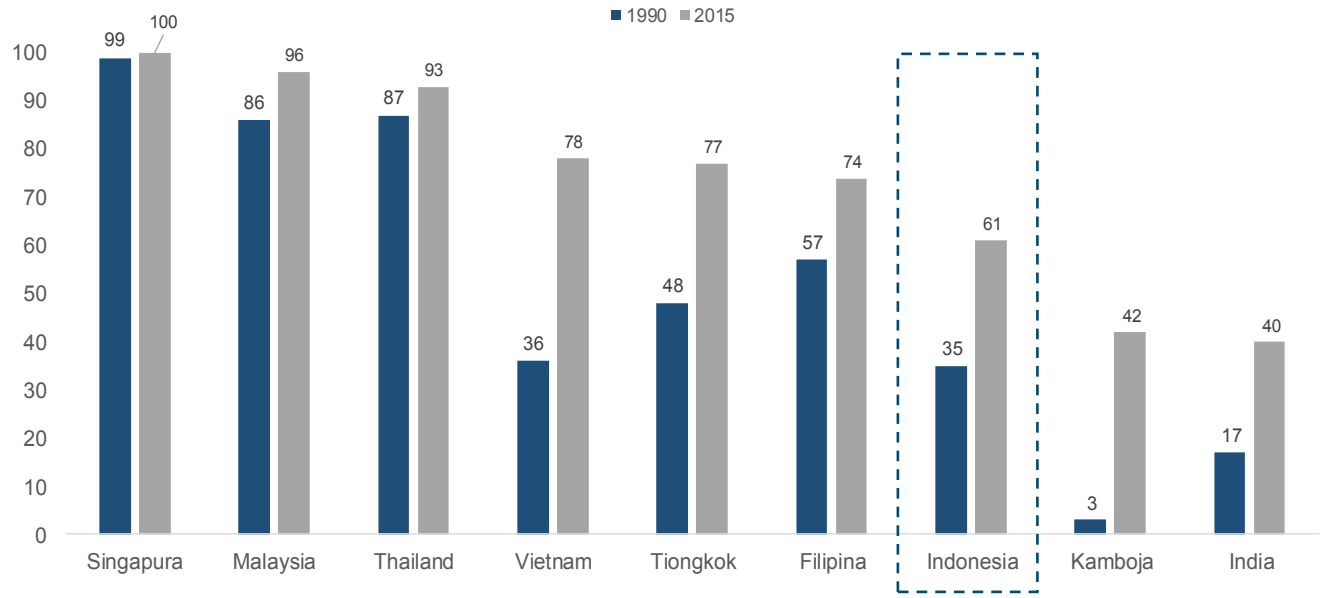
"It takes hard work to achieve a target of 100% sanitation access by 2019, especially to find alternative fund sources other than limited state budget funds"

In line with the economic growth and massive infrastructure development, the sanitation sector needs to receive serious attention. Because, as reported by WHO and UNICEF in Joint Monitoring Program (JMP) in 2017, Indonesia's sanitary access coverage rating is the lowest in ASEAN and Asia in general. By 2015, only about 61% of the population had access to sanitation. The rating is lower than Singapore (100%), Malaysia (96%), Thailand (93%), Vietnam (78%), China (77%) and Philippines (74%), but still better than Cambodia (42 %) and India (40%).

Nevertheless, the achievement coverage in 2015 has increased by 26% from the achievement in 1990 where only 35% of the population had access to sanitation. The increase was the realization of various efforts made by the Government. However, the current achievement is not enough, the Government targets sanitation access by 2019 to reach 100%. With the vast territory of Indonesia stretching from Sabang to Merauke, work hard is certainly necessary to achieve such target, especially with various funding sources other than limited state budget.

Picture 1. Only about 61% of the population can access sanitation in Indonesia; this figure is still one of the lowest in ASEAN and Asia, only better than Cambodia and India. To catch up with other countries, the Government has set a target of 100% sanitation access by 2019.



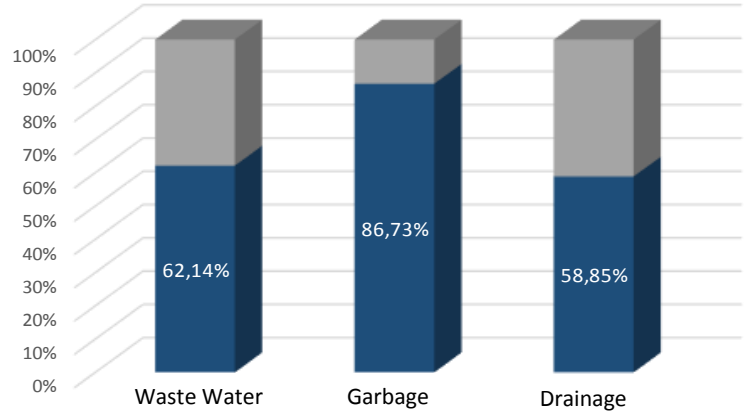
Source: World Bank, WHO, UNICEF (2017)

Review of Sanitation Condition in Indonesia

At present, Indonesia's access to sanitation is still far from the 100% target in 2019. For example, access to waste water in 2015 remained at 62.14%, while for garbage access was 86.73% and access to new drainage reached 58.85%. Although there is still a large gap against the target, there is still an increase in access every year.

According to WHO study (2015) released on the UNICEF website (2017), more than 50 million Indonesians have not used toilet as a means of sanitation. The number is recorded to occupy the second highest ranking in the world after India. At least 20% of Indonesian people still defecate (BAB) in open places. This then causes drinking water contamination that causes diarrhea. At least 88% of infant deaths are due to the diarrhea resulted from water and sanitation conditions.

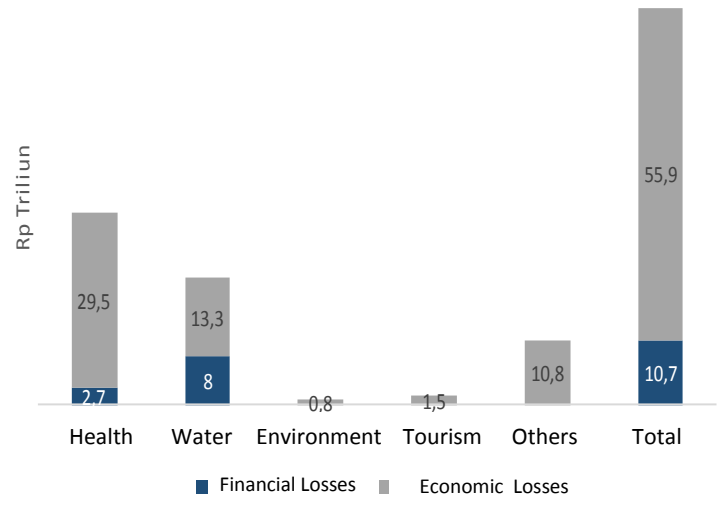
Picture 2. Based on the achievements in 2015 in several sanitation scopes such as waste water, garbage and drainage, there is still a gap with the 100% target in 2019.



Source: BPS, Riskesdas, 2015 (Processed)

A survey conducted by the Ministry of Health and UNICEF in Yogyakarta Province in 2015 found quite alarming results. Two out of three drinking water samples contained e-coli bacteria from exposure to poor sanitation. Contaminated water causes adverse health effects for children. At least about 9 million Indonesian children suffer stunting. Stunting opportunity is 1.4 times greater due to poor sanitation. Therefore, according to Patunru (2015), improvement and upgrading to sanitation access are much more important than water access improvement.

Gambar 3. Indonesia loses at least Rp 66.6 trillion annually due to adverse sanitation impacts, which result in losses in health, drinking water, environment, and tourism as well as creation of other impacts.



Source: World Bank, 2006

Several other studies, such as conducted by World Bank (2006), revealed that at least Indonesia suffered a loss of Rp 66.6 trillion per year or about 2.3% of GDP due to poor sanitation. The greatest impacts of poor sanitation consist of health hazards, impacts on the availability of safe drinking water, Impacts on the environment, impacts on tourism in the area around contaminated areas and other impacts. Therefore, it is not surprising that sanitation improvement should be a national priority program to mitigate the greater negative impacts.

Sanitation Sector Development Strategy in Indonesia

The government sees sanitation as one of the most important sectors to improve, as stated in 2020-2024 National Long-Term Development Plan (RPJPN) which explained: "Development and provision of drinking water and sanitation are aimed at fulfilling the people's basic needs and the related-sectors needs, such as industry, trade, transportation, tourism and services as efforts to boost economic growth". In addition, it is also contained in 2015-2019 National Medium-Term Development Plan (RPJMN) which reads: "The improvement of people's access to proper sanitation (domestic wastewater, waste and environmental drainage) to 100% at the level of basic needs through regional, district/city, territorial and environmental management, both in urban and rural areas ".

In order to meet the target of 2015-2019 RPJMN, the Government has prepared various strategies, among them are by applying success indicators in the sanitation subsector, including 85% of decent access and 15% of basic access fulfillment. The basic access fulfillment in rural areas is targeted to reach 100%. With the vast territory of Indonesia, of course it becomes a challenge and also requires good cooperation with various parties, among others, with the community itself. Therefore, the Government has issued PHBS (Healthy and Clean Lifestyle Behavior) slogan to arouse public awareness about the importance of having healthy behaviors and attitudes, among others, by reducing BAB behavior in open places. On the other hand, the challenge also comes from the funding side, which according to estimates in 2015-2019 RPJMN, requires a budget of around Rp 273 trillion for sanitation-sector development.

Picture 4. The strategy of fulfilling the target of 100% sanitation access in 2019 will be pursued by several steps such as through the target setting of 100% of waste water service, 100% of waste service, and 100% of environmental drainage service.

100% Sanitation Access Fulfillment

100% Wastewater Service	100% Garbage Service	100% Environmental Drainage Service

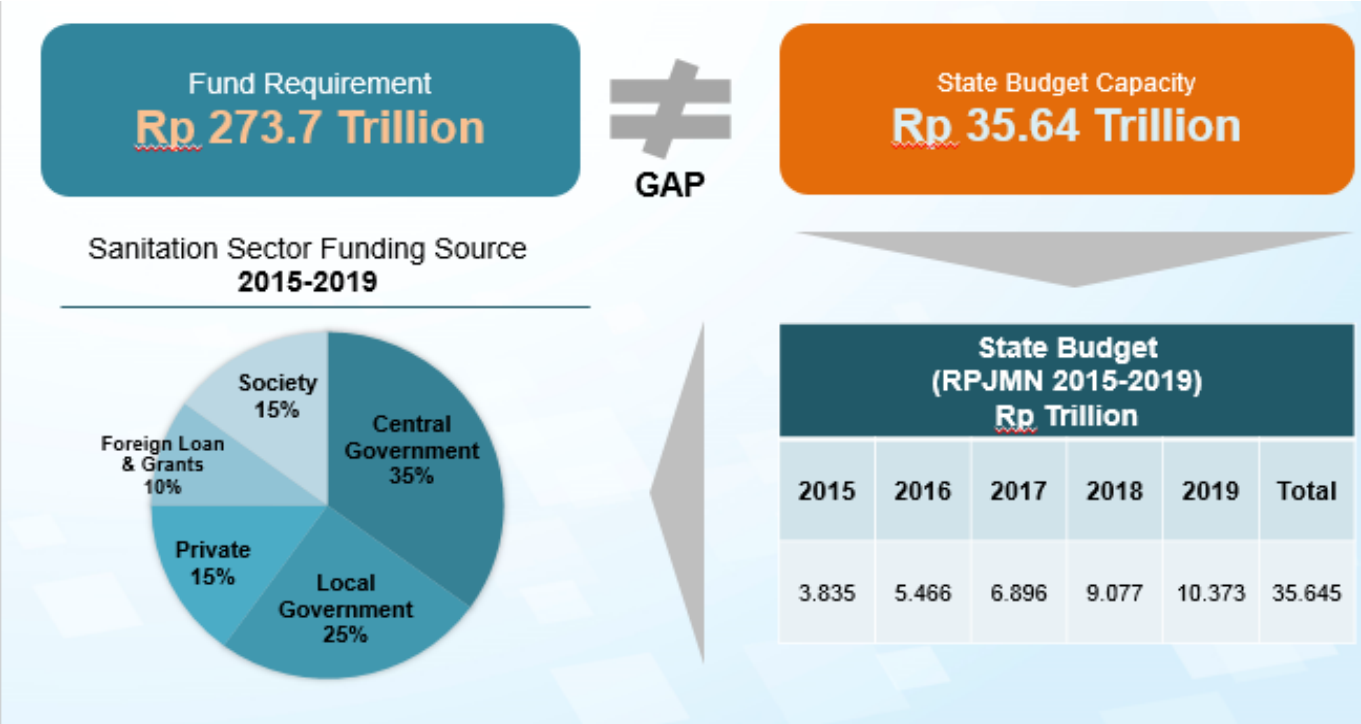
Wastewater Management		Waste Management		Drainage Management
85% Proper Access Fulfillment				
On Site System	85% (Urban & Rural)	Waste Reduction	20% (Urban)	No inundation of more than 30 cm for 2 hours and no more than 2 times a year
Off Site System	15% (Urban)	Waste Management	80% (Urban and Rural)	
15% Basic Access Fulfillment				
Clean and Healthy Behavior	100% (Rural)	Stockpiling and Composting	100% (Rural)	

Source: Ministry of Public Work and Public Housing, 2017

Sanitation Sector Financing Needs in 2015-2019

Funding is one of the key factors in accomplishing the 100% target of sanitation access by 2019. Bappenas estimates that the required funding is Rp 273.7 trillion during 2015-2019. Out of this amount, the portions of central government is 35%, the local government is 25%, the society is 15%, private sector is 15%, and the Foreign Loans and Grants (PHLN) is 10%. Nevertheless, from the target portion of 35%, the Government seems only able to meet about 19% or about Rp35.64 trillion.

Picture 5. Funding needs for sanitation-sector development for 2015-2019 period was estimated to reach Rp 273.7 trillion. Out of this amount, the State Budget was only able to provide fund of Rp35.64 trillion. Thus, other sources are needed to be able to achieve the funding need target.



Source: Ministry of Public Work and Public Housing, 2017

Government spending in the sanitation sector is relatively minimal. During 1970-1999 period, the total investment of central and local government for sanitation was only Rp 200 rupiah per capita per year. This figure has indeed increased during 2000-2004 to 2,000 rupiah and for the last 5 years, sanitation investment per capita has been increased to 5,000 rupiah per year. Unfortunately, the amount was still far from the ideal requirement of around 47,000 rupiah per capita per year (Bappenas study, 2008).

In addition to the Central Government role, the Municipal Government role also becomes crucial following the regional autonomy. Limited funding and un-prioritized sanitation due to unpopularity have resulted in limited fund allocation in APBD for sanitation development and services in most District/City governments. However, from 2006 to 2010, there has been a significant increase in sanitation budget allocation. If in 2006, the average sanitation allocation in the district/city APBD had still been below 1 percent of total APBD spending, then in 2010 the average allocation of sanitation spending reached an average of 1.5 percent of total APBD expenditure. The government through the Ministry of Home Affairs has committed to encourage the allocation of APBD spending for sanitation by 2%. However, only about 119 districts out of 365 districts or 32.5% that have implemented them (MoHA, 2017)

Investment Opportunities in Sanitation

With the large gap in sanitation-sector funding needs, the Government opens space for private investment to be able to invest in the sector. This is regulated in Presidential Regulation Number 38 Year 2015 on Government Cooperation with Business Entities in Infrastructure Provision and Regulation of State Minister of the National Development Planning Agency Number 4 Year 2015 on Procedures for Implementation of Government Cooperation with Business Entities in Infrastructure Provision. For the sanitation sector in particular, there are 3 subsectors, among others are Centralized SPAL (Sewerage Channel) infrastructure, local SPAL infrastructure, and waste infrastructure.

Picture 6. The Regulation of the State Minister of the National Development Planning Agency Number 4 Year 2015 on Procedures for Implementation of Government Cooperation with Business Entities in Infrastructure Provision, has divided investment opportunities in sanitation sector into 3 subsectors, namely central SPAL infrastructure, local SPAL infrastructure and waste infrastructure.

Centralized Waste Management Infrastructure	Local Waste Management Infrastructure	Waste Infrastructure
		
• Service Unit • Collection Unit • Processing Unit • Final Disposal Unit • Drainage and Sanitation	• Local Processing Unit • Transportation Unit • Stool Mud Processing Unit • Final Disposal Unit • Drainage and Sanitation	• Transportation • Trash Processing and/or • Final Processing

Source: Ministry of Public Work and Public Housing, 2017

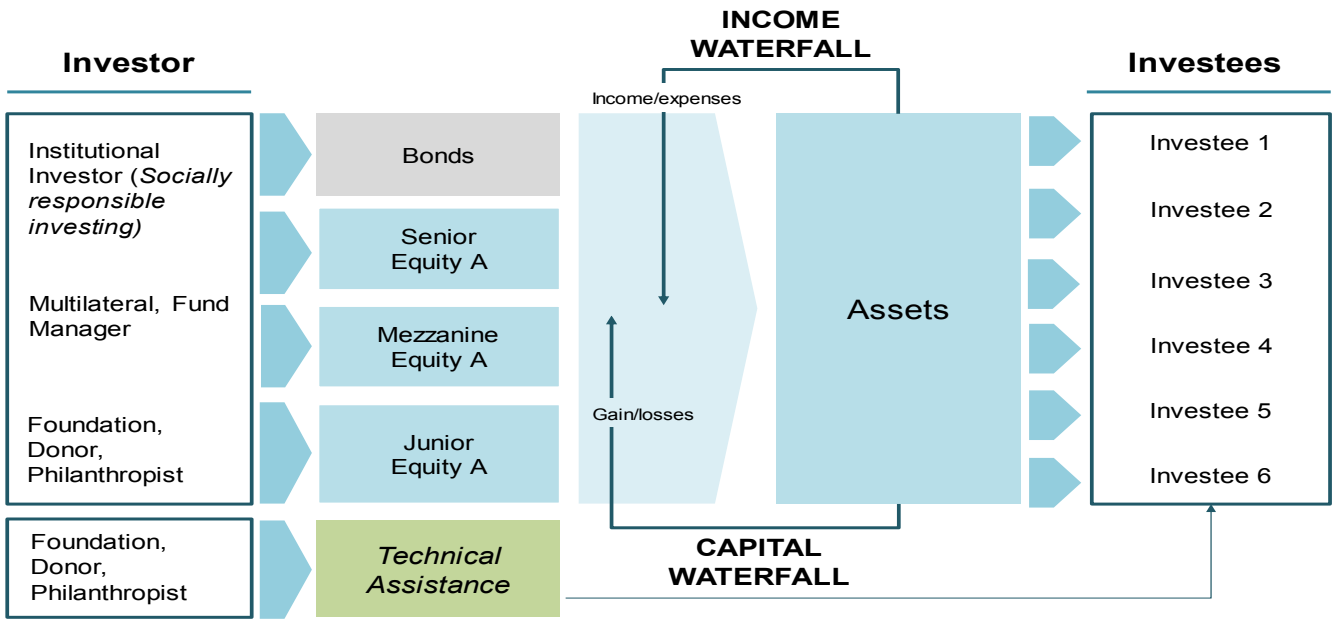
However, private investment in sanitation sector is almost non-existent. The causes, among others are related to the return rate that is not attractive to private investors. Usually, private housing developers prefer to bundle sanitation with property construction, so it is more profitable. Especially at this time, the municipal government role is also important in tariff determination for Sewerage Channel (SPAL). As an illustration, for DKI Jakarta (Special Capital City District of Jakarta), in accordance with Jakarta Governor's Decree Number 991 Year 2012 on Stipulation of Wastewater Disposal Service Tariff and Wastewater Pipe Connection Cost by PAL Jaya Local Utility vary based on user group starting from Rp131/m² building area for type A Household (450 Watt electricity) up to Rp788/m² for large industries. In other cities, the tariffs are much lower, such as in Medan, wastewater rates ranging from Rp98/m² for type A building up to Rp325/m² for large industries, as stated in Tirtanadi PDAM (Local Water Supply Utility) Board of Directors Decree Number 06/KPTS/2017. Given the current conditions and the spirit to pursue sanitation access to 100% by 2019, dependency on private investment is likely to be too difficult to do. Thus, other breakthroughs are needed, among others, by combining private investment with relief funds from donors so that service tariffs can be affordable by the community while maintaining the organizer (investor)'s business continuity.

Blended Finance Scheme for Sanitation Sector Financing

Blended finance is a financing sourced from philanthropic funds collected by the community to mobilize private funds for long-term investments. This blended finance concept was introduced as one of the solutions to cover development financing gap, especially in developing countries, after the international conference for development financing which was held in July 2015. Even the World Economic Forum (2016) has conducted a survey where the potential sources of blended finance funding in the world reached USD 25.4 Billion (~ Rp337.82 Trillion) from about 74 institutions.

In the blended finance scheme, donor agency roles will be optimized, both in the form of capital participation and technical assistance portion. With such enormous potential and harmony to sanitation development characteristics, infrastructure development options through blended finance scheme need to be considered. Moreover, the sanitation sector is one of the donor concerns for development in developing countries such as Indonesia. Such scheme has been developed and applied by some countries, particularly related to drinking water and sanitation sectors, such as in India. (See case study).

Picture 7. The difference in blended finance scheme with conventional scheme lie in the investor arrangement, whereas the foundations, donors and philanthropists can participate either as senior, mezzanine or junior-type shareholders. With this combination, the scheme can be encouraged to fund projects that do not provide high returns but have major impacts on communities such as sanitation.



Source: Innpact, 2017

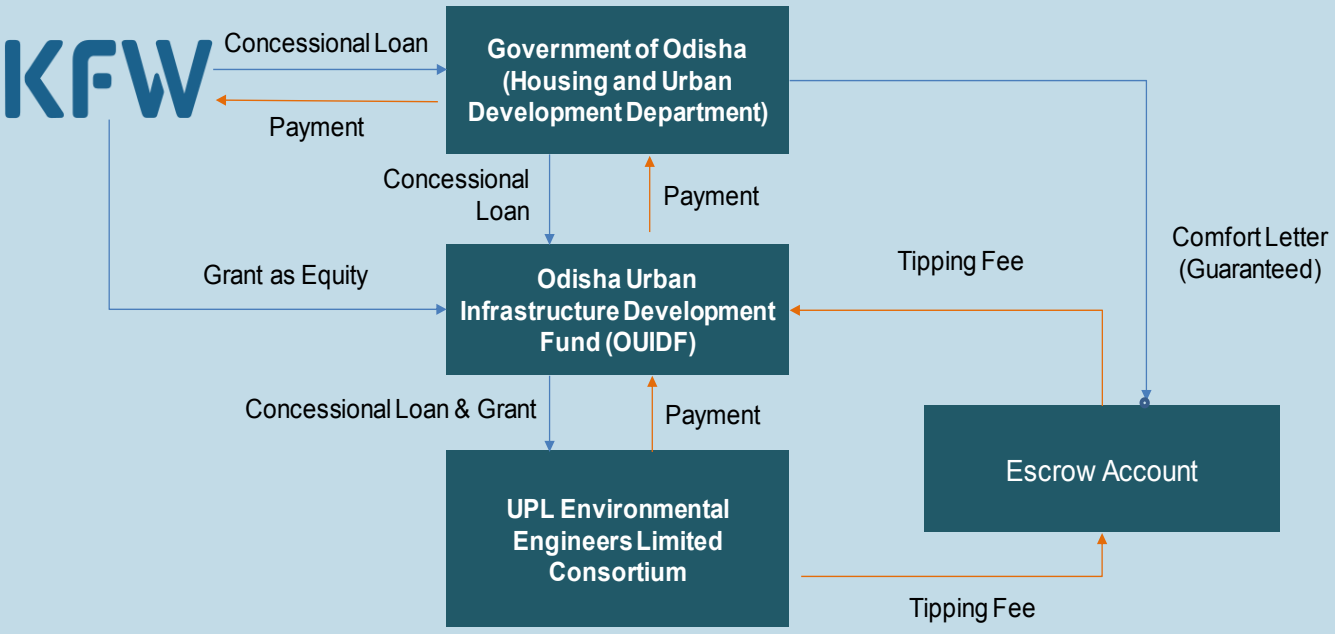
One structure illustration in the Blended finance scheme as reflected in Picture 7 above reveals that the investor composition will not only come from institutional investors or financial institutions, but also from foundations, donor agencies, or philanthropist individuals who want to participate in infrastructure development. In addition to being investors, the foundations, donor agencies, or philanthropist individuals may also play a role in providing technical assistance grants for project preparation or in other forms. Because it is a philanthropic fund, the return on investment in the blended finance scheme is mostly low value. Nevertheless, there are still benefits to be achieved so that the project continues to roll. Typically, projects that attract donors with this scheme are related to Sustainable Development Goals (SDGs) achievement.

Case Study: Berhampur Solid Waste Management

The solid waste management system in Berhampur, a town in Odisha States of India, is no longer proper to meet its population needs and not in accordance with national regulations. In the absence of primary waste collection in the city, many residents, especially in low-income areas, are exposed to health risks such as pollution, water contamination, and untreated solid waste. Odisha Government's Housing and Urban Development Department and Berhampur Municipal Corporation, are looking for an affordable solution to provide better waste management services to their citizens. They are trying to find a breakthrough by involving private investors. However, service tariff is key-source revenue for operators. To cover operational costs, financing costs, and include profit margins, service rates must be very high which impact on unaffordable service tariffs incurred by municipalities.

Accordingly, they look for ways to keep projects affordable and also ensure the project financial feasibility. One of the ways is applying for soft loans during construction and grants. Grants and soft loans are provided by Odisha Urban Infrastructure Development Fund (OUIDF), a trust fund financed by KfW Germany so that the service tariff remains at an affordable level for the government. Soft loan is set at 25 percent from the initial project cost. With the combination of soft loan and grant, the project becomes financially feasible. Although the project's financial feasibility has been in place, some bidders are still paying attention to the payment risks from the municipality. To address this, IFC (World Bank Group), as a financial adviser, introduced an escrow account mechanism with a three-month reserve and automatic disbursement after receiving monthly invoicing. The municipal liability obligations are backed by a comfort letter from the Department of Housing and Urban Development of Odisha Government. UPL Environmental Engineers Limited consortium has won the concession for 20 years.

Picture 8. The combination of soft loan with grant has encouraged the sanitation project properness in Berhampur area, Odisha States, in India.



Source: IFC, World Bank, 2017

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