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USAID IUWASH PLUS NORTH SUMATRA

# MEDAN CITY

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

is an initiative designed to assist the Government of Indonesia 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 and donor agencies, the private sector, NGOs, communities and others to achieve the following "high level" results:

- An increase access to improved water supply service for one million people in urban areas of which at least 500,000 are from the poorest 40% of the population (also referred to as the “bottom 40%” or “B40”); and
- An increase access to safely managed sanitation for 500,000 people in urban areas.

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.

In North Sumatra, USAID IUWASH PLUS works in five cities/districts located in Medan City, Deli Serdang District, Tebing Tinggi City, Pematangsiantar City and Sibolga City.

## Medan City At A Glance



The total area of Medan City is 265.10 km<sup>2</sup> and administratively consists of 21 Sub-districts and 151 *Kelurahans*. Based on the population census in 2016, the population of Medan City is 2,109,339 people. Medan is the city with the largest population in Sumatra Island and the fourth in Indonesia with a density of 8,008 people/km<sup>2</sup>. Medan is a heterogeneous city with diverse

ethnicities and religions.

The working area of USAID IUWASH PLUS in Medan City is located in 10 *kelurahans*, namely Belawan Sicanang, Titi Kuning, Petisah Hulu, Sunggal, Suka Maju, Tanjung Gusta, Tegal Rejo, Tegal Sari Mandala 3, Sei Kera Hilir II and Polonia.



USAID IUWASH PLUS North Sumatra

Condition in *Kelurahan Belawan* influenced by tide.

## Accelerating The Development of Urban Water Supply

Based on Municipal Drinking Water Company (PDAM) of Tirtanadi's 2016 internal report, the number of water supply customers in Medan City and surrounding areas in 2016 was 431,431 customers with water supply service area coverage reaching 74%. Currently, the water production capacity of PDAM Tirtanadi has reached 6,710 liters per second coming from 1 spring, 5 Water Treatment Plants (IPA) which is sourced from surface water, 5 Mini IPA and 44 active borehole locations with total water sales reach 4,831 liters per second.

At present, the production of water supply is largely extracted from surface water sources. However, the continuity of raw water supply in Medan City is still very vulnerable because the catchment area is located outside the administrative area, namely in the Deli Serdang District. In addition, the discharge of several springs

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has decreased, for example Sibolangit Spring. Such conditions are also experienced by other major rivers that flow across Medan City, such as the Belawan River, Deli River and Percut River. Therefore, it requires real action as soon as possible to do conservation and land use planning so that PDAM's raw water source can be conserved in the future. In addition, the following are the conditions that are still faced by PDAM Tirtanadi and Medan City Government in increasing the water supply access in Medan City, namely:

- The PDAM's Non-Revenue Water (NRW) rate is still high and has reached 26%, then it requires maximum effort to reduce the NRW to 20%
- PDAM piped water service still needs to be optimized by increasing the production capacity of IPA and optimizing the pipeline network to achieve sufficient pressure and water supply, especially in the outskirts of Medan City.
- Non-PDAM water supply service needs to be developed in areas which are not covered by the PDAM pipeline network by applying Master Meter, whether managed by the community or by the City Government, especially in the areas inhabited by Low-Income Communities or in the slum areas.

To overcome these obstacles, a planned strategy is needed to realize the acceleration of water supply development throughout the city as soon as possible.

## Optimization of Wastewater Service System

The City Government (*Pemko*) of Medan has implemented several optimizations which include the Centralized Service System of Wastewater Pipeline Network, Wastewater Treatment Plant/WWTP (IPAL) in Cemara, Development of Individual Septic Tank and plan for Development of Septage Treatment Plant (IPLT). Gradually, *Pemko* Medan also implemented the Scheduled Desludging Service program (L2T2). To follow up the L2T2 program, *Pemko* Medan has provided Local Regulation (*Perda*) of Domestic Wastewater of Medan City and arranged Mayor Regulation (*Perwal*) about Technical Guidance (*Juknis*) of Domestic Liquid Waste Management.



## Supports and Priority of USAID IUWASH PLUS for Medan City

USAID IUWASH PLUS partners with City Government of Medan in following water supply and sanitation sectors:

### Water Supply

- Increasing the production capacity of water supply through a regionalization of water supply scheme (Medan, Binjai and Deli Serdang) and increasing water production through funding mechanism of APBN/APBD.
- Improving supply water service in Medan City with Non-PDAM scheme.
- PDAM assistance program for performance improvement through training of financial, technical, SOP improvement, and development of technical documents and planning.
- Safeguarding the source and communal water supply to achieve Quality, Quantity, Continuity and Affordability targets.
- Master meter and micro credit for Low Income Communities.
- Development of new pipelines and house connections.

### Sanitation

- Optimization of Wastewater Pipe Network of Medan City in Zones 10, 11 and 12.
  - Construction of 1 unit of Cemara STP with SS + Press system with 2 x 50 m<sup>3</sup> per day capacity.
- To support the SPAL Development of Medan City until 2021, through Cooperation Agreement between Ministry of Public Works and Housing - Provincial Government of North Sumatra - Medan City Government:
- Build 5,000 units of granted septic tanks.
  - Encourage 450,000 families in Medan City to rehabilitate their septic tanks.
  - Build 269 units of Communal WWTP.
  - Build 2 units of WWTP at area scale.
  - Build 13,300 Home Connection (SR sewerage system).
  - Construction of the L2T2 System.

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### For further information:

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