



SEED Awards 2011

for entrepreneurship in sustainable development

WINNER

Waste Enterprisers Ltd. : Ghana

Revolutionising sanitation and propelling Africa to the forefront of waste reuse

Project description

Waste Enterprisers makes cities and economies greener. The initiative's waste-based businesses create a demand for human waste that unlocks profitable alternatives to haphazard dumping. Profits are reinvested back into the sanitation sector to extend services to poor communities.



Business model

Waste Enterprisers Ltd. (WE) is transforming human waste into renewable fuel for industrial kilns and boilers. Its target market – industrial manufacturers such as cement plants and plastics factories – need cheap fuel to produce their products. WE leverages this energy demand to create an incentive for waste collection and processing, thereby tackling the urban sanitation crisis.

WE's waste-based businesses completely reinvent the economics that govern waste management. By creating demand for waste, WE triggers action across the sanitation value chain, while the initiative's "Fecal Fuel" product replaces fossil fuels, thereby reducing emissions of greenhouse gases.



Scaling up activities in 2012

- Conduct a demand study to assess market size and target customers' requirements
- Process prototype Fecal Fuel and run test firings with potential customers
- Contact technology providers and calculate the necessary capital investment and potential for partnerships or licensing agreements
- Draw up a full business plan including an operating model, sales and distribution activities, a growth strategy and pro-forma financials

Immediate needs

- Financial support for product pilots and tests
- Assistance in applying for carbon credit financing
- Legal support in managing the numerous different contracts necessary for becoming a thriving multi-national company providing a utility service in the developing world
- Support expanding the initiative's network of angel and social investors



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Partnership

- ❶ **Waste Enterprisers Ltd.** is the lead partner in the initiative, in charge of managerial oversight and developing social and environmental impact mechanisms
- ❷ **Kumasi Metropolitan Assembly** provides access to land and waste streams, making the development of Fecal Fuel possible
- ❸ **Wisdom Togobo, Director (Renewable Energy), Ministry of Energy** advises Waste Enterprisers on national energy policy and strategy
- ❹ **The Kwame Nkrumah University of Science and Technology** provided students to carry out the initial characterisation of waste streams and the market analysis



Social, environmental and economic impacts

Social impact: Over two million people each year – mostly children under five – die from diarrhoeal diseases that are attributable to inadequate sanitation and unsafe water. One Fecal Fuel facility could treat the waste of over 350,000 people, relieving entire communities of this disease burden.

Environmental impact: Assuming that one plant would receive 500 m³ of fecal sludge (FS) per day, a conservative fuel yield would be 39 metric tons (Mt) per day and the

annual CO₂ offset would amount to 4,000 Mt. In Africa, average annual CO₂ emissions are 1 Mt per capita, meaning that one plant would offset the emissions of 4,000 people.

Economic impact: One facility with the capacity to receive 500 m³ FS per day could generate over USD 2 million in annual revenue as well as provide jobs for local engineers, labourers and security personnel.

Contact

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SEED Partners

SEED's founding partners are the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP); IUCN (International Union for Conservation of Nature) and SEED is hosted by UNEP-WCMC. Other current partners are the governments of Germany, India, the Netherlands, South Africa, Spain, the United Kingdom and the United States of America; the European Union; Conservation International; and SEED's corporate partner, Hisense.

About the SEED Initiative

The SEED Initiative identifies and supports promising small scale social and environmental entrepreneurs around the globe, entrepreneurs that while working towards a greener economy also tackle poverty, marginalisation and social exclusion.

SEED provides these social entrepreneurs with know how and networks, taking the lessons learnt at local level up to decision-makers to promote evidence-based policy making.

More information: www.seedinit.org

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