

*As part of the SwitchMed programme, UNIDO supports industries in the Southern Mediterranean through the transfer of environmental sound technologies (MED TEST II) to become more resource efficient and to generate savings for improved competitiveness and environmental performance.*

## Morocco

### COCHEPA

#### Chemical sector

#### Context

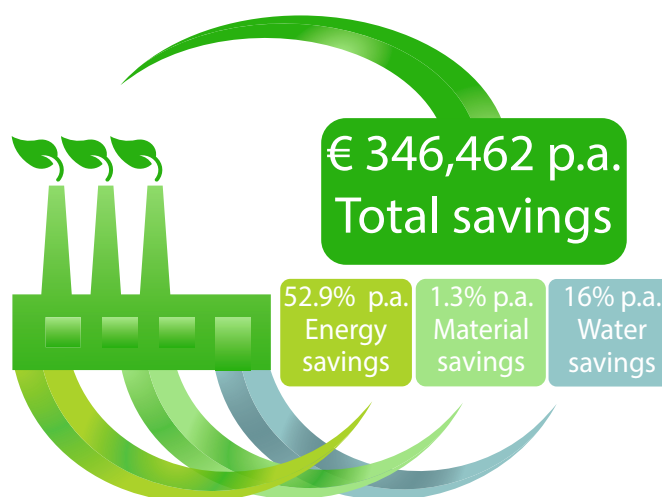
Number of employees: 90

Key products: Paper and Plastic Bags, Valve Bags, Open Glued, Flat, with Hexagonal Bottoms, Polyethylene Film Bags, Tarpaulins and Irrigation Shafts.

Main markets: Local and international (Western Europe, Middle East, Africa).

COCHEPA (Compagnie Chérifienne d'Emballages en Papier), established in 1942, one of the leading packaging companies in Morocco, specializing in the manufacture of large and medium-sized bags, films and sheaths. Its vast experience ensures a mastery of the entire production chain, a production unit fully operational to design, develop and produce any type of paper or plastic bag (cement, plaster, lime, flour ...). ISO 9001, ISO 18000 and ISO 26000 certified, COCHEPA focuses its efforts on social responsibility while respecting the environment.

#### Benefits



Graphic: UNIDO

The MED TEST II project identified opportunities for total annual savings of € 346,462 in raw materials, water and energy for a projected investment of € 412,850. The average return on investment period for the identified RECP measures is 1.2 years. All the identified measures have been accepted by management and are currently being implemented. Of these, however, three (3) require additional studies.

Through the improvement and optimization of production and the installation of more efficient equipment, these measures adopted will reduce energy consumption by 52.9%, water consumption by 16% and raw material consumption by 1.3%. The environmental benefits obtained by photovoltaic power generation, better management of effluents and waste, training and qualification of personnel and installation of a water and energy management system will reduce annual expenses and reduce CO<sub>2</sub> emissions by 52.9% (590 t).

## Saving opportunities<sup>1</sup>

Action	Economic key figures			Resource savings & Environmental impacts per year		
	Investment euro	Savings euro / Yr.	PBP Yr.	Water & Materials	Energy MWh	Pollution reduction
Optimizing consumption of energy and utility	13,648	11,291	1.2	-	60	Total: 590 t CO <sub>2</sub> 107 m <sup>3</sup> waste water 131 t solid waste
Energy and water management system	15,038	5,426	2.8	120 m <sup>3</sup> water	58	
Production optimization tools	29,021	275,985	0.1	110 m <sup>3</sup> water 131 t raw materials	15	
Photovoltaic installation	355,143	53,760	6.6	-	670	
<b>TOTAL</b>	<b>€ 412,850</b>	<b>€ 346,462</b>	<b>1.2</b>	<b>131 t raw materials 230 m<sup>3</sup> water</b>	<b>803 MWh</b>	

<sup>1</sup> Numbers based on production value from 2015

### Optimizing consumption of energy and utilities

Energy consumption will be reduced through measures aimed at optimizing contracted power, improving lighting performance by installing LED appliances, real-time monitoring of the plant's electricity demand and repair of leaks in the compressed air network will also help reduce energy consumption. In addition, the company will gradually replace electric motors with high efficiency motors.

### Energy and water management system

Installation of an electrical energy management system to implement the standard ISO 50001 on the management of energy will, by identifying the consumption drifts related to production, make substantial gains by reducing energy consumption while improving the company's environmental record.

### Production optimization tools

Productivity will be improved through measures such as introduction of a preventive maintenance plan, quality control of incoming paper, optimization of format change by SMED method, analysis and reduction of downtime.

### Photovoltaic installation

The independent production of photovoltaic energy (465 kWp) will cover more than 44% of the annual consumption of the company.

## For more information, contact:



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