CRGE FAST TRACK INVESMTNETS

2014 - 2016

ABOUT THE BROCHURE

The Government of Ethiopia has started implementation on its Climate Resilient and Green Economy (CRGE). Through the newly established CRGE Facility, a Fast Track Investment (FTI) program has been deployed. The FTI are summarized in this brochure.

Zerihun Getu CRGE Facility. November 2014

FAST TRACK INVESTMENT PORFOLIO

THE FAST TRACK INVESTMENTS

The Government of Ethiopia established the CRGE Facility as a mechanism of coordinating, aggregating, managing and deploying finance toward the CRGE. The Facility began its first round of funding in June 2014 to selected projects that directly contribute to growth, resource efficient low carbon development and building resilience. These projects were prepared by sectors and regions within the six CRGE priority ministries. The FTIs projects are designed to jump start implementation of the CRGE in 6 key ministries, it also acts to test the CRGE Facilities processes and give rapid iterative feedback for implementation modalities on the ground.

FTI Funding Allocation

The CRGE Facility funds were allocated per the government's priority areas as follows:

Total Allocation:	\$20.8 Million
Industry	\$1.5 Million
Transport	\$1.5 Million
Urban Development and Construction	\$1.5 Million
Energy	\$3 Million
Water	\$3 Million
Agriculture	\$6.8 Million
Forestry	\$3.5 Million

Overview:

The Government of Ethiopia initiated the Climate-Resilient Green Economy (CRGE) initiative to address the adverse effects of climate change and build a greener economy. Ethiopia has committed to build a climate resilient green economy, achieving middle-income status by 2025, with a zero-net greenhouse gas emission from 2010 levels while building climate resilience.

To make this ambition a reality, the Government of Ethiopia aims to fully mainstream and integrate the CRGE with the Growth and Transformation Plan (GTP) by 2015. This will ensure that all regions and sectors work towards effective implementation of CRGE actions aligned to the GTP. The Government also established the CRGE Facility to attract, aggregate, blend and deploy resources across the economy to achieve the CRGE. The Facility was capitalized in 2013 and 2014 by investments for UK DFID (£15 Million GBP) and the Government of Austria (Euro 630,000).

In January 2014, the Management Committee allocated 20.8 Million USD to 6 core CRGE sectors. Sectors were asked to review their Growth and Transformation Plans (GTP-I) and identify activities that can be implemented on the ground with the remaining GTP I period. In collaboration with relevant actors, sectors prepared Fast Track Investments (FTIs) for immediate implementation (with an ideal time frame of 18 months).

The FTIs were designed to contribute to triple objectives of economic growth, greenhouse gas emission reduction and resilience to the adverse effects of climate change. Sectors are expected to draw lessons from implementation of these FTIs and build long term strategic plans in line with GTP II planning process to enable sustainable economic growth and reduce poverty.

FTIs were submitted to the CRGE Facility and appraised against three high level criteria: relevance, impact and deliverability. The following diagram summarizes the overall projects that were awarded by each sector. A brief overview of the specific projects is summarized in the following pages.

Agriculture	\$6.8 M
 2 large programmatic invest M&E system development b NGO led investment in lands 	ments in CSA by private sector scape rehabilitation
Water Irrigation and Energy	\$6M
 Fuel testing Solar lighting: expansion Biogas: expansion 	
Forests	\$3.5M
 Bamboo production Wood fuel micro enterprises Participatory Forest manage Research on <i>P. Juliflora</i> 	s ment
Transport	\$1.5M
Pedestrian infrastructureOff street parking	
Industry	\$1.5M
•Greening industrial zones •Baselines and EE equipment	
Urban Development	\$1.5M
Solid Waste ManagementUrban greenery	

Ministry of Agriculture (MOA): \$6.8 Million USD sector allocation

Climate Smart Agriculture in 8 regions of Ethiopia

#1. MOA	Climate Smart Agriculture: Piloting Climate Proof and Low Carbon Agricultural Investments in Ethiopia
Regions: 8 Regions (22 woredas)	Budget: \$ 5,227,063

Objectives and aims of the Project:

Piloting climate smart agriculture (CSA) in 22 woredas across 8 regions. Many of these farmers and pastoral households are highly vulnerable to climate shocks and lack proper food and income security. The expected impacts include increased productivity of crops and livestock through CSA, productive land conservation and rehabilitation of degraded lands through Integrated Natural Resource Management, and general ecological sustainability and improved household livelihoods. In the process, it aims to strengthen the capacity of offices of the Ministry at the national, regional and woreda levels, especially in implementing large scale programs such as this one, while contributing to the GHG emission reductions goals of the Ministry.

#2. Ministry of Agriculture	Climate Smart Agriculture in Pastoral Areas
Region: Afar and Somali regions	Project Budget: \$857,376 / € 630,000
Project title: Climate Smart Agriculture in two pastoralist regions of Ethiopia	

Objectives and aims of the Project:

Through improved productivity of crops and livestock, this project aims to pilot innovative 'climate smart' practices, which can deliver 'win-win' outcomes – higher baseline production, greater climate resilience, mitigation of climate change – in 4 woredas in the Pastoral regions of Ethiopia. The pastoral communities, specifically those of Afar and Somali regions, live in a frequently changing climate and environmental conditions having high uncertainty and risk, making livelihoods comparatively disadvantaged. Compounded with this increasing numbers of livestock above the carrying capacity of range lands, clearing of vegetated lands for agriculture, poor soil and water management practices, these areas face major challenges in the agriculture sector. The proposed Project can play a key role in catalysing adoption of CSA practices and enabling communities to scale them. Through training and technical support to woredas, the project intends to prevent any further degradation and restoration of degraded lands, which will improve land productivity, enhance biological diversity and contribute to environmental safety trough better practices and conservation of range lands, while using safeguards that minimize any adverse impacts on the environment, biodiversity and society.

#3. MOA	Developing M&E, MRV and long-term Investment plan for selected
	Agricultural Sector
Regions:	Project Budget: \$ 539,340

Objectives and aims of the Project:

As the Ministry of Agriculture is moving towards implementing the CRGE, having a robust M&E as well as MRV system showing the achievements towards meeting CRGE and GTP targets is a key factor. Though there are currently various initiatives looking at MRV, there are limited activities addressing sector specific MRVs. This project will thus develop agriculture sector specific MRV (as well as M&E) system that will be integrated with the national MRV framework currently being developed by MEF. Additionally, the project aims to develop a clear baseline for the targeted woredas and systematic tolls for developing baseline for other woredas beyond this project, and long-term investment plan tools for the piloted woredas so they can attract continued financing.

#4. MOA (in partnership w/ Climate	Piloting Conservation Agriculture CRGE in the Rift Valley Ecosystem	
Change Forum-Ethiopia (CCF-E))		
Region: Rift Valley Region	Project Budget: \$ 233,597	
The goal of this project is to implement integrated watershed development mechanisms (biological and physical		
interventions), to improve resilience to climate change and variability within the sensitive and fragile		
ecosystems of the Central Rift Valley (CRV) system. Multiple interacting forces that exceed the carrying capacity		
of the area have caused Land Use Land cover changes that result in high run off with consequent siltation to the		
rift valley lakes. The phenomenon of increased evaporation (increase temperatures) and reduced inflow		
(increasingly erratic rainfall) is seen affecting the biodiversity in the water body and the agricultural productions		
around lake Ziway and Shalla areas. Looking at these two areas more specifically, the project aims to address		
these multi-dimensional problems by	developing and implementing adaptation projects and intervention	
measures that are expected to dramatic	cally improve the current status of biodiversity, agricultural production	
and rural livelihoods in the CRV.		

Ministry of Water, Irrigation and Energy (MOWIE) Projects

#1. Ministry of Water, Irrigation	Solar Power for Water Supply and Irrigation
and Energy	
Regions: Oromia, Tigray, SNNPR and	Project Budget: \$ 2,599,844
Amhara	
Irrigation is a strategic priority for both food security and exports. This project will install 42 solar pumping	
systems to demonstrate solar powered groundwater irrigation. The project is expected to improve sustainability	
and supply of water to increase the sustainability and supply of water to 147,000 people and reduce	
greenhouse gas emission by 1,233t CO2e per annum as well as contribute to improvements in local air quality.	
The ultimate impact of this will be fre	eing up productive time for income generation, improvements in
livelihoods.	

#2. Ministry of Water, Irrigation	Accelerating the National Biogas Program Ethiopia
and Energy	
Region: SNNPR	Project Budget: \$63, 831
The overall aim of the project is to increase the substitution of traditional fuels with modern biogas by addressing	
key bottlenecks in the National Biogas Program of Ethiopia. To this end, 40 demonstration digesters will be	
installed in Benishangul and Gambella with the aim of marketing and expanding access to domestic bio-digesters.	
The main benefits will be to increase the uptake of biogas technology in these regions with the ultimate benefit	
being felt by women who will have more time for productive activities and better health from improved indoor air	
quality.	

#3. Ministry of Water, Irrigation	Strategic Support Improved Water Monitoring Systems
and Energy	
Region: Federal government	Project Budget: \$ 700,000
This project aims to upgrade climate an reliable, accurate and sustainable qualit gauging stations and database, alongsic focused strategic plan for upgrading the instruments and telemetry system lead and flood management.	d hydrological information systems in Ethiopia in order to generate ty data. The objective of the project is then to upgrade a number of de staff capacity development. The investment will develop a clear, user- e monitoring system and install 54 improved stations with automated ing to improved Surface and Ground Water Database and better water

#4. Ministry of Water, Irrigation and Energy	Monitoring and Regulatory Systems: Strengthening the monitoring Capacity of Petroleum Downstream Operations
Region: Federal government	Project Budget: \$ 635,000

The project aims to strengthen the monitoring capacity of the ministry and respective line institutions at regional level to properly monitor and regulate the petroleum supply chain operations in the country. The objective of the intervention is then to establish effective monitoring and regulatory system that will assist in avoiding the petroleum products adulteration for end-users to get quality products. The existence of price difference between fuels is providing the incentive to the ongoing adulteration along the supply chain, which studies estimate to be from 10% to 40%. The expected output is the introduction of new technologies and approaches for reducing fuel adulteration, including testing and laboratory equipment and skilled manpower to effectively monitor and regulate the petroleum supply chain. This will result in avoiding the petroleum products adulteration of emission and air pollution as well as on costs to end-users of petroleum products and the environment.

#5. Ministry of Water, Irrigation	Access to Solar Energy Technologies: Improving the Livelihoods and
and Energy	Life Styles of Rural Community of Emerging Regional states through the
and Energy	Dissemination of Solar Energy Technologies
Region:	Project Budget: \$ 2,001,316
The project aims to improve sustainable energy access for remote rural communities through the dissemination	
of Solar Energy Technologies, which provide wide opportunity for children and women to get time for education	
and productive activities. The project also contributes to biomass conservation and reduces health risks caused	
due to use of traditional and carbon in	tensive fuels for lighting. The main project outcomes are the supply of

Solar Home Systems (SHS) to 4000 households in all the four Regions and the Supply of Solar Lanterns of 8,000 units in all the four Regions and 24 institutional photo-voltaic systems units and building capacity of implementers.

Ministry of Environment and Forest (MEF) Projects

#1. MEF	Empowering Woman through Better Forest Management and micro-
	enterprise development
Region: Harari Region	Budget: \$ 51,451

Project title: Improving the income of women through the development of woodlots in Erer and Sofi woreda

Objectives and aims of the Project:

This project aims to reduce deforestation in the Harari region through collaborative efforts with the community, especially mobilizing local women. The Harari region with its increasing population and reducing agricultural land productivity, clearing of shrubs to cultivate unstable terrains and deforestation for wood fuel are the main cause of degradation in the area. In the proposed piloted areas, such activities are a means of daily income for underprivileged woman which supply 40% the regional biomass demand. This project will undertake post planting management of 750ha forest tree plantation, and engage 1,400 rural HHs in Sofi and Erer Woreda of Harari Regional State, helping them secure a better and more sustainable livelihood by generating alternative income from employment in planation and post plantation management activities, bee keeping and selling by-products. At the same time, it will contribute to the GHG emission reduction by improving forest cover. The program will also create awareness on climate change, forest management and area rehabilitation for over 90% of locals in the 5 kebeles.

#2. MEF	Bamboo Plantation in the Highlands of the Upper Rift Valley
Region: Oromia Region	Project Budget: \$ 435,416

Project title: Promotion of highland bamboo plantation for ecosystem restoration and livelihood improvement in the eastern escarpments of the upper rift valley

Objectives and aims of the Project:

The Highland Bamboo aims to unlock the huge market potential of bamboo forests in Ethiopia, by addressing degradation while creating sustainable income for the local community. Ethiopia has immense untapped bamboo resources, with over one million hectares estimated to 67% of Africa's entire bamboo resource. The Government of Ethiopia has designed policies and strategies to encourage sustainable management of forests including bamboo as a renewable resource. This allows the project to promote bamboo plantation for increased forest cover and improvement of livelihoods of the local community, while restoring biodiversity and improving carbon sequestration. The project will be working with the local community to establish bamboo forests in 10 kebeles of Arsi Negelle and Kofele woredas of West Arsi zone of Oromia region. Over 3000 selected farmers will plant 500,000 bamboo culms on 200 hectares of lands. The project will also contribute to improving environmental services through enhanced soil and water as well as biodiversity conservation and thus improves the income of households in the project areas.

#3. MEF	Bamboo Forest Management in Benishangul
Region: Benishangul Gumuz	Project Budget: \$ 69,399 USD
Project title: Creating climate change Resilient communities through bamboo forest management	

Objectives and aims of the Project:

This project aims to address degradation of the lowland bamboo forests while enhancing awareness of the considerable environmental, ecological (such as watersheds protection, carbon sink, biodiversity) and economic benefits of bamboo forests to the community. Significant amount (85%) of lowland areas Bamboo resources are largely found in Benishangul Gumuz (share 30% of the country's bamboo resource), which is being used ineffectively for low economic value merchandizes or cleared for human settlement or farm lands. The project creates awareness of the environmental/ecological. It will build capacity in the local communities and amongst other stakeholders, increase bamboo coverage by 50% in the target area of 50ha while regenerating 30% more plant species and creating a sense of ownership for forest land management amongst target communities build capacity within the local organization delivering the project. Decrease the vulnerability of the land to erosion in the target area. The project will:

- 100 of the target community will be trained on seedling and nursery management and establish 2 nurseries
- Plant of 100,000 bamboo and other indigenous plants over 200 hectares of land and sequester 4000 tonnes TCo2e
- Establish 2 micro enterprises established and create market linkages

#4. MEF	Watersheds Rehabilitation in Amhara Highlands
Region: Amhara Region	Project Budget: \$ 844,477
Project title: Reducing land degradation and building livelihoods in the highlands of Amhara	

Objectives and aims of the Project:

This project is designed to rehabilitate the degraded watersheds in the drought prone districts of eastern Amara, which will serve as pilot learning scheme. The selected areas are districts that are designated food insecure and flood prone. After restoring their productivity, these watersheds will become sources of livelihoods for job seeking youths and underprivileged women. The project has been designed by actively engaging concerned regional bureaus and considering the severity of land degradation and vulnerability of communities. The selected districts are economically vulnerable and so far, marginalized districts in terms of project support from the region.

Major actors at federal, regional and district level have signed agreement to commit themselves to the project. Watershed sites are selected (including size) and identification of beneficiary groups and their numbers undertaken. Capacity for project management and stakeholder's engagement is enhanced and a baseline and Development map of the selected watersheds are generated for the site. Biophysical measures are then applied and 4500 ha of watershed area treated to become more productive and with less erosion. Approximately 3500 youths and poor women are organized and gain temporary employment in small business units; and 2400ha of forest lands will be brought under formal Joint Forest management and planted with appropriate species for energy and for timber.

#5. MEF	Participatory Forest Management (PFM) in Dire Dawa
Region: Dire Dawa Administration	Project Budget: \$ 56,100
Project title: Participatory Forest Management (PFM) in Dire Dawa	

Objectives and aims of the Project:

This project will concentrate on the 480 ha of the most biological diverse and carbon-dense forest in Dire Dawa. It aims to create awareness and promote sustainability of existing community protected forests, biodiversity as well as enclosure, reclamation, rehabilitation and restoration of the adjacent degraded forests in three-rural kebeles of the region. The intervention is expected to enrich the continued flow of ecosystem services, particularly carbon sequestration service, through promotion of sustainable forest management while strengthening the capacity of the CBOs, developing sustainable livelihood opportunities and establishing sustainable financing schemes. The specific objectives include

- Enhancing forest land security from illegal deforestation
- Promoting fuel efficient stove to 3300 household
- Enhancing livelihoods of 26% of the household and increase their annual income by 50%
- Raising awareness of 2650 households in participatory forest management with in the planning period
- Restoring and conservation of bio-carbon stocks in 1000ha forest land through community based afforestation and natural regeneration
- Enhancing bio-carbon stock in 500 ha agricultural, homestead and road side land

Total cost of the project is USD 102,241. From the total budget 55% (USD 56,100) of the budget will be covered by CRGE facility, 40.5% (USD 41,490) of the budget will be covered by the DDA and the rest 4.5% (USD 4651) of the budget will covered by the community.

#6. MEF (in collaboration with	Low-cost Construction Material from Local Invasive Trees
Forest Research Center)	
Region: Afar & Somali Region	Project Budget: \$185,200
Project title: Application of Prosopis Juliflora cement bonded particleboards for low cost house construction	
Objectives and aims of the Project:	
This is project to convert and process <i>Prosopis Juliflora</i> , an invasive species that is spread widely in Ethiopia into	
different value-added products for low cost house construction as well as introduces/ promote new house	
construction styles/designs suitable for arid zones. This can minimize the invasion of P. <i>juliflora</i> from grazing and	
farm lands. Additionally, such type of houses can be constructed with about 40% less cost and time than house	
made from cement bricks and wood. Thus, this project creates a win-win situation by reclaiming land currently	
covered by these species, while creating sustainable job opportunity for low income people. The project will	
install machinery, develop a business plan and build 26 demonstration houses from the particle boards.	

#7. MEF	Somalia Region Afforestation/Reforestation
Region: Somalia Region	Project Budget: \$ 83,137
Project title: Afforestation/Reforestation in Karamara Hill	
Objectives and aims of the Project:	

The proposed afforestation and reforestation project targets areas in the Eastern part of Ethiopia. Clearance of vegetation cover stems from the growing demand for land and forest products, and the lack of sustainable

resource management. The project aims to address this through increased vegetation cover and diversity through afforestation, area closure and use of energy efficient technology, reduced land degradation through biological and physical soil and water conservation measure, development of alternative income source for women, and enhanced capacity and community awareness in seedling production and nursery management while building the institutional capacity to implement such projects. This will rehabilitate 1,300 Ha of land, and planting a buffer zone with 500,000 seedlings. 2 km of hill side terrace, stone dams and over 2000 eyebrow basins will be prepared.

- 50 community members trained on improved fruit production and management
- 50 HHs having improved fruit seed and start to produce
- 30 HHs trained on improved forage production
- 30 HHs having improved forge seed and start implement cut and carry system
- 30 HHs trained on timber and fire woodlot establishment
- 30 HHs provided with forestry equipment and fuel wood and timber woodlot seeds

Ministry of Transport (MOT) Projects

#1. MOT	Share the Road (Encouraging Non-Motorized Transportation)
Region: Addis Ababa city	Project Budget: \$ 715,000
administration	

Project title: Share the Road: Development of Walking and Cycling Facilities for Urban Transportation of Addis Ababa

Objectives and aims of the Project:

The objective of this project is to shift in urban mobility to a design that encourages the usage of safe and environmentally friendly non-motorized modes of transport (NMT). With increasing private car ownership rate increasing rapidly, NMTs are needed to help combat increased CO2 emissions, congestion and other related problems resulting from the disorderly urban traffic. This project aims to pilot bicycle taxis and bike rental programs, work specifically with three condominium neighborhoods (with >10,000 inhabitants) to facilitate access to public transport station such as Light Rail Transport or Bus Rapid Transport stations. This pilot project will identify three mass-housing residential neighborhoods and increase pedestrians and cycling by 15% for a distance of less than 1.5 km. Moreover, it will create employment opportunity for about 65 people (15 permanent pedestrian facility care takers, ~50 SME members and many more temporary workers will be benefited). This can serve as a role model for city / transport planners on how they can integrate NMT infrastructure in their design. Moreover, the project will supply 20,000 matured trees for pedestrian shades, 45 sitting benches and water tabs, install street lights, rehabilitate existing pedestrians and cycling facilities, prepare "Business Plans" for 6 SME's in the three sites to execute the bicycle rent/taxi business and provide Bicycle-taxi/ rental services for 5,250 commuters/ day.

#2. MOT	Smart Parking
Region: Addis Ababa	Project Budget: \$780,000

Project title: Smart Parking as an Instrument to Improve Traffic Flow and Emissions Reduction

Objectives and aims of the Project:

In collaboration with the private sector, this project aims to implement smart parking systems in the capital city that will dramatically improve traffic flow which will have a catalytic effect in reducing emissions. Addis Ababa has one-thirds or one-fourth of the existing street lanes occupied by Street-side parking. Un-regulated street parking has impact to slow down journey time, increase the level of accidents and reduce the efficiency of road transportation in the city. The project will carry out a city-wide assessment of traffic flow and identify key locations for off-street parking lots/garages starting with about 10 locations per sub-city and initially working with about 15 private stakeholders that have already expressed interest. It will be preparing city-wide maps that show available parking space and their relevance in addressing the congestion problem and develop a PPP guideline based on this pilot for future expansions. A pilot site will be developed in Lideta Kifle Ketema around Mexico square.

Ministry of Industry (MOI) Projects

#1. MOI	Sector Specific MRV System
Region: All	Project Budget: \$584,000
Project title: Development of baseline and MRV system for GHG emissions from the industry sector and	
implementation of pilot GHG reduction through energy efficiency	

Objectives and aims of the Project:

This project expects to address energy efficiency issues in the industrial sector and develop an accurate baseline and sector specific MRV system. The sector in general has large energy consumption and is a significant source of both conventional pollutants and greenhouse gas emissions. However, in Ethiopia, energy efficiency best practice measures are not well understood, and most industries do not deploy these in process related areas. Very few have the internal systems to identify and deploy genuine innovations in processes such as heat recovery, energy efficiency and novel cleaning methods. As the CRGE strategy identifies energy efficiency as one of the main GHG abatement levers, this project will work on developing computer aided energy management system, install energy efficiency system in a pilot project resulting in improved diffusion of energy management systems and use of best practices. With an accurate baseline data on GHG emissions from the sector, the necessary system can be put in place to monitor GHG emissions reductions and report aligned with the CRGE and GTP targets, while building capacity in MOI and sector agencies on energy efficiency. The project will develop an accurate baseline data on GHG emissions from the sector and have the necessary system in place to monitor GHG emissions reductions and report aligned with the CRGE and GTP targets. One energy efficiency system for one industry from each sub sector will be installed.

#2. MOI	Green Industrial Zone
Region: Addis Ababa	Project Budget: \$ 508,000
Project title: Development of Green Industrial Zone – Bole Lemmi	

Objectives and aims of the Project:

The project intends to contribute to the ecology of Bole Lemmi Industrial Zone (Phase I & II) through greening 10% of its total cover, creating a healthy and environmental friendly industrial zone. The Bole-Lemmi is a 342ha industrial zone part of the new nationwide program of developing industry clusters including all related infrastructure to facilitate the industrialization goals of the Growth and Transformation Plan (GTP). Understanding the potential risks (on biophysical environment and social) of industrial zone, these green belts around the zones are hoped to contribute to the healthy functioning of the industrial zone, while directly reducing pollution (air & noise) in the neighboring areas. The pilot project will also lay out the foundation for

future design of industrial zones green spaces and develop green area development & management guideline for industrial zones. Additionally, the project will make sure the necessary equipment and resources for further maintenance of the green area that are in place and that the capacities of the actors and stakeholders involved are strengthened.

Ministry of Urban Development, Housing and Construction (MOUDHC) Projects

#1. MOUDHC	Urban Parks
Region: 11 regions and city	Project Budget: \$ 1,500,000
administrations	
Project title: Urban greening and solid waste management across Ethiopia	

Objectives and aims of the Project:

This is a major initiative to create urban greenery (in 6 regions) and solid waste management (in in each region and city administration of Ethiopia).

As Ethiopia's urban area are growing, many are remaining without significant green spaces, and particularly without parks and solid waste management systems.

Urban greening: Park development in the open spaces of cities will contribute to the reduction of dust storms and carbon dioxide which will eventually result in the reduction of GHGs and help to create climate adaptive communities. The outputs of these projects will be jobs, training to develop climate resilient communities, and the greening of urban space.

Solid Waste Management: Inappropriate solid waste management in Ethiopia's urban spaces is contributing to a range of health and environmental problems. Cities lack the equipment for waste collection and composting, and in many areas waste dumping in not properly controlled. This project will introduce effective management practices to produce organic fertilizer for agriculture and urban greening, create jobs, and reduce the emission of methane and carbon dioxide. The outputs of these projects include creating jobs, providing training, and providing solid waste management sites and infrastructure.

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