



Water and Sanitation Issues in Indonesia

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II





Situation Analysis on Water

- Nearly 53.4% of households (74.1% in urban areas, 36.8% in rural areas) had access to safe drinking water in 2004 which includes 19% with access to piped water service provided by PDAM (32.8% in urban areas, 7.0% in rural areas). As a result an estimated 50 million urban poor in Indonesia remain unconnected to piped water.
- Government Regulation No 16, 2005 requires local governments to provide and manage safe drinking water, whilst the National Policy on Community-based Safe Water Development and Health sees the importance of community involvement in safe water provision and management



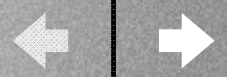
Situation Analysis on Sanitation

- The level of household's accessibility to sanitation facility is increasing from 63.5% in 2002 to 67.1% in 2004. Some estimates stated that in urban areas the number even reach up to 80%. nevertheless, in quantitative, the achievement in this sector is fairly high but in quality it is still in questioned due some facts that there are still many open system sewerage (especially in slum areas) and most of existing basic sanitation facilities (such as septic tank) did not fulfill the common hygiene standard.
- UN-HABITAT is undertaking the Aceh Sanitation Assessment and Assistance Programme (ASAAP) improving up to 1,000 households' sanitation facility with water proof and earthquake resistant septic tanks. For further development UN-HABITAT is also proposing assistance to the Government of Indoensia to improve the sanitation facility of post reconstructed houses in Yogyakarta.



Water Problems

- On water, there are some issues with regard to the capacity of local government water service company (PDAM) to get raw freshwater from upstream water bodies. The unmanaged water bodies (river basin, lakes, and water retention ponds) has caused reduced amount of raw freshwater for the water treatment plant intake.
- The increasing amount of extracted of ground water through shallow and deep well has caused urban land subsidence and in coastal cities has caused flooding and sea water intrusion. In Jakarta the land subsidence has come to a rate of 8 cm per year, and sea water intrusion has come to more than 3 km from the coastline to the inland.



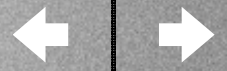
Sanitation Problems

- As mentioned before, the inadequate quality of urban sanitation system (open sanitation, leakages of septic tank, and open outflow wetland) has caused high contamination of the urban soil, ground and surface water. With this situation and big number of urban population using ground water are prone to water borne diseases and other health hazards that could easily outbreak.
- Effective city-wide sewer system needs a planned urban area, whilst in Indonesia's cities between 40-60% of urban areas are unplanned or informal settlements that incrementally developed without proper urban infrastructure standards.



Possible Innovations

- Some innovations on water and sanitation were developed by local NGOs together with International NGOs and Ministry of Public Works, such as community-based integrated public toilets, mobile waste water treatment plant (membrane, plasma technology, biogas toilet etc). For the situation like in most of Indonesian cities which is characterized with the urban informality, unplanned, spontaneous and incremental development, the more decentralized (or community-managed) urban water and sanitation system could be more appropriate.
- Experience shows that more inclusive (with involvement of all relevant actors) but decentralized Urban Governance system could make collective water and sanitation system possible to be developed within an integrated city-wide support system. Community-managed system could be the most appropriate system, but it needs support from city-wide level such as raw fresh water supply from rainwater harvesting system or regional water bodies or other technical assistance that could improve compliance to technical standards.



Integrated Sanitation Facility in Solo



A neighborhood integrated sanitation facility that collects sewer from houses and processed it to become biogas that could be used for cooking by the households. The system was built by a Local NGO with the support of Ministry of Public Works. The facility also provides public toilet that could be used by community members who does not have a toilet in their houses.



This facility could be combined with community-managed water system that employs appropriate water management technology.



UN-HABITAT Sanitation Project in Aceh



UN-HABITAT Aceh Sanitation Assessment and Assistance Programme is undertaking the delivery of waterproof and earthquake resistant sanitation system to up to 1,000 households.

The system consists of black water unit, grey water unit, and wetland unit all built in water proof and earthquake resistant materials (bottom right).





Some Conclusions

- Water and sanitation should become an integrated package in low-income housing, slum upgrading, for post disaster reconstruction programs.
- In Indonesia's cities where most parts are unplanned, spontaneous and incrementally built, a more decentralized but integrated to the city-wide system is needed to help the underserved communities to get clean water and proper sanitation system.
- The Urban Governance system needs to be developed into more inclusive that recognizes how the urban informal system works and supportive to the underserved communities.



Thank You