



City Sanitation Data

Assessment Checklist

City Sanitation Data Assessment Checklist

The methodology presented in this note is designed to help cities assess their existing sanitation data and identify gaps in these datasets, and suggest potential directions a city could consider to strengthen its sanitation data ecosystem.

How to Use the Checklist for Assessment

The data assessment approach presented in this note examines two types of data for each city: 1) service level data across the sanitation service chain, focusing on a few key factors that influence data generation and update, including data reporting structure and funding sources of the data; 2) data on sanitation finance, including common sources of revenue and expenditure. The sections below explain the intention behind the assessment questions and how the questions are organized. The complete checklist is available in table format at the end, with skip logic that attempts to accommodate most scenarios.

Almost all questions are phrased as binary (Yes/No) choices, supplemented with additional details useful for a more in-depth understanding of existing datasets (what, who, why). More 'Yes's than 'No's would usually denote a stronger and more sustainable dataset for the service chain segment referred in a given column or for sanitation finance. However, there is no standard or ideal answer to all questions—there could be different scenarios across cities and across datasets, and more than one of these could work well depending on the city context (e.g., the owner of a dataset can either be the service authority or the national statistical office, and one is not necessarily better than the other). Hence, the assessment questions are designed with skip logic that attempts to accommodate most scenarios and are phrased to focus more on desirable attributes regardless of the institutional context.

Data Across the Sanitation Service Chain

The first set of questions look at all available datasets generated across the service chain in a city. While the assessment focuses on the city service authority as the data owner due to the nature of its mandate, it also considers datasets collected by other government agencies on the city, such as by the national statistical office and the various ministries as part of their larger data collection efforts across the country. However, data collected entirely by external stakeholders without involving the service authority is not considered, as these datasets tend to be one-off and may not always be accessible to the service authority for use in planning and decision-making.

The data ecosystem is assessed on the following key themes:

- 1. Availability & update:** Is there a dataset that covers this component of the service chain? How frequently is it updated?
- 2. Coverage:** Is the dataset representative of the entire city, including low income communities?
- 3. Ownership & access:** Who is the data owner? Does the service authority have access to the raw data and in digital format? Is the dataset public?
- 4. Reporting requirement:** To whom is the dataset required to be reported? For what purposes?¹

¹ Here, "reporting motivation" is captured as the primary use case of the data. Nevertheless, data use in general is a large topic beyond the scope of this assessment, which focuses on identifying main gaps in the existing data.

5. Funding source: Who funds the data collection? Is the funding source sustainable over the long term?

These five areas broadly fall into three categories—the first three look at whether the dataset has a set of **desirable attributes** such as access, coverage and ownership; reporting requirement examines the **motivation for the collection of a dataset** and the final assessment area seeks to understand the **resourcing of data collection**, both of which shed light on key questions such as the likelihood of continued update of an existing dataset, and what could be done to bridge current data gaps.

Reporting requirements are classified into four categories: **1) institutionalized reporting**, which are inbuilt mechanisms of the overall government system and could include things such as the national census and routine regulatory reporting; **2) national/ state/ regional programmatic reporting**, which are initiatives of the national/ state/ regional government with a fixed timespan and often linked to a specific scheme or program; **3) own activity**, which are collected entirely for the city's own operational purposes and needs independent of national/ state/ regional requirements; **4) IFI/ donor program reporting**, which are collected and reported for IFI/ donor driven programs. It is worth noting that even though type 2) programs may also receive financial support from IFIs/ donors, the agenda is mostly driven by the national/ state/ regional governments.

The funding sources for sanitation can be broadly classified into three categories: **1) national/ state/ regional transfers**, all of which are classified as grants. This also includes direct data collection by government agencies other than by the sanitation service authority at the city level, such as the national census and datasets collected by various ministries through their delegates at the city level; **2) city's own revenue**; **3) IFI/ donor funding**, which can be grants or loans but are external sources and always linked to specific programs. Dataset collected through the last category of funding is the most likely to discontinue in the medium to long term.

In most cases, the reporting requirements and funding sources of the data updates follow those of the initial data collection. However, in some cases, datasets initially collected through donor funded programs can become institutionalized, under certain conditions².

Sanitation Financial Data

The assessment of sanitation finance data focuses on the availability aspect, centering around the following key questions:

- **Level of aggregation:** Is the data on 'sanitation finance' available at the city level or only aggregated at higher levels?
- **Revenue data by source:** Is sanitation revenue from all revenue generating activities (i.e., excluding government transfers and IFI/ donor funding) clearly documented by source?
- **Expenditure data by asset category:** Is data readily available or can be easily compiled for the Operations & Maintenance (O&M) cost of each type of asset (treatment plants, sewer network, desludging vehicles, transfer stations, etc.), instead of presented only as combined

² For example, data on public toilets (PTs) in Kampala was first collected through a 2018 survey funded by the BMGF supported Citywide Inclusive Sanitation (CWIS) program and implemented by the Kampala Capital City Authority (KCCA). After the initial survey, KCCA has institutionalized the monitoring and is now collecting daily updates using KCCA's state approved budget.

costs of all municipal/ utility operations under the heads of salaries, electricity, fuel, chemicals, etc.?

Availability of these types of financial data to a large extent depends on the accounting practices adopted by the service authority, as well as reporting requirements as laid out in the accountability mechanisms. A full assessment table is available in the next section, with all main revenue, expenditure, and subsidy items listed.

List of Data Assessment Questions

Service Chain Data Assessment

No.	Assessment Questions	Answer for Each Segment of the Service Chain (Yes-Y; No-N; Not Applicable-N/A)											
		Access					Containment		Emptying & Conveyance		Treatment	Reuse	
		HH Toilets	PT	CT	EI ³	HF ⁴	Sewer	Onsite	Emptying	Disposal at TP	Treatment quality	Treated effluent	Treated biosolids
DATASET ATTRIBUTES													
1	Availability & update: Is there a dataset that covers this segment of the service chain for the city? What is the dataset? <i>(If yes, go to 1a; if no, go to 2)</i>												
1a	• Is the dataset periodically updated? <i>(If yes, go to 1b; if no, go to 2)</i>												
1b	• Is the frequency of the update at least once per annum?												
2	Coverage: <i>(If the dataset is on access and/or containment, go to 2a; if it is on emptying & conveyance, go to 2c)</i>												
2a	• For a dataset on access and/or containment, is it a census or a survey based on representative sampling (i.e., stratified random sampling) of the entire city, including low income communities (LICs)? <i>(If yes, go to 2b)</i>												
2b	• Does the dataset allow disaggregation of data on LIC and on non-LIC?												
2c	• For a dataset on emptying & conveyance, does it cover all service providers, including manual emptiers?												
3	Ownership & access: Is the service authority the data owner? <i>(If yes, go to 3d; if no, go to 3a)</i>												
3a	• Does the service authority have access to the data collected at the city level? <i>(If yes, go to 3b; if no, go to 4)</i>												

³ Educational Institutions.

⁴ Healthcare Facilities.

3b	<ul style="list-style-type: none"> Is the data readily accessible to the service authority in a digital format (MIS or any other form) as part of routine data sharing instead of only on request basis? <i>(If yes, go to 3c; if no, go to 4)</i> 												
3c	<ul style="list-style-type: none"> Does the service authority have access to the raw data collected, rather than only the aggregated data values? <i>(If yes, go to 3d; if no, go to 4)</i> 												
3d	<ul style="list-style-type: none"> Is the dataset open to the public? 												
MOTIVATION FOR DATA COLLECTION													
4	Reporting requirement/ motivation: To whom is the dataset required to be reported? For what purposes?												
4a	<ul style="list-style-type: none"> Is the dataset required to be reported to authorities at the national/ state/ regional level? <i>(If yes, go to 4b; if no, go to 4c)</i> 												
4b	<ul style="list-style-type: none"> Is the reporting institutionalized⁵ (this does not include reporting for national/ state/ regional level programs that are timebound⁶)? <i>(Go to 5)</i> 												
4c	<ul style="list-style-type: none"> Is the data collected for the service authority's own purposes of revenue/ cost documentation? <i>(If yes, go to 5; if no, go to 4d)</i> 												
4d	<ul style="list-style-type: none"> If the data is collected for IFI/ donor supported program reporting, are plans in place to continue the data collection after the program ends? 												
RESOURCING OF DATA COLLECTION													
5	Funding source: Who funds the data collection? <i>(If funded by national/ state/ regional government transfers, go to 5a; if funded by authority's own revenue, go to 5b; if funded by an external source, go to 5c)</i>												
5a	<ul style="list-style-type: none"> If it is funded by national/ state/ regional government transfers, is this funding guaranteed through constitutional/ regulatory mandate (as against being program linked and timebound)? 												

⁵ Examples of institutionalized reporting include the national census, treatment quality compliance, or any other routine reporting required as part of accountability and laid out in laws, regulations, performance contracts between the service authority and higher-level authorities, etc.

⁶ An example of national/ state/ regional programmatic reporting is the reporting for the Swachh Bharat Mission (SBM) of India, which is a national scheme that targeted the improvement of sanitation and solid waste management across the country over a period of five years. While the scheme has been renewed for another five years, continuity of the reporting is uncertain after the program period ends.

5b	<ul style="list-style-type: none"> If it is funded by the authority's own revenue, does the authority have the intention AND resources to continue funding the data collection in the long term? 																					
5c	<ul style="list-style-type: none"> If it is funded by an external source (e.g., IFIs, donors, NGOs, etc.), have mechanisms been put in place to ensure continued funding for data updates by own revenue or other government sources, after the program period ends? 																					

Sanitation Financial Dataset Collected

Financial Data	Dataset Area (*If the service authority operates at the national/ state/ regional level, data availability needs to be examined at the city level)	Is Data Available? (Yes; No; Not Applicable)
Revenue Sources	Total annual sewerage/ sanitation fees (collected on water bills) for the city	
	Disaggregated data of sewerage/ sanitation fees (on water bills) for sewer vs. non-sewered households, if the city has sewers	
	Sanitation surcharge (on water bills) for sanitation improvement interventions	
	Sanitation tax charged on property tax/ water bills/ independently for service provision, such as for scheduled desludging	
	Total annual revenue generated from PT & CTs owned and operated by the service authority, if user fees are charged	
	Total desludging revenue to service authority from HHs and/or institutions (for services directly provided by vehicles owned and operated by the service authority)	
	Total annual tipping fees from desludging operators	
	Fees from private players contracted to operate PT & CTs / treatment plants, including license fees	
	Fines and penalties (for illegal sewer connections and drains, FS leakage/ spillage, etc.)	
	Sales of treated effluent and biosolids	
Expenditure Categories	CAPEX for each treatment plant	
	Annual O&M cost for each treatment plant	
	CAPEX for the sewer network	
	Annual O&M cost for the sewer network	
	CAPEX for PT/CTs owned by the service authority	
	Annual O&M cost for PT/CTs owned by the service authority	
	CAPEX for desludging vehicles owned by the service authority	

	Annual O&M cost for desludging vehicles owned by the service authority	
	CAPEX for transfer/ decanting stations (incl. mobile transfer stations) owned by the service authority	
	Annual O&M cost for transfer/ decanting stations (incl. mobile transfer stations) owned by the service authority	
	CAPEX for any other assets owned by the service authority	
	Annual O&M cost for any other assets owned by the service authority	
Direct Subsidies	Direct HH subsidies provided by the service authority for toilet & containment	
	Direct HH subsidies provided by the service authority for emptying	