an institutional level, such as a utility.

Many of the PFM reforms aimed at enhancing integrity are technical, encompassing legal and institutional shifts, system development, and capacity-building, including:

- fortifying business processes and segregating responsibilities;
- adopting integrated financial management systems for automation and transparency;
- implementing e-procurement systems and embracing open contracting;
- bolstering internal audit mechanisms;
- enhancing both internal and external fiscal and performance reporting;
- fostering open government initiatives, including transparency portals; and
- strengthening external auditing and oversight through effective sanctions and increased transparency.

While reforms such as these are proven to be effective, approaching them solely as technocratic interventions is unlikely to lead to significantly reduced corruption in the PFM system (World Bank, 2020; Rocha Menocal, 2015). Informal patterns of corrupt behaviour may persist even with new rules, procedures, and documents—indicating the need for a more multifaceted approach (Andrews and Htun, 2017), which also pulls from the 'no reason' pathway.

In addition to broader PFM reforms, open contracting and e-procurement are powerful ways to enhance transparency, reduce discretion, and minimise opportunities for misconduct. Performance-based contracting is also promising in deterring corruption, incentivising efficiency, accountability, and risk management. However, addressing corruption in water and sanitation financing requires a multifaceted approach—minimising opportunity alone is not enough. The 'no room' pathway offers interesting insights into tools that can form part of a wider intervention.

4.2.1 Strengthening budget practices

Where officials have high levels of discretion in allocation of funds, corruption risks increase (section 3.3.2). This is exacerbated by lack of transparency and poor oversight from responsible institutions. Strong budget practices can reduce opportunities and leave 'no room' for corruption in resource allocation decisions. Improved transparency about the relationship between spending and outcomes can also reduce the likelihood of integrity failures (Morgner and Chêne, 2014). Interventions to strengthen budget practices include:

- **clearer decision-making rules that reduce discretion**, including on tariff setting, subsidies, and revenue management;
- more consistent and **transparent processes** for budgetary and project decision making;
- stronger internal **anti-corruption rules and practices**;
- stronger transparency within government agencies and to parliaments and the public on decisions made; and
- clear channels for reporting wrongdoing (**whistleblowing**).

The establishment of a **robust public investment management system** is a central intervention to curb misallocation of capital resources (Menocal et al, 2015). This should entail independent project appraisals, multi-stakeholder/multi-actor committees to approve projects, and public transparency throughout the process.

Countries have had success by formalising political engagement in budgetary decisions through Cabinet and parliamentary processes. However this requires a shift in the informal norms around political office being a means to direct budget and project decision-making (achieved via 'backdoor influence' and pressure on officials). (Bäck et al, 2019)

Engagement by external actors—whether the media, civil society organisations or citizens—in how resources are allocated (and on the quality of budget processes) can also significantly contribute to curbing discretion. This can also provide a helpful brake on the subversion of rules and collusion between state actors, and state and private actors (Dorotinsky and Pradhan, 2007).

Some of these principles are evident in efforts to promote transparency in the allocation and use of disaster relief funds. One example is **Brazil's Transparency Portal**, which provides information on public spending, including disaster-related funds. (Other portals were set up for short term use following Typhoon Haiyan in the Philippines in 2013 and the earthquake in Nepal in 2015.) Contingent disaster financing is another example, which has been used by several development banks. It enables the systems for disbursement and application of disaster financing to be put in place prior to a disaster happening, thus reducing the high risk of corruption and mismanagement often found in disaster contexts (Asian Development Bank, 2019).

BOX 14: Creating oversight institutions specific to disaster management

From the late 2000s to the 2020s, Queensland Australia experienced multiple large-scale flood events. The 2010-2011 floods, often referred to as the "summer of sorrow", were particularly devastating. After an unusually wet La Niña event, torrential rains led to widespread flooding that affected over two-thirds of the state, with Brisbane, the capital, inundated by its worst floods since 1974. Over 20 lives were lost, and the disaster caused over USD 2 billion in damages.

The aftermath of the floods revealed concerns about the management and distribution of disaster relief funds, particularly about the lack of transparency and accountability in the allocation of funds. In addition there were allegations of mismanagement and misuse of funds, including nepotism, corruption and fraud, as well as finance allocated to projects that did not directly benefit flood-affected communities (Moore and Solomons, 2021).

In response the Inspector-General for Emergency Management (IGEM) was established in 2014 to provide oversight and assurance over the management of disaster response, recovery, and mitigation efforts. This role includes auditing and monitoring the distribution of relief funds, as well as advising on best practices. The Queensland government also imposed stricter financial reporting requirements on agencies responsible for distributing disaster relief funds as part of its open government drive, and set up of an Open Data Portal (Queensland Government, n.d; Inspector-General Emergency Management Queensland, n.d)

IGEM's work has contributed to increased transparency and accountability in the allocation and management of disaster relief funds. By conducting regular audits and monitoring the implementation of its recommendations, IGEM aims to ensure that funds are used effectively and efficiently, minimising the risk of future mismanagement, fraud, or corruption.

4.2.2 Tackling inequity in investment decisions – the case of sanitation

Not all households have equal access to sanitation services due to social marginalisation, affordability constraints, investment limitations, land tenure issues, engineering considerations or corrupt decision-making processes. Here again, elite capture can also play a role (Section 3.3.2). Many sewerage utilities provide reticulated sewerage networks and treatment facilities to wealthier urban areas, leaving a significant portion of the population dependent on independent on-site sanitation options. However, there has been a global shift in thinking over the past decade, with an increasing number of utilities expanding their mandates to cover all aspects of sanitation. This change recognises the importance of addressing the entire sanitation value chain, including non-sewered sanitation solutions like septic tanks, latrines, and other on-site options. In some cases, this has led to a change in the name or branding of the utility, to better reflect their expanded mandate and service offerings

This follows an early shift where stand-alone water utilities were created by carving out the relevant operations from municipalities and making them autonomous (which, when first done, often left on-site sanitation as a municipal responsibility, even as sewer networks and wastewater treatment plants were transferred). **Still, sanitation often lags behind water supply, especially when it comes to access by the poor**.

One way around this is to cross-subsidise from water provision to sanitation provision. This is commonplace when the subsidy is restricted to covering sewerage costs but not across all forms of sanitation. The problem is that sewer access is highly regressive, which is to say the rich benefit from it far more than the poor. An interesting departure from this can be found in **Kenya**, where the public utility serving Nakuru (NAWASSCO) is being pushed by the national regulator (WASREB) to add a sanitation surcharge to the water tariff. This would cover not just sewerage but also on-site sanitation. WASREB has taken on the role of a convenor in this and, partly as a consequence, on-site sanitation is now included in the 2019-2030 National Water and Sanitation Service Strategy (Franceys R, 2020). This is one example of **the important and proactive role a regulator can play in bringing more integrity to budget allocations—in this case ensuring cross-subsidies are not regressive and elite capture is minimised.**

As utilities broaden their scope to include on-site sanitation services, they should develop investment plans that specifically address the needs of poor communities who rely on these services. This shift is intended to counter existing patterns of skewed investments that tend to favour the connected and affluent.

By embracing expanded mandates and considering a more diverse range of services in their investment plans, utilities can reduce the possibilities of elite capture, ensuring that resources and services are distributed more equitably.

However, while this inclusivity is critical, it does not necessarily, on its own, reverse the focus on investing in wealthier areas. Even for a utility with a clear mandate to provide services to marginalised groups, there may be a lack of real incentives to prioritise investment in these areas. And in contexts of systemic corruption, there may be real incentives for staff to prioritise work in wealthier areas where the possibility of personal benefit is higher. Deliberate pro-poor service delivery policies are an important part of addressing this. Adopting a Citywide Inclusive Sanitation approach will also serve to address bias in service delivery. Finally, the involvement of affected communities in planning is also critical.

"In Eastern and Southern Africa, we can now observe a shift taking place, away from split mandates and towards placing responsibility for service outcomes with the utility, removing infrastructure-dictated fragmentation. We see this evolution in Zambia, where NWASCO has expanded the licensing terms for utilities to include responsibility for non-sewered sanitation (in addition to their existing mandate for sewered sanitation)".

The Eastern and Southern Africa Water and Sanitation Regulators Association (ESAWAS, 2021)

BOX 15: Integrity in the Malaysian sanitation sector

Malaysia's sanitation sector serves as a testimony to what can be achieved when integrity is embedded in governance systems. The country's approach is not just about establishing policies, but about crafting a system where integrity is the default setting. It starts at the top, with strong commitments from government agencies, and is built into the institutional DNA through initiatives like integrity units, risk management, and compliance policies. There is a National Anti-Corruption Plan, reinforced by various agencies. With clear definitions of roles and robust oversight mechanisms, this allows for strong oversight on sanitation management.

Within some of the utilities that provide sanitation services, there are integrity units to raise awareness and compliance policies to prevent corruption. For instance, Indah Water Konsortium (IWK), a large sanitation provider, has established an integrity unit within the company to instil a culture of integrity throughout the organisation. Above this sits the National Water Services Commission (SPAN), which acts as the economic regulator for water supply and sanitation. SPAN has mandated that operators and suppliers allocate 1% of their annual operational budget to carry out integrity programmes, including setting up integrity units responsible for activities like auditing, risk assessment and training.

The emphasis on stakeholder inclusion and capacity building serves as a catalyst for a culture free from corruption. By incorporating public and industry inputs into the policymaking process and continually training personnel to manage integrity risks, Malaysia ensures that its approach to integrity is both inclusive and evolving.

Beyond this, financial management in Malaysia is fine-tuned to encourage accountability and ensure value for money. Contractor selection, bidding processes, and approvals adhere to set guidelines, making opaque dealings difficult. The same applies to prioritisation criteria and capital expenditure plans.

'Value engineering' is an important tool in guiding Malaysia's investment planning processes—including in the sanitation sector. The government mandates value engineering be implemented for public projects valued over MYR 50 million (USD 10.48 million), to review project scoping and maximise returns on investment. Value engineering scrutinises project scopes to make the most of funding allocated for infrastructure development. It is one of several 'value management' tools used to align outcomes with objectives, from the strategic planning stage through to project operation.

These value management systems help promote integrity by ensuring capital expenditures—particularly for expensive sewerage projects—are guided by catchment plans and national priorities. Capital expenditure undergoes criteria-based selection, which prioritises projects with the highest cost-benefit ratio. This is generally done in accordance with Sewerage Catchment Plans (which provide strategic guidance on infrastructure needs and priorities).

Malaysia's experience suggests a holistic approach to embedding integrity in public services can pay dividends. But for these frameworks to be truly effective, they need to be dynamic, and adapting to emerging challenges and opportunities.

(Source: Asian Development Bank Institute, 2020)

4.2.3 Supporting participatory budgeting

Another 'no room' approach for integrity champions to consider for limiting discretion, capture of allocation processes, corruption, and malpractice is participatory budgeting. Participatory budgeting aligns well with broader open government initiatives—either narrowly in the water sector or more broadly—that can shrink the room for malpractice that less transparent systems offer.

Participatory budgeting is a practice in which citizens, civil society organisations, or community members play an active role in deciding on budget allocation. It aims to give people power a say in decisions that directly impact their lives and communities. Overall, participatory budgeting strives to cultivate transparency, accountability, and inclusivity in the budgeting process, while, fostering more equitable distribution of resources and facilitating broader access to public services (Participatory Budget World Atlas, n.d.).

Over 7000 cities worldwide have already implemented this approach in some form (Participatory Budget Strategy, 2024). But **only eight countries globally have formal channels to directly engage underserved communities in budget processes** (IBP, 2021). Even in places where participatory budgeting is required, as by the Brazilian Constitution, its application needs monitoring, in particular so that it leads to "increased transparency and virtually uprooting entrenched patronage-based spending" as was done in Porto Alegre (de Albuquerque, 2014: 13).

All citizens, without discrimination, have a right to participate in public affairs, according to the International Covenant on Civil and Political Rights (article 25) and as developed further by the Convention on the Elimination of All Forms of Discrimination against Women (article 7), and the Convention on the Rights of Persons with Disabilities (article 29). According to the UN Special Rapporteur on rights to water and sanitation, this includes the right for individuals and civil society to participate in budget processes (de Albuquerque, 2014: 12). Participatory budgeting is one way to realise this right.

Cashier writing out receipt for payment in Gobile community, Ethiopia. By Caritas Switzerland - Ethiopia.

One of the benefits of this practice is a shift away from clientelism, where only a few are favoured. Participatory budgeting is meant to ensure citizens, particularly the poor, voice their demands and help monitor their proposed projects (World Bank, n.d). Secondly, it can also bring diverse and innovative solutions to ongoing challenges for the community. It is also a way to develop administrative capacities amongst citizens. Lastly, collaborative efforts involving the government, public and private sectors, and citizenship can enhance accountability, fostering trust in institutions (Organizing Engagement, 2024).

Transparency is fundamental to participatory budgeting. To begin with, the government must disclose its financial position and make economic information available. The Open Budget Survey 2023 reported the average transparency score globally having increased by more than 24% since 2008. It is an important trend but one that needs monitoring and ongoing pressure from civil society. And, the details are important. Not more than 43% of countries provide sufficiently detailed information for citizens to understand how their budgets address poverty. Over time, there are also noted drops in the publication of key documents relevant for oversight, like In-Year reports and Citizen Budgets (IBP, 2024). For authorities, the constant public interaction means pressure for accountability and community-led projects to be delivered on time and effectively.

Kenya's constitution adopted participatory budgeting in 2010 and started implementing it in 2013. In 2015 the village of West Pokot took on participatory budgeting. Its first project was repairing an old borehole which used to provide clean water for the villages. Water had run dry, and without knowing how to fix the borehole, villagers returned to drinking contaminated water from the river. Through participatory budgeting, citizens could pinpoint their most urgent issues, one of which was the need for access to clean water. This led to the repair of the borehole, which was also made hybrid so it could operate both with electricity and solar energy. (World Bank, 2017)

On a larger scope, in Kenya there have been two interesting trends in places where participatory budgeting is practiced. **Citizens reduce resource allocation of projects where they perceive vulnerable to corruption in the past years**, this has been the case of water and road infrastructure sector. Instead, people tend to prioritise resources to ongoing or incomplete projects (World Bank, 2018). This shows citizens' awareness and responsiveness when addressing inefficiencies in resource management, as well as their preference for ensuring the completion and effectiveness of the projects chosen.

4.2.4 Integrity in tariff-setting and subsidy policies

Tariffs are a critical element of water and sanitation financing but they seldom generate sufficient revenue to cover even operation and maintenance costs, let alone capital costs. While water charges and tariffs may be low to ensure affordability for poor users, this may also be driven by political reasons (section 3.3.2.). A study of 119 cities in Spain from 1998 to 2015 found "strong empirical evidence of the influence of the electoral cycle on water pricing insofar as price increases are significantly lower in the years immediately preceding municipal elections than in non-pre-election years." The same study showed that the same applied in the context of outsourced water services because of politicians using their right to supervise water tariffs to their advantage. (Picazo-Tadeo et al, 2020)

Where the full cost of providing services is not being recouped (through a combination of taxes, tariffs and transfers), the financial situation of water and sanitation providers is weakened. This makes it hard for them to maintain and upgrade existing services, or to expand services to the unconnected. Not only is this inequitable, but it makes room for malpractice, creating the potential for corrupt or unethical provision of services to the unconnected. Senior utility managers in South Asia are frequently caught running 'private water trucking' services. The practice exists elsewhere too—the Caribbean and South Africa being particularly notable examples (Galvin, 2023; Corruption Watch/ WIN, 2020; Hassanali, 2021). In some cases, utility staff are even suspected of sabotaging public infrastructure to create additional demand for water trucking.

In the water resources sector, low tariffs for irrigated supply or water abstraction are commonplace. Abstraction licenses are often cheap, politically distributed or not monitored. This leads to over-abstraction of water, depleted aquifers, and falling groundwater levels. All of these reduce resilience in the face of

climate change and hit poor farmers hardest—each year in India there are reports of suicides linked to falling groundwater levels, a correlation that research confirms (Romano and Akmouch, 2019). Low charges and poor revenue collection contribute inadequate maintenance of water resources infrastructure and underfunding of water resources management activities.

In both sectors, subsidies which are generally intended to benefit the poor, seldom reach the poor, benefiting wealthier water users instead. A study of subsidies in Ethiopia, Mali, Niger, Nigeria, Uganda, El Salvador, Jamaica, Panama, Bangladesh, and Vietnam showed that 56% of subsidies went to the wealthiest 20% of the population, while the poorest 20% of the population only received 6% of the subsidies (Andres et al, 2019). Subsidy policies should support particular policy goals, such as provision of affordable water services to poor households, or promotion of small-scale irrigation for food security. Subsidies may benefit wealthier water users instead either because they are poorly constructed, or because of lobbying and political influence in the process of determining subsidy policy.

One way to limit room for undue political interference in tariff-setting and subsidy policy is through regulation. Regulators, whether independent or not, can adopt diverse measures to ensure integrity and prevent corruption in these processes.

The institutional arrangements for regulation of water and sanitation vary considerably. Many regulatory agencies are situated at the national level, but in India, for example, each state has its own regulator (Ahmed and Araral, 2019). Brazil has decentralised regulation to municipalities and state-level agencies (OHCHR, 2013). The Philippines has several water regulators, and there is some flexibility as to which regulator a utility can use, which can present integrity challenges (Villa, 2020). All countries of Latin America have introduced regulatory agencies with combined regulatory and enforcement responsibilities (where enforcement is the application of sanctions for weak performance or non-compliance), except for Colombia and Chile which have divided regulatory roles and enforcement into two separate agencies (Andrés, Schwartz and Guasch, 2013). In addition to regulatory and enforcement responsibilities, regulators often have roles in policy development and policy guidance (WIN, 2021).

"In the last two decades, however, regulation of public utilities has been growing in response to the deteriorating quality of WASH service delivery. This approach has led to several benefits, notably de-politicising tariff setting and providing independent oversight. Countries as different as Portugal, Australia, Peru, and Colombia are using regulation as part of the mix of policy instruments that ensure that public utilities offer improved value and quality services to the public."
(Mumssen et al, 2018)

One approach for tariffs involves establishing **explicit and transparent criteria for tariff determination while making their methodologies and assumptions public**. Regulators should then rigorously review and scrutinise tariff proposals, perhaps bringing in independent analysis and assessment. In a similar vein, seeking input from consumer groups and other stakeholders, or conducting public hearings to gather feedback and ensure transparency, are recommended practices.

BOX 16: Tariff-setting conditionalities by the National Water Supply and Sanitation Council (NWASCO), Zambia

NWASCO is the regulatory authority for 11 water and sanitation utilities and six private schemes in Zambia, ensuring their adherence to standards and guidelines while safeguarding consumer interests. NWASCO plays a crucial role in dealing with corruption and other integrity challenges. It does this in three ways:

- Tracking and reporting on utility performance. NWASCO tracks collective efficiency (percentage of billed revenue that is collected) and how much operating expenditure is covered by revenue. It also examines other issues. NWASCO's CEO said it has taken a keen interest in Corporate Governance issues in the utilities that have operated without boards for a long time. By publishing this information in a Sector Report, utilities face scrutiny of not only the regulator, but also sector stakeholders and the public as a whole.
- Signing service level agreements (SLA) with utilities. SLAs serve as a reference point for NWASCO to monitor utility performance and ensure accountability for meeting minimum service levels and providing customers with defined service levels for a specified price. If service providers do not meet the conditions of their SLA, NWASCO can enforce penalties by denying approval for new tariff proposals.
- Enforcing guidelines as a condition to approval of tariff adjustments.NWASCO issues guidelines on tariff setting as a reference point for stakeholders in the water and sanitation sectors, including utility companies: NWASCO follows a gradual approach to increase water supply and sanitation tariffs, aiming for full cost recovery in the long run. Its objective is financial sustainability of companies (sufficient revenues to cover justified costs associated with services provision). Its cost recovery model includes cross-subsidies to users with low incomes and a $6m^2$ lifeline. Utility performance, consumer impact, public opinion, and affordability are considered before tariff approval. Providers must adhere to a strict process outlined in the Tariff Setting Guidelines, including public consultation, before applying for tariff adjustments. This contributes to NWASCO's objective of consumer protection and fair pricing.

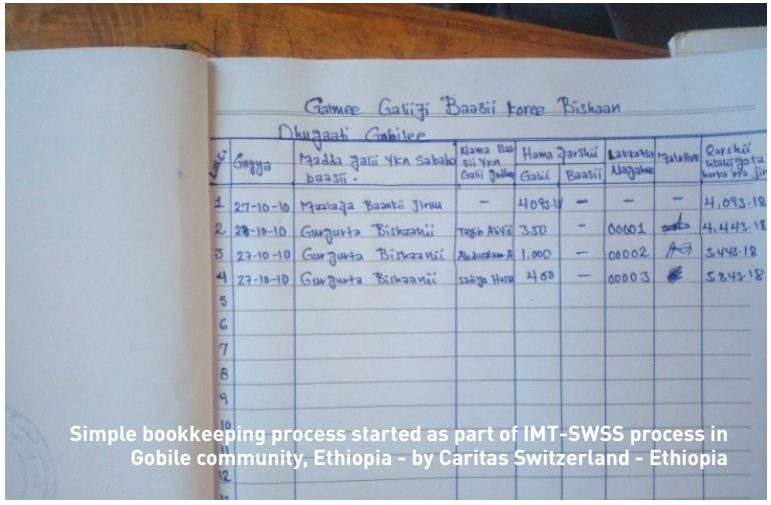
The Lusaka Water and Sewerage Company (LWSC) initially resisted NWASCO's oversight. However, when LWSC sought tariff adjustments, NWASCO leveraged the opportunity to assert regulatory control over LWSC. NWASCO directed LWSC to attend to the issues raised in the Inspection findings, such as overcharging some areas, not adhering to tariff guidelines or not displaying water quality at all pay points. NWASCO also instructed LWSC to adhere to the minimum service level guidelines to improve water supply and sanitation service delivery.

The Water Supply and Sanitation Act No. 28 of 1997 states that a utility's operating license can be suspended or cancelled in the event that a provider fails to meet the license conditions. Other penalties are applicable, including for an individual (staff member of a provider) found to be responsible for a negligent act leading to the provision of unsafe water. The penalty can be a fine, imprisonment or both.

(Source: NWASCO, n.d.; USAID, n.d.)

In some instances, tariff setting might be directly overseen by legislative bodies or through another public process defined by legislation. Such legislative mechanisms can provide a certain degree of transparency and accountability, although they may be vulnerable to political influence. Other mechanisms for ensuring integrity in tariff-setting and managing financial flows also exist. In the case of PPPs, rules on tariffs may be set out in general regulations but also in the PPP contract, though this might result in them being less transparent than other utility tariff-setting processes.

Public participation can help. **Public hearings or consultation mechanisms offer opportunities for various stakeholders, including consumers, to challenge proposals from the utility and ensure they reflect public interests.** Although a challenge here is that wealthier stakeholders are better equipped to engage in such consultations and thus may sway the results in their own favour. Where the rationale for decisions around financial flows, investments, subsidies and tariff changes is shared, stakeholders, even after the fact, can monitor and challenge potentially problematic decisions, helping to safeguard integrity. All these actions support the 'no room' pathway.



Simple bookkeeping process started as part of IMT-SWSS process in Gobile community, Ethiopia - by Caritas Switzerland - Ethiopia

"We have developed a guideline for tariff setting for the entire region to assist regulators. This relates to a lot of issues of corruption, exclusion, and accountability. The guideline articulates how consumers can participate in tariff setting and raise their voice. We try to make information clear so consumers are aware about how tariffs are set up and what people can do to get a new connection. ... I have noticed that, in the region, corruption primarily emerges from lack of information and unclear rules."

Chola Mbilima (NWASCO)

Regulation, however, is also subject to political interference. In Brazil, for example, regulation of state-owned enterprises has been made difficult by the role that governors play in the appointment of the regulatory agency boards as well as the management of water service providers. *"Short-term political goals seem to win most of the disputes with medium and long-term economic and evidence-based tariff setting decisions"* (Sampaio, 2020).

Not all political involvement in regulation is improper. Political involvement is important, for example, to provide regulators with information on the impacts of their decisions, to hold them accountable under the law, to provide politicians with information to make evidence-based policy decisions. Improper political interference, on the other hand, violates procedures, laws and policies and tries to influence regulatory decision making for personal or political benefits.

Effectively addressing improper political interference requires dealing with pressures from outside the organisation as well as building the internal capacity to resist such pressure. Firstly, it is important to be able to distinguish between proper and improper political engagement. The first is to be welcomed, the second to be resisted. Secondly, it is important to understand the drivers and relationships of the politicians, and to understand what alternative approaches might serve their interests without negatively affecting the regulator or the service providers. Often politicians are aiming to maintain their standing within particular constituencies. In such cases, giving politicians credit for improved service delivery, helping them to identify regulatory benefits that are important to their constituents, and similar approaches may be useful. (Jamison and Castaneda, n.d.)

In terms of the internal capacity to resist undue political interference, transparency and participation are critical tools. **Transparency on tariff-setting processes**, for example, can enable civil society and water users to hold utilities and regulators to account and to reduce the risk of undue interference.

4.2.5 The promise of e-procurement

E-procurement, short for electronic procurement, is a process where businesses and government entities use digital technology to buy goods and services from suppliers. By replacing traditional paper-based procedures with technology-driven systems, e-procurement facilitates efficient transactions. It has gained prominence amongst actors interested in safeguarding integrity. Organisations such as the European Commission, recognising the potential of public e-procurement, are in the process of rolling out directives for member countries.

E-procurement contributes to the 'no room' pathway by minimising opportunities for misconduct or corruption within organisations during procurement (section 3.3.4.). This works in a number of ways.

Firstly, in a traditional procurement process, there can be significant room for individual discretion, which can lead to misconduct or corruption. E-procurement systems reduce this discretion by standardising processes, applying predefined criteria for evaluation, and automating various steps in the procurement cycle. Secondly, e-procurement systems are designed with numerous controls and oversight mechanisms that monitor every stage of the procurement process. These include **transparent bid management systems, automatic checks and alerts for irregularities. Such measures reduce the scope for misconduct.** Thirdly, e-procurement systems can help in more equitable and efficient allocation of resources. By providing a transparent platform for suppliers, e-procurement can prevent the capture of opportunities by a select few, thereby avoiding inflated contracts and single-supplier monopolies. In addition, the **auditable digital trails** that e-procurement creates make it increasingly challenging to conceal illicit actions, providing a more efficient means of identifying wrongdoings—which also contributes to the 'no reprieve' pathway (Section 4.3).

To make e-procurement systems function optimally, it is necessary to train staff around both the legal and technical aspects of the system. This is especially important given the complex rules and regulations governing how tenders are prescribed, bids are presented, winning bids are chosen, data about bids are stored, and recourse mechanisms function.

4.2.6 Performance-based contracting

Performance-based contracting offers an alternative approach to tackle corruption in public works by restructuring the traditional reward system for contractors. Instead of upfront payments or quotes, performance-based contracting establishes an incentive framework that encourages cost-effective delivery of results while appropriately allocating risk between parties. Results-based financing is another umbrella term for using financial incentives to achieve pre-

BOX 17: Performance-based contracting in addressing non-revenue water in São Paulo, Brazil

The Basic Sanitation Company of the State of Sao Paulo (SABESP) implemented performance-based contracts to reduce high levels of NRW resulting from leaks and theft. Contractors were assigned specific targets to reduce NRW, and their remuneration was tied to achieving these goals. This incentivised the contractors to efficiently locate and repair leaks, leading to positive environmental, financial, and socio-political impacts. By addressing NRW, SABESP improved water conservation, financial performance, and customer reputation.

SABESP has faced multiple water crises and the conservation of water resources is a key issue for the company.-Addressing NRW helped make the utility more resilient (as well as reducing the energy use for water production, which can be quite high). Financially, the intervention improved SABESP's bottom line by reducing water losses and increasing revenue. In a context where water crises had been high profile, there were important socio-political benefits too—the work demonstrated SABESP's commitment to dealing with the water crises faced, improving service efficiency and delivering value for money, thus enhancing its customer reputation.

(Source: Kingdom et al, 2018);

agreed and verified results. This approach not only enhances cost-effectiveness and risk management but also improves transparency and accountability in the procurement process and contract management (Kenny et al, 2013).

The **Asian Development Bank is supporting an initiative that is exploring how performance-based contracts can be used in the irrigation sector (ADB, 2022).** A performance-based irrigation management approach is being developed for Ganges-Kobadak and Teesta irrigation projects, with a contract to the Bangladesh Water Development Board. A private consulting consortium, appointed after competitive selection, is engaging in a five-year irrigation management contract agreement. The contractor is not only responsible for efficient service and revenue collection, but construction supervision, modernisation of civil works and the development of pilot agricultural demonstrations. A 15-year lease contract to maintain the improvements of the first contract is also envisaged (ADB, 2022).

The performance-based contracting model, by nature, encourages transparency, accountability, and efficiency. As such, it is strongly linked to integrity. **Contractors are held accountable for delivering specific results, which must be clearly demonstrated and verified. The risk of non-performance is shifted to the contractor, reducing opportunities for corruption or waste.** Moreover, the **competitive bidding process for awarding the contract introduces a level of transparency and fair competition** that can be missing in traditional contract models (and which had been a particular problem in Brazil (Box 17).

4.2.7 Social accountability

Social accountability relies on civic engagement to hold government accountable. It involves the use of the voice of communities, stakeholders, or water users to elicit information, to publicise challenges, and to demand accountability.

There are a range of tools and mechanisms that can be used for social accountability, some of which may be supported by the state. But in general, social accountability approaches are bottom-up processes. Common elements in social accountability include collecting, analysing, and disseminating information; mobilising public support; building popular knowledge around accountability and how to take action; and advocating for change. (Kohli, 2012)

Increasing access to digital space has seen civil society using online data to inform their activism as well as grassroots data collection by or with affected communities. There has also been an increase in participatory budgeting, in tracking public expenditure, and in citizen monitoring of public service delivery.

"In the long run, social accountability through a proactive and inclusive engagement of all sections of society is key to preventing and combating corruption. Civic engagement is instrumental in institutionalizing integrity, ethics, and moral standards in public and private sectors."
(UNDP, 2019)

BOX 18: Social accountability tools – common examples

Citizen charters: Citizen charters inform citizens about their rights and entitlements as service users, including the standards they can expect (timeframe and quality), the remedies available for providers' non-adherence to standards, and the procedures, costs, and charges of a service.

Social audits: Publicly held social audits are monitoring processes through which organisational or project-related information is collected, analysed, and shared publicly in a participatory fashion.

Community scorecards: A community scorecard is a monitoring tool that assesses services, projects, and government performance by analysing qualitative data obtained through focus group discussions with the community.

Citizen report cards: A citizen report card is an assessment of public services by the users (citizens) through client feedback surveys.

Participatory budgeting: Participatory budgeting refers to a process through which citizens participate directly in budget formulation, decision-making, and monitoring of budget execution.

(Source: Baez, 2018)

Social accountability can also be supported through new institutional forms. Ecuador has created a legal basis for the participation of communities in water services provision through Community Drinking Water and Sanitation Organisations (OCSAS). As described in WIGO Latin America, municipal governments in rural Ecuador can form public-community partnerships with OCSAS. This allows OCSAS to engage with municipalities more easily.

4.2.8 Financial transparency, open data, and digital technology

Transparency in government has long been recognised as a critical tool in the fight against corruption. It is a critical element of 'no-room' approaches—necessary, but not sufficient on its own. In recent years, open data has become a powerful tool for transparency, linked to the increased digitalisation of government processes, including government finances. Such digitalisation enables governments to release large amounts of high-quality data.

As part of these processes, various **open data standards** have been developed including the **Open Up Guide: Using Open Data to Combat Corruption**, which Mexico has introduced as the official standard in its open data policy, and the **Open Contracting Data Standard (OCDS)**, which is used by a number of countries, including Mexico, Ukraine, Colombia, Canada and the UK (Petheram, 2019). The Open Contracting Data Standard guides governments in how to publish procurement data across five stages of the contracting process: planning (pre-procurement), the initial tender, the contract award, contract finalisation, and implementation (post-procurement).

Equally important as information on contracting is information on government payments (above a certain threshold). While there may be challenges in doing this, where possible, integrity **activists should be advocating for payment data to be made available as this provides invaluable information on where public funds are actually going**. In the **UK**, government departments are required to publish details of all payments above GBP 25 000, but very few other governments do this. Some countries make expenditure data available by account codes but not for individual transactions.

In addition to making data available, technological innovation can help structure and automate processes, as well as facilitate monitoring or tracking of transactions. Digital billing and payment systems or automated meter reading, are important examples of tools that can assist in addressing the high risks of fraud and corruption taking place between utilities and their customers (section 3.1.4), as well as help reduce NRW (section 3.3.3.4). **These technologies offer 'no room' by either framing or eliminating some of the human interactions where petty corruption can occur.**

BOX 19: Mobile payment of water bills, Tanzania

Research in Tanzania looked at the link between mobile-enabled payment of water bills and the extent of petty corruption in water invoicing and payments. It showed that digitisation not only brought increased transparency to revenue generation via the tariff, but also limited the potential for meter readers and others to corrupt the process and otherwise 'extract rents' (Krolikowski, 2014).

A wider study tested the link between digital payments and corruption using a global panel dataset of digital payments and Transparency International's Corruption Perception Index (CPI) across 111 developing countries from 2010-2018. Based on this wide dataset, it showed that digital transactions reduced corruption (Setor et al, 2021).

Yet there is often resistance from utilities to adopting such systems. The reasons for this are multiple and complex, and may involve appropriate reasons such as expense, and technological challenges. But **some of the resistance to change may be linked to internal networks within utilities that benefit from the existing systems.** Corrupt networks linked to meter reading are an example. Automatic metering is a challenge to these, for example, as it precludes the opportunity to take bribes in order to 'zero-rate' or otherwise tamper with water bills.

This is one reason that **it is important for actors with integrity who are outside the utility to get involved, whether these be sector regulators or even utility financiers.** In this vein, the **Water Services Regulatory Board (WASREB) in Kenya** has not only encouraged the adoption of mobile payment options for water utilities it oversees, it has gone as far as providing guidelines and setting targets for water utilities to transition to digital payment platforms.

"WASREB proposes to [incorporate] ... regulatory enablers for digitalisation of utility core functions geared towards enhanced customer experience [as well as] ... technologies that support utilities to reduce losses and increase transparency".
Joseph Keter, Chief Executive Officer, Kenyan Water Regulator (GSMA, 2022)

4.2.9 Summary: No room

The 'no room' pathway focuses on reducing the opportunity for integrity failures and corruption, at various levels.

At one end of the scale, the focus is on **addressing distortions in how resources are distributed. Regulatory frameworks can be an ally here**, ensuring that tariffs and subsidies are calculated in an unbiased manner, curbing the power of political patronage and potential bias. Moreover, regulators can alter the mandates of existing utilities, intervening via license arrangements (such as where 'sewerage' utilities have become 'sanitation' utilities). In doing so, existing imbalances that most affect the disenfranchised can be partly addressed.

Regulations—and regulators—also can limit the room for corruption. They do this by **prescribing how procurement takes place** (a common area of focus for anti-corruption efforts). **Open contracting** is another way to identify and control corruption. It offers a promising opportunity that opens up a role for civil society and other actors with integrity. Other ways include **performance-based contracting or ensuring due emphasis is put on non-revenue water reduction or demand management.**

Technology can also play a role in reducing corruption risks, including **digital meter reading, mobile payments and automated systems**. These all stymy opportunities for frontline service officials and customers to defraud institutions. **Regulators can use their influence to insist that such innovations are adopted, even when senior management prevaricates.**

It is essential to ensure any 'no room' measures are suitably tailored to the context, considering local factors such as the institutional environment, existing governance frameworks, and social norms. The 'no room' pathway does not act in isolation; it relies on support from the 'no reprieve' and 'no reason' pathways.

4.3 No Reprieve

Countering the belief that an individual can cheat or steal and 'get away with it' is a pertinent factor in preventing corruption. By placing emphasis on detection, then sanction, it is possible to deter would-be-corrupt-actors. The third pathway, referred to as 'no reprieve', emphasises these two things—**efforts to detect malpractice** and **the application of sanctions**. The former is closely tied to transparency, the latter to accountability, and, to a degree, legal systems. Implicit in this is not just that sanctions are morally justified, but that the threat of sanctions is important for deterring corrupt behaviour in the first place. By holding everyone to the same standards and ensuring clear rules and fair enforcement mechanisms, the pressure and opportunity for corruption are reduced.

Integrity champions interested in 'no reprieve' approaches could **consider building collaborative efforts between water sector civil society organisations, public finance management system experts, and big data analysts as an excellent entry point**. Collectively these sorts of collaborations improve not only the 'detection' aspect of the puzzle but—if agencies with prosecuting powers are brought in (such as the Special Investigative Unit in South Africa)—also the 'sanction' element. Likewise, strengthening relationships between anti-corruption agencies, other oversight bodies, civil society organisations, and media actors could also make a vital contribution.

The section discusses how establishing transparency in financial flows, contracts, decision making, and beneficial ownership enables greater scrutiny that can expose wrongdoing. The need for functional public financial management systems and oversight bodies is underlined—in part as these enable robust detection of fraud and corruption.

Critical to this is **ensuring that capable, empowered institutions and individuals are in place to safely monitor information and investigate integrity failures**. Where supreme audit institutions exist, they can play a useful role but they need a) to be empowered and b) to be 'brought into the water sector'. Other routes include empowering anti-corruption agencies, and engaging civil society (in part to generate additional information, in part to apply public pressure).

Penalties are not, on their own, sufficient, but they are important. Apart from criminal penalties for misconduct, 'administrative penalties' can play an important role—one example being the blacklisting of known corrupt actors. Recourse to the courts, by civil society or affected members of the population is also an option.

4.3.1 The context and capacity for 'no reprieve'

Impunity for corrupt acts breeds more corruption. When the perpetrators of corruption are not punished, others are encouraged to engage in wrongdoing of the same or different kinds across the water and sanitation budget cycles.

'No reprieve' anti-corruption interventions are focused on building the belief that corrupt deeds will be sanctioned. This applies not only to those involved in raising, allocating and spending water and sanitation sector funds, but also across society.

Several elements are required. First, that corrupt actors know they are at high risk of being detected. Second, that there is sufficient transparency in the allocation and use of water sector funds (via pro-active information disclosures and / or via free access to information). **Third, that institutions and individuals—those with the will, power, and capability to monitor information—call out corrupt actors and apply sanctions**. All of this is dependent on a broader enabling environment, such as appropriate legislation and regulations, and an independent and effective legal system.

The water and sanitation sectors operate within a broader framework of public financial management systems, national legal constructs (including anti-corruption legislation), and varying socio-political landscapes. Regardless of these specific contexts, it is evident that the responsibility for imposing sanctions doesn't lie with a single entity. Instead, **imposing sanctions is a collective endeavour** involving a range of state institutions, and often extending to civil society and the media.

A range of actors with formal oversight roles—ministers, principal secretaries, heads of utilities, chief financial officers, auditors, parliamentarians, and regulators—are tasked with identifying and sanctioning misconduct. Beyond the confines of the state, **civil society organisations and the media play critical roles** in establishing a culture that tolerates no corruption, through vigilant monitoring, investigation, and advocacy to remove corrupt politicians, politicians and companies from positions of power and influence.

4.3.2 Public finance management, detection and sanctions

Strong public finance management systems are critical to all three pathways, 'No room', 'No reason' and 'No reprieve'. While not overtly designed as an anti-corruption instrument, sound public finance management increases the likelihood of detection of errant behaviour. PFM covers revenue collection, budget preparation, budget execution, accounting and reporting, and audit and oversight. Interventions along all of these stages can reduce the risks of corruption and integrity failures, but a positive political environment is necessary to achieve maximum benefits.

PFM processes can increase the probability of detection, mainly through increased transparency (Long 2019; Chen and Neshkova 2019; Akitoby 2018). Prevention and detection mechanisms can also shift behaviour amongst public officials and external stakeholders (Heredia-Ortiz, n.d.).

An important role lies with the finance ministry in each country. Detecting corruption and applying sanctions require these ministries to put in place budget and financial management systems that produce information that can be published on time. This is linked to the establishment of adequate public financial management (PFM) systems. For detection to work adequately, **PFM systems must enable regular internal and public reporting on budget commitments and results, alongside robust risk management and auditing systems**. At the same time, water ministries and utilities should also make their financial information on budgets and expenditure publicly available. This will enable civil society and the private sector to use the information to identify potential areas of corruption and to hold state entities to account.

Many PFM legal frameworks allow for administrative sanction of irregular transactions and require handing over dossiers for criminal prosecution in stipulated circumstances. **Blacklisting corrupt companies** from participation in public contracts is a common feature of procurement regulatory frameworks.

4.3.3 Strong Supreme Audit Institutions

Public sector auditors are vital to anti-corruption efforts. **The role of Supreme Audit Institutions (SAIs) in uncovering financial misconduct, misspending and poor performance make them an essential link in the prevention of fraud and corruption** and the application of sanctions. Over the last two decades, SAIs have become stronger in addressing corruption, and they can be strengthened further to sanction responsible public officials, recover misused funds and enforce sanctions. It is important that government considers SAIs as an ally and takes their reports seriously.

Mandate

An important distinction lies in contexts where SAIs possess judicial powers versus those relying on parliamentary or other institutions for remedial actions. Around 89% of countries that underwent the OECD's Public Expenditure and Financial Accountability (PEFA) diagnostic assessment reported that their legislatures struggled to ensure the executive branch systematically followed up on recommendations arising from audit reports (Public Expenditure and Financial Accountability Program, 2022). In contrast, in contexts where SAIs have judicial powers, audit courts can issue rulings on the personal and financial liability of public accountants.

"We tackled the hard issues around ethics, accountability, and enforcement of consequences. The answers for the problems we are experiencing here are the hardest to find. Enforcement is improving, but slowly, and we know that without enforcement we will not succeed with prevention of the type of undesirable behaviour we have seen so many times now that is stealing the services away from the people who need them most".

South Africa's Auditor General, (Closing Speech to PFM week, November 2021)

There is a trend towards sharpening the mandates of SAIs so that they not only detect corruption but also impose sanctions. Between 2017 and 2020, the number of countries where SAIs are deemed capable of investigating corruption rose by 10%, and almost 20% more institutions can issue binding remedial actions. However, more SAIs are mandated to deal with financial misconduct than broader corruption: 85% of SAIs globally could refer suspected corruption cases to appropriate entities, but only 78% were mandated to share information with specialised anti-corruption institutions in 2020. (IDI, 2017; IDI, 2020).

Box 20: Audit as deterrence: the likelihood of being audited reduces corruption

In about half the villages targeted in a randomised trial on combatting corruption in community development in Indonesia, project implementation teams knew they were certain to be audited. Audits caused more materials to be legitimately used in building the roads, reducing missing expenditures from 28% to 19%.

In contrast, grassroots participation in monitoring of projects, had no impact on missing materials expenses, and reduced only missing labour costs as community members themselves worked in projects and had an interest to make sure they kept their wages

(Source: Olken, 2007)

Independence

The independence of SAIs (in law and practice) clearly affect their capacity to detect corruption. It means that SAIs can choose which matters to audit, can access information without fear of interference or threats against staff, and can operate their own finances and have the right to appoint and manage their staff (Pompe et al, 2022).

Scope

Many SAIs have expanded their scope and enhanced institutional capacity to conduct *performance* audits, and some focus on the country's internal measures to detect and sanction corruption. For example, the SAI in Liberia conducted performance audits related to the country's Anti-Corruption Commission and asset declaration systems, exposing weak coordination and recommending sanctions for officials with suspicious wealth. In Burkina Faso, the SAI's audit highlighted weaknesses in identifying officials who should declare assets and in tracing the wealth of key individuals (Pompe et al, 2022).

Capacity

The capacity of SAIs to conduct audits affects their capacity to detect corruption. As public financial management systems are digitised and big data becomes available, SAIs must ensure that they have the skills not only to audit these systems, but also to use the data they produce to identify high-risk cases.

When it comes to dealing with specific sectors, many SAIs are appointing engineers and technical sector experts alongside auditors to undertake performance audits of infrastructure projects. These audits are primarily to assess whether governments use public funding economically, effectively and efficiently, but they can detect fraud and corruption. A good example of an SAI engaging on sector-specific issues comes from **Rwanda**, where the SAI has issued various reports on the sector, including one querying the design of a long-term PPP arrangement for bulk water supply via Kigali Water. (Leigland, 2020)

Transparency

The public accessibility of audit reports is crucial to ensure that the naming, shaming and reputational damage effect of negative audits is effective in curbing corruption. However, not all SAIs release their reports publicly. According to a global survey by IDI (2020), the number of SAIs that published their reports (at least 80% of the text) increased from 58% in 2017 to 70% in 2020, a growth trend that needs to continue.

BOX 21: Publicising audit results can curb corruption, especially if linked to electoral cycles

In Brazil and Mexico voters rewarded or sanctioned politicians when they learned through audit findings publicised through local radio stations, which candidates had engaged in corruption. In Brazil, when local officials were up for re-election, voters who received audit results beforehand voted less for officials who had committed more corrupt acts. Audits helped to reduce corruption when voters could hold politicians accountable for wrongdoings.

(Source: JPAL, 2020).

Participation

In many countries, CSOs or users have participated in SAI audits in different ways. Table 2 outlines various forms of participation and provides examples of countries where this has taken place.

TABLE 2: Public participation in audits

Form of cooperation	Examples
Formal mechanisms such as meetings and on-line portals where civil society can express requests on audit topics and inputs on audits	Argentina, Australia, and Cyprus
Incorporating public participation in the audit process in the form of (open) expert panels, focus group discussions and interviews	Brazil, Luxembourg, Finland and the United States of America
Participation of citizens in individual audits	Costa Rica, India, Lithuania, Mexico, Republic of North Macedonia and the Slovak Republic.

(Source: INTOSAI, 2021)

Each form of cooperation and user participation develops in different ways. For example, in **Costa Rica**, stakeholders together discussed and identified issues through a performance audit of public water supply services to vulnerable communities and a compliance audit on the Risk and Emergencies National Commission. In contrast, in the **Slovak Republic**, residents provided information about urban sanitation projects that was used to prioritise projects for audit (INTOSAI, 2021).

While not all countries have formalised coalitions in place, cooperation between SAIs, CSOs and users are increasingly common and can enhance the likelihood of detecting corrupt behaviours and transactions. This can have a powerful impact, as the case of Ghana illustrates (Box 22). Inspired by Ghana's success, other African countries, including Liberia, Sierra Leone, South Africa, and Zambia, have enacted laws empowering SAIs to recover misused funds. However, the implementation of these laws has not been as visible as in Ghana.

BOX 22: CSOs supporting detection and sanction by SAIs in Ghana

In Ghana, a remarkable collaboration between the Ghana SAI, civil society organisations (CSOs), and the courts took place between 2014 and 2018. During this period, the Auditor General was granted the authority to disallow expenditures made from the public purse that violated the law and to hold responsible officials accountable for the costs. OccupyGhana, a prominent CSO, filed a suit before the Supreme Court in 2014 to enforce this mandate, and the Court unanimously upheld it. In 2018, the Auditor General issued first reports disallowing approximately USD 1.1 billion of expenditures.

Over 200 senior state officials were involved in the cases, many of whom were high-profile figures. CSOs and the media played a crucial role in exerting pressure on the Attorney General to prosecute perpetrators, and they even took legal action to protect the SAI from significant pressure (Pompe et al, 2022).

The Ghana Anti-Corruption Coalition was later formed with members from: the Ghana Audit Service (the supreme audit institution, now with sanction powers); the Public Procurement Authority; the Commission on Human Rights and Administrative Justice (with investigative powers); the Economic and Organized Crime Office (with investigative powers), and the National Commission for Civic Powers. It has been pivotal in facilitating cooperation between public sector institutions, the private sector, and civil society groups, passing critical legislation, such as the Witness Protection Act (2018) and the Right to Information Act (2019). It monitors the implementation of anti-corruption laws, supports social accountability on the ground, and advocates tirelessly for law enforcement.

4.3.4 Big data analytics for detection

Big data analytics can be used to detect corruption in procurement contracts and in other internal procedures. It involves the process of examining large, and often multi-source data sets that are pooled through specialised tools to reveal hidden patterns, correlations and trends. Most obviously, it can help anti-corruption institutions identify unusual or suspicious transactions for in-depth audit.

The **European Investment Bank (EIB)** utilises big data analytics in its proactive integrity reviews of organisations receiving its loans, particularly in the infrastructure sector. The process involves creating organisational profiles using diverse data sources, including all of the borrower's procurement activities and financial performance, both quantitative and qualitative. Subsequently, high-risk organisations identified in the initial step are subjected to in-depth desk research, which includes a review of media reports. Finally, a smaller sample is targeted for on-site auditing (Adam and Fazekas, 2021).

Corruption risk indexes employ 'red flags' found in public procurement records as proxy measures, including:

- tendering risk indicators, such as the length of the advertising period or the number of bids;
- political connections indicators, that reveal ties between bidders and office holders;
- supplier risk indicators, such as ownership data, to identify politically exposed persons (individuals with prominent public functions and their family members and close associates);

- contracting body risk indicators, like transparency scores and audit information.

This approach is considered more reliable than traditional measures like surveys or ex-post audits of specific cases to detect, measure, and mitigate corruption in procurement (Fazekas and Kocsis, 2015; Adam and Fazekas, 2021).

A number of countries and civil society organisations in the global South also make use of big data analytics for oversight of public procurement. In **Indonesia and Malaysia**, anti-corruption bodies have electronic access to payroll, procurement, tax records, asset/income declarations, and data from government financial systems, employing machine learning, geographic data mapping, text mining, link analysis, social network analysis, predictive analyses, and automated red flags to enhance their efforts (UNODC, 2020).

4.3.5 Whistleblowing procedures

To complement safeguards and transparency built into PFM systems, many countries establish mechanisms for citizens and officials to report corruption and introduce participatory budget, procurement and audit processes or open data portals to encourage citizen monitoring. Investigative journalism, social accountability and whistleblowing in general are critical in exposing corruption and in monitoring the actions taken when corruption is identified. It was investigative journalists who revealed the extent of state capture in **South Africa** and forced the government to take action (WIN and Corruption Watch, 2020).

Many countries have whistleblowing protections in place, and specialised agencies like anti-corruption agencies, ombuds, financial crime investigative and asset forfeiture units with special powers and skills to detect, investigate and prosecute corruption and recover stolen funds and assets.

Whistleblowing is one of the most important elements in detecting corruption and should be encouraged and protected. People are hesitant to blow the whistle for fear of legal, financial and reputational consequences, the sense that nothing will be done about it, and lack of clarity on how, where or to whom they should report (Transparency International, n.d). Ministries, utilities and regulators should introduce mechanisms for whistleblowing that ensure legal protection of whistleblowers against retaliation, including protection of employment.

"Whistleblowing procedures should provide for a variety of easy and accessible channels that can be used to disclose information, such as to the line manager, an ethics committee, the Ombudsperson, internal hotlines or web-based reporting tools. Policies and procedures should also clearly separate personal grievances from whistleblower reports, offer guidance and procedures for internal and external reporting, provide sufficient feedback to the whistleblowers, establish appropriate follow-up mechanisms with timeframes, and protect people from retaliation. It is essential that whistleblower procedures are supported by the top management and accepted and well-known by the members of the organisations."
(Whistleblowing: an effective tool in the fight against corruption. Transparency International Policy Position 1, 2010)

BOX 23: Role of anti-corruption agencies, the Kenyan example

Anti-corruption agencies play an important role in collaborating with water sector stakeholders to strengthen integrity. In Kenya, the Ethics and Anti-Corruption Commission (EACC) works closely with various government departments and state-owned enterprises dealing with water provision.

The collaborative efforts of the EACC and the Auditor General, as of June 2023, had exposed corruption in the water sector costing upwards of KES 47 billion (approximately USD 433 million). The Auditor General plays a key role in identifying financial irregularities, while the EACC pursues them with investigations and reformative actions.

Nairobi City Water and Sewerage Company drew scrutiny for unexplained revenue deficits totalling KES 39.2 million (about USD 360,000), primarily from licensing 657 private water bowsers. Wajir Water and Sewerage Company flouted recruitment guidelines, adding 521 employees in a manner deemed irregular. Taita Taveta County's Tavevo Company faced an EACC investigation over questionable payments to directors (Luseka, 2023).

In response to the Auditor General's report, the Ethics and Anti-Corruption Commission (EACC) has written to all 47 Kenyan governors asking them to submit mitigation plans and quarterly progress reports (Muoki 2021).

More broadly, the EACC collaborates with water sector stakeholders in Kenya in several ways to strengthen integrity: a) It conducts research studies to understand corruption challenges in the sector, like assessing policies, institutions, corruption prevalence and impacts; b) it engages in public education campaigns to increase awareness of reforms, roles and responsibilities of different players, and anti-corruption measures; c) it provides advisory services and helps develop anti-corruption policies, codes of conduct, and corruption prevention plans for water institutions; d) it monitors and enforces anti-corruption laws through investigations of reported corruption cases in the sector; and e) it works with WASREB to mainstream anti-corruption through performance contracting of water organisations (EACC, 2011).

4.3.6 Collaboration between water stakeholders and outside bodies

Effective detection and sanction often require cooperation between different state actors. For example, **water sector regulators, aside from their own powers to apply sanctions like revoking licenses or imposing fines, are in a good position to bring abuses of power to the attention of others** (whether in the criminal justice system or external oversight agencies, such as the Supreme Audit Institution). They can cut through the complexity of the sector and make it clear to non-specialists when abuse is happening.

4.3.7 Summary: No reprieve

'No reprieve' is the third pathway to reducing corruption in the water and sanitation sectors. This pathway aims to increase the likelihood that corrupt activities are identified and that sanctions are applied where corruption is found. This process benefits the fight against corruption in two ways. **Firstly, it aims to ensure that corrupt actors are held accountable, and pay for their misdeeds. And through this, it aims to discourage others who might be contemplating taking part in corrupt activities.**

There are two key elements in the pathway: detecting corruption and integrity failures, and imposing sanctions on those guilty of corruption. There are a number of actors that are important in this pathway: ministries of finance that are responsible for putting in place sound financial management systems; supreme audit institutions and anti-corruption bodies who are responsible for detecting and sanctioning corrupt activities; public sector managers who are responsible for implementing public finance management systems in their institutions and for the detection of corruption or other financial crimes; and the media and civil society who have an important watchdog role in detecting corruption and in keeping pressure on the public sector for implementing sanctions.

Ensuring effective whistleblowing mechanisms and protection of whistleblowers, whether at the national, sectoral or institutional level is an important element of the No Reprieve pathway.

Big data can also be harnessed to assist in the detection of corruption and other financial crimes. It can be boosted by open data portals and the active involvement of civil society.

Water sector stakeholders can effectively collaborate with government audit institutions, anti-corruption institutions or other non-state actors to pinpoint and address malfeasance or ensure that sanctions are applied.

4.4 Combining Pathways and Creating Context-Specific Approaches for Integrity: The Case of Asivikelane in South Africa

This section looks at a case study from South Africa—the Asivikelane initiative. It draws from a range of sources including documents on the Asivikelane website, and analyses by IBP International (2021) and Folscher (2024). The Asivikelane initiative is a citizen-led effort to address systemic failures and improve water and sanitation services to informal settlements through civic activism. It confronts not just the tangible issues like pipe leaks and broken taps, but also more complex structural challenges, such as improving and monitoring the budget, procurement, monitoring and accountability systems for the allocation and use of public resources for water and sanitation services.

The case provides early lessons on the potential of allying citizen-sourced data and citizen voices to technical knowledge and collaboration with technical stakeholders. This creates 'no room' for integrity failures, while contributing to changing social norms for 'no reason' and creating a context of 'no reprieve'.

Integrity issues addressed by Asivikelane

The Asivikelane initiative aims to improve water and sanitation services to about five million people living in informal settlements in South Africa's eight metropolitan municipalities and selected secondary cities. In the initiative, the International Budget Partnership South Africa (IBPSA) works with local civil society and community-based organisations and a network of almost 5,000 residents in about 500 informal settlements, to engage city governments on services and the systems that deliver them.

"A lack of adequate basic services disproportionately affects women and girls living in informal settlements. Improving the quality and safe access to water and sanitation will have a profound impact on their physical, emotional, and mental well-being. If government is serious about addressing gender inequalities and protecting women — particularly the urban poor — basic services is an essential place to start".
(Asivikelane.org, 2020)

Integrity failures beset the provision of water and sanitation services in South Africa's burgeoning informal settlements. Corrupt contract awards, inflated contract prices and theft and fraud in the procurement and delivery of communal infrastructure and services, as well as the political capture of sought-after community worker service positions in these settlements, have been reported (SERI and WIN, 2019). Poor supply chain management and weak budgetary monitoring and control systems for delivering and monitoring water and sanitation services in informal settlements results in inefficient and, at times, wasteful use of resources. These issues are well covered in the annual overview report by the Auditor General of South Africa of audits undertaken under the Municipal Financial Management Act. These integrity failures mean that millions of informal settlement residents do not have reliable access to clean water and decent sanitation, or that services are shockingly inadequate, poorly maintained and unhygienic.

Asivikelane supports informal settlement residents to engage city governments, striking a balance between working with city representatives on relevant financial management and service delivery systems, and holding them to account on budgets and spending for water and sanitation. Asivikelane's aim is not addressing corruption or fraud in municipal water and sanitation service delivery as such, but its work directly affects integrity and finance issues in the service delivery chain.

Integrity Approaches and impacts

Up until 2023, Asivikelane employed established social-audit methodologies including data gathering, engagement with public officials, and amplification of issues through public releases and media campaigns to highlight service failures and hold officials to account. Since 2023 Asivikelane has deepened its engagement model to work more directly in solution-seeking hubs with engaged city officials and other stakeholders, like the Auditor General of South Africa (AGSA), to address the underlying systemic problems that lead to the failures, including in the public financial management and procurement systems.

Data gathering

Between 2021 and 2023, Asivikelane regularly surveyed citizens, using mobile phones, on their access to water, sanitation and refuse removal services, to provide evidence on service delivery. This evidence was then used to determine the systemic drivers of shortfalls. Asivikelane still collects data from informal settlement residents on services, but now with a focus on informing the system and service improvement dialogues with city officials and other stakeholders.

Metros have reported that the Asivikelane survey data strengthens their internal ability to protect the integrity of resource use by signalling where issues occur. In the City of Tshwane, for example, officials have credited their engagement with Asivikelane with a revamp of their service delivery and monitoring systems.

The data also has helped cities to monitor their service contracts and to hold service providers to account. It has drawn attention to non-delivery of services, delivery not to specification of contract terms, and theft. This has contributed to discontinuation of contracts with service providers, and the appointment of additional service providers on new contractual terms.

Asivikelane's partnership with offices of the Auditor General ensures its data feeds into the AGSA's financial audits and accountability processes. Asivikelane has worked with AGSA on specific performance audits of water and sanitation contracts in the cities of Tshwane and eThekwini.

Holding officials to account

The initiative places a strong emphasis on empowering communities to hold metro officials to account, advocate for more resources and work with officials to find solutions for system bottlenecks. From 2021, Asivikelane has supported a network of community leaders in participating informal settlements empowered to push for improved service provision, arming them with service failure information and insights and connections to local decision-makers. These community leaders engage metros through public budget participation forums and ad hoc meetings and joint workshops, using evidence and analysis, drawing in other stakeholders.

Asivikelane's engagement with senior municipal officers and other stakeholders focuses on rectifying budgeting, PFM, and service delivery challenges, improving service delivery efficiency and closing the loopholes through which integrity failures occur in both metros and secondary cities.

For example, Asivikelane's work has contributed to restatement of water and sanitation (and waste management) procurement specifications and to strengthening of contract management and service delivery. This includes addressing safety measures, such as gender-segregated communal facilities. In eThekwini its work with the AGSA fed into the live audit of post-flood disaster recovery expenditure, with direct feedback into the City's expenditure management systems for regularity, efficiency and integrity.

Reflection on approaches and strategies

Integrity failures are complex social phenomena and seldom have simple fixes with predictable results. People don't necessarily agree on the extent to which they must (or can) be tackled, and bring different and often conflicting knowledge and views on how to do so. In the anti-corruption sector, opinions vary on the best strategies to pursue.

Some popular approaches deal primarily with tracking and addressing the symptoms, such as the use of technology to detect and anomalies, outliers and underperformance. While sanctions and enforcement are essential as 'remediation' and offer the advantage of immediate, measurable results, they generally fail, on their own, to address the underlying issues. One cannot legislate one's way out of corruption.

A long-term preventative approach that goes to the root of the problems drives change in the social norms that enable corruption. While this may lack quick wins, it offers a more durable solution. Such an approach should, nonetheless, be run in parallel with other approaches such as strengthening PFM to limit corruption opportunities, and introducing new technologies, heightening detection and enforcement capabilities, and building strong anti-corruption partnerships. Prevention is a critical element of any anti-corruption strategy. In purely financial terms, the return on investment from pre-emptive anti-corruption programmes generally outweighs the significant costs of prosecution.

Corruption is a multi-actor problem, addressing it is, equally, a collective endeavour. In the water and sanitation sectors, responsibility to address integrity failures belongs to the state, private sector, and society that pay bribes and seek favours.

While the fight against corruption is ongoing, integrity champions must be constantly vigilant, and must have the ability to adapt. The corrupt continually refine their tactics, requiring anti-corruption measures to evolve in kind. This necessitates ongoing updates and rethinking of strategies, whether they address symptoms or root causes. In this context, a flexible, multi-pronged approach becomes indispensable for both immediate impact and long-term resilience.

PART 5

Taking Action

This report has set out key integrity risks in the financing of water and sanitation, and ways of addressing these through three pathways described as 'no reason', 'no room', and 'no reprieve'. Building on these pathways, this section of the report provides **practical recommendations** to enhance financial integrity in the water and sanitation sectors.

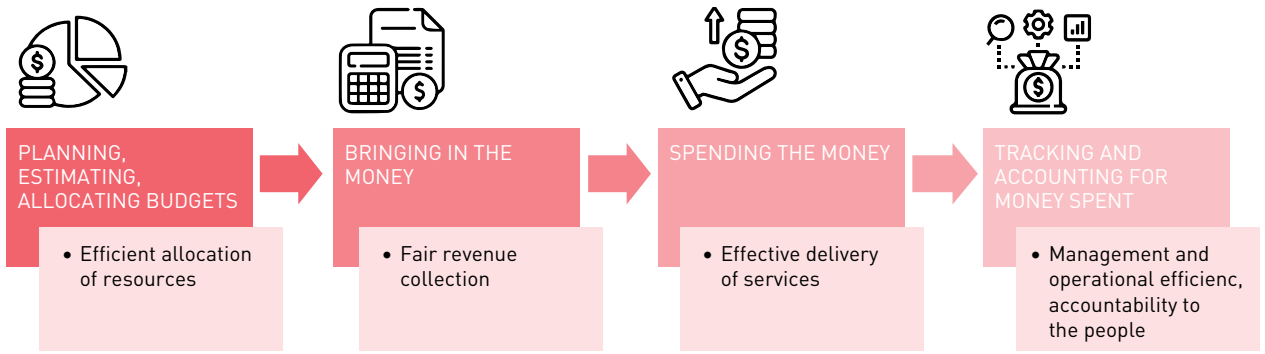
While each action may contribute primarily to one pathway, many contribute to more than one. Each action calls upon different stakeholders to take practical steps in order to reduce the risks of corruption and malfeasance, whether policymakers, senior managers in utilities or regulators, water and sanitation professionals, social activists, concerned citizens or others. It is not a comprehensive manual on good financial management, but targets specific actions relevant to the battle against corruption.

WIN's hope is that, through these entry points, integrity champions across the globe can move forward in their own journeys, adapting them to the various contexts and challenges faced, and finding fruitful grounds for discussion, debate and, above all, action.

5.1 Strengthen Public Financial Management

Effective PFM is critical to a well-functioning administration, as well as to sustainable and equitable resource management and service delivery. PFM covers revenue collection, budget preparation and allocation of resources, budget execution, accounting and reporting, and audit and oversight. It refers to not only financial management systems, but also legislation and regulations, appropriate institutional arrangements with clear mandates, and competent officials that drive the implementation of the systems.

Figure 10: Importance of public financial management (Source: Collidu, n.d)



Improving PFM systems contributes to better governance, with beneficial impacts on poverty reduction and development. Interventions across the PFM cycle can also contribute significantly to reducing corruption, particularly where there is political support for PFM reform.

Many countries face challenges in establishing effective public financial management, especially at the local level. Even where excellent financial management systems are in place in terms of legislation, regulations and procedures, compliance with regulations and enforcement of sanctions may be weak. The systems may also be vulnerable to political interference, not just in relation to the setting of tariffs and subsidies, but also in relation to the manipulation of financial and other data.

A range of elements need to be in place for effective financial management, at different levels, including in individual institutions. Utilities, for example, must also plan for strong financial management. WIN's Integrity Assessment for utilities—part of the InWASH tool for integrity management—enables utilities to score themselves against a range of integrity indicators, including for financial management. These indicators are:

- There is an approved annual budget and all expense accounts are regularly reviewed and analysed using comparisons with budgeted amounts.
- Reconciliation of all accounts is carried out at frequent regular intervals, such as monthly or quarterly. The following accounts are reconciled at minimum: accounts receivable, accounts payable, bank statements, and payroll registers to the general ledger control accounts.
- The employee payroll list is reviewed periodically for duplicates and ghost employees.
- The utility conducts random, unannounced audits of all of the following: inventory, cash, expense, purchasing, billing, and other accounts by internal or external auditors.
- The utility implements a non-revenue water reduction programme, which includes all of the following components: water balance analysis, leak detection, repair and maintenance, performance incentives, field audits, commercial audits, maintaining an up-to-date customer database.
- The utility has a disconnection policy for non-payment. The disconnection policy takes tailored approaches to various customer segments, and has safeguards to protect vulnerable customers during the debt recovery process.

5.1.1 Ensure fairness in tariffs and subsidies

Tariffs and subsidies are extremely vulnerable to undue political interference and elite capture (section 3.3.2). Politicians may try to keep tariffs low in their voting districts, while groups with access to decision-makers may seek to influence both tariffs and subsidies in their favour. To overcome this, governments should establish a **transparent framework and methodology for tariff setting and review**. The process for tariff setting should be objective and clearly outlined to provide consistency and ensure that tariffs have some correlation with costs and their increase over time. Similar frameworks and processes are needed for the development and implementation of subsidy policies. **Consultation with affected stakeholders is critical in relation to both tariffs and subsidies.**

Actions for regulators:

- Develop guidelines for subsidies and tariffs which include requirements for:
  - consultation with affected parties;
  - publication of tariffs and subsidy policies and actual tariffs and subsidies;
  - protection of the rights to water and sanitation for marginalised groups.
- Assess tariffs and subsidies against policies.

Actions for utilities:

- Develop subsidy and tariff policies in consultation with water users, with particular focus on enabling the participation of representatives from marginalised groups.
- Consult with water users on annual tariff determination, particularly with marginalised groups.
- Publish subsidy and tariff policies and annual tariffs.
- Review subsidy policy and implementation on a regular basis to avoid elite capture.

Actions for CSOs:

- Review subsidy and tariff policy and analyse implementation to avoid elite capture of subsidies and undue political interference in tariff setting.
- Advocate for consultation with marginalised communities on tariff setting and subsidies.
- Educate water users on their rights and responsibilities in relation to tariffs.

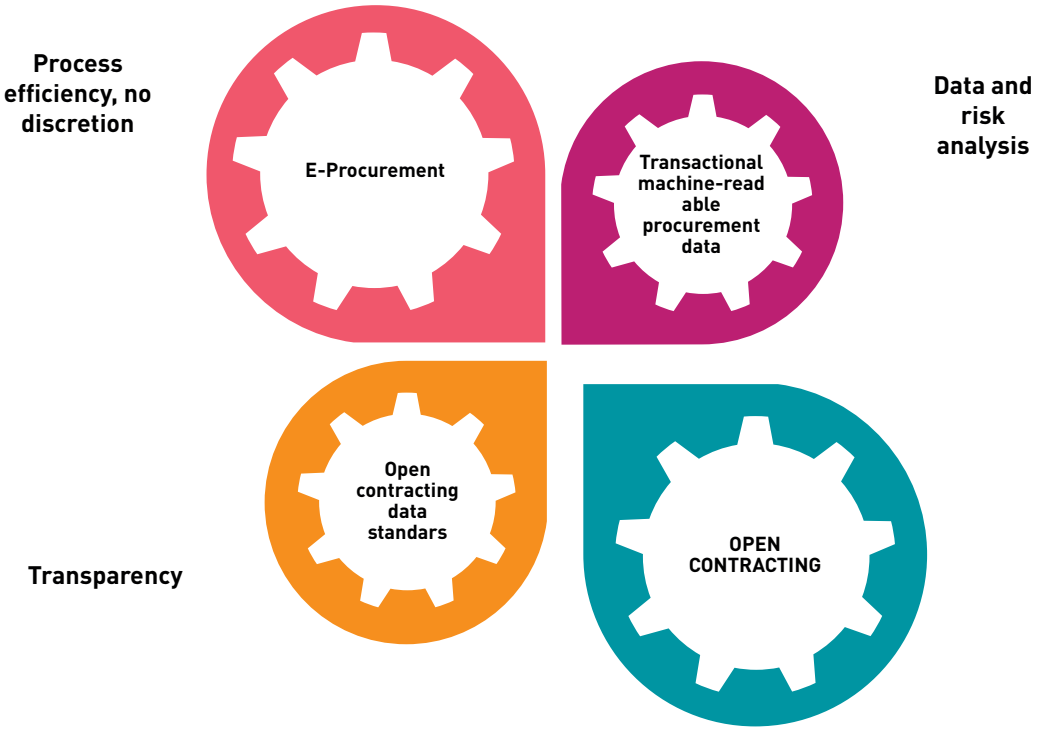
5.1.2 Introduce open contracting and e-procurement

Open contracting is about publishing and using open, accessible and timely information on public procurement and contracting. It enables civil society and the private sector to engage with public procurement processes and has significant benefits in improving procurement processes generally, but also in reducing the potential for corruption.

Public procurement is extremely vulnerable to corruption (section 3.3.4). A lack of transparency serves to obscure such malpractice. Open contracting forces contractual information into the open and, by doing so, reinforces the 'no reprieve' pathway by making detection of corrupt actions easier. Making information publicly available also reduces the scope for corrupt actors to hide their actions behind confidentiality clauses, or the many barriers created by paper-filing, in line with the 'no room' pathway.

While open contracting should be applied across all contracting, it is **also useful in the context of emergency funding, which is particularly vulnerable to misuse and corruption** (section 3.3.4). Open contracting helps to ensure more consolidated and accessible data in disaster management. Decision-makers can then assess the effectiveness of past actions and future needs for flood response and mitigation.

Figure 11: Elements of open contracting (Source: Smith, 2017)



Open contracting improves public procurement systems by bringing together e-procurement, the use of open contracting data standards in the e-procurement system, and machine-readable procurement data (Figure 10). In e-procurement, an electronic system replaces paper-based procurement processes—manual exchange of contracts, sending out of tender documents, reception of bids, supplier on boarding questionnaires—with a largely automated online process. It also blends elements of procurement and finance to streamline operations between the two. The technology is designed to centralise and automate interactions between an organisation, customers, and other value-chain partners to improve the speed and efficiency of procurement practices.

Implementing an e-procurement system benefits all levels of an organisation. E-procurement systems offer improved spending visibility and control, and help financial managers match purchases with purchase orders, receipts, and job tickets. Benefits include improved efficiency, transparency, equity, fairness, and encouragement of local business. **E-procurement supports efficiency** because it lowers transaction costs and has the potential to minimise time needed for and errors in the

bidding process. There are a number of ready-made products for e-procurement, although these still need to be configured according to the relevant legislation and processes of the country.

The **data from e-procurement systems can play a crucial role in supporting the implementation of automated, proactive fraud detection systems, or integrity filters in the system**. These filters instantly review all transactions, unlike audits that only examine sample transactions. They effectively block irregular processes, such as bids from companies that are blacklisted, and promptly alert the contracting authority and oversight bodies to potential fraud in real time. Additionally, they create comprehensive audit trails and digital evidence for auditors and investigators.

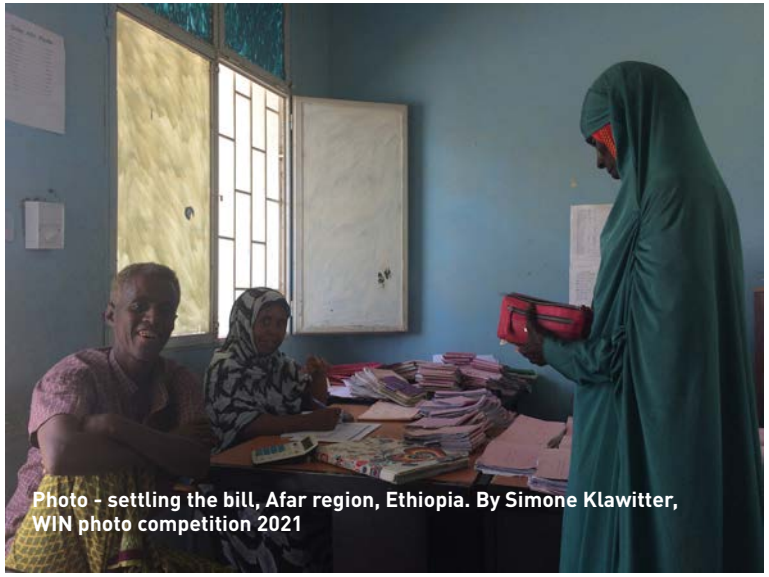


Photo - settling the bill, Afar region, Ethiopia. By Simone Klawitter, WIN photo competition 2021

Open data refers to procurement information that is made available for free and in formats that are machine-readable and can be reused for any purpose. **When water and sanitation authorities make public contracting information available openly, they strengthen their transparency and accountability. In addition, civil society can analyse the available data to assess public spending and raise red flags.** More people can obtain information earlier, which increases transparency. This can mitigate corruption by reducing the degree to which governments, institutions, and corporate businesses withhold information from non-favoured bidders.

With so many variables in a procurement cycle, one of the challenges is what data to collect and in what format. The Open Contracting Partnership (OCP) has developed a set of **Open Contracting Data Standards (OCDS**, which are gaining momentum (currently being implemented by around 50 governments) and have the potential of becoming a global norm. The OCDS require contracting authorities to gather a set of recommended data fields and documents to publish as well as a common structured data model. In Ukraine, the OCDS became the basis of the **Prozorro e-procurement system.** This led to major savings to government (an estimate of over USD 1 billion) and increased competition in procurement.

Given the high public spending for infrastructure, and the associated corruption risks, OCP and WIN's partner the Infrastructure Transparency Initiative (CoST), expanded the original OCDS into the **Open Contracting for Infrastructure Data Standards** (OC4IDS) asking contracting authorities to publish particular data sets in relation to infrastructural procurement. It is not hard to imagine how beneficial OCDS and OC4IDS can be when applied to water and sanitation procurement. (Kramer, 2020)

Actions for ministries, regulators and utilities:

- Apply OCDS and OC4IDS to all water and sanitation procurement, following these steps towards the implementation of open contracting:
    - Develop an e-procurement/open data implementation strategy that is fit for purpose, with input from stakeholders. The strategy must address issues of possible exclusion and the digital divide.

- Develop a business case and ensure buy-in, including from high-ranking officials with the authority to make decisions and allocate resources and from key stakeholders in civil society and the private sector.
- Redesign paper-based systems to be electronic, open-by-design, user-friendly, security, reliable. It is important that the e-procurement system is integrated with existing IT systems and that the information shared in real-time across the system is accurate and reliable. It should ensure confidentiality of financial data such as the bid amount. If this is not the case, the system may facilitate corruption.
- Develop the e-procurement system using open-source technologies and standards which allow transparency.
- Where resources are limited, start with publishing procurement information from planning and implementation. The planning stage information will increase interest among bidders and the post-award information increases accountability and traceability (OCP, 2021).
- Train users sufficiently. The smooth transfer to a digital system and its acceptability to all stakeholders depend on the training received.

Actions for CSOs, researchers and the media:

- Engage with central procurement bodies to request the adoption of open data standards in the water and sanitation sectors.
- Demonstrate the usefulness of open contracting to organisations including in relation to disaster/emergency funding.
- Advocate for contracting authorities to publish particular data sets in relation to infrastructural procurement (for example using OC4IDS).

5.1.3 Blacklist corrupt companies

Blacklisting, or debarring, is a practice where individuals or entities proven to be involved in corrupt or fraudulent activities are barred from participating in certain business or government activities, usually for a specified period. **Blacklisting is a form of deterrent designed to reduce corruption by increasing the consequences of fraudulent behaviour.**

Institutions like the **European Investment Bank (EIB)** maintain blacklists of contractors found guilty of malpractice, barring them from further engagement. Similarly, the World Bank has a publicly available blacklist. While these lists are not entirely mutual (i.e., being on one list does not automatically disqualify one from contracts with the other institution), they still provide some leverage over those engaging in wrongdoing.

Clearly blacklisting is more effective when institutions or countries share information, preventing companies blacklisted in one region or institution from simply moving their operations to another region or institution. Collaboration platforms like the cross-debarment agreement signed in 2010 by the African Development Bank Group, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank Group, and the World Bank Group, are essential to reinforce such measures (African Development Bank Group, n.d).

Actions for ministries, regulators, and utilities:

- Review whether and how known 'corrupt contractors' are excluded from future opportunities and invest in measures that make consequences more robust.
- Ensure that blacklisting is checked during any due diligence or procurement process.
- Ensure water sector regulators and pertinent oversight entities can access registers of blacklisted individuals and entities.
- Make blacklists publicly available.

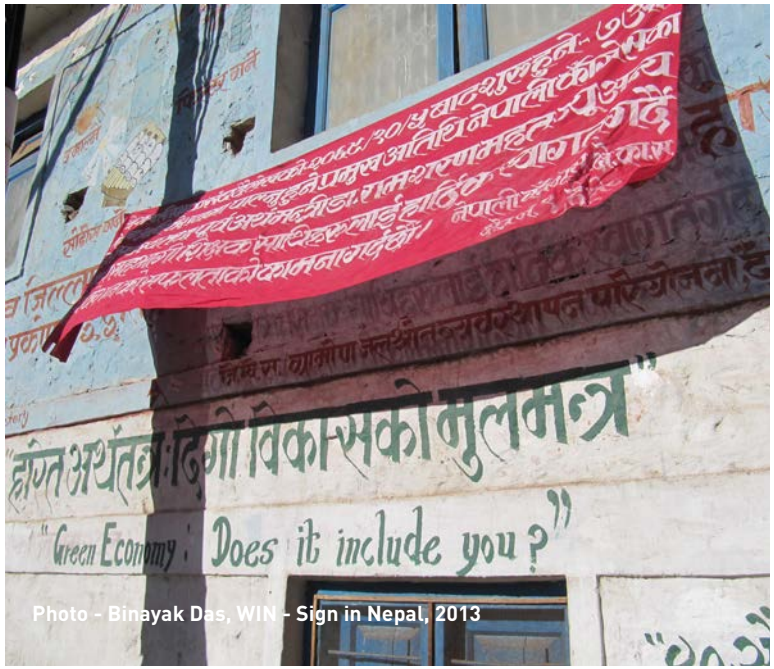


Photo - Binayak Das, WIN - Sign in Nepal, 2013

Actions for CSOs, researchers and the media:

- Determine if blacklists exist and work to consolidate information and monitor procurement. Where blacklisting is not currently supported, advocate for legislation or regulations to be changed to allow for blacklisting of corrupt actors.
- Advocate for public access to blacklists.
- Advocate for beneficial ownership regulations and public registers, to increase transparency of private interests in the sector.

5.1.4 Encourage and protect whistleblowers

Whistleblowing is an important tool in the anti-corruption fight and a means to protect organisations against legal, reputational and financial harm. It should be encouraged and protected at all levels (section 4.3.5). Alongside the safeguards and transparency embedded in PFM systems, countries commonly establish mechanisms for reporting corruption by the public and officials. Additionally, they institute whistleblower protections and establish specialist anti-corruption agencies with the power to investigate and sanction corruption, although not all countries have sufficiently strong whistleblower protection laws. **Many countries require institutions to implement internal whistleblowing systems. Even where this is not required, organisations should implement such systems.**

A strong whistleblower policy should include:

- A **safe, confidential and easily accessible reporting mechanism** for staff to report unethical or illegal behaviour that they witness either or are asked to participate in.
- A **commitment to protecting whistleblowers from retaliation** in relation to their reporting of violations (such as demotion or firing), and
- **Mechanisms to investigate and enforce** this commitment, such as disciplinary action against anyone who violates the policy.

Actions for ministries and regulators:

- Put in place regulations regarding minimum internal whistleblowing systems for utilities, aligned with international best practice.
- Monitor whether utilities have a whistleblower policy and system in place.

Actions for utilities:

- Put in place an internal whistleblowing system that allows for safe and protected reporting of corruption and financial mismanagement and meets the above requirements.

Actions for CSOs:

- Advocate for whistleblower protection policies in water and sanitation entities.
- In the absence of whistleblower protection laws, direct victims of corruption to an Advocacy and Legal Advice Centre (ALAC), which are present in more than 60 countries. ALACs provide free and confidential advice and support to victims and witnesses of corruption, enabling them to assert their rights, seek redress and stand up for justice.

5.1.5 Ensure financial transparency

Detailed, accessible financial information is required to reduce the risk of corruption in the water and sanitation sectors (section 3.1.6). E-procurement and the application of the OCDS are important elements of this (section 5.1.2). Information on blacklists, conflicts of interest, and beneficial ownership is also relevant.

Transparency about the sources of funding and how they are used, such as the scale and type of projects, is important as a basis for identifying integrity risks. This includes traditional sources of funding, innovative financing, and climate financing. To identify and track financial flows in the WASH sector, WHO developed the **TrackFin methodology.** This supports the mapping of WASH financial flows, based on standard classifications. The methodology gives rise to WASH accounts which provide evidence for better planning, financing, management and monitoring of WASH services. TrackFin and WASH accounts focus clarifying the total WASH sector expenditure, the way money is spent, and the sources of funding. It also looks at who the main WASH service providers are and how much they spend. (WHO, n.d)

Financial transparency is also important in ensuring that national WASH accounts are used and linked with policy objectives and strategic financing plans. According to GLAAS et al (2021: 15), *"Assessing who the main service providers are in the sector and their share of expenditure can provide insight into how resources are currently being directed."* **Mozambique** has started to use the Trackfin results, alongside other assessments, for discussions on the unequal investment prioritisation of sanitation in relation to water supply.

The right of access to information allows anyone to obtain facts and information about the use of public funds and the exercise of public authority. It is embedded in **Right to Information (ROI) laws**. Once passed and enforced, ROIs allow citizens to request any and all information and records from the government or other public agencies. Currently, around 120 countries have ROI in place, but their scope and strength varies greatly.

Financial transparency is crucial at different levels and utilities also have a role to play. WIN's Integrity Assessment for utilities—part of the InWASH tool for integrity management—includes information on the relevant financial information to disclose, including, at minimum, revenue, profit, cash flow from operating activities, gross investment, return on equity, equity/asset ratio, dividends, audit reports, and tariff structure. For a maximum score on the relevant indicators, utilities would have to publish up-to-date financial statements both in their original format and in a summarised form to make them more easily understandable. It would also have evidence to show it fulfils ROI requests systematically and in a timely manner.

Actions for utilities:

- Make financial data publicly available, preferably in machine-readable digital format, but at a minimum in hardcopy.

Actions for CSOs, researchers and the media:

- Advocate for ROI laws that meet international standards.
- Educate civil society on the existence of ROI legislation and how to use it.
- Connect with open government organisations to advocate for fiscal transparency or budget transparency and call specifically for information on expenditure.
- Monitor information available on utility websites and data platforms.

5.1.6 Use big data analytics to detect corruption

Big data analytics is an important development in the fight against corruption. It can strengthen the hand of public internal auditors, anti-corruption authorities, regulators, utilities, financiers and development finance institutions. It draws on structured data from public sector systems, as well as unstructured data from other source. This includes payrolls, procurement data, tax records, and financial allocations. These **datasets have become increasingly crucial as new methods have emerged to objectively measure corruption risk in transactions, contracts, and organisations**, based on observable behaviour in procurement data (section 4.3.4). Both the Water Integrity Risk Index (WIRI, Box 24) and the Framework for Integrity in Infrastructure Planning (FIIP) are tools that cross-reference significant volumes of data to identify integrity risks at different phases of the budget cycle.

"While, in the past, research on fraud and corruption has typically revealed only the tip of the iceberg, developments with big data analytics offer new opportunities for detecting and measuring fraud and corruption and recommending prevention measures."
(ECA, 2019)

Big data, refers to high-volume, high-velocity, and high-variety data. In the water and sanitation sectors, as with other sectors, the volume of big data is growing exponentially. Methods to analyse this data are also growing, through the use of artificial intelligence (AI) and machine learning (ML). AI/ML can analyse large quantities of data in a short time, enabling the detection of anomalies far more quickly, for example to detect fraud and mismanagement of public funds.

However, big data analytics are not easy to apply in all contexts. The OECD highlights four key considerations in the use of big data to fight against corruption:

- **Good data and strong analytical capacity:** Big data analytics requires good quality data. Where data is of poor quality, the analysis will equally be of poor quality. It also requires strong analytics capacity with competent data. Data scientists are, however, in high demand, and it is not easy to attract them to the public sector. To address this, some countries and cities are establishing labs to attract data specialists and to incubate innovation.

- **Links to the national integrity system:** It is not sufficient to analyse the big data and highlight red flags. The analysis of big data must link to complaint mechanisms and anti-corruption institutions to contribute to investigations, prosecutions, and sanctions. The results of the data analysis should, ideally, also enable corrective measures to be put in place to reduce the risks of corruption.
- **Transparency of anti-corruption analytics:** Big data analytical tools are vulnerable to capture by a select few, and to analytical bias. To avoid reinforcing inequality, attention must be paid to ensuring that algorithms are accountable, and to gaps in data that might bias results.
- **Corporate data must be opened:** There is a great deal of data held by the corporate sector that relates to public finance and public service delivery. The Panama Papers revealed some of the extent of this data. There are various initiatives underway to improve access to corporate data. **Open Corporates**, for example, provides data on the legal status of companies from 140 countries. Open Oil has created a search engine, Aleph, which contains 3 million compliance documents from various oil companies. They also conduct financial analysis of large oil and mining companies. (OECD, 2018)

Photo: Assessing integrity risks for utilities (Integrity Management Toolbox / InWASH process), Kenya, 2014

BOX 24: The Water and Sanitation Sector Integrity Risk Index

The Water Integrity Network, in collaboration with the Government Transparency Institute, is working on tools for monitoring corruption risks in urban water and sanitation sectors through the use of big data. The Water and Sanitation Sector Integrity Risk Index (WIRI) is such a tool that can be used to probe three integrity hotspots: public investment projects, recurrent spending that supports ongoing operations, and interactions between clients and utilities. The composite index captures small variations in risk levels, based on data rather than perception-based metrics—unlike many traditional corruption indices. WIRI results are also comparable across time and geographical locations, enabling users to track progress and set benchmarks for different cities.

These features make WIRI a useful tool to steer policy decisions. It can also be used by civil society and other entities keen to hold those governments accountable, as a factual basis for coordinated action, to target and design interventions for reducing corruption and safeguarding integrity.

Actions for donors and international financial institutions:

- Finance the development of AI and big-data systems for the water and sanitation sectors.
- Use data tools, including FIIP and WIRI to analyse corruption and integrity risks in the water and sanitation sectors at different levels.

Actions for ministries, regulators, and utilities:

- Identify opportunities for the use of big data analytics in detecting corruption in water and sanitation finance.
- Train staff and introduce appropriate software for mining vast datasets.
- Use data tools, including FIIP and WIRI to analyse corruption and integrity risks in the water and sanitation sectors at different levels.
- Take action to overcome data silos within government.
- Build cooperation between agencies with access to big data/ and those mandated to implement effective detection and sanctions add to the complexities.

Actions for CSOs, researchers, and the media:

- Harness digital tools and big data for analysis of financial information.
- Build the capacity of civil society to request financial information through access to information legislation, and to analyse available information.

5.1.7 Strengthen partnerships with Supreme Audit Institutions

Supreme Audit Institutions are vital to anti-corruption efforts. They can identify cases of financial misconduct, potential corruption, and misspending of public funds. **There are opportunities for stakeholders in the water and sanitation sectors to work more closely with SAIs** in this regard. In some countries, SAIs are already working with civil society, in other countries such partnerships still need to be built. SAIs can also provide valuable information to utilities and regulators in the water and sanitation sectors that can be used to improve financial integrity and institutional performance.

In addition, SAIs are increasingly being called upon to provide oversight of climate finance flows, SAIs maythough they may need expanded mandates to track climate finance from diverse sources outside of traditional budgets. Given its increasing scale, it is important that this expenditure is properly accounted for and used effectively and equitably to support climate adaptation and emergencies.

Actions for Supreme Audit Institutions (SAIs):

- Use the International Organization of Supreme Audit Institutions (INTOSAI) to share protocols and learnings from water and sanitation sector audits.
- Audit the use of water and sanitation-related climate funds at the national and sub-national levels.
- Further develop emerging approaches to audit emergency financing in real time in the face of more frequent water-related natural disasters (rapid onset and chronic).

Actions for CSOs, researchers, and the media:

- Where possible, work with SAIs to improve oversight of integrity in finance in water and sanitation. Where such opportunities do not yet exist, lobby for space to engage with SAIs on the auditing of public entities in the water and sanitation sectors.
- Advocate for SAIs to track and evaluate use of climate finance.
- Advocate for publication of SAI audit reports.
- Use SAI reports to advocate for corrective action on integrity risks or call for their enforcement.

5.1.8 Institute integrity safeguards for disaster management

Climate emergencies, natural and human-made disasters create the need for rapid disbursement of funds for recovery and reconstruction: in most PFM legal frameworks **these funds are disbursed through shortened procedures with fewer checks and less transparency, increasing the risks of corruption and reducing the likelihood of corruption being detected** (section 3.3.4). The challenges are higher in countries that are grappling with systemic corruption, have poor internal control systems, or are politically instable. Nevertheless, there are measures that can be taken to limit the integrity risks along the various phases of disaster management: prevention, preparedness, response, and recovery. Particular focus should be given to improvements for the first two phases. Having strong integrity procedures in place from the onset will safeguard vital relief funding and recovery investments.

Actions for donors, international financial institutions, and Supreme Audit Institutions:

- Communicate that anti-corruption remains a priority, and require anti-corruption mechanisms to be applied to disaster funding.
- Require standard audits at the end of the emergency to evaluate and identify corruption risks and to enable law enforcement agencies to pursue sanctions (Piñeros et al., 2023).

Actions for regulators:

- Set open data standards that require utilities to publish open and machine readable data during disaster management/emergencies.
- Collaborate with SAIs to introduce innovative, real-time auditing for emergency spending and disaster contexts, particularly for common water-related hazards.

Actions for utilities:

- Put in place disaster management/emergency policies and systems and ensure that these systems and policies are publicly available.
- Assess and address risks in existing procedures, improve internal systems and train staff on integrity risks in disaster financing (Schultz & Søreide, 2006).

Establish whistleblowing mechanisms (section 4.3.5).

Blacklist firms that engage in corruption (section 5.1.3).

- Establish processes for civic monitoring of emergency/ disaster programme implementation and expenditure.

Actions for CSOs, researchers and the media:

- Advocate for transparency in emergency/disaster budgeting and expenditure and monitor both to identify potential areas of corruption or integrity risks.
- Monitor how emergency funding is allocated and spent through, for example, social accountability mechanisms, budget tracking, and information sharing.

BOX 25: Real-time audits of disaster relief funding

Real-time audits are aimed at immediate detection of corruption and timely corrective action by the authorities. In 2022 the Auditor General of South Africa announced its intent to undertake real-time audits of disaster relief funds disbursed in the KwaZulu-Natal and Eastern Cape Provinces, to provide flood relief after disastrous climate-linked floods. AGSA (2022) stated that: *"With the risks prevalent, e.g. procurement and contract management, value for money and fraud risk, the audit will provide assurance that the purchased goods or services were of the right value and quality, and they reached the intended beneficiaries."*

In other audits of emergency funding, the AGSA found inadequate controls of payment processes, duplicate payments and non-payments, unfair awarding of government contracts, and a lack of attention to protect against overpricing, financial loss, fraud and abuse of the system.

The South African SAI is not alone in its efforts to implement real-time audits to safeguard disaster relief funds. An early example is the real-time audit undertaken on fund management during the 2016 Ebola crisis by the Sierra Leone SAI, and many countries including Zambia, Kenya and Malawi, have applied the approach during the COVID-19 crisis.

(Source: AGSA, 2022)

5.2 Enable Stakeholder Engagement

5.2.1 Involve the public in making decisions about finance

Involvement of the public in decision-making on finance in the water and sanitation sectors is crucial for reducing corruption risks and improving integrity, for example in tariff setting, subsidy policy and decisions that have long-term financial impacts on water users, such as loan financing.

'"Sometimes governments are pressed to impose private involvement in water and sanitation service provision, ostensibly to raise extra finances. States much ensure that these decisions are made in an open and transparent manner, with opportunities for public participation." (de Albuquerque 2014: 26)

Choices to take on debt through repayable finance arrangements or through commercial investments may be taken by government leaders who seek to benefit through political support, either through personal or political party finance or through the mirage of progress, without users being aware of choices and compromises for their future (section 3.2.3). As recommended by the UN Special Rapporteur on rights to water and sanitation (2014), governments need to provide information to civil society about choices in obtaining funds, so that the process is transparent. This lessens the scope for behind the scenes deals between investors and government leaders or officials.

Actions for ministries, regulators and utilities:

- Provide information to the public on proposed decisions regarding taking on repayable finance options and provide options for consultation with and input from the public.
- Ensure consultation with the public on tariff setting and subsidy policies, ensuring that marginalised communities in particular have a voice in the process.

5.2.2 Promote integrity in the private sector

The fight against corruption cannot be achieved by government in isolation. It is critical that the private sector addresses corruption risks and works with government and civil society to reduce corruption. Significant improvement in integrity in a society cannot be achieved without the private sector being part of the solution. Businesses have a responsibility to act as good corporate citizens, nationally and internationally. There is evidence that reducing corruption risks is good for business and important in protecting the reputation of companies. Many forms of corruption are also illegal, and there are significant consequences for companies that are caught violating the law.

Many companies have robust integrity and compliance programmes in place and should pursue these efforts. However, there are companies that are actively involved in corrupt activities and some that are involved in legal but unethical practices.

Integrity can be encouraged in private sector companies by advantaging those who demonstrate good anti-bribery, or more generally, anti-corruption practice. This could be done by large companies by obtaining accreditation under ISO37001, the global anti-bribery standard. For smaller companies, for which ISO37001 may be excessive, reference to an existing national standard or code of practice could be a useful first step. If such a code does not exist, action could be urged to establish such a standard. National authorities should then be encouraged to ty success in tenders to compliance with the standard or a set of expected behaviours. This can be done at either of two levels:

- a 'hard' level where eligibility to even bid for a tender requires the company to have the standard;
- a 'softer' version, used at the tender assessment stage, where extra marks are given in the evaluation for those who possess the standard against those which do not.

Actions for ministries and regulators:

- Require evidence of integrity compliance from bidders on public tenders (ISO37001 for large companies, and an appropriate standard for small companies).

Actions for private sector companies:

- Make financial information publicly available, particularly in relation to government tenders and programmes.

5.2.3 Empower civil society and the media, strengthen social accountability

Citizen groups, NGOs, journalists, and activists need not just to be free but actively encouraged to hold the powerful accountable. In the water and sanitation sectors, this entails promoting transparency, community participation, and accountability mechanisms at all levels, from local water management to national policymaking. Actors in the water and sanitation sectors can also seek out allies in the broader social justice space, which can increase their impact.

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Corrupt actions can be detected through public scrutiny and exposed through public criticism. Such public engagement raises the chance of detection and sanction. Civil society or users' engagement in budget and accountability processes enables them to hold public actors accountable. They can establish public forums as independent initiatives or participate in formally established budget processes. Social accountability tools can be helpful and powerful levers for action. Even in places without formal civil society organisations, residents can join forces in once-off initiatives to hold government accountable.

Actions for donors, international financial institutions:

- Promote and defend civic space. This could include supporting local civil society groups, promoting policies ensuring transparency and accountability, and applying diplomatic pressure on governments to protect civic space and civil society engagement in water and sanitation sector budgeting and expenditure processes.
- Fund and support social accountability initiatives
- Build capacities of civil society, academia and media to access and analyse open data related to public procurement, and to communicate to the public about the findings.

Actions for CSOs, researchers and the media:

- Encourage open government initiatives in the water sector and advocate for reform in public finance management systems for better fiscal transparency and open contracting.
- Organise and amplify residents' voices and increase the capacity for understanding water and sanitation finance and budgets.
- Generate new information on the use and effectiveness of public funds and services. Some examples include contributing to public expenditure tracking surveys, citizen report cards or municipal scorecards. Social audits or other means of community monitoring of service quality are also relevant.
- Find allies within government, partner with regulators or use consultation spaces to advocate for stronger anti-corruption efforts.
- Advocate for the publication of SAI audit reports.
- Participate in public consultations on new procurement bills and suggest including or strengthening blacklisting and increasing social accountability mechanisms within procurement rules.

Actions for the media:

- Build capacity to investigate and expose corruption in finance for water and sanitation.
- Contribute to public oversight and pressure for change.

5.3 Promote a Culture of Integrity

5.3.1 Build multi-stakeholder partnerships

The benefits of collaboration between different government entities, the private sector and civil society in tackling corruption and improving integrity is well recognised. The aim is that by bringing together different stakeholders and co-ordinating actions and expertise, they can better solve common problems (section 4.1.3). Multi-stakeholder partnerships can also provide clout, or strength and protection in numbers, to influence peers and make integrity a guiding principle for action on water and sanitation that cannot be ignored.

Partnerships with anti-corruption organisations and coalitions in particular can help raise awareness on integrity issues with widespread consequences in the water and sanitation sector and bring in valuable expertise. There are several global multi-stakeholder partnerships (MSPs) with an anti-corruption focus. Such partnerships, beyond the water and sanitation sectors, can be powerful allies for change. The Infrastructure Transparency Initiative (CoST) brings together members from government, civil society, and the private sector around public infrastructure projects. The Maritime Anti-Corruption Network (MACN) is made up of private companies that own or operate commercial vessels and companies in the maritime value chain (section 4.1.3). The World Economic Forum has also established a multi-stakeholder Partnership Against Corruption Initiative (PACI) with participation mainly by business and civil society.

However, MSPs are based on voluntary commitments and non-binding agreements. This can result in a lack of enforcement capacity and willingness where members contravene the principles of the partnership. **Because MSPs are based on trust and mutual interests, they do not generally incorporate much scrutiny of the actual practices of partners. This could be changed through the adoption of best practice from other partnerships** (U4, 2021; CEO Water Mandate and WIN, 2015).

Actions for regulators:

- Strengthen relationships and information sharing with other accountability bodies (such as SAIs, anti-corruption bodies, professional institutions), civil society, and media in recognition of their shared goal of corruption detection and enforcement.
- Work closely with SAIs, and support widening their mandate and strengthening their capacity.

Actions for utilities:

- Build alliances with civil society, academics, the private sector, to strengthen their capacity to tackle corruption.
- Initiate multi-stakeholder anti-corruption partnerships with like-minded utilities, government agencies, and civil society organisations to raise awareness on integrity risks within a particular area (for example procurement or water resource allocation), to provide capacity building, and to develop and share best practices.

Actions for CSOs:

- Explore opportunities to collaborate with other groups that actively protect civic space both within and outside the water and sanitation sectors. This can include exploring joint initiatives or funding proposals that focus on integrity in the water and sanitation sectors.
- Partner with organisations experienced in public financial management, procurement processes, data analysis and related areas. Combining expertise will enable more effective monitoring and detection of wrongdoing.
- Partner with SAIs, regulators and other key government partners to increase the capacity to detect and sanction corruption and integrity failures.
- Press government for whistleblowing protection and legislation, and open budgeting.

All:

- Explore integrity pacts as one way to influence the behaviour of bidders on government procurement by emphasising the value of third-party oversight. Consider making such pacts conditional on selected funding opportunities, particularly around new sources of finance (such as climate finance) or other investments with high public value.
- Explore multilateral avenues such as the Open Government Partnership at the national and local level to co-create workable open government commitments with the government and private sector to foster financing integrity.

5.3.2 Influence social norms related to integrity

"A social norms approach can help practitioners design effective anticorruption reforms. Social norms in communities, families, and organisations help explain why corruption persists. The threat of social sanctions for norm violations creates pressures on officials and citizens to sustain corrupt practices." (Jackson and Köbis, 2018)

Social norms are the backbone of the 'no reason' approach (section 4.1). Strategies to influence them need to embrace their variety and different sources. Within an organisation or sector, sustained strategies can see significant change within two to three years.

There are several types of social norms that contribute to the challenge of addressing corruption: social and kinship pressures, peer-to-peer pressures, and top-down pressures. **The first step in addressing these social norms is to understand which norms are particularly prevalent and relevant in the context being addressed.** This can be done through a combination of literature review, interviews, focus groups, etc.

Once it is clear what norms are sustaining corruption in the organisation or sector, anti-corruption programmes can be tailored appropriately (Jackson and Köbis, 2018). **A practical way to influence social norms is through institutional culture, which can be driven by an integrity champion and other ethical leaders.** Internal promotion of staff who display a high degree of integrity is a powerful tool in shifting organisational norms.

Actions for ministries, regulators and utilities:

- Introduce a reward system for integrity actions including the promotion of staff who act with integrity.
- Identify and nourish integrity champions within organisations, so that they can drive normative change within the organisation and broadly within the water and sanitation sectors.
- Develop and lead a culture change programme within the organisation.
- Initiate or support processes to understand how corruption is supported by social norms in the organisation and formulate strategies to address them (U4, 2018).

Actions for CSOs:

- Provide training and capacity building to civil society organisations and groups on social norms, how they influence corruption and integrity failures and how to shift them.
- Facilitate discussions to identify social norms that enable corruption and integrity failures, and to identify what behaviours are desirable versus non-acceptable.
- Work with informal vendors to develop a better culture of integrity.

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