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SCHEDULED DESLUDGING SERVICE (LLTT) IN INDONESIA

The USAID Indonesia Urban Water, Sanitation and Hygiene *Penyehatan Lingkungan untuk Semua (IUWASH PLUS)* project

is a five-and-a-half-year initiative designed to assist the Government of Indonesia (GOI) in increasing access to water supply and sanitation services as well as improving key hygiene behaviors among urban poor and vulnerable populations. USAID IUWASH PLUS works with governmental agencies, the private sector, NGOs, communities and others to achieve the following "high level" results:

1. An increase of 1,100,000 people in urban areas with access to improved water supply service quality, of which at least 500,000 are from the poorest 40% of the population (also referred to as the "Bottom 40%" or "B40"), vulnerable groups or Indonesia's eastern provinces; and
2. An increase of 500,000 people in urban areas with access to safely managed sanitation.

USAID IUWASH PLUS works with 32 Local Governments across Indonesia located in 8 provinces that includes North Sumatra, West Java, Central Java, East Java, South Sulawesi, Maluku, North Maluku and Papua, and 2 special areas in DKI Jakarta and Tangerang district.

A 14-Step Process to Establish Desludging Services

A 14-step Process to Establish

The majority of Indonesia's urban poor, like most urban poor in middle-to-low income developing countries, rely on onsite sanitation. Indonesia has made progress in the sector, with 77 percent of its population having access to at least basic sanitation, such as a pit latrine or

The "SANBURGER" as domestic Waste Water Framework



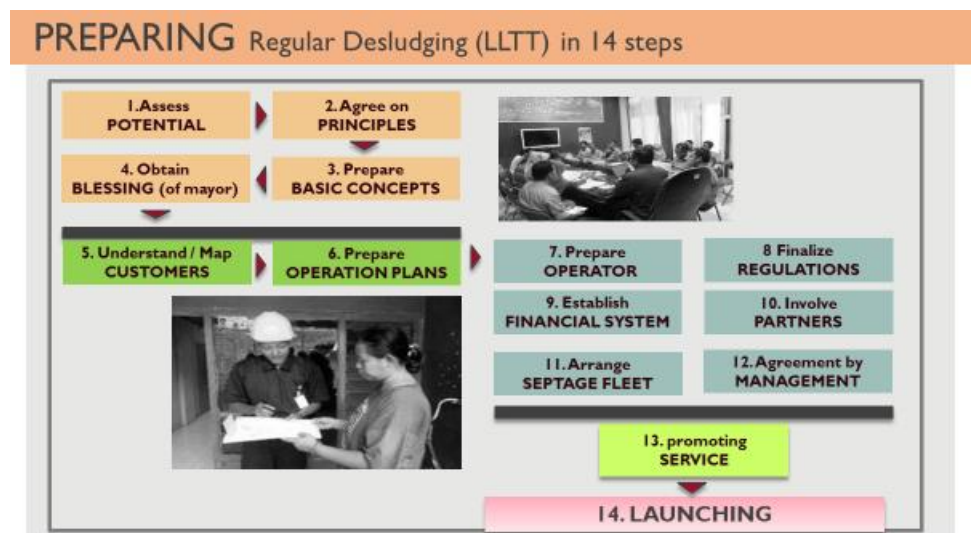
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septic tank. Exhibit in the right with the “SANBURGER” concept showing the different sanitation components.

However, the vast majority of Indonesia’s urban human waste is still not being safely captured and managed before it is released back into the environment. Until recently, most urban Indonesians were dependent on informal, unregulated on-call fecal sludge removal—but at a price. Desludging fees were highly variable and unregulated. Septic tank maintenance occurred irregularly, if at all. Desludgers engaged in unsafe collection and transportation practices. And perhaps most troubling—illegal dumping of human waste into nearby rivers or canals was commonplace due to a combination of limited treatment infrastructure capacity and the appeal of cost and/or time savings for desludgers.

Emerging evidence highlights the clear and important linkages among exposure to untreated fecal waste, childhood stunting, and human capital. Poor sanitation and water quality, along with associated diarrheal diseases, rank among the leading risk factors for stunting worldwide. With approximately 9 million of its children under the age of 5 suffering from stunting, Indonesia is no stranger to these adverse social and human capital impacts.

In response, the USAID-funded Indonesia Urban Water, Sanitation and Hygiene Penyehatan Lingkungan untuk Semua (IUWASH PLUS) project launched the **Regular Desludging Services or Layanan Lumpur Tinja Terjadwal (LLTT) Guidelines**. Endorsed by the Government of Indonesia (GOI), the LLTT Guidelines now serve as the principal authority and primary driver in formalizing Indonesia’s desludging services across the country. The guidelines detail a 14-step process for creating LLTT, including the establishment of a cost recovery tariff model (see exhibit above).



Now, with additional support from the GOI and several donor agencies, the guidelines are being rolled out nationwide. For the first time, 40 cities across Indonesia will establish regulated, scheduled desludging services using the LLTT Guidelines—and benefit hundreds of thousands of households.

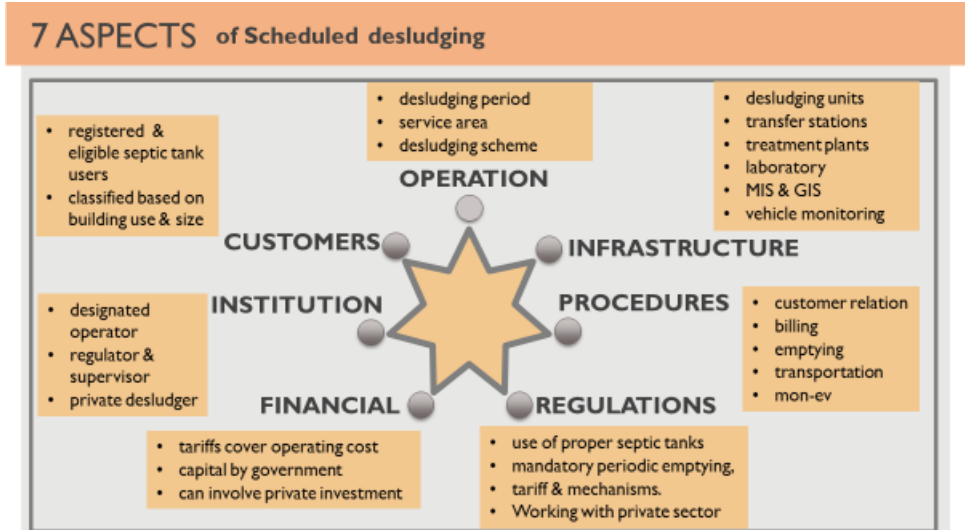
What Does It Means?

Introducing a scheduled desludging service first means to obtain the required legislation, which allow for the appointment of a designated waste water operator and a tariff structure, which covers the direct cost of collection and treatment. After that the operators starts with the socialization of the service, followed by registering of customers and either manage a fleet of trucks themselves or arrange contract with privately owned trucks. Designated local government wastewater operators are planning collections, overseeing payments, and monitor truck movement, thus improving transport efficiency and operational cost recovery, while reducing the likelihood of illegal dumping. Finally, the Operator manages

one (or more) Septage Treatment Plant, where the sludge is delivered, treated and disposed of in a safe manner.

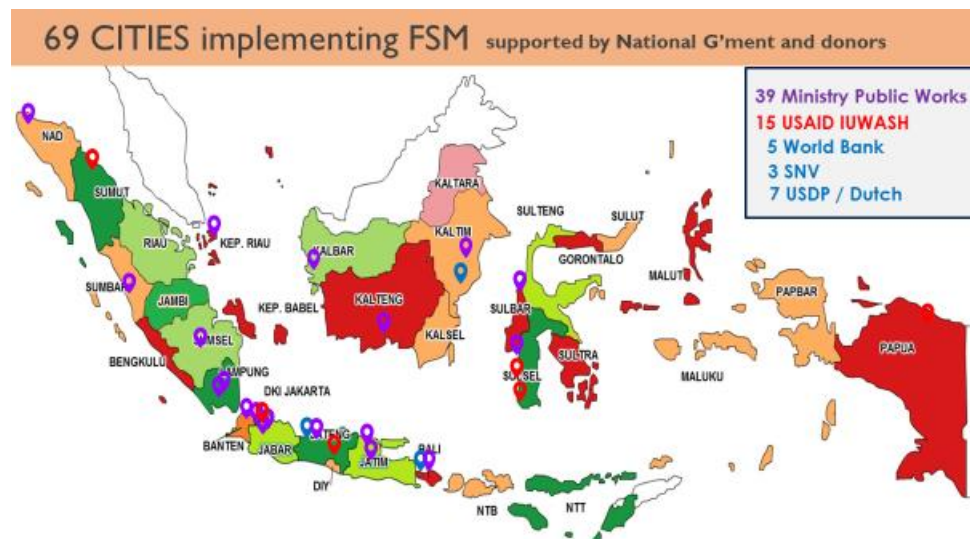
Through a “learning by doing” process, the IUWASH projects identified seven key planning aspects of scheduled desludging (see Exhibit below). These seven key planning aspects—operations, infrastructure,

procedures, regulations, financing, institutions, and customers—set the framework for each city’s tailored assistance package to establish and roll out scheduled desludging.



Where It Is Done?

Knowing that early and strong commitment from city leaders is critical to LLTT’s success, three municipalities with active wastewater operators already in place were identified (Surakarta City, Makassar City, and DKI Jakarta) and in 2013, IUWASH started the introduction of registered desludging services with the local stakeholders and Gol to implement a range of coordinated activities aligned with the seven key planning aspects. These activities included the preparation of legislation, promotion campaigns, developing cost recovery tariff models, upgrading customer databases to mobile phone-based data collection systems, improving location accuracy, and train waste water operators to implement the services to their (potential) customers. Additional cities joined in subsequent years, and IUWASH PLUS currently supports the LLTT initiative in over 15 cities including cities Bekasi, Medan, Bogor, Jayapura, Ternate, Malang and Magelang as well as Regencies of Gresik, Sidoarjo and Lumajang. This example is now followed by other donor agencies as well as Indonesian Government, so that by end of 2018, LLTT has been introduced to already 69 cities (see exhibit in the right)



What Is The Best Example Until Now?

While the initial LLTT introduction is relatively easy, as cities are immediately interested to improve their current poor performance, agreements of required legislation to establish the operator and setting

a cost-recovery tariff require time, especially when one has to deal with changes in local parliament and mayors. So, while the designated operator, for instance in Surakarta city was already agreed in 2014 (the local Water Utility), it took until early 2018 to obtain the formal legislation to make the service mandatory for a 3-yearly emptying cycle of all septic tanks for a cost-recovery tariff (average US\$ 1 per month). After this milestone was reached, the LLTT program developed quickly with awarding contracts to 4 private truck operators and socialization of this new (mandatory) service to all 45,000 Water Supply customers in Surakarta city, including the LLTT tariff, which would be collected monthly and directly with the water bill. The tariff has a built-in cross-subsidy, similar to all water supply tariffs in Indonesia, where the low-income households pay much less compared to the rich households, industry and hotels. In this manner the LLTT services are affordable for all households.

The LLTT program formally started in July 2018 and until March 2019, septic tanks have been emptied from ca. 10,000 households in Surakarta. Because the capacity of the existing Sludge Treatment Plant (IPLT Jebres) was not sufficient, IUWASH PLUS supported the local government to successfully lobby additional funding from Gol for repair and expansion which is planned to take place in 2010. In the meantime, one of the Sewerage Plants (IPAL Semanggi), which still has idle capacity received a small mechanical sludge separator (belt filter press), in order to take up part of the increased load. While this progress is truly amazing, considering the actual LLTT services only started 9 months ago and is already reaching a cost-recovery status, it also became clear that at least 20% of households in Surakarta either does not have a septic tank or have a tank, but are unable to access it. In the coming 3 years. IUWASH PLUS will continue to support the Local Government and Water Utility to first map out where these houses are and then conduct an aggressive sanitation marketing campaigns to convince these households to install a proper septic tank, if necessary, with limited subsidy or micro-credit assistance.

Conclusion

Establishing, regulating, and monitoring scheduled desludging services at national and local levels has been a game changer for Indonesia's urban centers. But as LLTT is scaled across the country, and demand grows with Indonesia's rapid urbanization, it will be important for the country's local and national governments to continue investing in efficient, regular desludging services combined with appropriate treatment infrastructure. With limitation in land and financing, emerging evidence surrounding the viability of incremental sludge treatment plants will offer additional promise for Indonesia. Reductions in treatment cost, gained from new technology, could translate into meaningful incentives to institutionalize proper disposal of fecal sludge in Indonesia, helping to accelerate the country's progress towards safe water, sanitation, and hygiene services for all.

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For further information:

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