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C40 CITIES CLIMATE LEADERSHIP GROUP

Dar es Salaam Briquetting Project
A PPP case for PoA?

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CARBON FINANCE ASSIST

Schweizerische Eidgenossenschaft
Swiss Confederation

Federal Department of Economic Affairs FDEA
State Secretariat for Economic Affairs SECO

Kanton Basel-Stadt

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Carbon Finance Capacity Building (CFCB) Programme

Vision
Mega cities all over the world harness the Carbon Finance opportunities of the UN-Kyoto-Protocol to address the needs and urgent problems in their city's infrastructure development in a sustainable way and simultaneously mitigate global warming.

Mission
The CFCB programme empowers mega cities' officials and administrative bodies to meet the procedural and administrative demands necessary to use Carbon and Climate Finance.

- **Bottom-up** (learning by doing): build capacity in the city staff by promoting and assisting the implementation of CDM project (s)
- **Top-down**: Involve and commit high-level policy makers in encouraging the city to use Carbon Finance for city development
- ➢ **Assist the crafting of a capable entity within the city that knows the benefits of Carbon Finance and can successfully utilise Carbon Finance for necessary city development.**

www.lowcarboncities.info

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Project Background Dar es Salaam

- Dar es Salaam: heavy inflow of people from up country regions and Zanzibar in search for better living in the city.
- High demands for reliable and affordable fuel and energy like electricity, LPG, kerosene, charcoal, firewood and industrial wastes.
- **Charcoal is consumed by the majority** of the residents in the city.
- The city (5 million inhabitants) consumes almost **750,000 tonnes of charcoal per year**, representing half of the national demand.
- Most it is used in traditional charcoal stove:
  - giving out excessive **carbon emissions**, which are harmful to human health and polluting the city environment.
  - and **increase deforestation**.

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Biomass Fuel Briquettes and Improved Stove Manufacturing

- Public - private programme
  - **Dar es Salaam City Council (DCC)**
  - **BEDOKO Traders Ltd**
- Using MSW, agro-industrial residues, sawdust and carpentry shavings from carpentry/furniture factories in Dar es Salaam.
- Substitution of charcoal and firewood use in the city creating:
  - At least 300 city micro-enterprises dealing in improved biomass fuels and cooking devices
  - At least 300,000 households routinely using these fuels and devices, and enjoying the benefits of improved indoor air quality.
  - A culture of using improved biomass fuels briquettes and improved cook stoves.

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Socio-economic benefits

- One production unit producing 60‘000 tonnes per year:
  - Creates over **2000 jobs** mostly for women collecting and sorting MSW.
  - Creates 38 skilled jobs at the briquette factory.
  - The Office of the Mayor would **save (USD 1.3m) in cost of transport** collection and Landfill site operations.
  - Create a self-sustained entrepreneurial network of at least **300 city micro enterprises** for delivery of improved biomass fuels and cooking devices.
  - Using improved biomass fuels and cooking devices will become a common practice in at least 300‘000 rural households in Dar es Salaam.
  - A workable model for identifying and commercializing biomass energy technologies will be demonstrated.

Environmental Benefits

- Saving of charcoal:
  - An improved stove saves about 300 kgs per year and 1 tonne of briquette replaces 3 tonnes of charcoal.
  - With the project's target of 12'000 improved stoves and 60'000 tonnes of fuel briquettes annually the project will save about **183'600 tonnes of charcoal per year**.
- Avoided deforestation:
  - An average of 0.1 ha of forest per ton of charcoal produced.
  - 183'600 tons of charcoal saved by using improved stove and fuel briquettes annually, save almost **18'360 ha of forest**.
- Health impact:
  - Better indoor air quality in houses, institutions and industries.
  - Improved health of the inhabitants, particularly women and children.

A case for Programmatic CDM?

- CDM Potential?
  - Charcoal combustion emits 3 tons of CO2 per ton of charcoal.
  - Therefore for 18‘360 tons of charcoal saved.
  - CO2 emissions are reduced by **55’263 tons/year** (12‘000 improved stoves and 60’000 tonnes of fuel briquettes)
- PoA Potential?
  - How can public private partnerships enable PoA‘s?
  - How can this successful pilot project in a early stage benefit from the PoA approach?
  - What are the regulatory and procedural needs to trigger this kind of projects by means of PoA Approach?