

BARBADOS



GREEN
CLIMATE
FUND

GLOBAL
PROGRAMMING
CONFERENCE

Project title	Integrated Solid Waste Management Complex			
Result areas	Sector	Total financing, USD	GCF financing, USD	Financial instrument
Mitigation – Energy access and power generation Adaptation – Infrastructure and built environment - Health and well being and water security	Public/Private	\$39,574,428	\$35,974,428	Grant
Description of specific climate change problem and how the project will address it	<ul style="list-style-type: none">• Use of fossil fuels to generate electricity leading to greenhouse gas emissions / Substitution of fossil fuels by greener energy production• Disposal of waste to landfill and subsequent venting of greenhouse gases to the atmosphere/ Capture and destruction of landfill gas• Increased incidences of drought and reduced potable water (Barbados is almost completely dependent on groundwater for potable water supply)/ Protection of the groundwater reserves through the treatment of leachate• Human health impacts/ Reduction of habitat for disease vectors through removal of tyres			
Alignment with key country priorities and stakeholders engaged	<ul style="list-style-type: none">• Fossil fuel free by 2030• Reduce greenhouse gas emissions and contribute to Climate Change mitigation• Protect and sustainably manage water resources• Treat waste as a resource• Reduce foreign exchange expenditure• Develop local human capital as our greatest resource is our people• Stakeholder Engagement – All key Government Agencies engaged to date			

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Activities

- (i) Landfill Gas-to-Energy Facility – The Project will involve the drilling of several wells in the closed and working cells of the Mangrove Pond Landfill and the installation of LFG collection pipes to direct the gas to a to-be -onstructed energy facility. A combustion turbine within the Facility will generate electricity to be fed into the National Grid and to the LFG Facility and other Facilities that make up the Integrated Solid Waste Management Complex.
- (ii) Leachate Treatment Facility – The construction of a Membrane Bio-Reactor (MBR) Facility to treat the leachate currently being generated and recycled at the Mangrove Pond Landfill
- (iii) Tyre Recycling – The procurement of a tyre shredder/ tyre crumb machine and the construction of a facility to house the machinery for the production of tyre crumb for input into the bitumen mix in road construction

Expected outcomes

- Reduced importation of fuel oil and a shift to greener energy
- Increased lifespan of roadways and reduced tyre wear therefore less resource consumption and carbon footprint due to reduced imports
- Improved quality of life for residents and visitors, sustainable employment, increased awareness and understanding of the impacts of climate change, solid waste management and ecosystem management, improved public perception of waste management
- Reduction of 2,800,000 tCO₂eq to the environment. Protection of ecosystems and groundwater resources. Improved human health and sanitation.

Paradigm shift potential

- Shift to a Green Economy, Integrated Solid Waste Management as part of the transformational Roofs to Reefs Programme which will benefit the health and well-being of 100% of population and visitors, promote sustainable solid waste management solutions, ecosystem protection, groundwater protection, green energy production, reduced pollution