

GREEN PRODUCTIVITY AND CIRCULAR ECONOMY- COMPLEMENTARY APPROACHES TO SUSTAINABLE DEVELOPMENT

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MISTI ROLES AND RESPONSIBILITIES

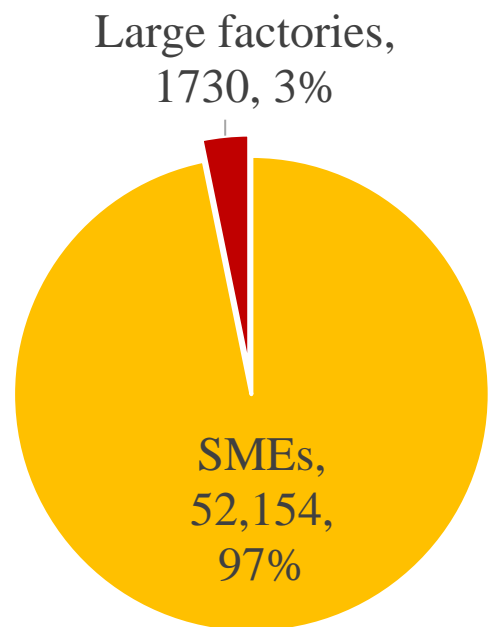
- ❖ Formulation, Coordination and monitoring of the Royal Government's overall policy, strategy, direction and plan in **industry, science, technology and innovation, including handicrafts and clean water sector**
- ❖ Leading and managing **industry, science, technology and innovation, including handicrafts and clean water at the national and sub-national levels.**
- ❖ Developing **policies and programs** for SME, factories, handicrafts, and clean water
- ❖ Coordinate, collaborate and undertake research, research and development of innovation, science and technology to support and promote the development of industry, science, technology and innovation, including handicrafts and clean water
- ❖ Encourage and support **innovation in technologies, including entrepreneurship** in industry, science, technology and innovation, including handicrafts and clean water.
- ❖ Manage, evaluate, recognize and grant **certificates, patents, useful models and industry illustrations**
- ❖ .

MISTI ROLES AND RESPONSIBILITIES (Cont.)

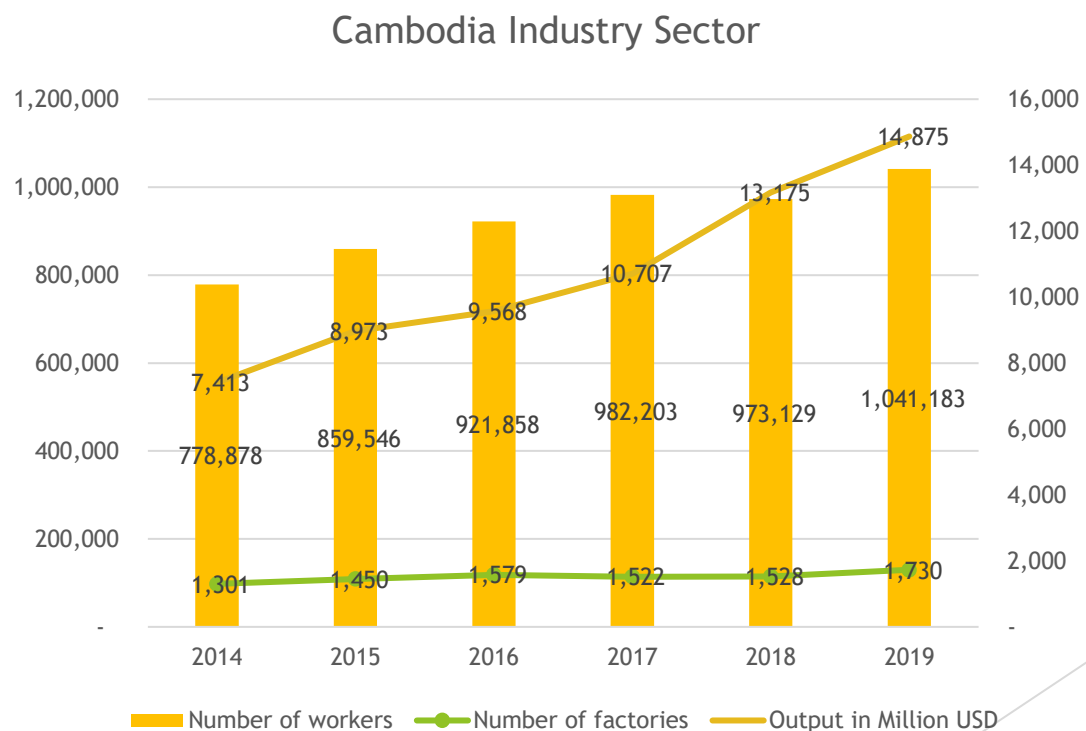
- ❖ Arrange, manage and disseminate **technology and innovation**
- ❖ Arrange, manage and disseminate **standardization and product quality assurance** work
- ❖ Technical repairs on public enterprises and public institutions established under the authority of the Ministry of Industry, Science, Technology and Innovation
- ❖ Arrange, manage, and disseminate legal work
- ❖ Develop and implement **policies to supply clean water to cities and urban areas**
- ❖ **Cooperation** with regional countries, institutions, national and international organizations, including the private sector, to promote the development of industry, science, technology and innovation, including handicrafts and clean water.

Large Factories and Manufacturing SMEs in Cambodia

- ▶ By the end 2019, there are 1730 Large factories and 52,154 manufacturing SMEs in Cambodia



Source: DGI

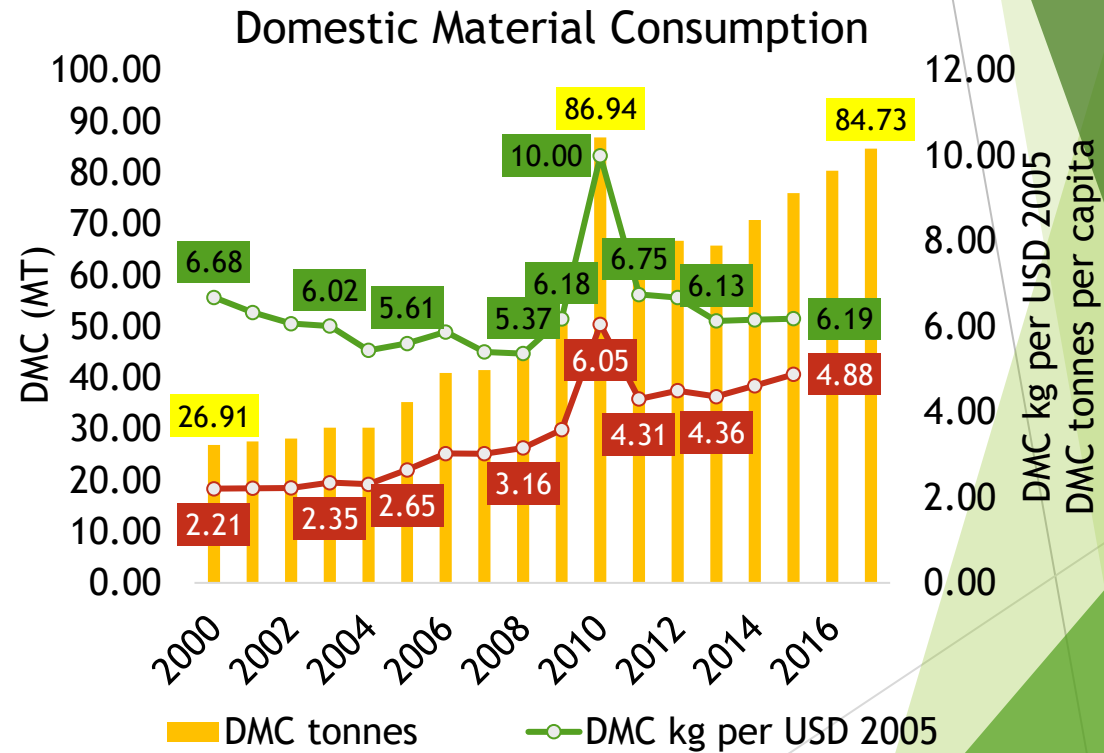


MISTI's mandates to promote RECP in industries

The resource consumption increases overtime correlated with the growth of industrial outputs.

MISTI has mandate to promote resource use in the industry sector through:

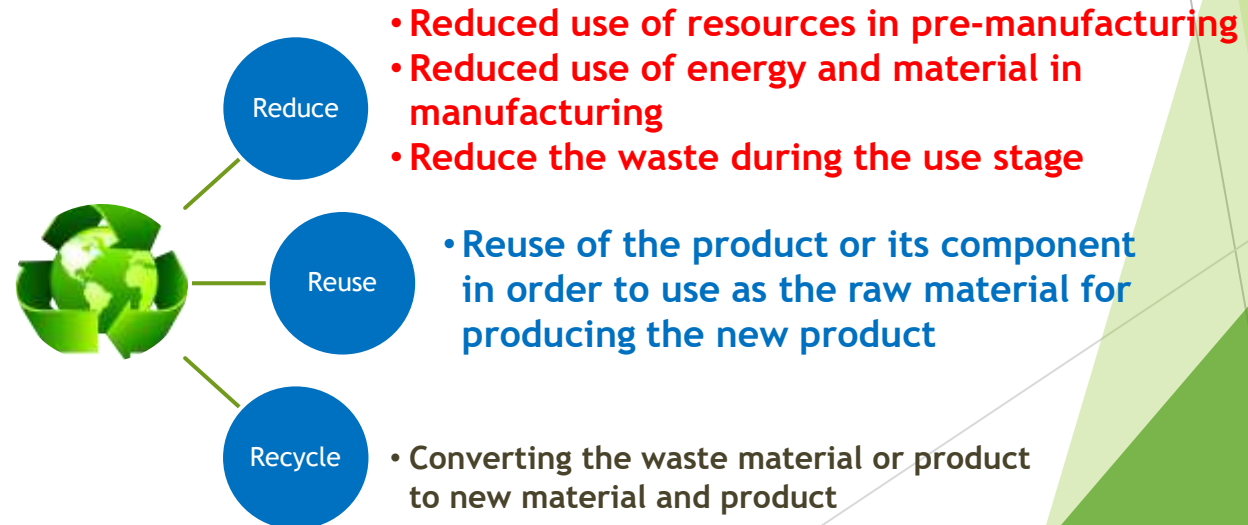
1. National Productivity Center of Cambodia (NPCC)
2. The adoption of green productivity, 5S and EMS
3. Promote the Green Industry Award.
4. Promote the adoption of green technologies.



Source: RECPSAP 2021-2030, MISTI

GP & CE & Manufacturing Industry

- **Sustainable Manufacturing:** “the creation of manufactured products that use process to minimize negative environmental impacts, conserve energy and natural resources, and also are safe for employees, communities, and consumers and are economically sound
- **Sustainability** let organization to reduce risk, avoid waste generation, increase material and energy efficiency, innovate by creating new and environmentally friendly products or services



Resource Efficiency & Cleaner Production Strategy & Action Plan RECPSAP 2021-2030, (MISTI-UNIDO Cooperation Project)

D. Cambodian Sustainable Development Goals Framework (CSDG)

Following the UN's Sustainable Development Goals (SDG), the Royal Government of Cambodia has been preparing a country focused framework: the Cambodian SDGs (CSDG). From the adopted CSDGs and indicators the following are of relevance to RECP:

- i) CSDG 6: Clean Water and Sanitation
- ii) CSDG 7: Affordable and Clean Energy
- iii) CSDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- iv) CSDG 12: Ensure Sustainable Consumption and Production patterns
- v) CSDG 13: Climate Action

Figure 46: RECP's measures and approach to low carbon growth ^[47]



Source: RECPSAP 2021-2030, MISTI

RECPSAP 2021-2030...

RECP implementation in Cambodia has traditionally relied on project-based interventions and needs a long-term program-based support, for which the mainstreaming the RECP into government's programs is necessary




Addressed by RECP SAP	Policy framework	Implementation
Material Efficiency	<ul style="list-style-type: none"> Lack of regulations on key RECP concepts Lack of specific standards for reused/recycled/remanufactured products 	<ul style="list-style-type: none"> Second-hand industrial equipment leaves little scope for optimizing design No monitoring and reporting of resource use/recovery/recycling Limited economic incentive for material efficiency Limited capacity of industries to use recycled inputs
Circular economy and waste management	<ul style="list-style-type: none"> Draft of National Circular Economy Strategy and Action plan is under preparation E&NR code is under preparation No regulation to minimize Single Use Plastic for packaging 	<ul style="list-style-type: none"> Constrained waste management budgets of industries: Infeasibility of cost-plus model of waste processing for certain types of wastes Low economic incentive to expand markets for alternative products Limited presence of Eco-Industrial Parks/clusters Limited progress on green procurement and ecolabelling
Energy Efficiency and Emission reduction	<ul style="list-style-type: none"> Draft of National Energy Efficiency Policy is being revised Resource efficiency and cleaner production are not accorded adequate focus in CCAPs 	<ul style="list-style-type: none"> Lack of financing program for industrial EE technologies Lack of model energy service performance contracts for the operations of ESCOs
Industrial Safety	<ul style="list-style-type: none"> No databases on the certification of industrial equipment such as boilers and motors No formal mechanisms of reporting of workplace accidents/incidents to MISTI 	<ul style="list-style-type: none"> Limited compliance of second hand imported industrial equipment/locally fabricated equipment with equipment safety standards Low awareness among the industry units Limited budgetary resources for GMP, HAACP assessments in industries
Electrification of industrial processes and fuel switching	<ul style="list-style-type: none"> Draft of key policies such as National Energy Efficiency Policy and E&NR code are being revised Lack of regulatory clarity on sustainable use of forest wood by industries 	<ul style="list-style-type: none"> Unrestrained and free access to firewood for thermal energy weakens the business case for fuel switch in industries Lack of regulatory support for the adoption of Captive Renewable Energy projects in Industries

Key next steps for the development of RECP action plan

To promote the resource efficient use in industry and SMEs sector, MISTI will:

1. To promote resource efficiency in industry and SMEs sector through:
 - a. Develop legal framework for resource efficiency promotion.
 - b. Resource consumption reporting system by large factories and SMEs.
 - c. Resource's assessment and recommendations for improvement.
 - d. Best practices for each sector of industry.
 - e. Promote the adoption of ISO 14001.
 - f. Capacity building for MISTI officers and industrial and SMEs personal.
 - g. Awareness raising and award program.
2. MISTI will work with DP and all stakeholder to promote the resource efficiency.
3. Involve private sector for resource mobilization. Develop legal framework for resource efficiency promotion

Cambodia Green Industry Award, 2022

 POTENTIAL TARGET GROUP			 GIA SELECTION CRITERIA (Focus Areas)	
<<< Large Industry/Company and SME >>>				
Manufacturing Companies	Industrial Supporting Services	Green start-ups and Innovation		
<ul style="list-style-type: none"> • Garment & footwear sector • Food & beverage sector • Construction material sector • Agro-Industrial sector • Chemical industrial sector 	<ul style="list-style-type: none"> • Special Economic Zone • Industrial Park • SME Cluster Zone 	<ul style="list-style-type: none"> • New industry & business model are emerging in sustainable energy & climate technology sectors 		
 WHAT TO APPLY ?				
<p>A specific environmental project that has demonstrated significant leadership in a focused area through the activity or set of activities which have been realized within the company in the last two years.</p>				
			1. Material Efficiency (SME)	9. Investment Versus Saving (SME)
			2. Waste Management and Recycling (SME)	10. Relative Investment (SME)
			3. Energy efficiency and renewable energy (SME)	11. Job Creation (SME)
			4. Water Efficiency (SME)	12. Personnel (SME)
			5. Wastewater Treatment	13. Working Place and Industrial Safety (SME)
			6. Emission to air	14. Gender (SME)
			7. Environmental Management program	15. Community (SME)
			8. Innovation	

Outstanding Enterprise and Handicraft Companies received **32 awards** and **13 commendation certificates** out of 67 companies that implemented successfully the Green industry and the “5S” method.

Other Relevant Regulations And Action Plan

- 1/ Resource Efficiency and Cleaner Production (RECP) and Action plan for Industry and SME Sectors 2021- 2030 (Strategy & Action Plan)
- 2/ Pollution Control and Industrial Waste Management (PCM). (Draft)
- 3/ National Energy Efficiency Policy. (Draft)
- 4/Cambodian Green Industry Award.



THANK YOU FOR YOUR ATTENTION!

