WASH Technical Paper TP/16/2021

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# Mobilizing Domestic Revenue to Increase Safely Managed Sanitation in Indonesia


## SUMMARY

A preliminary assessment was conducted to assess the need of governments to provide sustainable financing for safely managed sanitation in order to achieve the Sustainable Development Goals (SDGs) in line with the new National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional,* the RPJMN) 2020-2024. The assessment started by identifying various funding options from a range of countries and assessing their transferability to Indonesia according to various factors, including legal and institutional factors. The options are: (a) sanitation taxation associated with a property tax; (b) sanitation surcharges on water supply tariffs; (c) sanitation surcharges on tariffs for sanitation services; (d) contribution fund for house construction; and (e) fee for the registration of septic tank. The collectability of each option as well as its applicability were analyzed to inform the local government in selecting which options that might be applicable in their respective areas. Recommendations from this study are: initiate policy dialogues on domestic resource mobilization; pilot testing in selected districts and cities to obtain agreement from institutions at the national and sub-national levels; and further explore collaboration between funding for sanitation and other public services in urban areas.


## Background

**Indonesia's National Medium Development Plan (RPJMN) 2020-2024 sets targets for safely managed sanitation**. While the current level of access to safely managed sanitation is 7% in 2019, the Government of Indonesia (GoI) has a target for 15% of the population with access to safely managed sanitation by 2024, rising to 53.7% in 2029. Sanitation services, both onsite systems (faecal sludge management) and offsite systems (sewerage system), must be improved in Indonesian cities to meet those targets.

**The local governments are responsible for the provision of sustainable sanitation service in its area and must budget for capital expenditure and operational expenditures.**

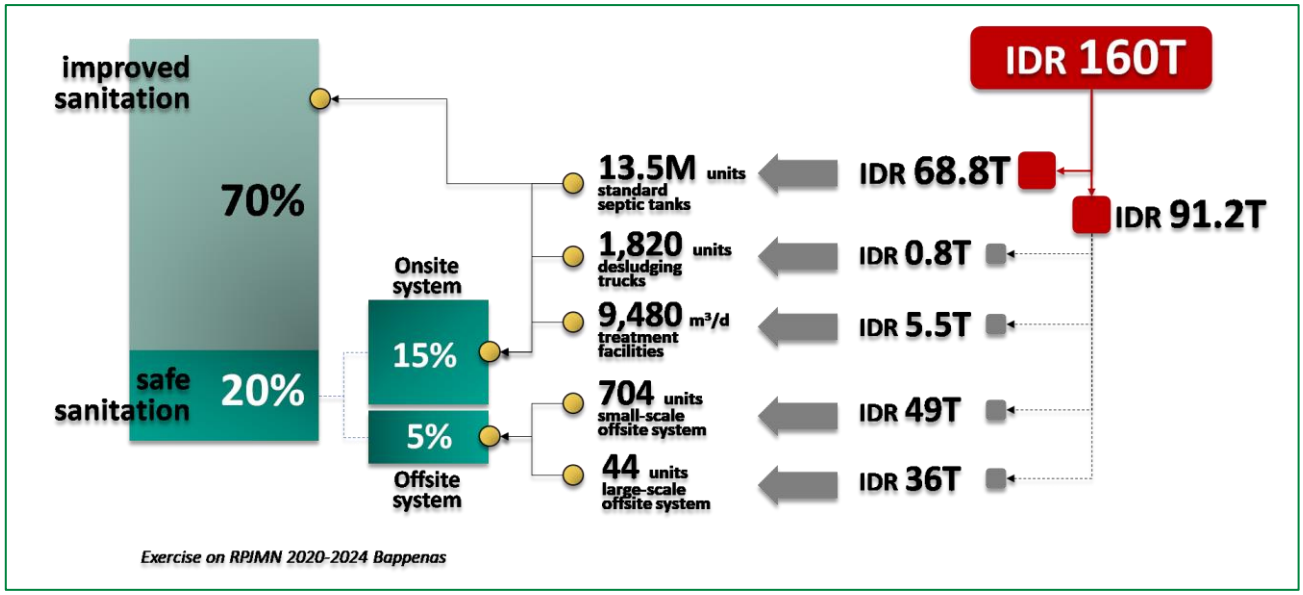
The Ministry of Development Planning (Badan Perencanaan Pembangunan Nasional abbreviated BAPPENAS) estimates a total investment of IDR 160 Trillion (USD 11 Billion) is required to meet the 2024 target (see Figure 1) and an additional IDR 300 Trillion to meet the 2029 target. Of those amounts, the development of sanitation services will require IDR 91 Trillion (USD 6.3 Billion) for 2024 target or annually IDR 18 Trillion (USD 1.2 Billion). Meanwhile, the remaining amount of IDR 68.8 Trillion (USD 4.7 Billion) is needed to provide septic tanks which will be mostly borne by household and building owners.

They must identify the budget to develop sanitation service, such as by using their own budget, especially from local taxes or revenues. Another option is funding from the central government which can be transferred both directly and indirectly through the provincial government. However, the funding capacity of the central government is limited.[1] In the current RPJMN (2015–2019) local governments are expected to fund 25% of the capital investment.

Assuming the proportion stays the same, local governments need to allocate budgets of almost IDR 23T (USD 1.6B) in the RPJMN (2020 – 2024) period or IDR 4.5T (USD 311B) annually. This is much greater than their current sanitation budget which is estimated to be around IDR 1T (USD 69B)[2] which create huge financing gap for sanitation. Therefore, the local governments have to find additional sources to fill the financing gap in order to meet the Minimum Service Standard (SPM or *Standard Pelayanan Minimal*) that require domestic wastewater service to be available for each citizen.[3]

**Local revenue must be mobilized.** Combined with improved performance on planning and spending, local governments need to increase their financial resources to provide improved sanitation services. Some local governments do not have the capacity to provide matching funds to access funding assistance from the central government, as has happened for sewerage system or septage treatment plant projects. Likewise, the sanitation grant programme to support the development of sanitation-related facilities requires local government to provide an initial investment fund before being reimbursed by the central

**Figure 1: Total investment required to meet the 2024 and 2029 target**




[1] *The maximum annual budget of MPWH (Ministry of Public Works and Housing) for sanitation in the period of 2014 – 2019 is IDR 2T (USD 138B).*

[2] *The MoF states that the 542 districts and cities in Indonesia has allocated a total of IDR 223.6T for their capital expenditures in 2018. The amount is used to finance infrastructure and other fixed assets - such as roads, canals, land, buildings, machinery and vehicles - in various sectors. Assuming 0.5% of the budget is used for sanitation, there were a total budget of around IDR 1 Trillion in 2018 for sanitation investment, or around IDR 2 Billion per city and district.*

[3] *The Government Regulation No. 2 Year 2018 on Minimum Service Standards states that every citizen must be ensured access to domestic wastewater service by the head of district or the mayor. The Ministerial Regulation of Public Works and Housing No. 29/2018 on Technical Standards of the Minimum Services Standards for Public Works and Housing requires the safe wastewater service must be available in urban areas or in rural areas with more than 25 people/ha.*

government. Meanwhile, the private sector is not yet interested in investing in sewerage system services or septage treatment services given the lack of investment guarantees from the government, as well as the low demand of communities for sanitation services. Service tariffs cannot be expected to provide high revenues, given the low tariff rates and the low coverage of the services. In the absence of substantial revenues from transfers and tariffs, and the lack of private sector interest, the local government should look for alternative sources such as sanitation taxation and levying.

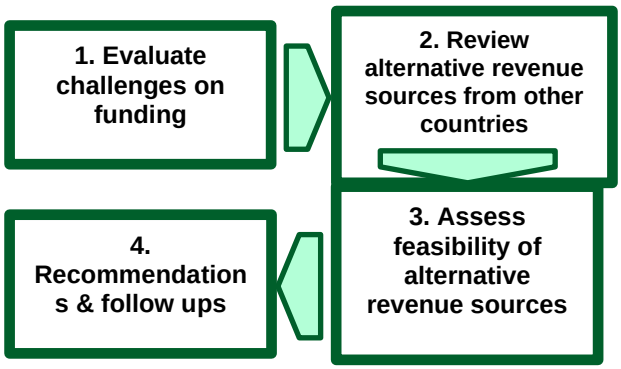
**This preliminary assessment on domestic fund mobilization for urban sanitation serves as an initial feasibility analysis of local taxation and surcharging to mobilize funds in Indonesian cities in order to improve the provision of urban sanitation services**. So far, attention has focused on how to improve tariffs and transfers as a source of revenue for local governments. However, considering the limitations on service tariffs and fund transfers from central government, exploring the feasibility of sanitation taxation and levying in Indonesia is becoming critical to ensure the availability of financing for sustainable and equitable WASH services.

Efforts to mobilize domestic revenues in Indonesia is considered strategic because it will provide upstream solutions with impact at scale and allow UNICEF Indonesia Country Office to collaborate with policy-making institutions at both national and sub-national levels. The results will provide direction and scope for a full assessment where additional fund mobilization models could be evaluated, more stakeholders consulted, and new taxation or surcharging models simulated. This may involve efforts to change policies and guidelines at national and subnational levels, particularly those on local taxation and levying.

# Methodology

**Learn globally, act locall**y. The preliminary assessment was carried out through a desk study of national and global literature. Experiences were collected from other countries on how to mobilize domestic revenue. Discussions and field visits were carried out to gather more information, especially regarding the availability of domestic finance sources and mechanisms at the city level, and relevant regulations to assess how these could be applied to Indonesia.

**Figure 1: Methodology for the Preliminary Assessment**




The preliminary assessment had four steps as shown in Figure 2. The assignment started with an evaluation of the challenges faced by local government in allocating funds for sanitation services. Visits were made to the district of Bandung Barat (West Java), city of Solo (Central Java), district of Sumbawa Barat (Nusa Tenggara Barat) and district of Sleman (DI Yogyakarta) to collect more information and exchange ideas with local government officials as well as to confirm the need for the local governments to find their own local sources of funds. The second step was to evaluate fund mobilization models for sanitation services in other countries to understand the background, goal, mechanism and effectiveness. The feasibility of adopting/adapting each model in Indonesia was assessed based on the regulatory and institutional aspects, potential revenue and practicability. Opportunities to utilize existing mechanisms to mobilize public funds in Indonesian

cities was also assessed. As the final stage, some actionable recommendations are presented, in particular to pilot the implementation of potential option at city level.

## Results

**Sanitation taxation and surcharging are applied in many countries.** Mobilization of domestic revenues for sanitation services, particularly in the form of taxation, surcharging and levying, has been carried out in Bangladesh, Bermuda, India, Kenya, Malaysia, the Republic of Ireland and Zambia. The service providers, both public and private, collect user fees from their customers to partly or fully finance operational expenditure. In addition to that, the governments impose a tax, surcharge or levy to households to finance investment, operation or administrative expenditure. Each country has their own considerations in determining whether a sanitation taxation or surcharging is appropriate. The existing regulatory and institutional framework, availability of a service, social acceptance and financial capacity of households are among the most important considerations. Other considerations include the revenue target, the intended purpose of the fund and the practicality.

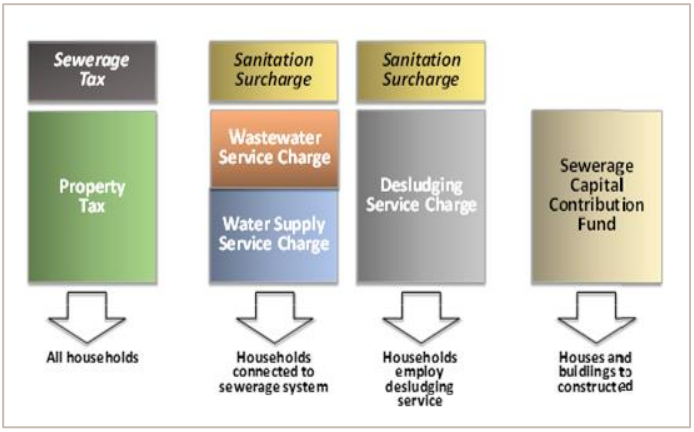
**As a sanitation tax and surcharge are yet to be introduced in Indonesia, it is important to learn from other sectors with similar characteristics**. Households pay a Street Lighting Tax (PPJ or Pajak Penerangan Jalan) to local governments. This tax is earmarked for the provision of street lighting. Cities earn large revenues from PPJ. In Solo, during 2019, PPJ contributed one fifth of the total city taxation revenues. On the other hand, surcharging has never been applied to any tariff on public services. However, the cities of Medan, Surakarta and Balikpapan have included a scheduled desludging service or sewerage service charge to the water bill.

**Sanitation levies can be applied to all or some households.** Fund mobilization models for the provision of sanitation services, as practiced in other countries, can be classified as:

- **Tax**: Paid annually by all households to finance the provision of sanitation services in all areas of the city;
- **Surcharge**: Paid monthly on top of water or wastewater service fees by customers who receive the service to finance specific purpose and target of sanitation services;
- **Contribution**: One-off payment to compensate for the discharge of additional wastewater into the existing system or for the use of a septic tank;
- **Registration fee**: Paid once to register the household's septic tank.

These are illustrated in Figure 3.

**Figure 2: The sanitation levy loading scheme for households in fund mobilization models in several countries.**




The fund mobilization models from India and Bermuda impose a sewerage tax on all households and the revenue is used to improve and expand sewerage system (see Table 1). The sanitation surcharge models from Zambia and Bangladesh only apply to the households that subscribe to water supply service or employ desludging service respectively. Cities have their own criteria to determine the households targeted for sanitation taxation and levying. The regulatory and institutional framework, availability of a service, social acceptance and financial capacity of households are among the most important considerations. Other considerations include the revenue target and the intended purpose of the

revenue, the practicality of the collection and the politic dynamics in the decision-making arena.

**Different types of sanitation levies would provide different level of collectability.** Taxation may generate higher revenues for the city than surcharging, due to higher number of payers. Whilst surcharges extend only to those who receive a services, sanitation taxation is imposed on all houses and buildings registered in the city. All must pay even if they haven't been served previously or can expect to be served in the near future.

**Regulations would need to be amended to allow the implementation of a sanitation levy.** Specifically, Act No. 28 Year 2009 on Local Taxes and Local Levies must be amended to allow sanitation taxation and levying to be implemented in Indonesian cities. Changes would also need to be made to government regulation, local acts and other regulations related to budget allocation issued by the Ministry of Home Affairs. Such changes may involve a long process and require time, while all cities need additional revenues to achieve the target for the 2020-2024 development period. Advocacy is necessary to convince the central and local governments that sanitation levying is needed to improve their financial capacity to meet the sanitation target. Justifications for the implementation of sanitation tax and surcharge, include a) local government's new obligations and targets of sanitation services b) the polluter pays principle requires all wastewater-generating households to pay compensation for the pollution they cause, c) the equality principle calls on all households to bear the cost of pollution control efforts.

**Earmarking the revenue collected helps ensure it will be allocated for sanitation investments.** One of the keys to success in sanitation revenue mobilization is the ability of cities to earmark tax revenues for the provision of sanitation services. Earmarking is important, otherwise taxes could easily to be allocated for other purposes. Revenue from surcharging, on the other hand, is easier to control because it is received by the service provider which has authority to allocate the fund.

**Table 1: Domestic revenue mobilization models**

| Category of contribution | Estimated level of revenue | Applicability |
|---|---|---|
| **Sanitation taxation associated with property tax** | High, due to a great taxpayer base and strong association with property tax | Cities with high payment rate of property tax, supported by earmarking policy |
| **Sanitation surcharge on water supply tariffs** | Medium to high, due to strong association with water supply service | Cities with high coverage of water supply services and effective billing mechanism |
| **Sanitation surcharging on tariff of sanitation service** | Modest, due to the low water supply services | Cities with high coverage of sanitation (wastewater) services and effective billing mechanism |
| **Contribution fund on house construction** | Very high, due to its proportionality to building construction cost | Cities with high intensity of housing development projects |
| **Fee of septic tank registration** | High, due to high number of septic tanks in Indonesian cities | Cities with large number of septic tanks |

***Table 1*: *Models of Mobilization of Public Fund***

| REVENUE MOBILIZATION MODELS | PURPOSE | | | IMPOSE TO | RATE BASE | FREQUENCY | RATE | CONTRIBUTION | BILLING ASSOCIATION |
|---|---|---|---|---|---|---|---|---|---|
| | Investment | Operation | Supervision | | | | | | |
| **Sewerage tax in Bermuda** | ● | | | Sewerage users | Annual rental value (ARV) of a property | Twice a year | USD 40 for $20,000 ARV | < 50% of capital cost | Separate but linked to payment of property tax |
| **Sewer tax in India** | ○ | ● | | Registered houses and buildings | Property value | Annually | 2% - 15% of property tax | 44% - 176% of operation cost | On property tax |
| **Sanitation surcharge in Zambia** | ● | | | Water supply customers | Water tariff | Monthly | 2.5% surcharge of water service tariff | ± 25% of capital cost | On top of water service bill |
| **Sanitation surcharge in Bangladesh** | ○ | ● | | Desludging service customers | Desludging fee | Every desludging service | 5% surcharge of desludging fee | -- | On desludging service bill |
| **Sewerage capital contribution fund in Malaysia** | ● | | | Building construction project | Building construction value | One-off prior to construction | 1% of building price | ± 15% of capital cost | Separate but linked to construction permit |
| **Septic Tank Registration Fee in Ireland** | | | ● | Households using septic tank | Flat | One-off | €50 per septic tank | -- | Separate |

# Conclusions

**Cities should consider sanitation levying to meet access targets for safely managed sanitation.** The RPJMN (2020-2024) requires cities to improve their sanitation services to meet safely managed sanitation targets. When a local government cannot rely on transfers from central government and tariffs from services for funding their sanitation services, mobilizing revenues from domestic sources is an option to consider. Sanitation levies, either in the forms of taxation, surcharging or others, could generate revenue for local government to allocate for investment in the operation of sustainable sanitation services. Cities in other countries, such as Bangladesh, Bermuda, India, Malaysia and the Republic of Ireland have applied different sanitation levying models. A cities' tax governance and performance of public services may determine the applicability of the models.

**Cities may consider other intermediate solutions, as follows:**

**Include sanitation in the property tax**. The property tax rate is based on the Sales Value of Tax Object (NJOP, or *Nilai Jual Obyek Pajak*) set by the local government. Local governments can apply it to houses according to the polluter pays principle. All wastewater-generating households must pay compensation for the pollution that they might cause. The availability of sanitation services and better environmental conditions are criteria for the local government to increase the NJOP. Increases in the NJOP are more appropriate for properties in areas where sanitation service is available. In practice, NJOP has a reciprocal relationship with market price. The property owner can benefit from an increase in the property tax. If the local government raises NJOP above the prevailing market price, it is likely that the market price of the property will also increase.

a. **Include sanitation in the capital contribution fund to the construction permit fee (IMB) levy.** A local government has the authority to set the calculation method of IMB levy. Many cities factor in parameters of design complexity, density of buildings in the area, fire risk and earthquake risk, which are represented in the calculation by the Integrated Index with value range of 0.1 – 0.5. Thus, the local government could also include a parameter related to the provision of wastewater infrastructure as part of the Integrated Index.

b. **Add a sanitation surcharge to the water supply tariff.** Those who receive drinking water services produce wastewater and so should bear the costs required for the provision of sanitation service. Those who use more water have to pay a higher surcharge. In accordance with the principle of equality, those who have received a service should help those who have not yet received a service.

c. **Increase sanitation service tariff to accommodate sanitation surcharge.** The Government Regulation No. 46 Year 2017 on Environmental Economic Instruments requires the tariff calculation for general services, including wastewater services, to factor in the capital cost required for the development of infrastructure. This will increase the current tariff for sanitation services, which currently only takes into account the operational and maintenance costs. By increasing the tariff, as ordered by government regulation, cities will have additional funds with which to develop sanitation services.

d. **Septic tank registration fee.** As most households in urban areas are connected to septic tanks, applying a fee for septic tank registration might provide another source of revenue for the city. Registration could also improve the monitoring of households' septic tanks and so reduce environmental and water source pollution from faecal waste.

**Sanitation taxation and surcharging offers many benefits beyond a continuous revenue stream for the local government or service provider to finance the provision of sanitation services.** Sanitation taxation and surcharging, with billing managed by the local government, allows the service provider to concentrate on service operations.

Sanitation taxation or surcharging is likely to increase household demand for sanitation services, given the payments they make. In return, local government must improve the services they provide to households. A continuous and sufficient stream of revenue from sanitation taxation and surcharging should increase the profile and capacity of the local government to access financial support from the central government, or even from the commercial capital market. Funds currently idle in central government's account could be channeled to those cities with the strongest financial capacity.

**Sanitation tax holds the equality principle as polluters pay for wastewater pollution.** The polluter pays principle is acknowledged in Act No. 32 Year 2009 on Environmental Protection and Management, as well as in local acts (Perda) on environmental management. Households that refuse to pay can be considered as violating the law. A similar approach has been applied in Indonesian cities for solid waste services. A levy for the solid waste service is imposed on all households to fund the cost of transporting solid waste to the final disposal or treatment site. A household may not necessarily directly benefit from the service despite the payment, i.e. those household that manage their waste individually or collectively within the neighborhood.

**The application of sanitation taxation and surcharges will also have challenges** such as: (1) securing decision-makers agreement and approval from the House of Representatives; (2) by-in from households for a new tax; (3) capacity of service providers to ensure sustainable services and manage a more complex city-wide operation. Stronger demands and attention from stakeholders will require local government to improve their performance on planning and spending.

[4] *Discussions have been initiated to appoint the city of Bekasi as one of the pilot cities..*

# Recommendations

- **Initiate policy dialogues on domestic resource mobilization at the national and sub-national levels**. At city level, advocacy to the Mayor and parliaments (as key decision makers) is critical to obtain political support for implementation. Although sanitation levies will be implemented at the city level, discussions with central governments, especially Ministry of Finance and Ministry of Home Affairs, on topics such as regulation, sanitation levies and taxation are crucial for the provision of sustainable sanitation services.

- **Pilot test sanitation taxation and levying[4] in selected districts and cities to obtain agreement from national and sub-national institutions**. Activities might include:
  a. Designing appropriate sanitation taxes and levies to the various conditions and capacities of cities in Indonesia;
  b. Advocacy to the local House of Representatives on tax ringfencing/ earmarking as a way to mobilize and stabilize the level of funds available;
  c. Reviewing the feasibility of options such as budget transfers from central government.

- **Explore collaboration with other urban public services.** In order to overcome the low levels of awareness and priority given to sanitation by decision makers and communities, sanitation levies could be combined with other public services that have great coverage in the cities, such as electricity, solid waste management, or piped water.

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# Acknowledgements


The paper is written based on the Rudy Yuwono (2020) Final report of the Preliminary Assessment on Domestic Revenue Mobilization. We acknowledge Ann Thomas, Chief of WASH UNICEF Indonesia Country Office, and Guy Hutton, Senior Adviser, UNICEF New York, for valuable inputs and Sue Cavill for review and editing. The author would like to thank HanChul Kim and Brooke Yamakoshi (UNICEF, EAPRO) for helpful feedback.


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**Document No: WASH/TP/16/2021**