

A Call to Action:

Regulating for Citywide Inclusive Sanitation

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'squaring the circle': 'doing something that is very difficult or impossible'.¹

"Annual per capita costs for the [Kampala, Uganda] sewage regime (\$186) are more than 13-fold those for the Faecal Sludge regime (\$14)."³

"Regulation is a policy intervention that aims to promote sector goals in the public interest – balancing the competing interests of the various stakeholders."⁵

Regulating for Citywide Inclusive Sanitation: A Call to Action

How to **'square the circle'** of 2.1 billion urban dwellers, many of the poorest on the planet, urgently needing the human right of safely managed sanitation? And at an estimated cost of \$105 billion per year², how is this to be delivered in a sustainable AND affordable manner when affordability (and willingness to pay) is so limited, taxation rates are low and donor transfers are not increasing?

Citywide Inclusive Sanitation (CWIS) is a public service approach to planning and implementing urban sanitation systems to achieve outcomes summarised in **SDG 6.2**: *safe, equitable and sustainable sanitation for all by 2030*, irrespective of where people live within a city or what technologies are used to serve them.

The proportion of the urban population living in slums or informal settlements worldwide was estimated to be 66% in low-income countries (37% lower middle, even 24% in upper middle-income countries), with the absolute number of people growing to over 1 billion⁴. Meeting the sanitation needs of informal settlement dwellers and ending open defecation, is a particular challenge relating to affordability and accessibility, where conventional water-flushed sewerage is even more difficult and expensive to install and where non-sewered service options require regular access to pits or tanks for desludging. This is in addition to possible institutional prohibitions in serving informal areas.

Delivering CWIS needs regulators, because regulators have the expertise of finding the pragmatic balance between the policy and standards set by policymakers and legislatures, and the service providers, who need to access the funding (tariffs & taxes), repayable financing and human resources to deliver the service.

Regulators (and their equivalents) in a wide variety of contexts have shown that they can make a significant difference in nudging forward the monopoly piped water supply sector, empowering service providers to improve their performance for the benefit of their customers, and new customers, whilst challenging them through comparative competition (benchmarking) as well as penalising failures. Now comes the bigger challenge of asking regulators to extend their art of compromising beyond overseeing limited monopoly piped sewer networks, with similarly limited wastewater treatment, usually supported by subsidies from the water tariff. Regulatory oversight needs to be extended to the service providers of 'Non-Sewered Sanitation' (NSS) in formal and informal housing areas, with NSS needing the on-site sanitation service chain of household containment, septic pit/tank emptying, safe transport and necessary delivery to a public faecal sludge treatment & reuse plant. Such regulatory oversight necessarily accepting the implicit risk of groundwater pollution, where permeable pit lining is used as an affordable 'drainage field'.

For achieving CWIS, the mandated service provider is expected to enable and oversee subcontracted elements of the total service, including those potentially delivered by private small and medium enterprises, community-based and non-governmental organisations (all with standardised contracts), as well as the public sector.

Every country has its own regulatory frameworks and structures which straddle a wide spectrum where power and priorities vary significantly, ideally with regulation carried out at appropriate levels for the specific purpose, with 'no best approach' ('there is not one size fits all') but the same target: sanitation.

The mission of this Call to Action is to support and inspire regulators, particularly economic, to catalyse service delivery in the context of affordable and sustainable tariffs, charges and subsidies, all with close linkages to water resources and environmental regulation, supported, with enforcement where necessary, through planning and building, environmental health, occupational health & safety and consumer protection regulations.

A "Regulatory Authority, Regulatory Body or Regulator is a public authority responsible for applying and enforcing standards, criteria, rules or requirements - which have been politically, legally or contractually adopted - exercising autonomous authority over the Services, in a supervisory capacity." ⁶

Regulating can be undertaken by a "Sector Specific National or State Regulator; Multi-Sector Regulator; Self-Regulation at the Municipal Level; Government Department; Regulation by Contract".⁷

Regulating catalyses the progressive realisation of the human right to water and sanitation.



"A non-sewered sanitation system: [one] that is not connected to a networked sewer system, and collects, conveys, and fully treats the specific input to allow for safe reuse or disposal of the generated solid output and/or effluent."

'Sanitation is defined as access to and use of facilities and services for the safe disposal of human urine and faeces'.⁸ **Citywide Inclusive Sanitation** (CWIS) is a public service approach to planning and implementing urban sanitation systems to achieve outcomes summarised in **SDG 6.2**, irrespective of where people live within the city or what technologies are used to serve them.



Accelerating progress on sanitation delivers health benefits for individuals and the nation (child survival, higher utilisation of health services, elimination of cholera, eradication of polio, control of intestinal worms, less stunting in children), safety and mental health, food safety, environmental justice, decent work and a clean environment for recreation.¹⁰

Actions by Regulators for Service Providers: bridging policy, law-making and service provision

The task of the regulator is to enable, empower and ensure the financeability of efficient service providers to accelerate delivery of inclusive sanitation services.

Regulatory enabling environment for CWIS

- Undertake a review of the regulatory framework (including laws, charters, decrees, degrees of regulatory independence and other instruments) to prepare a **regulatory CWIS road map**, charting the course to deliver CWIS in the context of developing public policy.
- Include in the road map a clear understanding of the various **stakeholders involved** in delivering sanitation for all, their roles and responsibilities, any gaps, overlaps and weaknesses, particularly municipal planning and service authorities, ensuring appropriate law-enforcing responsibilities are defined.
- Recognise CWIS as the critical first step to the longer-term goal of 'Integrated Urban Water Management'¹¹ planning (including grey water and storm water, particularly in informal settlements), a definition of sanitation also referring to 'the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal.'
- Having developed the necessary consensus, consider adjusting the license of the public water (and/or sewerage) supplier to become a 'water and sanitation company' with responsibilities to manage sanitation service provision for all, NSS in addition to sewerage; alternatively, where municipalities have proven to be effective service providers or where there is no likely separate public water supplier, the municipality to be mandated as CWIS regulated license holder.
- Establish processes for license renewals. The license needing to mandate clearly defined geographical boundaries, with the expectation boundaries will adjust over time.
- Facilitate updating and the reconfiguration of **quality-of-service standards**, **norms and bye-laws** to facilitate progressive realisation of non-sewered sanitation, including accessible and emptiable pit/tanks, in addition to sewered (conventional & reduced cost) sanitation.
- Harmonise regulatory requirements across sanitation-related sectors to ensure the protection of **human health and the environment**.
- Communicate with government as to the likely extent and structure of necessary **subsidies needed from taxes** to support the phased development of CWIS.
- Promote a culture of collaboration, transparency, shared learning and willingness to innovate to achieve goals, incentivising operators to be open to new technologies and solutions regulators accepting service providers' preparedness to experiment, learn from mistakes and work collaboratively with all stakeholders.

'IUWM is described as the practice of managing freshwater, wastewater, and storm water as components of a basin-wide management plan. It builds on existing water supply and sanitation considerations within an urban settlement by incorporating urban water management within the scope of the entire river basin."¹¹

'Householder's willingness to pay [Nakuru, Kenya] is less than 25% of [capital] cost of a high quality pour flush toilet with a lined pit.¹²

Willingness to pay for emptying and safe disposal [of pit sludge] through a transport and treatment route in Kisumu corresponds to 23% of operational costs.⁴³ "Economic regulation is the set of rules and organisations that set, monitor, enforce, and change allowed tariffs and service standards for water [& sanitation] providers."⁴

Using regulatory techniques, though not a 'regulator', sewerage connection and treatment rates in the Republic of Korea rose from about 2% (1961) to about 90% (2012), supported by accessing \$800m of private capital financing for 100 wastewater treatment plants between 1998-2008 (also delivering a 25% reduction in plant opex). This in the context of National and Local Subsidies averaging \$2.8 billion per year and water user charges increasing about 3.8 times (2000-2012).¹⁵

Regulating service providers to deliver CWIS

- Promote a range of incentives to mobilise service providers in **servicing neglected areas** in the context of pragmatism, gradualism and flexibility.
- Engage with **private service providers** to better understand what incentives would enable them to cover neglected areas.
- Commence development of a joint regulator and service provider transparent 'tariffs and charges financial model' (spreadsheet), including sewered (reducing present subsidies) and non-sewered service chain options.
- Develop an understanding of the **'true cost of sanitation'** (in parallel to the already known 'true cost of water') in order to raise awareness.
- Develop **Key Performance Indicators** (but not too many!), linked to incentives and efficiency requirements, to ensure service provider plans include incremental service improvement to the poor with a specific KPI for **ongoing service levels** (services used) to the lowest-income quartile.
- Begin **satisfaction surveying**, use of Citizen Report Cards, benchmarking and comparative performance tables across the range of licensed service providers.
- Where needed, support service providers (and consumer representatives) through **capacity-building**, particularly in supporting the development of risk-based approaches to preparing service and asset management plans.

Setting licensed service provider requirements

- Collect, and report on, appropriate data **service quality information**, and **costs** based on regulatory accounting guidelines for sewerage & sanitation costs separation with **incremental strengthening of information management and reporting systems** across the entire sanitation service chain.
- Deliver periodic (regulator defined) **service and asset management plans** for the entire sanitation service chain, including funding proposals, justifying the balance between sewered and NSS solutions (both also relative to water supply investments), related to anticipated outcomes based on health risk assessments.
- Develop **proposed tariffs and user charges** (within the regulator's guidelines & financial model), structured to balance affordability to users and sustainability for service provision, with appropriate subsidies (particularly from water tariffs, municipal taxes and national or state investment poorer users to be subsidised through the lever of regulation) supporting both access and consumption, targeted to reach needy households.
- Ensure an adequate mechanism for **service provider appeals** against regulatory decisions.
- Investigate and develop **innovative funding and financing options**, donor transfers, subsidies and cross-subsidies, including any possible benefits of *'waste to wealth'*.
- Engage with citizen customers, promoting the value and benefits of sanitation as well as the knowledge, awareness and understanding of the sewered and non-sewered sanitation sector.
- Ensure adequacy of customer consultation mechanisms in service provider plans.
- Deliver human resources capacity-building, and health & safety for sanitation workers, through development and implementation of Standard Operating Procedures.

Acknowledgments

This Call to Action has been prepared by a Task Force of IWA members and partners, with valued support from an Advisory Board, to act as a strategic contribution to the SDG6 Global Acceleration Framework, building on the foundations of the IWA 2015 Lisbon Charter.

IWA would like to pay special thanks to Richard Franceys and Kathy Eales for their dedication and hard work in compiling this document using the valuable inputs of the initiative's Task Force and Advisory Board members.

References

- ¹ Cambridge Dictionary: https://dictionary.cambridge.org/dictionary/english square-the-circle
- ² UNICEF (2020) Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2 November 2020
- ³ McConville J, Kvarnström E, Maiteki J and Niwagaba C (2019) Infrastructure investments and operating costs for fecal sludge and sewage treatment systems in Kampala, Uganda, Urban Water Journal, 16:8, 584-593
- ⁴ https://data.worldbank.org/indicator/EN.POP.SLUM
- ⁵ Mumssen Y, Gustavo S, Kingdom B, Norhan S, and Marques R (2018) "Regulation of Water Supply and Sanitation in Bank Client Countries: A Fresh Look." World Bank, Washington, DC.
- ⁶ International Water Association (2015). The Lisbon Charter Guiding the Public Policy and Regulation of Drinking Water Supply, Sanitation and Wastewater Management Services
- ⁷ Mumssen et. al. (2018) op.cit.
- ⁸ United Nations Children's Fund (UNICEF) and the World Health Organization (2020) State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies. New York
- ⁹ UNICEF & WHO (2020) op. cit.
- ¹⁰ ISO/IWA 24:2016 (2016) Non-sewered sanitation systems General safety and performance requirements for design and testing: https://www.iso.org/obp/ui/fr/#iso:std:iso:iwa:24:ed-1:v1:en
- ¹¹ Tucci, C., Goldenfum, J.A., Parkinson J.N. (2009 "Integrated Urban Water Management: Humid Tropics"). 978-92-3-104065-8 CRC Press
- ¹² Norman G (2019) Is slum sanitation likely to require major subsidy? WSUP, July 2019, London
- ¹³ Peletz R, MacLeod C, Kones J, Samuel E, Easthope-Frazer A, Delaire C (2020) When pits fill up: Supply and demand for safe pit emptying services in Kisumu, Kenya. PLoS ONE 15(9): e0238003.
- ¹⁴ Groom E, Halpern J and Ehrhardt D (2006) Explanatory Notes on Key Topics in the Regulation of Water and Sanitation Services, Water Supply and Sanitation Sector Board Discussion Paper Series 6, World Bank, Washington, DC.
- ¹⁵ Yu-Seop Shim, Seong-Hwan An, Jong-Ho Ahn (2016) Transformation of the Water Sector (1960–2012) Korean Water and Wastewater Works Association (KWWA), May 2016, Seoul

Additional Resources

IWA CWIS WEBINAR 1 - In this webinar, panellists from the Initiative's Taskforce share their experiences and lessons learnt from Latin America, Africa and Asia: *https://iwa-network.org/learn/regulatingcwis/*

IWA CWIS WEBINAR 2 - In this webinar, service providers and regulators from Malaysia and Kenya discuss how regulators can support service providers through using collaborative approaches and incentives as well as how service providers can step up to the challenge of providing good quality, affordable and sustainable services for all: https://iwa-network.org/learn/regulating-serviceproviders-for-citywide-inclusive-sanitation/

CITYWIDE INCLUSIVE SANITATION BRIEFING NOTE: *https://citywideinclusivesanitation.com*

GUIDELINES ON SANITATION AND HEALTH - Geneva: World Health Organization; 2018. 'Clearly setting out the need for action and providing tools and resources, these guidelines also reinvigorate the role of health authorities as champions of sanitation.': https://www.who.int/water_sanitation_health/sanitation-waste/sanitation/sanitation-guidelines/en/

SANIPATH ASSESSMENT TOOL - Designed to assess risk related to poor sanitation and to help prioritise sanitation investments based on the exposures that have the greatest public health impact: *https://www.sanipath.org/*

REGULATION STRATEGY AND FRAMEWORK FOR INCLUSIVE URBAN SANITATION SERVICE PROVISION - ESAWAS outlines a regulatory framework and strategy that integrates and addresses inclusive urban sanitation service provision (incorporating non-sewered sanitation) such that the WSS regulator can effectively administer its mandate (see also ESAWAS Guidelines): https://www. esawas.org/index.php/publications/other-esawas-publications

SANITATION SERVICES ASSESSMENT AND PLANNING TOOL - The Citywide Inclusive Sanitation Services Assessment and Planning (CWIS SAP) tool helps decision-makers compare the outcomes of different sanitation interventions or investments. The tool analyses and illustrates how each proposed intervention is likely to affect the equity, financial sustainability and safety of sanitation services in an urban area: https://www.cwisplanning.com/

REFEREE! RESPONSIBILITIES, REGULATIONS AND REGULATING FOR URBAN SANITATION - WSUP Discussion Paper which synthesises experience from Eastern and Southern Africa and Bangladesh to explore the evolving role of regulators in driving urban sanitation service improvements: *https://www. wsup.com/insights/referee-responsibilities-regulations-and-regulating-forurban-sanitation/*

WATER UTILITY PATHWAYS IN A CIRCULAR ECONOMY - IWA, 2016. Transitionary pathways for utilities are described that position them as engines for sustainable growth. The framework presents three interrelated pathways – water, materials and energy – that aim to help utilities identify integration points within systems that enable their transition to the circular economy: *https://iwa-network.org/water-utility-pathways-circular-economy-charting-course-sustainability*

ABOUT THE INTERNATIONAL WATER ASSOCIATION

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IWA connects water professionals in over 130 countries to find solutions to global water challenges as part of a broader sustainability agenda. IWA connects scientists with professionals and communities so that pioneering research provides sustainable solutions.

In addition, the association promotes and supports technological innovation and best practices through international frameworks and standards. Through projects, events, and publications, IWA engages with its members to stimulate innovative ideas and content in support of IWA's vision of a water-wise world.



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Company registered in England No.3597005 Registered Charity in England No.1076690

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