

Using organic waste streams for compost and biogas production

Opportunities and challenges in Nairobi

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Nairobi City Waste project 2009-2010

- Why focus on the recycling of organic city waste?



Waste dump: photo ECOMC

Nairobi City Waste project 2009-2010

- Project funded by the Dutch Ministry of Economic Affairs, Agriculture and Innovation
- What have we done?
 - Analysis of the existing urban waste management system in Nairobi
 - Survey of existing municipal waste management systems and stakeholders analysis
 - Inventory and analysis of relevant policies affecting waste management and use of organic material in (peri-urban) agriculture
 - Analysis of quality of different types of city waste
 - Identify constraints and potentials for use of urban organic waste for recycling
 - 2 pilot projects: compost and biogas production

The future

- What will we do in the next months?
 - Evaluate pilots: technical, economic and institutional potential
 - Evaluate business-oriented compost production cases
 - Write feasibility report and project briefs presenting the lessons learnt from our activities and recommendations
 - Liaise with businesses, governments and other organizations to support the uptake of our lessons in their businesses and projects
- What will we do from next year onwards?
 - Set up cooperation to make business models work

Related research at Wageningen University and University of Ghent

- Potential to replace oil with biogas in Kenya
 - Calculations of potential to use side-streams for biogas and electricity production (maize, cotton and barley)
 - Enough to supply $\frac{3}{4}$ of Kenya's energy production
 - Next steps: Life Cycle Analysis on sustainability of this approach, costs of installations and use of slurry
 - Phd student: Mr. Charles Nzila, charlesnzila@mu.ac.ke
 - Which sustainability criteria for LCA applicable for Kenya/EA?
 - Whish: setting up biogas research centre in Kenya
 - Mr Henri Spanjers, supervisor of Charles: henri.spanjers@wur.nl

Today's programme

- Nairobi solid waste context
- Sustainability aspects of compost and biogas production
- Institutional barriers in recycling organic waste
- Marketing to the agricultural supply chain
- Technical and economic potential of ARTI

Thank you!

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