



GGGI
Cambodia



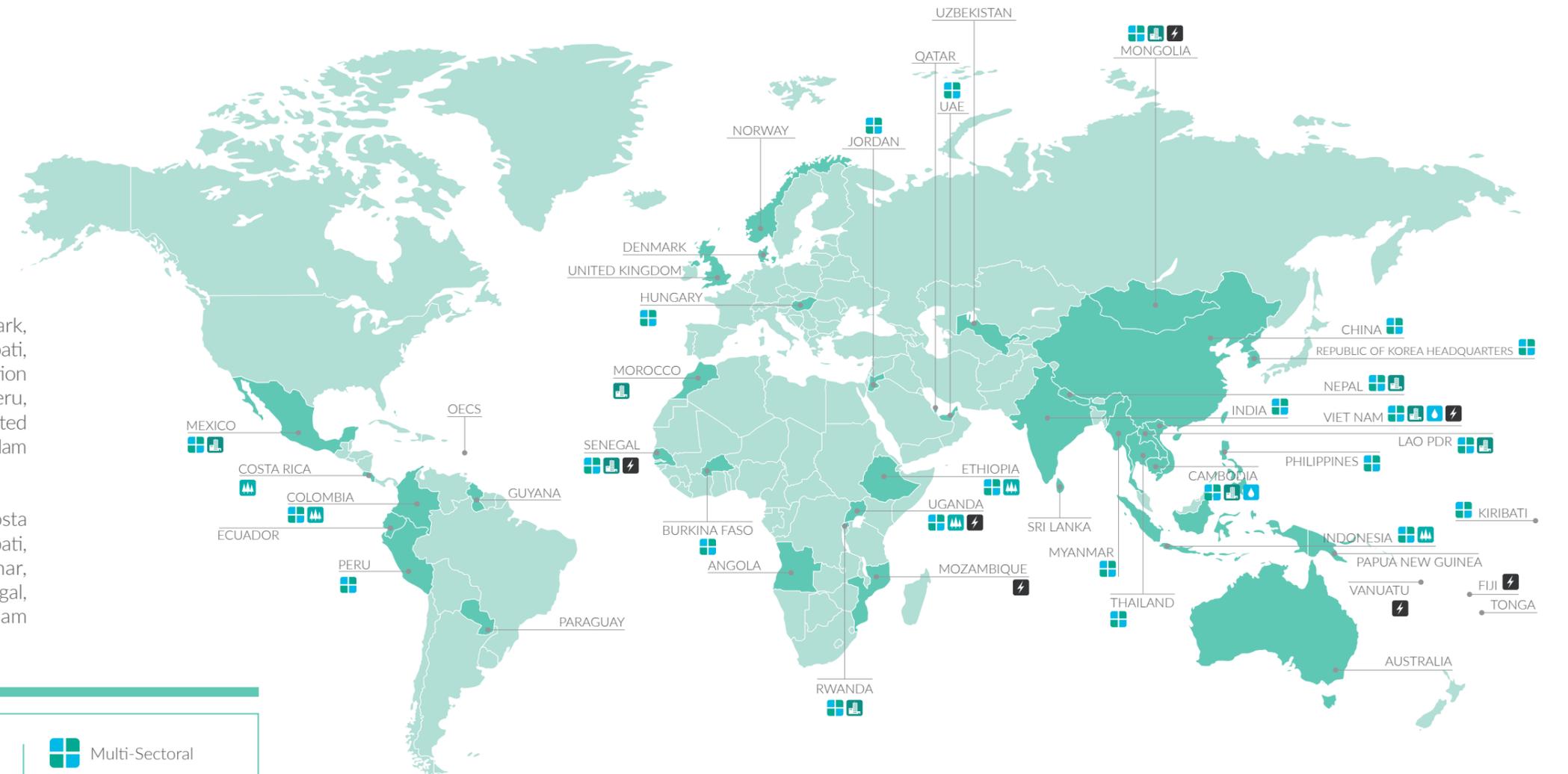
HEADQUARTERED IN SEOUL, REPUBLIC OF KOREA, GGGI HAS 36 MEMBERS WITH OPERATIONS IN 33 COUNTRIES

MEMBER COUNTRIES

Angola, Australia, Burkina Faso, Cambodia, Costa Rica, Denmark, Ecuador, Ethiopia, Fiji, Guyana, Hungary, Indonesia, Jordan, Kiribati, Republic of Korea, Lao PDR, Mexico, Mongolia, Norway, Organisation of Eastern Caribbean States, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Rwanda, Senegal, Sri Lanka, Thailand, Tonga, United Arab Emirates, United Kingdom, Uganda, Uzbekistan, Vanuatu, Viet Nam

OPERATIONS

Burkina Faso, Cambodia, Caribbean (OECS), China, Colombia, Costa Rica, Ethiopia, Fiji, Guyana, Hungary, India, Indonesia, Jordan, Kiribati, Lao PDR, Mexico, Mongolia, Morocco, Mozambique, Myanmar, Nepal, Papua New Guinea, Peru, Philippines, Qatar, Rwanda, Senegal, Thailand, Tonga, Uganda, United Arab Emirates, Vanuatu, Viet Nam



IN OUR EFFORTS TO
ADVANCE GREEN GROWTH
WE PRIMARILY FOCUS ON
FOUR THEMATIC
PRIORITIES:

- Sustainable Landscapes
- Sustainable Energy
- Green Cities
- Water and Sanitation
- Multi-Sectoral
- Member Countries

WHO WE ARE

The Global Green Growth Institute (GGGI) is a new international organization dedicated to developing and diffusing green growth.

LEADERSHIP

President of the Assembly and Chair of the Council – Mr. Ban Ki-moon
Director-General – Dr. Frank Rijsberman

VISION

GGGI is an interdisciplinary, multi-stakeholder organization driven by the needs of emerging and developing countries.

It was founded on the belief that economic growth and environmental sustainability are not merely compatible objectives; their integration is essential for the future of humankind.

MISSION

GGGI is dedicated to supporting developing and emerging countries in demonstrating new pathways to climate resilient and pro-poor economic growth that simultaneously targets transformational aspects of economic performance, social inclusion and environmental sustainability.

GGGI IN CAMBODIA

Cambodia is a founding member of GGGI. GGGI's engagement with the Royal Government of Cambodia began in 2011, assisting the government in establishing a national policy framework and institutional arrangements for inclusive green growth. GGGI's goal in Cambodia is to support the government in achieving its ambitious climate, green growth and sustainable development agenda, through capacity development, policy and investment advice at the national and sub-national level.

GGGI Cambodia is housed within the General Secretariat of the National Council for Sustainable Development (NCSD). GGGI also has offices in the Ministry of Interior, the Ministry of Public Works, and Phnom Penh Capital Administration.

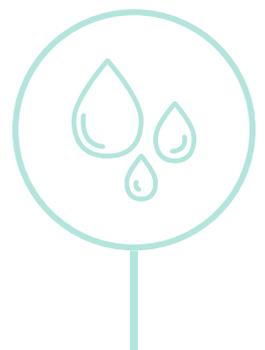
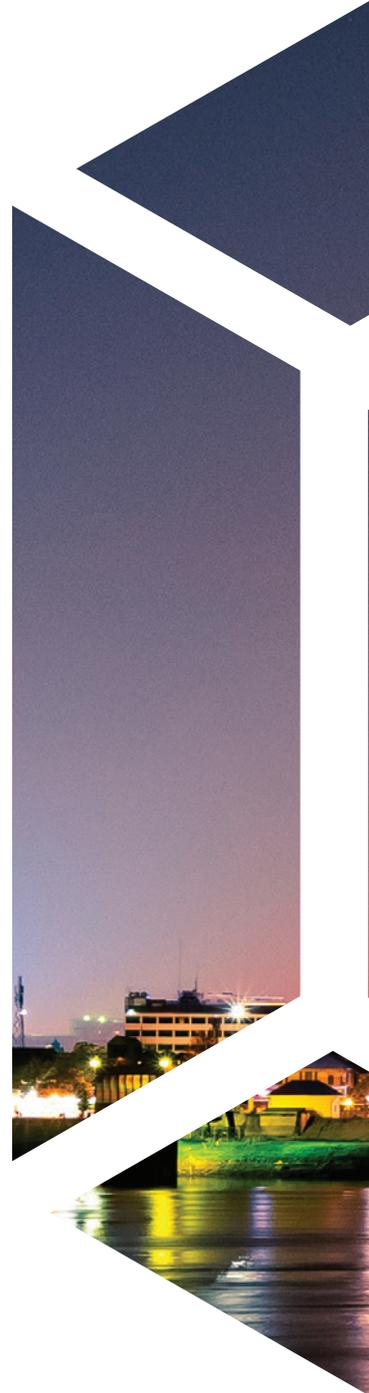
GGGI is proud to be recognized by the Minister of Environment of Cambodia for pioneering green city work in the Kingdom. GGGI has worked with national and municipal counterparts to develop sustainable city plans for Phnom Penh and seven secondary cities: Siem Reap, Battambang, Sihanoukville, Kep, Kampong Cham, Bavet and Suong. These plans look holistically at the requirements for green urban development, addressing clean energy, sanitation, waste management, mobility, green building, manufacturing and more. GGGI Cambodia now advises its counterparts on business models and investment solutions for the implementation of green city projects.

GGGI IN CAMBODIA

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CAMBODIA WASTEWATER AND SANITATION PROGRAM 2018-2019



BACKGROUND

NCSD and GGGI have supported government and city authorities in Cambodia in developing sustainable city plans for Phnom Penh and seven secondary cities: Battambang, Kampong Cham, Siem Reap, Kep, Bavet, Suong, and Sihanoukville. The plans propose a holistic concept of green urban economic growth, social inclusion and resilience – addressing a broad range of issues including energy, transport, building, public space, solid waste, drainage and wastewater management, combined with a project prioritization exercise. The GGGI-supported wastewater and sanitation program supports the implementation of these sustainable city plans. Approximately 9.4 million Cambodians lack access to improved sanitation, which particularly impacts the poor and marginalized communities.

OBJECTIVE

GGGI works with national and municipal counterparts on business models for decentralized sanitation, bringing affordable solutions to urban and peri-urban communities, which these communities can realistically operate and maintain over time through simple cost recovery schemes.

In parallel, GGGI also works to enhance the enabling policy and regulatory framework for urban sanitation.

EXPECTED RESULTS

- GGGI helped to establish the Sub-Technical Working Group on urban wastewater and sanitation, a much-needed group to co-ordinate efforts in the sector, chaired by the Ministry of Public Works and Transport (MPWT). GGGI supported the drafting of the Sub-Decree on the Management of Drainage and Wastewater Treatment System and related prakas, while also advising MPWT on a wastewater law. In partnership with GIZ, GGGI supported the development and publication of MPWT's guidelines on Wastewater System Operation and Maintenance.
- GGGI designed a technology-based business model for improved fecal sludge management in Siem Reap city. Through a call center and app, the model proposes a platform for scheduled desludging, better matching of supply and demand and lower cost of service. The platform is designed to promote sanitary standards of services, enhance monitoring, combat illegal disposal and promote re-use through conversion into fertilizer for on-sale to farmers.
- In the city of Kep, GGGI and Borda designed an affordable decentralized sanitation system and a public-private cost recovery scheme for Koh Tonsay island, for inclusion into the city investment plan. The model is suitable for replication in other cities, in particular tourist destinations and islands, where hospitality businesses have a stake in cleaner water and beaches.

IMPACT

- Access to sustainable sanitation services

FUNDING SOURCE:



PROJECT PARTNER:





CAMBODIA SOLID WASTE PROGRAM 2019-2020



BACKGROUND

Improving waste management is a key challenge for the city of Battambang, as it is for most cities in Cambodia. Cities are faced with uncontrolled disposal, accumulation of household waste in waterways and drainage systems, as well as open burning. These cause negative impacts on public health, particularly because of the release of toxic gases during burning, and reduce the overall livability, resilience and competitiveness of the cities. Battambang has seen some local entrepreneurs set up recycling businesses, but current waste management practices, such as limited separation at source, do not provide for a conducive environment for such recycling businesses. Around 150 tons of waste end up on the landfill every day in Battambang.

In 2015, sub-decree 113 was released setting out grounds to decentralize urban solid waste management through transferring responsibility and associated financial resources to the provincial, municipal and district levels. Successful implementation of this sub-decree will have a significant impact on public health of Cambodian citizens, livability of urban centers, and tourism potential of cities such as Battambang.

OBJECTIVE

The objective of the project is to develop detailed options to establish a reliable supply chain (segregation, collection, transport and on-sell of products) for recyclable waste in Battambang, with a focus on plastic and organic waste. GGGI and the city worked together to develop specific, realistic and costed options and a trial ready for implementation, aiming to increase the quality and volume of feedstock for the MRF and the local recycling and composting businesses.

GGGI partners with UNIDO to implement the trial. GGGI will also provide technical assistance to the city to implement the waste management recommendations, and coach local waste businesses in scaling up their activities and markets.

EXPECTED RESULTS

- Detailed and costed recommendations and business models for the establishment of an efficient waste recycling system in Battambang developed and implemented
- Large-scale trial for waste segregation, collection and transport of recyclable waste in Battambang designed and implemented
- Local waste recycling businesses and start-ups coached to scale up their activities and markets

IMPACT

- Access to sustainable waste management services
- Reduced air pollution and GHG emission

FUNDING SOURCE:



PROJECT PARTNER:





GREEN CITY CAPACITY DEVELOPMENT 2019-2020



BACKGROUND

Cambodia's urban population is growing at a rate of 4.4% per year, according to the World Bank. By 2030, an estimated 44% of the Cambodian population will live in cities. Cities drive economic activities, propel job creation and GDP growth. Phnom Penh alone represents over 30% of Gross National Product. However, this urbanization also poses significant demands on infrastructure and services such as water supply, sanitation and transport. Cities face challenges such as congestion, pollution and affordable housing.

GGGI worked with the National Council for Sustainable Development (NCSD) and national and municipal counterparts on a Sustainable City Plan for Phnom Penh and for seven secondary cities: Battambang, Kampong Cham, Siem Reap, Kep, Bavet, Suong, and Sihanoukville. The Plans propose a holistic concept of green urban economic growth, social inclusion and resilience – addressing a broad range of urban issues including energy, transport, building and public space, solid waste, drainage and wastewater.

The project on Green City Capacity Development aims to build the skills of national and municipal counterparts to implement these plans.

OBJECTIVE

NCSD and GGGI work together to enhance the capacity of key national and city officials to effectively and efficiently engage in sustainable city development through the implementation of the sustainable city plans. The project aims for:

- **Awareness:** Creating momentum, awareness and visibility around the adoption of the sustainable city plans through events and communication initiatives.
- **Mainstreaming:** Integrating the identified green city priorities into cities governance processes such as investment planning, monitoring and institutional coordination.
- **Knowledge sharing:** Deepening the technical understanding of green city development by training and coaching government officials, entrepreneurs and other stakeholders in building sustainable cities.

EXPECTED RESULTS

- Adapted municipal processes and stronger skills among government officials, entrepreneurs and other stakeholders to enable cities to take forward the implementation of sustainable city plans.

IMPACT

- Increased access to sustainable services

Greenpreneurs a global business accelerator program and business plan competition by GGGI, Student Energy and Youth Climate Lab. In Cambodia, GGGI also runs a national greenpreneurs chapter, whereby local waste recycling businesses and start-ups receive coaching on business readiness, financial planning and sales strategies. The program enables the entrepreneurs to start-up or scale-up recycling businesses and demonstrate business solutions for a circular economy.

FUNDING SOURCE:



PROJECT PARTNER:





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GREENING MOBILITY THROUGH ELECTRIC MOTORBIKES 2019-2020



BACKGROUND

Gasoline motorcycles currently dominate Cambodia's national vehicle market, although the total cost of ownership of electric motorcycles including lifetime operating costs is often lower than that of gasoline motorcycles. With strong economic growth in recent years, the number of vehicles has been growing rapidly in Cambodia. In 2016, more than 3.2 million vehicles were registered; with motorcycles accounting for 84% of the total registered vehicles. Transforming the growing fleet of motorcycles into low-emission motorcycles will contribute to achieving Cambodia's international climate commitments.

OBJECTIVE

On behalf of the General Secretariat of the National Council for Sustainable Development (NCSD), GGGI is delivering a GCF readiness project which aims to promote the shift from gasoline to electric motorcycles in Cambodia

EXPECTED RESULTS

- Situation analysis of the transport sector, with a market and technical assessment for electric motorcycles;
- Economic, environmental, and social assessment for electrification of motorcycles; Assessment of education and communication needs;
- Policy and regulatory gap analysis to facilitate the deployment of electric motorcycles;
- Development of a financing mechanism for the deployment of electric motorcycles; and an investment project concept note that builds on the above assessment results
- Investment commitment of US\$ 10 million

IMPACT

- Reduced GHG emissions
- Reduced air pollution

FUNDING SOURCE:



REFUSE-DERIVED-FUEL PLANT IN PHNOM PENH 2019-2021



BACKGROUND

In Phnom Penh, the amount of municipal solid waste transported to landfill has been growing exponentially, from 241,000 tons/year in 2004 to more than 1 million tons per year today. The waste is transported to the Dangkor landfill which is operated by Phnom Penh and has limited environmental controls. By some estimates, the landfill will be full by 2020.

The ongoing economic and construction boom in Cambodia has created huge needs for building materials, in particular cement, which is a key ingredient of concrete. There are currently 5 cement kilns operating in Cambodia which produce up to 8 million tons of cement per year. Given increasing cement demand, the industry's absolute energy use will continue to grow in the coming decade. The cement production sector is highly polluting and is responsible for around 5% of global CO₂ emissions. One of the reasons for this is the extreme heat (about 1500 °C) required to produce cement. Producing one ton of cement requires the equivalent of about 180 kg of coal and generates nearly one ton of CO₂. The fuel used by cement factories in Cambodia is generally coal imported from Indonesia. To reduce fuel costs and promote a greener production process, cement factories are on the lookout for cheaper combustible materials to co-process as fuel alongside traditional coal.

OBJECTIVE

The project addresses an existing demand for fuel from the cement kilns and a shift away from their current coal use. It establishes a model for RDF to be produced from municipal waste. Non-combustible materials, recyclables and contaminants are removed, and the residual material is then shredded and compacted. This means the project offers a potential solution for mixed and hazardous waste, which are a challenge for landfills and other waste-to-resource strategies. The project supports government counterparts in assessing technical and financial feasibility of the RDF plant, and in designing a suitable procurement and contractual set-up for a PPP.

EXPECTED RESULTS

- Pre-feasibility and feasibility study for an RDF plant in Phnom Penh assessing technical and financial options, together with environmental and social safeguard requirement
- Recommendations for an optimal procurement process
- Targeted investment commitment of US\$ 17 million

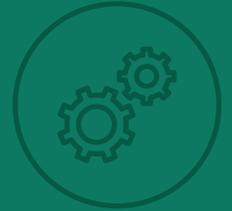
IMPACT

- Reduced GHG emissions
- Improved air quality

FUNDING SOURCE:



ENHANCING THE NATIONALLY DETERMINED CONTRIBUTION TO THE PARIS AGREEMENT FOR THE INDUSTRIAL SECTOR (2020)



BACKGROUND

The Royal Government of Cambodia submitted its intended Nationally Determined Contribution to the Paris Agreement on Climate Change (later called the first Nationally Determined Contribution or NDC) in 2015. Cambodia is a low emitter of GreenHouse Gas (GHG) emissions while being highly vulnerable to the negative effects of climate change. The Cambodian NDC sets out commitments to mitigate GHG emissions across economic sectors and to ramp up Cambodia's resilience to climate change. With regard to the industries specifically, the NDC commits to promoting the use of renewable energy and adopting energy efficiency for a number of manufacturing sectors.

At the 26th Conference of Parties of the UN Convention on Climate Change in 2021, Parties to the Convention, including Cambodia, will be expected to submit an enhanced NDC, raising the bar to keep global warming below 1.5 degrees.

Drawing on its track record of work in the industrial sector in Cambodia, GGGI is supporting the National Council for Sustainable Development of Cambodia and the Ministry of Industry, Science, Technology and Innovation, with analysis and projections to set more ambitious climate targets for the Cambodian industrial sector.

OBJECTIVE

This project aims to support the Royal Government of Cambodia to enhance its Nationally Determined Contribution to the Paris Agreement on Climate Change for the industry sector.

EXPECTED RESULTS

Under the leadership of the National Council for Sustainable Development of Cambodia and the Ministry of Industry, Science, Technology and Innovation, GGGI will:

- (i) Undertake a baseline assessment and projections for GHG emissions in the industrial sector based on solid analytics.
- (ii) Propose more specific, comprehensive and ambitious targets to reduce GHG emissions from Cambodian industries.
- (iii) Identify potential measures and actions to meet the identified targets.

IMPACT

Strengthened international climate action commitments.

FUNDING SOURCE:



PROJECT PARTNER:



SWITCH GARMENT: PROMOTION OF SUSTAINABLE ENERGY PRACTICES IN THE GARMENT SECTOR IN CAMBODIA 2020-2024



BACKGROUND

The garment industry is the industrial sector's largest employer. In 2017, the garment industry alone employed more than 800 000 workers comprising 86% of the total industrial workforce, according to the Ministry of Industry, Science, Technology and Innovation. The sector's expansion is reflected in its growing energy demand, with total final consumption increasing by 11% between 2010 and 2015. This triggers a steep growth in GHG emissions. The predominant use of unsustainable fuelwood by garment suppliers contributes to the country's rapid forest depletion and further exacerbates the sector's ecological footprint.

Meanwhile, Cambodia's garment industry is losing its edge compared to countries like Bangladesh, Myanmar, and Viet Nam, given its relatively high labor and energy cost. The sector also suffered from demand reduction and supply chain disruptions due to the global Covid19 pandemic. There is an opportunity for Cambodian factories to use sustainability as a competitive advantage. An increasing number of international brands, to which Cambodian factories are supplying garments, have set corporate targets to lower the environmental footprint of their supply chains. Sustainable energy solutions can reduce production costs and green production processes, improving competitiveness while reducing negative environmental externalities. This sets factories on a track to green recovery.

GGGI's economic modeling projects that a 20% increase in energy efficiency in the garment sector would lead to an increase of 31% in energy productivity by 2030 and US\$ 2 billion of avoided energy costs. However, there are a number of barriers preventing large scale uptake of sustainable energy practices which this project aims to address.

OBJECTIVE

This project aims to increase competitiveness and decrease the environmental impact of garment producing SMEs by promoting the adoption of sustainable energy practices and facilitating investments in cleaner technologies. The project works on multiple fronts: (i) support to the National Council for Sustainable Development and the Ministry of Industry, Science Technology and Innovation in developing regulatory and enforcement measures (ii) stimulating demand for sustainable energy technologies and services and (iii) increasing the supply of technologies, services and financial solutions for sustainable energy in manufacturing.

EXPECTED RESULTS

- Regulatory and enforcement measures for the promotion of sustainable energy practices in manufacturing adopted
- Demand from factories for sustainable energy technologies and services increased through outreach, training and leveraging international brands
- Improved access of SMEs to technologies, services and financial solutions for sustainable energy in manufacturing
- Establishment of a guarantee scheme to de-risk SME investments in sustainable energy solutions, with a targeted capitalization of US\$ 5 million by 2023 leveraging US\$ 25 million in bank loans by 2035

IMPACT

- Reduction in GHG emissions of 175,000 tCO₂e by 2025
- Reduction of average energy cost for garment manufacturing by 20%
- Creation of green jobs
- Improved air quality

FUNDING SOURCE:



PROJECT PARTNER:

