



# LOW-CARBON DEVELOPMENT FOR PRODUCTIVITY AND CLIMATE CHANGE MITIGATION THROUGH THE TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY (TEST) METHODOLOGY

## BACKGROUND

The United Nations Industrial Development Organization (UNIDO), in close collaboration with the Ministry of Industry, Science, Technology and Innovation (MISTI) and Ministry of Environment (MoE), is implementing the project “Low-Carbon Development for Productivity and Climate Change Mitigation through the transfer of Environmentally Sound Technology (TEST) Methodology”. The Project is funded by Global Environment Facility (GEF). The implementation of the project supports the Program for Country Partnership (PCP) in addressing the crosscutting issues which are Resource Efficient and Cleaner Production (RECP) and Energy Efficiency, Innovation and Technology Transfer, Environmental Management and Climate Change.

Cambodia’s industrial sector represents more than 36.5% of national GDP in 2019 and is forecasted to continue with a dynamic growth. This sector is a key driver of economic development; however, rapid industrialization is placing increased pressure on the environment and community that must be addressed. In this regard, Industrial Resource Efficiency through the incorporation of technologies, best practices, and integral management approach, has been



identified as an effective way to address problems such as GHG emissions and harmful wastewater discharges into water bodies and land.

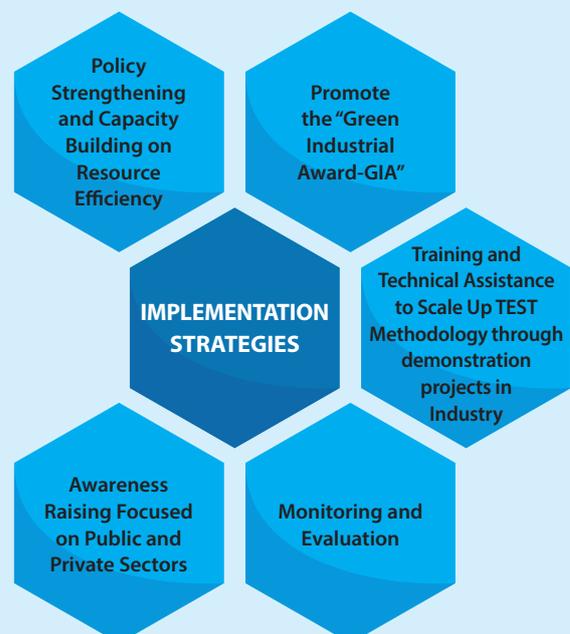
Building on the results on the pilot TEST Project in Cambodia (2011-2013) and on the extensive international experience of UNIDO, the Transfer of Environmentally Sound Technology (TEST) methodology will be introduced in a set of demonstration companies. The project aims to show that through the TEST integrated approach, companies are able to achieve increased productivity and improve economic performance, while at the same time reducing the negative impact on the environment.

## PROJECT OBJECTIVES

Reducing the long-term risks of climate change through the Transfer of Environmentally Sound Technologies in Cambodian Industries.

## IMPLEMENTATION STRATEGIES

The diagram illustrates the projects thematic components to achieve the above objective. The demonstration of TEST methodology in companies constitutes the heart of the project strategies.



## THE TEST APPROACH: TRIPLE BENEFIT FOR INDUSTRY

### ECONOMY

- Reduce production cost:
  - Save operating and raw materials
  - Reduce operating cost
- Increase productivity
- Improve competitiveness
- Optimize investment
- Improve secure long-term supply of production inputs

### ENVIRONMENT

- Compliance with national and international customers requirement, and also environmental regulation
- Reduce business risks
- Minimize cost of environmental compliance/ smaller environmental footprint
- Reduce wastes and emissions (Wastewater, Solid Waste, Hazardous Waste and GHG)

### SOCIAL

- Improve social responsibility performance
- Improve relationship with stakeholders: Investors, banks, regulatory bodies, local communities, consumer associations etc.
- Improve working condition

## IMPLEMENTATION OF THE TEST APPROACH IN THE DEMONSTRATION COMPANIES

Fifty (50) factories from the garment including laundry, textile, footwear, and the food and beverage sectors will be selected as demonstration companies and will benefit from the comprehensive project technical support. The project will provide trainings on the TEST tools, followed by the RECP assessment and energy audits of the production facilities,

which will be carried out jointly by the factory's TEST team and project experts. The assessment/audit reports will be prepared containing the identified causes of inefficiencies as well as recommended improvement measures. The project will provide support for the implementation of improvement measures as well as monitoring and evaluation of results.



### TEST METHODOLOGY

- Build on resource efficient and cleaner production (RECP) practices and technologies, following the learning cycle of Plan-Do-Check-Act.
- Enhance organizational learning and bring principles of material flows cost accounting and environmental management systems.
- Facilitate creative thinking and effective collaboration through teamwork

### TEST INTEGRATED TOOLS

- Resource Efficient and Cleaner Production
- Material Flow Cost Accounting/ Environmental Management Accounting
- Environmental/Energy Management System

## COST AND ENERGY SAVING POTENTIAL – 2019

Results from First Round Energy Audits in 15 Factories and SMEs

### Energy Efficiency Saving Measure Without Solar Photovoltaics Option



### Energy Efficiency Saving Measure With Solar Photovoltaics Option



For more information about the project and how to participate, please contact us:

Mr. Sok Narin  
UNIDO Country Representative, Cambodia  
n.sok@unido.org

Mr. SINGH, Rana Pratap  
Project Manager,  
R.P.Singh@unido.org

Dr. Rey Sopheak  
National Project Coordinator,  
S.REY@unido.org, Tel: 017668964