Sustainable recovery and upgrading of organic waste in the Stavanger Region, Norway

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Norway is a small country with 5.3 million inhabitants located in Northern Europe, crossed by the Polar Circle. Stavanger is an attractive city in the South Western part of Norway. The city is the gateway to beautiful fjords and mountains. Around 350 000 inhabitants are living in the Stavanger region. The University of Stavanger has 12 000 students, enrolled at seven different Faculties. All the Master Studies at the Faculty of Science and Technology are international, lectured in English, with Students from all over the world.

Decreed by law, the Norwegian municipalities sort and to a high degree recycle all household solid waste. Glass, paper, metals and plastic are recycled; from residual waste is produced electricity and district heating. From organic waste is produced biogas, compost, soil or soil conditioner. Treatment of wastewater is according to standard regulations with specific requirements. The wastewater treatment plants produce biogas, composted or decontaminated sludge with stringent demands for contamination.

In the Stavanger-Region, a public company, IVAR, handles all treatment of water, wastewater and solid waste. Sludge from wastewater treatment together with organic household waste and fish industry waste undergoes anaerobic digestion with biogas production. After dewatering and decontamination by thermal drying, a fertilizer plant produces high quality organic fertilizers through addition of minerals and other organic supplements. The renewable-natural-resources-company HØST and IVAR has developed this unique process. The pelleted products, with defined nutrient content, goes mainly to Asia where the demand for mineral organic fertilizers is high and increasing.