

Adopting safer chemical management in the fashion value chain

Business case:

La société tunisienne de Vêtement de Travail et de Loisirs (VTL) Tunisia

Context

As part of the regional EU-funded SwitchMed programme, the MED TEST III project supports industries in the Southern Mediterranean to improve their environmental performance and competitive advantage. Together with the Zero Discharge of Hazardous Chemicals (ZDHC) Foundation, a mission-driven multi-stakeholder initiative for the textile, apparel, leather and footwear industry, the United Nations Industrial Development Organization (UNIDO) has undertaken pilot projects in Egypt, Morocco and Tunisia to demonstrate the way forward for phasing out hazardous chemicals in the textile industry's value chain.

This project aimed to demonstrate and document the business case of implementing a sustainable Chemical Management System (CMS) in the textile-finishing industry in line with the ZDHC Guidelines. An initial training on ZDHC Sustainable Chemical Management and Wastewater Management for company staff was rolled out (2020-2021) targeting 37 production facilities in the three countries, followed by the launch of six industry pilot project (2021-2022), offering technical assistance to improve chemical and wastewater management systems in the production facilities. Additional 15 companies have been supported through training and capacity building actions, leading to the preparation of country roadmaps to extend the adoption ZDHC guidelines within the textile-finishing sector.

Company overview

Main production processes: Knitting, printing, cutting, sewing, ironing, screen printing, pad print, embroidery, dyeing, washing, jeans special effects, sublimation, heat transfer control, finishing and packaging.

Number of employees: 5,600

Number of staff trained: 7

La société tunisienne de Vêtement de Travail et de Loisirs (VTL) is a public limited company that was established in 1981. It comprises ten production units, including seven cutting and sewing units, one screen printing unit, one knitting, dyeing, printing and finishing unit, and one washing and jeans special effects unit. The company produces 20 million garments and 14 million meters of knit fabric annually. With over 40 years of experience, the company is fully dedicated to the export market. VTL continues to expand its vertical integration and production expertise.

Improving chemical management systems, policies and safety procedures

At the start of the project, VTL lacked a chemical purchasing policy and Standard Operating Procedure (SOP) for their Wastewater and Effluent Treatment Plant (ETP) that is aligned with the ZDHC Guidelines. However, during the pilot project, recommendations were shared to modify the existing procedure and meet the ZDHC CMS Technical Industry Guide (TIG) standards.

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Thanks to the CMS implemented during the Switchmed Project, the VTL team are now able to manage any deviation related to chemical use with much more efficiency. As the textile industry is changing, we need to use safer chemicals. VTL is committed to this.

Mr. Mohamed ELBEY
CSR Director VTL Group

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By the end of the project, the chemical purchasing policy was reviewed by team members, and completely renewed to become compliant with the ZDHC Guidelines. VTL is particular about supplier onboarding and only accepts those who meet their Purchasing Policy, leading to an increase in the percentage of chemicals used that are in conformance with the ZDHC Manufacturing Substances List (MRSL). This is a list of chemicals restricted from intentional use by manufacturing facilities during the production process in the textile, apparel, leather and footwear industry.

Although VTL had a Chemical Inventory List (CIL), it did not include all the chemicals used in their various factories, and the list did not comply with the ZDHC Guidelines. The SwitchMed pilot project helped VTL to adapt the CIL template to meet the ZDHC CIL standard that provides more details on their chemical inventory.

Additionally, the project provided VTL staff with ETP management training and ZDHC Wastewater Management training. Consequently, SOPs were introduced for the wastewater treatment plant and the ETP. A new ETP with recycling option is in the installation phase and will be accompanied with an In-House monitoring via an internal lab entity to better assess the ETP performance.



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As part of the EU-funded SwitchMed programme, UNIDO demonstrates in the MED TEST III project pathways for industries in the Southern Mediterranean to become more resource efficient and to generate savings for improved competitiveness and environmental performance.

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Relationship with chemical suppliers and registration of chemicals on the ZDHC Gateway

At the beginning of the project, the chemicals used in VTL's production were already registered on the ZDHC Gateway, the world's largest database of safer and innovative chemistry for the textile, apparel, leather and footwear industry. During the pilot project, VTL contacted 16 chemical suppliers to request data sheets of chemicals not yet registered on the ZDHC Gateway but still in use at the facilities.

VTL successfully engaged with several chemical suppliers and registered 13 new products on the ZDHC Gateway. A Corrective Action Plan (CAP) was set for the chemicals remaining in the CIL, and actions have been taken to change chemical products or suppliers if they insist on not registering their products on the ZDHC Gateway.

By the end of the SwitchMed pilot project, the percentage of ZDHC MRSL conformant chemicals has increased, and four additional chemical formulators of VTL are now registered on the ZDHC Gateway, tallying 15 VTL suppliers. VTL operates now in conformance with the ZDHC Manufacturing Restricted Substances List (MRSL).

Chemical products registered on the ZDHC Gateway Chemicals suppliers on the ZDHC Gateway

Total and %	New	Total	New
414 – 93%	13 (~20*)	11	4

* in the () data provided by the company in the self-declaration of the evaluation questionnaire v.s what indicated in the CIL

Substitution of high-risk hazardous chemicals

Substitution is a best practice solution for reducing health and safety risks from chemical use and discharge. However, substituting chemicals requires time. Therefore, other actions that can further assist in the reduction of risks should also be taken into account and implemented, such as, better handling and storage conditions, reducing the quantities of chemicals stored in the factory, better monitoring of Wastewater testing, and better use of Personal Protective Equipment (PPE). VTL has fully exploited all such available options and has adopted them into their business practice.

During the pilot, the VTL team performed a risk analysis using a methodology with the following formula:

$$\text{Risk} = \text{Gravity} \times \text{Frequency}$$

This formula was established to assign a hazardous level score to each of their chemicals. The gravity score defines whether the product is registered on the ZDHC Gateway, and if so at which level. In contrast, the frequency score is evaluated based on the use frequency, the stored quantity and the quality of available PPE for each hazard. The resulting priority list revealed several instances for substituting chemical products. Although the substitution process was initially problematic for VTL, also due to the higher cost for alternative chemicals, VTL has, to this date, managed to replace two hazardous chemicals according to the adopted purchasing policy and the ZDHC MRSL Guidelines.

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Wastewater testing and conformity

Wastewater testing was not part of and not required during the pilot project. Still, it is an essential component of the ZDHC Guidelines and is often requested by international brands independent of their involvement with the ZDHC Foundation.

In April 2022, VTL took part in the wastewater testing rounds of the pilot project. The testing was conducted by a ZDHC accredited sampler and the results were analyzed by a ZDHC approved laboratory. The test report met all ZDHC requirements, including test methods, limits, and testing approaches. The report has been published on ZDHC Gateway Wastewater Module.

By sharing the results on the ZDHC Gateway Wastewater Module, textile suppliers can showcase their performance to ZDHC Signatory Brands. The Clearstream Report, which summarizes all wastewater parameters with statistical graphs, is a standardized tool that provides an easy-to-understand overview for textile suppliers.

Three non-conformities according to the MRSL parameters were detected in the test and the VTL team developed an action plan to determine which chemicals can be the source of the non-conformity. Chemicals testing and substitution are the main corrective actions planned.

Brand relationship

VTL sees adapting to the ZDHC Guidelines as an opportunity to attract new clients and strengthen existing relationships. By producing more sustainably, they can meet the expectations of ZDHC Signatory Brands and other brands. During audits, several brands have acknowledged VTL's achievements in the SwitchMed pilot project and expressed satisfaction with their level of compliance. Some brands have even requested Supplier to Zero Certificates or ChemCheck certification for formulations. ZDHC Supplier to Zero helps suppliers improve their sustainable chemical management, reducing risks and costs. The ChemCheck report assures customers that products meet ZDHC MRSL requirements.

Since the completion of the SwitchMed pilot project, VTL has established connections with three new brands, including G-star, Decathlon, and Hugo Boss. The VTL team is proud of their accomplishments during the project and continues to prioritize chemical management with recent investments in the ETP lab and established systems.

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Thanks to the UNIDO project, VTL has new tools that can help showcase our commitment to produce in line with brand expectations, such as ZDHC Training Certificates. Improving and building customer relationships is essential to VTL's future.

Mr. Abdallah Guedess
Technical Director, VTL Group

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