



Global Report on Sanitation and Wastewater Management in Cities and Human Settlements

Key Messages and Priority Actions



Key messages:

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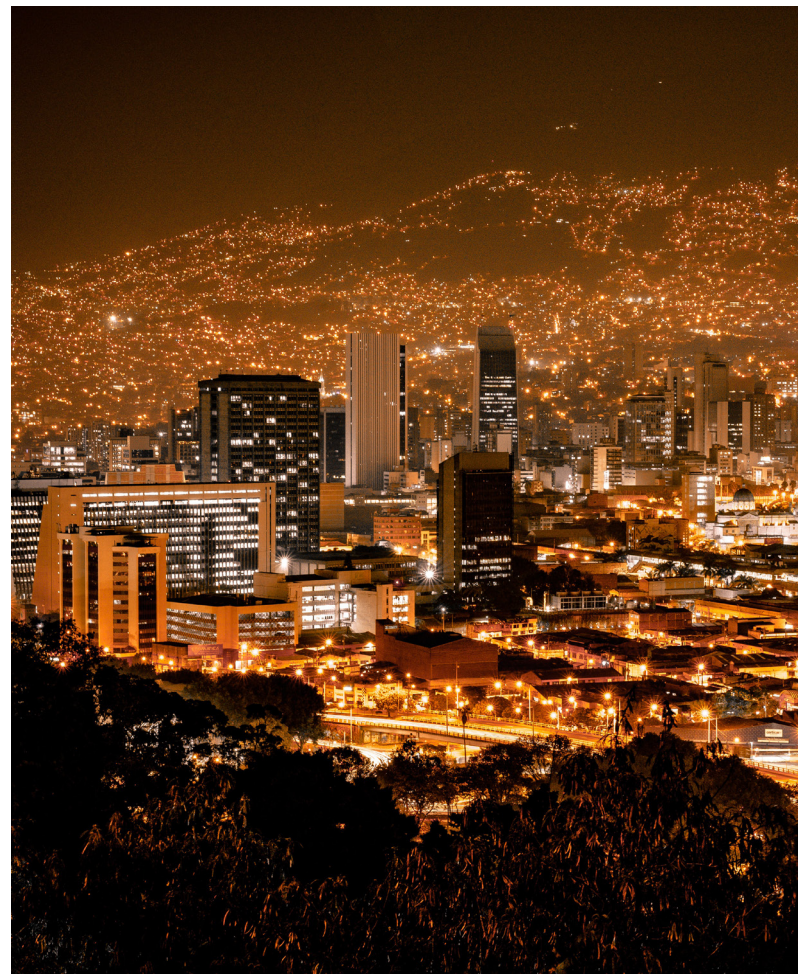
Sanitation and wastewater management are core to the health and wellbeing of individuals, cities, societies and whole environmental ecosystems. But halfway through the SDG era, it is increasingly clear that governments, intergovernmental organizations, research organizations and other practitioners still lack critical data on the status of wastewater and faecal sludge treatment, both globally and at the country level. Drawing on a mapping of 18 cities across Africa, Asia, Europe and Latin America, this report aims to raise awareness of the critical importance of sanitation in human and urban development; to bridge the data gap by shedding light on the current situation and the state-of-the-art globally, with specific reference to wastewater and faecal sludge management; and to provide decision-makers with guidance on the level and types of action required to drive change.

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The key premise of the report is that sanitation is a public good, and sanitation services must be organized into public service systems. National and local governments should prioritize sanitation and wastewater as a public service – just like education, health, energy and other services where service authorities have a clear public mandate to ensure service delivery for all. This in turn requires responses that look beyond infrastructure development. Ensuring sanitation systems deliver the expected outcomes requires financial planning, both for capital investments and operational and maintenance costs; as well as clear responsibilities, strong accountability frameworks, and capacities for data management that can help deliver citywide inclusive sanitation in the long term.

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By highlighting the cost of inaction, the report provides the rationale for a strong and urgent public response to the urban sanitation challenge. Poor sanitation and wastewater management creates major health risks from water-borne pathogens and is associated with reduced water quality and disease spread. Disposal of untreated wastewater and faecal sludge into the environment is a significant threat to life below water and life on land. These impacts on health and the environment are root causes of huge economic losses linked to poor sanitation and wastewater management, which are particularly substantial in low- and middle-income countries (LMICs). Today, climate change is exacerbating the impact of inadequate wastewater and faecal sludge treatment infrastructure, with urban populations particularly vulnerable to climate change because of their size and density, as well as being a key contributor to climate change.



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The report outlines how urbanization is further intensifying the challenge of wastewater and faecal sludge treatment.

The world has seen a rapid shift toward urbanization in recent decades. More than half of the world's population now lives in urban areas. Rapid rural-to-urban migration has led to the development of large informal settlements or slums in and around large cities. Whilst all cities and human settlements face the challenge of sanitation and wastewater management, every city occupies a unique context which defines the public responses required. As a result, contextual features must determine technology choices and the mix of services provided.

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The global mapping of 18 cities shows that in practice and regardless of technologies used, many cities in LMICs are struggling to manage wastewater and faecal sludge effectively throughout the sanitation service chain. For

a number of cities within our sample, these challenges begin at the containment stage and the challenge of providing access to basic sanitation services. At the treatment level, there are wide discrepancies in the volume of wastewater treated when mapped against city population size. For example, the volume of wastewater and faecal sludge treated in Dhaka, Bangladesh – one of the largest cities in the world – is at least five times less than volumes treated in Sofia (Bulgaria) or Paris (France), when Dhaka's population is nearly 10 times larger. Only cities in high-income countries were able to meet the Biological Oxygen Demand (BOD) global standard for tertiary treatment. Treatment technology is clearly correlated with higher treatment performance, with mechanized treatment processes only observed in HICs. There is misalignment in many cities in LMICs between the predominance of on-site sanitation and the low availability of treatment facilities capable of treating faecal sludge.

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Enhanced action on sanitation and wastewater management is therefore urgently needed. But many cities are already embracing the challenge, providing cause for optimism.

Supported by in-depth case studies, the report highlights actions being taken by governments, development partners, city planners, utilities, service providers and researchers around the globe, including in response to climate change. Together these examples show clearly that effective responses do exist. This is an exciting time for wastewater management. For example, at the global level, a paradigm shift is taking place, with wastewater increasingly being viewed as a resource not a waste stream. This report is also a repository for these emerging practices, developed to inspire further research and implementation of promising best-fit approaches.



How then can the situation be improved further? Drawing on examples from the global mapping and in-depth case studies, the report presents six core recommendations, unpacking each in turn to explore what implementation involves in practice. The Call to Action is summarized below:

Priority Actions:

1. Cities need to invest more, across the sanitation service chain, and invest more smartly, with specific attention to the environmental context as well socio-economic conditions and climate change risks.
2. Wastewater and faecal sludge management services must be integrated with national and local urban policies, strategies and plans, including slum upgrading processes.
3. Roles and responsibilities with regards to sanitation, from policymaking to service delivery across the sanitation service chain, have to be clarified so that actors have clear mandates to deliver on.
4. Financial and human resources must be allocated to regulation design and enforcement, without which service providers will not have incentives to invest as they should.
5. National monitoring systems for sanitation, wastewater and faecal sludge management services must improve radically, with countries supported in developing credible public data systems incorporating all sanitation outcomes.

6. Cities need to adopt measures for safe wastewater and faecal sludge valorisation, even ahead of the full development of sanitation services, so as to mitigate health and environmental risks associated with this resource.

Enabling Factors:

1. Funding for research into wastewater and faecal sludge management needs to continue and increase, to support the development of technologies and service models adapted to different contexts and resilient to climate change.
2. Peer-to-peer learning and south-south cooperation must be supported to share knowledge and inspire replication of best-fit approaches.

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