

Preface



Over half of Indonesia's 262 million people live in densely populated urban areas that often lack sewerage. In these urban areas, sanitation services are strained; over 80% of this population relies on individual or communal septic tanks that are rarely watertight. Indonesia, however, is highly committed to reaching the UN Sustainable Development Goal 2030 for safely managed sanitation. To improve the health and prosperity of this and future generations of families, Indonesia must increase its self-reliance in providing and managing regular, efficient, and cost-effective collection of sludge from the septic tanks.

From 2011 through 2016, the United States Government, through the United States Agency for International Development (USAID) Indonesia Urban Water, Sanitation and Hygiene (IUWASH) project, assisted the Government of Indonesia to achieve its sanitation development goal through an innovative service for scheduled desludging of fecal waste. This innovative service, called *Layanan Lumpur Tinja Terjadwal* (LLTT) in Indonesian, advances cities' self-reliance in safely handling and disposing of sludge, which is intimately linked with community health, water cleanliness, and fewer instances of waterborne disease such as diarrhea.

Through the LLTT system, households can easily subscribe to a regular septic tank emptying system handled by either public or private sector operators, who transport the sludge to an operating sludge treatment facility. To reduce the burden on families, LLTT facilitates a service payment plan that includes charges in water tariffs or structured monthly payments. This payment plan serves as an incentive for families to subscribe since it makes it easier for them to pay on time and in full.

After three cities launched LLTT, USAID IUWASH developed a book called *Saatnya Sekarang! Jalankan Layanan Lumpur Tinja Terjadwal!* (The Time is Now! Starting Scheduled Desludging!) to promote scheduled desludging and expand LLTT in more municipalities throughout Indonesia. USAID continues to assist 34 municipalities with increasing access to safely managed sanitation services for

families while improving key hygiene behaviors among poor and vulnerable urban populations. In early 2020, IUWASH PLUS updated and refined the technical, financial, and institutional aspects of the LLTT approach, and to date, 13 of the 34 assisted cities have launched LLTT services. With the support of USAID and the Ministry of Public Works, Ministry of National Planning, and other donor agencies, scheduled desludging of fecal waste is now happening in many other cities throughout the country, meaning that more families can enjoy better health and hygiene.

USAID thanks the Bill and Melinda Gates Foundation for helping to make the English-language version of this book a reality.

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Introduction

Almost all countries have committed to achieve sustainable development goals (SDG) by 2030, one of the goals is to achieve the provision of safety managed sanitation for all citizens. This means that each resident must have access to a toilet that is connected to a sewer system or to a septic tank. Many cities do not have sufficient funds to build and operate sewerage systems, consequently they encourage every household to use proper septic tank.

Septic tanks accumulate solids, either carried by the incoming wastewater or resulting from the anaerobic decomposition of feces and other organic materials. The settled solids or sludge must be pumped out regularly, otherwise the septic tank efficiency will be disrupted and septage might pollute the ground water. The accumulated solids can also reduce or even stop the flow of wastewater and disrupt the function of the toilet. Considering the potential negative impacts, periodic desludging of septic tanks has been made mandatory in cities in several countries, including in Indonesian cities.

A city or municipality must provide a service scheme that can provide periodic desludging to households in accordance with a specified schedule. Several programs need to be in place so the scheduled desludging scheme can run effectively, including regulations, institutions, infrastructure and customer management. In addition to service providers, municipal agencies need to be involved to ensure households use the right septic tank and perform regular desludging.

This book presents a methodology for preparing scheduled desludging schemes in cities. Opening with a description of its definition and principles, this book outlines step by step the preparation of a scheduled desludging scheme. Each city has its own characteristics; therefore, it is possible that a city may have a different sequence of preparation steps than other cities.

This book is an international adaptation from the book of *Saatnya Sekarang! Jalankan Layanan Lumpur Tinja Terjadwal (It's Time Now! Starting Scheduled Desludging Service)* which was created and published in 2015 by the Indonesian Urban Water, Sanitation and Hygiene (IUWASH) program funded by the United States Agency for International Development (USAID). This book targets those who will be involved by the municipalities to prepare scheduled desludging schemes in their respective regions. Some of Indonesia's specific narratives and terms used in the original book have been adapted for the benefit of readers from other countries (see the following box).

Happy reading.

The original book

*The book of **Saatnya Sekarang! Jalankan Layanan Lumpur Tinja Terjadwal (It's Time Now! Run the Scheduled Desludging Service)** was prepared in 2015 as part of IUWASH (Indonesian Urban Water, Sanitation and Hygiene) program activities to promote the scheduled desludging scheme in Indonesia. This book outlines the steps that need to be taken in preparing scheduled desludging in a city.*

Much of the materials in this book are taken from IUWASH program's direct experience in the introduction and preparation of scheduled desludging in several Indonesian cities, for example, Makassar, Surakarta (Solo), as well as DKI Jakarta. Some materials are taken from the Guidelines of Septage Management published by the Directorate General of Human Settlements (the Ministry of Public Works and Public Housing), as well as from the reports published by the Water and Sanitation Program (World Bank).

This book is complemented by 4 supplementary books on K3, finance, marketing and operations. The authors are IUWASH's internal expert staff in these fields and several external consultants. Periodic consultation is carried out with representatives of the Indonesian government, especially those from BAPPENAS (National Development Planning Agency) and the Ministry of Public Works and Housing. Soft copies of these books can be downloaded from the official website of the IUWASH PLUS program and other sites. The USAID-funded IUWASH PLUS program will continue to work in Indonesia until end-2021.

Adaptation for this book was prepared by Rudy Yuwono, Stantec Consulting Services, Inc., and Asian Institute of Technology (AIT).

