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Market waste can be converted into biogas and contribute to the energy supply.

GERMAN GOVERNMENT AND FEDERAL STATES PROGRAMME
BUND-LÄNDER-PROGRAMM (BLP)

Federal state - partner country
Hamburg - Tanzania

Title
Biogas as part of a sustainable energy supply for broad sections of the population in Dar es Salaam

In cooperation with the GIZ programme
Promotion of water security and climate resilience in urban areas in Tanzania

Financing arrangements

BMZ contribution	128,000 EUR
Hamburg contribution	85,680 EUR

Duration
01.09.2025 - 31.12.2026

Responsible ministry
Senate Chancellery of the Free and Hanseatic City of Hamburg

This project helps to achieve the following Sustainable Development Goals (SDGs):



Biogas production for sustainable and affordable energy in Dar es Salaam

Local situation

A large proportion of market waste in Dar es Salaam is organic and decomposes rapidly. Depending on the method of disposal, this can produce methane, which has a much stronger impact on the greenhouse effect than CO2.

Households are heavily reliant on charcoal and firewood. This is not only highly cost-intensive; it also contributes to deforestation and air pollution.

Due to the rapid urbanisation of Dar es Salaam, which has more than 6 million inhabitants, the city administration is facing significant challenges in the areas of waste management and energy supply. Large-scale informal housing development is also an obstacle to efficient waste collection, as substantial quantities of waste are being disposed of in an uncontrolled manner or dumped in water bodies, leading to blockages and hygiene issues.

Biogas is a sustainable alternative to the unreliable and expensive energy supply that is causing problems for the city. Furthermore, biogas produced from bio-waste can be stored as compressed biogas (CBG) and bottled so that it can also be used in rural areas.

Combining composting and biogas production means that multiple challenges facing the city can be tackled systematically – including waste management, greenhouse gas emissions and energy shortages.





Biogas produced from organic waste can be compressed, stored and filled into gas cylinders..

Cooperation arrangements

A city partnership between Hamburg and Dar es Salaam has been in place since 2010. Collaboration focuses on climate action and sustainable urban development.

Partners in Hamburg are the Ministry for the Environment, Climate, Energy and Agriculture (BUKEA) and the Hamburg University of Technology.

Partners in Tanzania are the municipal authorities of Dar es Salaam and Kinondoni, along with associated authorities and institutions and the University of Dar es Salaam.

What we are doing - and how

The project is being implemented in four coordinated work packages. This approach ensures a thorough analysis of technical and economic feasibility, practical dialogue between experts from Dar es Salaam and Hamburg, and strategic planning for the implementation of sustainable biogas technologies.

The availability and biogas potential of various market waste streams is being examined based on practical research in Germany and Tanzania. The existing infrastructure and the necessary technical facilities are being analysed and, based on this, a feasibility study including a roadmap for implementation will be drawn up.

PhD students from Tanzania have the opportunity to conduct research at the Hamburg University of Technology. They will be involved in ongoing research projects in the fields of biogas technology, composting and urban circular economies.

As part of a study tour, German experts from science and research and public administration will engage with local stakeholders to develop customised solutions together.

At a final on-site workshop with the relevant decision-makers, the results of the feasibility study will be presented, and options for further action will be identified and translated into concrete next steps.

Useful links

- Further information on the BLP:
  https://www.giz.de/en/worldwide/132983.html
  https://bund-laender-programm.de/en
- GIZ Programme “Promotion of water security and climate resilience in urban areas in Tanzania”:
  https://www.giz.de/en/worldwide/136360.html
- Partnership between Hamburg and Dar es Salaam
  https://www.hamburg.de/dar-es-salaam/

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