



the Textile sector

The European Union's LIFE (Financial Instrument for the Environment) programme has played an important role in demonstrating innovative approaches to sustainable production in European businesses and industries. Since 1992, a number of projects co-financed by LIFE (including its current phase LIFE+) have dealt or are dealing with environmental challenges relating to Europe's textile sector. Clothing and textile products affect the environment to varying degrees throughout their life cycles through the use of chemicals, solvents and large quantities of water. Other environmental impacts are from energy usage, the production of gas emissions, solid wastes and odours etc. With LIFE co-funding, projects have successfully tackled many of these issues, testing and improving innovative solutions and highlighting best practices to help Europe's textile companies minimise their environmental pollution.

Two projects are briefly presented here, and a list of 15 recent textile and clothing projects is attached. Direct links to detailed information (summary, project website, layman's report, etc.) on each of these projects can be found at: <http://ec.europa.eu/environment/life/themes/industry/lists/textile.htm>

LIFE05 ENV/IT/000846

Best Available Technique for water reuse in Textile (BATTLE)



The main negative impacts of the textile manufacturing sector on the environment are linked with primary water consumption and wastewater discharge, characterised by large amounts of organic chemicals and colouring agents, low biodegradability and high salinity. Prior to the launch of the BATTLE project, no company was implementing the full-scale recovery of effluents for reuse in production, although several successful research projects and pilot experiences had explored this option. According to the IPPC Directive, the best available technologies (BATs) for the textile sector, described in the BREF reference document, should be implemented by all large companies and also by SMEs with a production capacity of over 10 tonnes/day.

The project's main aim was to design and apply a new BAT for efficient wastewater reuse in the textile sector. The feasibility of the technology was demonstrated

successfully on a pilot scale: (approximately 500 cubic metres of effluent daily were treated at a wastewater treatment plant (WWTP) using membrane technology, producing an average 374 m³ of recovered water). When scaled up, the plant has the capacity to treat 1 000 m³ /day.

The results confirmed that the wastewater can be successfully collected and treated directly at a WWTP for reuse in finishing processes. The technology was tested in a typical medium-sized textile finishing company, Stamperia di Martinego (a project partner). Importantly, the quality of the recovered water also meets Water Framework Directive targets for water volume to reuse. The technology is highly replicable and provides a model for other textile companies.

For more information: www.life-battle.bologna.enea.it/

LIFE05 ENV/E/000285

Alternatives for waste volume reduction in the textile sector through the application of minimisation measures in the process and in the consumption (RESITEX)



A Spanish LIFE project, RESITEX, was established to identify specific ways in which waste can be managed and reduced in the textile-finishing sector. This sector, which includes printing and dyeing, has the greatest scope for environmental savings. The beneficiary, AITEX, together with ten textile companies in Spain and Portugal worked together to gather such knowledge, which forms the basis of the document "Procedure for Waste Management in the Textile Sector" – a reference point providing practical and specific advice on reducing waste and saving costs.

Advice in the guide is divided into three categories:

1. Identification, classification and description of wastes produced by the four different textile industry subsectors: spinning, weaving, clothing and finishing.
2. Identification, classification and description of specific waste reduction technologies applicable to the four subsectors.

3. Identification of general waste minimisation technologies for the textile industry.

The identification and dissemination of these best practices should help Europe's textile finishing companies to reduce their waste. Such measures could also help other textile companies to comply with increasing environmental requirements, while keeping costs down. Cost will become an increasingly important factor as the sector faces greater competition from producers in China and India.

Furthermore, the project's results are applicable to the whole industry including spinning, weaving and clothing, as well as being transferable across Europe.

For more information: www.aitex.es/en/home.html



Projects in the textile industry

Selective list

DE - DEUTSCHLAND

LIFE05 ENV/D/000195

Sustainable, AOX-free Superwash Finishing of Wool Tops for the Yarn Production' (SuperWool)

Beneficiary: RICHTER - Färberei und Ausrüstungs-GmbH

Website: www.superwool.de

[Project summary](#)

LIFE06 ENV/D/000471

'Environmentally Friendly Facade Elements made of thermal insulated Textile Reinforced Concrete (INSU-SHELL)' (INSU-SHELL)

Beneficiary: Rheinisch - Westfaelische Technische Hochschule Aachen

Website: www.life-insushell.de/

[Project summary](#)

ES - ESPAÑA

LIFE00 ENV/E/000506

'Demonstrative project of an innovative system to prevent the voc emissions generated by the industry' (VOCFREE)

Beneficiary: Lubrizol Advanced Materials Manufacturing Spain SL

[Project summary](#)

LIFE00 ENV/E/000545

'Prototype demonstration of dyeing with the application of clean technologies in the reduction of the colorant' (Electric reduction)

Beneficiary: Argelich Termes y Cia S A

[Project summary](#)

LIFE03 ENV/E/000102

'Water Purification Tertiary Treatment using Photo-oxidation at semi-industrial scale (FOTOTEX)'

Beneficiary: AITEX - Asociación de Investigación de la Industria Textil

Website: www.aitex.es/en/home.html

[Project summary](#)

LIFE03 ENV/E/000166

'Direct reutilization of dye baths and self-monitoring of the process 'on line'' (DYEING BATH REUSE)

Beneficiary: Universitat Politècnica de Catalunya (INTEXTER)

Website: www.upc.es/ctt

[Project summary](#)

LIFE05 ENV/E/000285

'Alternatives for waste volume reduction in the textile sector through the application of minimisation measures in the process and in the consumption.' (RESITEX)

Beneficiary: AITEX - Asociación de Investigación de la Industria Textil

Website: www.aitex.es/en/home.html

[Project summary](#)

LIFE07 ENV/E/000794

'Legionellosis: risk reduction to public health from environmental sources using biotechnology in the textile sector.' (TEXLEGIO)

Beneficiary: AITEX - Asociación de Investigación de la Industria Textil

Website: <http://lifelegionela.aitex.es/index>

[Project summary](#)

FR - FRANCE

LIFE05 ENV/F/000070

'Appropriate Clean technology: process of electromagnetic textile ennoblement aiming at to decrease the aqueous pollution' (METTE)

Beneficiary: Analyses, Mesures, Pollution (AMP Bureau d'études)

Website: www.amp-info.com

[Project summary](#)

GR - HELLAS

LIFE03 ENV/GR/000204

'Introduction and Promotion of the ECO-LABEL to the greek textile industry (ECO-TEXTILE)' (ECO-TEXTILE)

Beneficiary: HELLENIC FASHION INDUSTRY ASSOCIATION

Website: www.greekfashion.gr/english/

[Project summary](#)

IT - ITALIA

LIFE04 ENV/IT/000583

'Sustainable water management in the textile wet industry through an innovative treatment process for wastewater reuse' (PROWATER)

Beneficiary: Next Technology Tecnotessile - Società Nazionale di Ricerca Tecnologica s.r.l.

Website: www.tecnotex.it/prowater

[Project summary](#)

LIFE05 ENV/IT/000846

'Best Available Technique for water reuse in Textile SMEs' (BATTLE)

Beneficiary: Ente Nazionale per le Nuove tecnologie, l'Energie e l'Ambiente

Website: www.life-battle.bologna.enea.it

[Project summary](#)

LIFE07 ENV/IT/000439

'Advanced Purification Of Industrial And Mixed Wastewater By Combined Membrane Filtration And Sonochemical Technologies' (PURIFAST)

Beneficiary: Next Technology Tecnotessile Società Nazionale di Ricerca s.r.l.

Website: <http://purifast.tecnotex.it/>

[Project summary](#)

NL - NEDERLAND

LIFE00 ENV/NL/000797

'Demonstration Textile CO2 Treatment Introduction Validation Effort' (DETECTIVE)

Beneficiary: Krom Stomerijen B.V.

Website: www.krom.nl

[Project summary](#)

PT - PORTUGAL

LIFE07 ENV/P/000625

'Environmental performance indicators and their relation with economic factors in textile BAT implementation' (BATinLoko)

Beneficiary: Centro Technologico das Industrias Têxtil e do Vestuário de Portugal

[Project summary](#)

FUNDING OPPORTUNITIES

LIFE+ (2007-2013)

LIFE+ is the current phase of the LIFE programme and has a total budget of €2 143 million for the period 2007-2013. Every year a call for project proposals is launched for its three components: Environment Policy and Governance; Information and Communication; Nature and Biodiversity. The first two are the most relevant for the textile and clothing sector. <http://ec.europa.eu/environment/life/funding/lifeplus.htm>

CIP (2017-2013)

With small and medium-sized enterprises (SMEs) as its main target group, the Competitiveness and Innovation Framework Programme (CIP)

supports innovation activities (including eco-innovation), provides better access to finance and delivers business support services in the regions. The programme runs from 2007 to 2013 with an overall budget of €3 621 million. The eco-innovation market replication projects support the market uptake of innovative products, services and technologies that can make a better use of natural resources and reduce the ecological footprint. http://ec.europa.eu/environment/eco-innovation/index_en.htm

Further useful information

For all information on LIFE: <http://ec.europa.eu/life>

For all information CIP: http://ec.europa.eu/cip/index_en.htm