Food and organic waste treatment facilities in Hong Kong

In Hong Kong, food waste accounts for around 30% of all municipal solid waste. Unfortunately a large volume - around 3,500 tonnes - is disposed in landfills every day. Around 35% of food waste comes from the commercial and industry (C&I) sectors. In February 2021, the Hong Kong Government issued the Hong Kong Waste Management Blueprint 2035 outlining its ambitions.

Hong Kong has reviewed many types of technology for treating food waste such as anaerobic digestion, composting, or co-digestion for both the commercial and industry and domestic sectors. Other than issues with technology applications, the logistics on collection and delivery of food waste for both the C&I and domestic sectors is also a hurdle for the Hong Kong Government. A consultancy study on this will be launched in 2021. The two Organic Waste Treatment Facilities (OWFT) listed below cater solely to the C&I sectors, while most of the food waste from households ends up in landfills. The Hong Kong Government will continue to expand food waste collection and recycling service for domestic waste via the pilot scheme in 2021. It aims to achieve the target of collecting 250 tonnes of domestic food waste per day by 2022.

The first Organic Waste Treatment Plant (OWFT I - O•PARK1) commenced in 2018 and is able to transform 200 tonnes of food waste per day into 14 million kilowatt hour of surplus electricity per year, which is sufficient to support the electricity needs of about 3000 households. The second OWFT II is under construction and scheduled to commence operation by 2023. It will be able to transform up to 300 tonnes of food waste into electricity each day.

The Hong Kong Government is working on the transformation of food waste into other products using biotechnology, which can generate even higher returns e.g. in the case of turning into insect protein. A tender has been released by the Hong Kong Government regarding the bioconversion of organic waste from chicken farms by detritivores (such as black soldier fly larvae). More on this can be found in the abovementioned Waste Management Blueprint.

Opportunities

In the recently released Hong Kong Waste Management Blueprint 2035, the Hong Kong Government promotes circularity by transforming waste into energy or other useful resources.

A. Resource Circulation; boost the waste-to-energy and food waste treatment capability in Hong Kong

To achieve the target of "Zero Landfill", the Hong Kong Government will develop "O•PARKs" and optimize the use of sewage treatment works for carrying out food waste/sewage sludge anaerobic co-digestion, as well as explore other innovative food waste treatment technologies, with a view to enhancing the overall food waste treatment capability in Hong Kong. By mid-2030s Hong Kong needs to be equipped with *adequate facilities* to handle the amount of food waste to be collected (i.e. around 3,000 tonnes of the daily food waste disposal) for transforming into energy or resources.

B. Innovative & Cooperation; explore the use of innovative technologies to treat food waste more effectively

The Hong Kong Government will explore the installation of food waste grinders in new development areas and housing projects to provide an additional management option for treating household food waste and is planning to introduce advance biological technologies to treat organic waste, for instance, turning organic waste from chicken farms into insect protein, which is a source of animal feed. A pilot scheme will be hosted in 2021 to expand the application of such technology in treating organic waste from pig farms and food waste in Municipal Solid Waste (MSW).

Meer weten? Neem contact op met de Economische afdeling van het Nederlands Consulaat-Generaal in Hong Kong: hon-ea@minbuza.nl.