



USAID
FROM THE AMERICAN PEOPLE

iuwash
Indonesia Urban Water, Sanitation, and Hygiene

SITE PROFILE

Profile of Sanitation Development in Medan Belawan Sub-district

Medan Belawan Sub-district is located in the northern part of Medan, the capital city of North Sumatra Province and nearby the Malacca Strait. It consists of six villages namely Belawan Pulau Sicanang, Belawan Bahagia, Belawan Bahari, Belawan II, Bagan Deli and Belawan I. The total area of Medan Belawan Sub-district is 21.82 km² with total population of 96,700 people (48,908 men and 47,792 women) comprises of 21,320 households.



A view of the settlement environment with bad sanitation in Medan Belawan Sub-district.

Medan Belawan has very serious water supply and sanitation problems. Poor education, low income and unmanaged coastal environment are among the aggravating factors. The local communities who are mostly fishermen family live with no access to clean water and adequate sanitation. Since 2007, the price of clean water has been increasing significantly. Lack of proper sanitation facilities also has emerged that the number of open defecation practices is still very high in this area.

Open Defecation and Domestic Wastewater Disposal

Four of six villages in Medan Belawan Sub-district are situated in coastal area, with two of them; Bagan Deli and Belawan I are the most populous villages. Bagan Deli has 13,863 populations with the density of 6,027 people/km² while Belawan I has 21,448 inhabitants with 19,498 people/km² (data 2010).

Most of the people in this area live in their stilt houses and only few families are able to build proper individual bathroom and toilet. They usually defecate in the open space behind their houses. The construction of the houses, which are built above the water makes it easy for them to dispose their solid waste and domestic wastewater directly into the ocean and onto the beach. They think that the high tide will carry away all the waste to the sea. This fatal misperception not only cause serious environment health problem but also will contaminate the ocean ecosystem.



The community-based organization (CBO) members discussing SME selection of desludging operator.



A model of mobile desludging equipment that designed to reach narrow village lanes in Medan Belawan.

Sanitation Improvement in Medan Belawan

Under the cooperation of USAID-ESP (Environment Services Program) with Tirtanadi Water Utility in Medan, most of the community in Medan Belawan now already has access to clean water after receiving master meter program. Particularly in Bagan Deli and Belawan I Village, the master meter system is operated by community-based organizations (CBOs).

However, the access to clean water should be balanced with triggering activities in order to improve the sanitation condition. For example, high number of open defecation practices could be reduced with increasing the community's awareness on the important of individual toilets. In 2009, ESP then launched a pilot project as a breakthrough for individual sanitation system through introducing affordable septic tank with biofilter for 30 households in Belawan I and Bagan Deli. The tank placed above the water, are resistance to sea water and designed for 12 – 24 months desludging capacity. This trial was continued by IUWASH. With one of the challenges that no desludging equipment is available nor operator that could reach narrow, long and hanging wooden lane of the villages.

The Sustainability of Sanitation Improvement in Medan Belawan

In 2011, Medan municipality has successfully replicated ESP pilot project to expand the 30 units of biofilter septic tanks into 1,029 units for Medan Belawan Sub-district, followed by another 800 units in 2012.

IUWASH assistance in preparing sludge management for Bagan Deli and Belawan I Village, includes technical assistances on engineering design, equipment construction, standard operation procedure, promotion campaign and training, and formation of the SME as desludging operator. Medan municipality in collaboration with the communities agreed to will replicate the community based desludge system in other locations after to the water services to the 4,000 HH is achieved (by 2015).

Result to Date

Based on the Master Meter Implementation Evaluation in March 2012, the decreasing water service in Medan Belawan mainly for Belawan I and Bagan Deli Village affected 61.78 % of households. This local water crisis is part of general water supply crisis in Medan City coupled with the damaged of Martubung booster pump in delivering water to Belawan area.

Medan Water Utility and Medan Municipality, with help of IUWASH take maximum efforts to overcome this crisis and targeting to supply 2,000 liter/second by 2015. Starting with rehabilitating booster pump, design and construct build new water treatment plan (WTP), uprating old WTP and construct new deep wells. To support the efforts, IUWASH then split the implementation of disludge management program in two stages:

- During water supply recovery period, develop the system of desludge management system (under IUWASH grant implemented in 2013 – 2013)
- After water supply is recovered, implementation stage will be continued. Start in 2014.

For further Information please contact:

Indonesia Urban Water, Sanitation, and Hygiene (IUWASH)

Jl. Ade Irma Suryani No. 5
Medan, North Sumatra 20151
T +62-61 452 8699
F +62-61 451 9499

info@iuwash.or.id
www.iuwash.or.id
www.facebook.com/iuwash
Twitter @airsanitasi