ICP-AGIR Best Practice for
Cape Town (South Africa) / Hamburg (Germany)

Diverting organic waste from landfill: Combined energy and compost production	
	Hamburg (Germany)
Departments / Institutions involved	HiiCCE Hamburg Institute for Innovation, Climate Protection and Circular Economy City of Cape: Town Urban Waste Management
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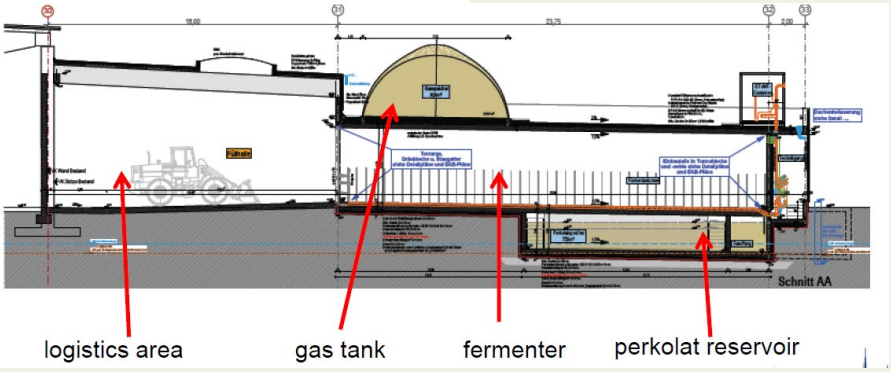
Description of the best practice	Separate collection of biowaste (both kitchen and garden), production of biogas and compost
Theme and sub-theme if appropriate	Circular Economy

Description of Best practice	
Challenge Addressed	The Western Cape Province of South Africa has issued a ban on organic waste to landfill by 2027. Hence, alternatives for treating organic waste are needed. At the same time, the City of Caper Town, is facing a shortage of electricity.

Solution Implemented	• Collection of organic waste (both kitchen and garden waste) from households and vegetable markets – either collection at source or through a convenient drop-off system
	• Treatment of the organic waste:
	  ○ Removing all contraries (metal, plastics, stones, etc.), either manually or through a sorting plant
	  ○ Breaking organic material larger than 80mm into smaller pieces

	○ Anaerobic fermentation for approx. two weeks to produce biogas ○ Treatment of biogas and insertion into gas grid (to be established) or electrification of biogas ○ Composting of the fermented organic waste • Certification of compost to ensure quality standards are met • Awareness raising campaign to sensitize citizens and businesses on separate organic waste collection and correct separation practices
Partnerships	HiiCCE handed in a proposal following the CoCTs Request for Information 006/2022/2023
Lessons Learned	Landfilling organic waste leads to immense greenhouse gas emissions. These can be prevented by diverting the organic waste and using it for energy and compost production. The solution reduces GHG emissions, contributes to secure and green energy provision and improves soil qualities. Additionally, it frees airspace at the existing landfills so that they can be used longer. The implementation of the solution requires infrastructure investment and creates employment opportunities for both, skilled and unskilled, labour.
Main Milestones	100 Characters

Materials for promotion	
Quote from city representative	**The solution is being implemented in Hamburg, Germany and functions very well.** **Currently 70,000t organic waste are being treated annually at the plant. As such, the plant produces 350 to 700m³ biogas per hour. This leads to a production of 2.5 to 2.8 Mio m" biomethane per year. In Hamburg the biomethane is fed into the city's gas grid. But it could also be converted into electricity by adding a component to the plant.** **Furthermore, 25,000t compost are being produced annually. The compost meets the highest quality standards.**
Graphic Material	 
Online links	Natur pur - Biogas- und Kompostwerk Bützberg | Stadtreinigung Hamburg