

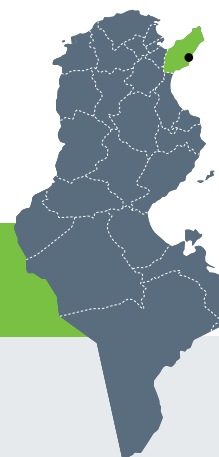
The Tunisian Cleaner Production Project (TCPP) is an initiative based on an approach laid by the United Nations Industrial Development Organization (UNIDO) with technical and financial support from Switzerland. The TCPP is co-financed by Switzerland's State Secretariat for Economic Affairs (SECO) and Tunis International Center for Environmental Technologies (CITET). CITET is in charge of its implementation with help from the Swiss environmental consulting firm, SOFIES.

With a budget of approximately 2.5 million €, the project is set to last 5 years (2010-2015). The TCPP's objective is to build national capacities in terms of environmental engineering tools, methods and technologies while strengthening the competitiveness of Tunisian companies.



Gonser Textile Treatment (GTT)

Korba, Nabeul



Case Study

Textile Sector

Company Overview

Gonser Textile Treatment (GTT) is a Tunisian, export-based enterprise that specializes in the washing and treatment of clothing materials. The company employs 700 workers that handle over 40,000 units a day for revenues totaling 5.6 million € per year.

GTT is part of a group of 20 enterprises that integrated the first phase of the Project in order to improve environmental performance and productivity. At the start of the project, the enterprise had already been certified ISO 9001 as well as OEKOTEX 100 product class II; it is now also certified OHSAS 18001 and has recently passed to a more strict certification OEKOTEX 100 product class I.



Source : M. Fritsch - emac

Benefits: environment, competitiveness and capacity building

Project experts have identified measures that directly address water and energy consumption and bring 115,000 € in annual savings stemming from an initial investment of 389,000 €. Payback periods vary between 1.3 and 5.5 years.

Energy savings come first and foremost from the installation of electricity meters linked to an automated accounting system.

The construction of a basin to harvest rainwater will provide a significant additional source of process water. Furthermore, reusing more wastewater can cut approximately 150,000 m³ of effluents per year. These procedures will render GTT less dependent on national water distribution networks, which is especially important in the face of possible restrictions on water consumption.

The company is also taking measures to improve the efficiency of its washing machines. It has invested in an ozone machine and four additional short cycle machines, which further limit the total consumption of water and energy.

Beyond the economic and environmental benefits, the project allowed the company to develop its expertise and know-how in terms of best practices and clean technologies related to eco-efficiency renewable energy production.

Saving opportunities and environmental impacts

	Action	Savings (€/year)	Investment (€)	Payback Period	Resource savings and environmental impacts
1	Installation of water and energy meters and sub-meters	9'400	12'000	1.3 years	Better resource management.
2	Installation of an automated accounting system	10'000 - 20'000	To be determined	To be determined	Better resource management.
3	Construction of rainwater harvesting basin	1'850	10'200	5.5 years	Recuperation of 4000 m ³ rainwater per year.
4	Improving wastewater treatment and recycling	103,000	365,000	3.5 years	Recycling of 150,000 m ³ water per year.
5	Installation of solar photovoltaic panels	17'900	247'700*	13.8 years*	Decrease in use of fossil fuels.

* Scenario taking into account existing subventions

Action 1

The installation of meters (4 water meters and 12 electricity meters) allows more control over consumption flows and lead the company to cut its overall costs for water and electricity by 2%.

Action 2

Installing meters is useless without an adequate system to process data. An automated accounting system should be synced with the installed meters in order to track intake and transform the information into easily digestible reports. Compiling consumption data produces a representative energy statement that can help with locating leaks, proving savings, benchmarking, and even achieving environmental certification.

Action 3

The proposed solution involves the construction of a basin to collect and filter rainwater on 8,500 m² of open roof space. The potential feed rate of the basin is 4,000 m³ per year. The basin also provides a diversity of supply, which becomes especially important in the face of potential groundwater depletion and usage restrictions.

Action 4

The proper treatment and reuse of water can lead to significant reductions in the water bill which currently stands at 135,000 € per year. Redirecting effluents coming from the dyeing and special treatment processes towards the wastewater treatment system so that they can be treated and reused in production processes can save the company 103,000 € per year.

Action 5

Installing 1000 m² of solar PV panels is intended to produce 226,000 kWh/year, which is about 15% of the company's total consumption. The high initial cost of installing solar PV panels is justified in the long term by the predictable increase in electricity prices and the consecutive increase of the feed-in tariff, but also by significant reductions in CO₂ emissions, a step toward energy autonomy, and a greener image of the company.