

Winding road of Jakarta waste management



Gross: Garbage piles up along a canal in Manggarai, South Jakarta, on Oct. 25, 2011. Jakarta's waste management facilities are ill-equipped to handle the garbage produced by the millions who live in the capital. (JP/P.J. Leo)

Jakarta has been long trying to stop its dependency on the Bantar Gebang waste facility in Bekasi regency, West Java, to treat the 6,000 to 6,500 tons of garbage produced daily by households, offices, industries and other commercial entities in the capital.

Regrettably, however, the effort has not been a success as Jakarta's waste management is insignificant for the capacity of the 100-hectare Bantar Gebang facility.

The only new waste treatment facility is the intermediate treatment facility (ITF) in Cakung Cilincing, North Jakarta, that started operating in August 2011 using Mechanical Biological Treatment technology. At Cakung Cilincing, inorganic waste is recycled, while organic waste is fermented to produce energy for electricity.

Built on 7.5 hectares of land, Cakung Cilincing ITF treats some 1,300 tons of garbage – far smaller than the total solid waste produced in the city. The facility produces 4.95 MWh of energy.

The city government is now preparing two other ITF facilities in Sunter and Marunda, also in North Jakarta. The Sunter site will occupy 3.5 hectares of land and is designed to manage some 1,200 tons of solid waste at its incineration facility.

The Marunda ITF is designed to treat some 1,500 tons of garbage per day. The site will be developed on 12 hectares of land, which will be integrated into the Marunda special economic zone in the northern part of the city.

The Jakarta City Sanitation Agency is also promoting a reduce-reuse-recycle (3R) program. There are 94 3R facilities across the city that can reduce some 350 ton of waste production per day or about 5 percent of the total waste produced in the capital.

Efforts to develop better waste facilities face many problems, not only because of financial constraints but also because plans for waste facilities often face criticism from local residents.

The poor condition of existing waste treatment sites makes people reluctant to accept waste management in their areas, even though the city provides a guarantee of environmentally friendly facilities. Waste treatment facilities are equated with poor sanitation, odors and as the source of various diseases.



Receptacle: A woman dumps her garbage in the Ciliwung River in Kampung Melayu, East Jakarta, on July 16, 2012. The river is choked with the city's trash, and waste treatment facilities are lacking. (JP/P.J. Leo)

In 2005, residents of Bojong in Bogor, West Java, for example, attacked an incineration plant developed by the Jakarta city administration. A similar incident occurred when the city planned to develop a waste treatment plant in Tegal Alur, West Jakarta.

The city government used to operate small incinerating machines in a number of villages to try to reduce the burden of the Bantar Gebang facility. But the program sparked protests from local residents because the gas produced by the facilities sparked environmental problems.

Initially, Bantar Gebang, which started operating in 1989, was designed to use sanitary landfill technology, but in practice it is merely an open dumping site that sparked environmental problems such as air pollution, odors and insanitary waste transportation and groundwater pollution in the surrounding area.

The environmental issues often sparked protests from local residents and became a political issue. In 2001, the local government closed the facility in protest over the problems. The site was reopened only after the central government acted as a mediator between the two autonomous administrations.

Local politicians also often pressured the Jakarta administration to disburse significant amounts of money as compensation. Currently, the situation is much better, but it is not a guarantee that such problems will not again.

Bantar Gebang's waste management now uses sanitary landfill with Gasification Landfill-Anaerobic Digestion (Galfad) that produces methane gas for electricity. It produces some 10.5 MWh per day. The total capacity of the plant is 26 MWh per day, expected to be achieved in 2023.

Beside its waste-to-energy program, Bantar Gebang also has a composting program in an effort to produce natural fertilizer, the program managing some 300 tons of waste a day.

Bantar Gebang remains the main waste treatment site for solid waste from the capital, and has a long and often bitter experience in the history of Jakarta waste management.