



COLLECTION OF GOOD PRACTICES

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CONTENT

1. INTRODUCTION	2
2. PURPOSE OF THE GUIDE.....	3
3. THE IMPORTANCE OF WATER FOOTPRINT REDUCTION IN THE TEXTILE INDUSTRY	4
3.1. The need to reduce the water footprint	6
3.2. Benefits of adopting good practice	6
4. EXAMPLES OF AVAILABLE TECHNIQUES FOR REDUCING WATER CONSUMPTION AND EFFICIENT WATER USE.....	7
5. STAFF TRAINING	10
6. REWAFT PROJECT ACTION PLANS	12
7. CONCLUSION	17
8. ACKNOWLEDGEMENTS	18
9. ANNEX – ACTION PLANS.....	19
10. REFERENCES	56



1. INTRODUCTION

The textile industry is characterised as an industry that consumes large amounts of water throughout its production chain, from the obtention of raw materials to the delivery of the product to the consumer. This consumption has increased significantly in recent years due to phenomena such as 'fast fashion', which has led to an increase in the production and sale of textile products. The main aspects of this problem are:

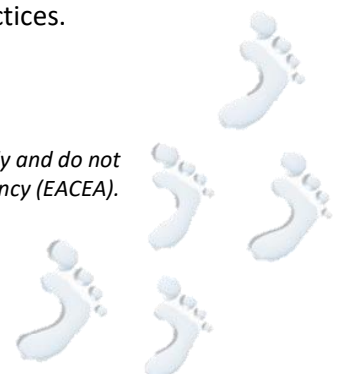
- Excessive water consumption: Textile production is extremely water-intensive. For example, it is estimated that around 2.700 litres of water are needed to produce a cotton T-shirt, from growing the cotton to the final product. The dyeing, washing and finishing processes also consume large amounts of water. This massive consumption not only depletes local freshwater sources, but also contributes to water scarcity in vulnerable regions.
- Water pollution: The textile sector is one of the largest water polluters due to the chemicals, dyes, salts and other toxic substances used in the industry and discharged into wastewater.
- Impact on vulnerable regions: Many textile factories are located in developing countries where environmental regulations may be less stringent and water availability is already limited. In these locations, the intensive use and pollution of water by the textile industry exacerbates water scarcity and endangers local communities that depend on these water sources for their basic needs.
- Operational efficiency: Inefficiency in water use is a common problem in many textile industries. Outdated technology and poor management practices lead to excessive water consumption, increasing operating costs and wasting a vital resource.
- Legislation and compliance: Environmental regulations are becoming increasingly stringent around the world. Textile companies that fail to comply can face financial penalties, operational restrictions and reputational damage.

There is an urgent need for the textile industry to take responsible action on water use in order to preserve the environment, especially due to the increasing demand for textile products in recent decades.

The water footprint is presented as a key environmental indicator that measures the total amount of freshwater used to produce goods and services and provides information on the environmental impact of the textile industry.

The REWAFT project, funded by the European Union's Erasmus+ programme, aims to raise awareness and train students and professionals in the textile sector in water footprint measurement and the implementation of sustainable water use practices, and to establish partnerships between academia and industry in this area. Project outputs include the development of a model and online tool for measuring water footprint, seminars for students, an online training course for textile company employees, and a collection of good practices for sustainable water use. The REWAFT project aims not only to quantify and measure the impact of water use in the industry, but also to provide practical solutions to reduce it and promote cultural change towards more sustainable practices.

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2. PURPOSE OF THE GUIDE

This guide aims to support textile companies in their efforts to reduce their water footprint, as well as to raise awareness and encourage companies to take action plans in their processes to reduce the water footprint of the textile sector for the benefit of the planet.

It aims to be a practical and accessible resource that addresses different aspects from the importance of reducing the water footprint in the textile industry to the implementation of efficient technologies and wastewater management that have been carried out in different projects in Europe and beyond.

In addition, it provides a set of recommendations and strategies based on experiences and case studies and practical examples of companies in the partner institutions' countries, which are already being implemented or are proposed to be implemented in the coming months, and which can be used as examples and/or be adapted to the specific needs of each company.

By following these practices, companies can significantly improve their water management, reduce costs and mitigate environmental and regulatory risks. Some of the action plans require little investment from companies, while others are more extensive and require significant investment, careful planning and implementation, but have been chosen by companies because the economic and environmental benefits are significant.

We invite all textile companies to use this guide as a starting point to develop and implement their own water footprint reduction action plans. In doing so, they will not only contribute to a more sustainable future, but also reap the many benefits of efficient and responsible water management.



3. THE IMPORTANCE OF WATER FOOTPRINT REDUCTION IN THE TEXTILE INDUSTRY

The textile industry is one of the largest consumers of water in the world. From the cultivation of raw materials such as cellulosic fibres, to the dyeing and finishing processes of fabrics, water is an essential resource. However, its intensive use and the resulting pollution present significant environmental challenges.

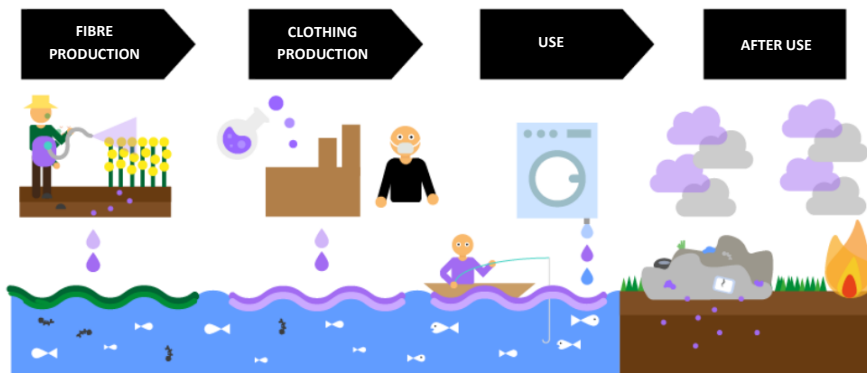


Image 1 Conventional textile production system and the use of water from the cultivation of natural fibres through the different stages of production, use and end of life. Source [AITEX](#)

Water consumption in textile processes is important due to the variety of operations that depend on it. The following is a summary of water consumption in some of the main textile processes:

- Washing and rinsing:
 - Washing: Water is used to remove impurities, oils and other contaminants from the fabrics.
 - Rinsing: This step is critical after washing and dyeing to remove residues of detergents, dyes and other chemicals. Traditional rinsing methods can consume large amounts of water.



Image 2. Industrial washing of textile products. Source [ALEXANDROS GARMENT TREATMENTS](#)

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- Dyeing and finishing:
 - Dyeing: Dyeing processes may vary in water consumption. For example, yarn reel dyeing may require between 15 and 30 litres of water per kilogramme of yarn, while post-dyeing rinsing may require between 30 and 60 litres of water per kilogramme.
 - Finishing: This process involves the application of chemicals to impart specific properties to the fabric and also uses large volumes of water.



Image 3. Textile dyeing process. Source [ECOTEXTILE](#)

- Other processes:
 - Scouring and bleaching: These preliminary processes, such as wool scouring, can consume 2 to 12 litres of water per kilogram of soiled wool.
 - Cooling: Water is also used in cooling processes when necessary.

It should also be noted that almost 90% of the organic load entering the textile process ends up in the effluent, highlighting the importance of controlling and efficiently managing the use and treatment of water in the textile industry.



Image 4. Waste water treatment in the textile industry. Source [AGUAMBIENTE](#)

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3.1. The need to reduce the water footprint

Reducing the water footprint is important for a number of reasons:

1. Environmental sustainability: Minimising water use and reducing pollution helps to protect ecosystems and maintain biodiversity.
2. Legislation and compliance: Environmental regulations are becoming increasingly stringent. Complying with these regulations not only avoids penalties, but also improves the company's image.
3. Economic efficiency: Optimising water use can reduce long-term operating costs through reduced water and wastewater treatment costs.
4. Water scarcity risks: In a world where water scarcity is a growing reality, companies that effectively manage their water resources are better prepared to face these challenges.

3.2. Benefits of adopting good practice

By implementing the good practices described in this guide, textile companies can improve on:

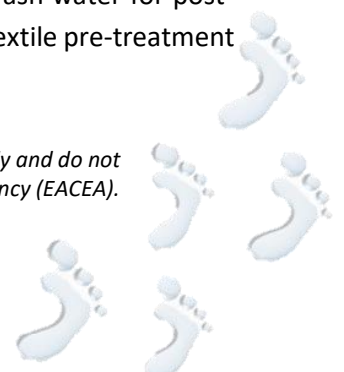
- Water conservation: The measures implemented resulted in significant water savings, which is crucial for the long-term sustainability of the textile industry.
- Cost reduction: Water reuse practices not only conserve water resources, but also result in significant financial savings for the industry.
- Improve their operational efficiency by adopting advanced technologies and optimised processes that reduce water consumption.
- Increase their competitiveness in the marketplace by demonstrating a commitment to sustainability and corporate social responsibility.
- Promote a sustainable culture by educating and training employees in sustainable practices.
- Strengthen their position with consumers, investors and regulators by demonstrating transparency and accountability in water management.



4. EXAMPLES OF AVAILABLE TECHNIQUES FOR REDUCING WATER CONSUMPTION AND EFFICIENT WATER USE

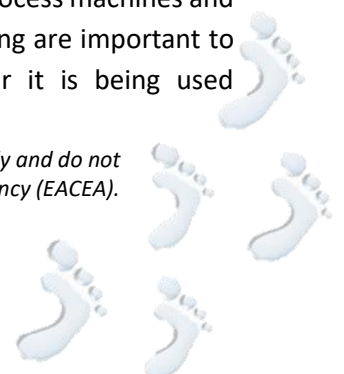
Various strategies and technologies have been implemented to reduce water consumption and adequately treat wastewater. The following are some of the most effective practices based on the 'TXT_BREF_2023 for publishing', 'Best available techniques (BAT) reference document for the Textiles Industry' and 'FabricAsia Water Efficiency' that have been implemented in various projects around the world:

- **Water Recycling and Reuse Systems:**
 - Sustainable Water Management Systems: Projects such as PROWATER have demonstrated that the integration of an effluent recycling system composed of physicochemical treatments, cross-flow ultrafiltration and ozonisation can reduce fresh water consumption by 40% on an industrial scale.
 - Advanced Treatment Processes: The PURIFAST project used an advanced wastewater treatment prototype based on ultrafiltration and advanced ultrasonic oxidation processes, achieving a colour reduction efficiency of over 90% and a reuse of 60% of the textile effluent.
 - Wastewater Treatment and Reuse: In the WASATEX project, combined techniques such as membrane bioreactors, nanofiltration, reverse osmosis and UV chemical oxidation were implemented, achieving a 62% reuse rate at the Benetton Tekstil plant in Croatia, with a theoretical recovery of up to 90%.
 - Reuse of Reverse Osmosis (RO) Plant Concentrate: Reuse of RO plant concentrate water in other processes, reducing fresh water consumption and the volume of wastewater.
- **Electrolytic Coagulation Technology:**
 - Electrocoagulation for Effluent Treatment: The EColoRO concept, demonstrated in textile plants in Belgium and Italy, uses electrocoagulation followed by membrane filtration (ultrafiltration and reverse osmosis), allowing the reuse of up to 90% of textile wastewater, with 93-96% dye and pigment removal.
- **Water Conservation Measures**
 - Reuse of cooling water from different sources: There is a lot of equipment in the textile finishing industries where cooling water is applied. This water is not contaminated and only increases in temperature and in many cases, it is finally discharged as wastewater. This water can be collected and reused in different processes that require water and residual heat.
 - Reuse of vapor condensate of caustic recovery plant: The diluted soda dilution of the mercerised product is concentrated by evaporators. The vapours are condensed in hot water through condensers. This hot water is at a high temperature of about 60 to 80°C with an alkaline pH. This water can be collected and reused as wash water for post-mercerisation washes or for pre- and post-washes of continuous textile pre-treatment

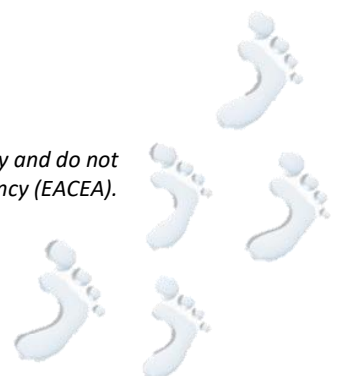


machines (desizing, scouring and bleaching) or as dilution water for the caustic soda solution, improving water use efficiency and reducing the need for fresh water.

- Reuse of water lock water from steamers: Machines equipped with steamers, at the outlet of which there is a continuous supply of fresh water which is wasted. This water is supplied to maintain a water lock so that the steam vapours could not escape from the steamer along with fabric into the atmosphere (loss of vapour and increase of ambient humidity). This is a relatively clean water stream that can be collected and reused in the washing boxes of the same machine.
- Reuse of post scouring washing Water as desizing washing: Water in the Continuous Cotton or cotton/polyester blends usually undergo continuous pre-treatment (desizing, scouring and bleaching with associated washing). In the continuous pre-treatment machine, the scouring wash water can be reused as desizing wash water, as high quality water is usually not required for desizing and the wash water from the washing section can be a good option.
- Reuse of Post-Mercerization Washes: Last post-mercerising washes contain a very low concentration of caustic soda. This water can be reused as wash water for desizing wash, post scouring wash or post bleaching wash..
- Reuse of Cooling Water of Dyeing Machines: After the dyeing process is completed, the temperature of the dye bath is reduced to about 80°C by circulating the hot bath through a heat exchanger (attached to the dyeing machine). Fresh water circulates in the heat exchanger to cool the hot bath, which is then heated. This hot water from the heat exchanger is discharged into the drain. This hot water can be reused in the process.
- Installation of Automatic Water Shut Off Valves at Rotary and Flatbed Printing Machines' Blanket Washing.
- Installation of automatic water shut off valves at rotary and flatbed printing machines' blanket washing water: The printer table blanket is washed with forced water jets. Generally, the blanket washing water at the printing machines is kept on running and wasted during machine stoppage (due to maintenance or change over). This water wastage can be avoided by installing automatic water shut off valve at the printing machines. This can save between 50 and 90 m³/day of water, with a payback time of 6 to 7 months.
- Intelligent rinsing: A method that uses lower liquor ratios and adjusts dosage to output, improving rinse efficiency.
- Optimisation of recipes and chemical use: Regularly review recipes to eliminate unnecessary chemicals and prefer those with better environmental parameters (biodegradability, low toxicity).
- Water management through monitoring: Implementation of water consumption monitoring systems to identify areas for improvement and optimise water use in all processes. Measuring water is very important for water management through the installation of flow meters at the main water turbines, at the different wet sections of the process, at the process machines and at the utilities. After measurement of water, its analysis and benchmarking are important to assess the state of water consumption in the industry and whether it is being used



inadequately in the process compared to other similar industries; as well as benchmarking water consumption per kilogram of fabric or product, and its improvement through the adoption of water conservation measures.



5. STAFF TRAINING

Staff training is also a key measure for the success of any water efficiency initiative in the textile industry. By investing in the training of their employees, companies not only improve their operational efficiency and ensure regulatory compliance, but also promote a culture of sustainability and environmental responsibility. The implementation of well-structured and continuous training programmes is therefore a key strategy for effective water footprint reduction in the textile sector. Such as:

- Knowledge of technologies and processes: Trained employees have a better understanding of advanced technologies and water recycling and reuse processes, such as reverse osmosis, ultrafiltration and electrocoagulation systems, and are able to operate them efficiently.
- Fostering a culture of sustainability: Training makes employees aware of the importance of sustainability and motivates them to adopt water-saving practices.
- The need for regulatory compliance: Well-informed employees help ensure compliance with environmental regulations, avoiding penalties and enhancing the company's reputation.
- Innovation and continuous improvement: Training fosters a continuous improvement mindset where employees are constantly looking for innovative ways to reduce water consumption and improve efficiency.

The REWAFT project has developed a range of training materials that companies can use to train their employees and build their capacity on these issues. These include seminars and an online course on the Water Footprint in the textile sector, which explains what the Water Footprint (WF) is, the importance of calculating it, and how it can be measured and reduced. Access to the platform where the educational materials are hosted is completely free and open, allowing companies and users to freely access and improve their training and skills on the Water Footprint and efficient water management in the textile industry. More information about these educational resources can be found on the project's platform: <https://training.textilewaterfootprint.eu/>

The online course on the Water Footprint in the textile sector, developed in the REWAFT Project, aims to provide participants with:

- know what the WF is and the importance of knowing and measuring it for their company and the environment;
- know how to assess it;
- be able to identify the business risks related to water and the strategic actions needed to achieve sustainable and efficient water use;
- be able to design their own water management system;

The course is characterised by:

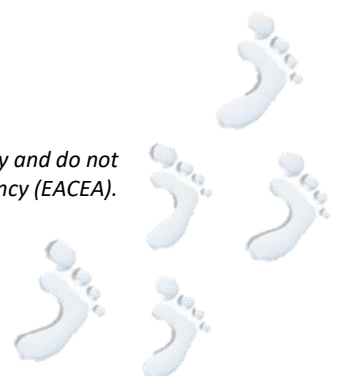
- modular: composed of 4 modules that are divided into different units with explanatory videos, support material, interactive exercises, guides and reference bibliography;
- with self-assessment exercises at the end of each module;
- flexible learning, at your own pace;
- has a duration of 25 hours;

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- Certificate of Achievement upon completion and passing the final exam.

In addition, in order for companies to know the status of their water footprint, an online water footprint calculation tool for textile companies is available on the project website to help them assess their wastewater discharges. Calculating their water footprint allows companies to have a deeper understanding of where their water dependency is, in the company's operations (direct) or in the supply chain (indirect). They can also foresee in which phase/s or stage/s they can implement measures to reduce their WF.



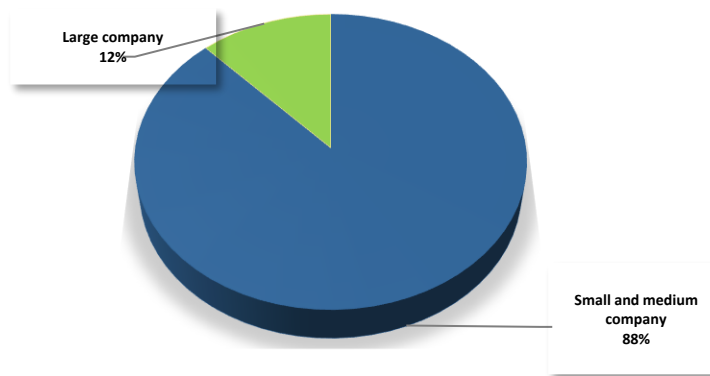
6. REWAFT PROJECT ACTION PLANS

Companies from the partner countries have participated in the Study Visits and have been enrolled in and completed the online course on the Water Footprint, as well as used the Water Footprint calculation tool to learn how and at what stages water is important for their business, assess the wastewater discharges generated and how it relates to the products they manufacture.

After completing the online course and using the calculation tool, the different companies have been invited to collaborate in identifying the problems related to water use, consumption or pollution that they face in their company, to determine why they consider it is important for their company to address these water-related problems and to indicate action plans that their company is already carrying out or to propose measures that they intend to implement in the short term. With all the information and proposals provided by the companies, a compilation of these case studies has been made, which are summarised and described below.

A total of 25 textile companies, 9 from Lithuania, 8 from Spain and 8 from Greece, participated in the elaboration of the action plans.

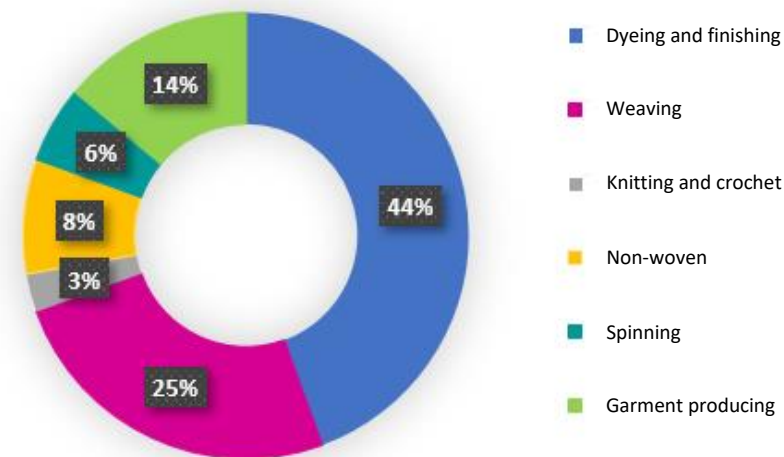
Participating companies include small, medium and large companies. Graphic 1 shows the percentage of participating companies according to their size.



Graphic 1: Size of companies that have participated in action plans

With regard to the activity carried out, taking into account that there are companies that develop different processes within their activity, graph 2 shows the processes of the industries on which the action plans and improvements to be implemented to reduce the water footprint have been proposed.





Graphic 2: Company processes in which action plans have been proposed

The participating textile companies have identified several problems related to water consumption and pollution in their production processes, such as:

- High water consumption in dyeing, washing and finishing processes: This is a recurring problem in most companies, particularly in the textile industry where wet processes such as dyeing and finishing require large volumes of water.
- High levels of pollutants in waste water: Many companies report that their processes generate wastewater with high levels of pollutants, making it difficult to treat and comply with environmental regulations.
- More stringent environmental regulations: Companies are forced to implement best practices to comply with local and European regulations on water and wastewater management.
- Water supply problems: Some companies, particularly those located in drought-prone areas such as south-eastern Spain, are experiencing difficulties in accessing water in the quantities required for their production, affecting the continuity of their operations.
- High cost of water consumption: Companies highlight that high water consumption results in increased operating costs, which negatively impacts their competitiveness and profitability.
- Difficulties in meeting customers' sustainability expectations: Customers are demanding more sustainable products and companies are challenged to reduce water consumption and improve their environmental performance to meet these expectations.
- Waste of water as a result of old or inefficient technologies: Some companies are finding that the use of outdated equipment and technologies in their processes leads to inefficient use of water with significant losses.
- Limited water reuse: Although some companies have started to reuse water in certain processes, many are still finding it difficult to implement more extensive and effective reuse systems.



- Increased water and carbon footprint: Companies also report that excessive water use not only increases their water footprint, but also contributes to increased energy consumption for heating and treating water, which increases their carbon footprint.
- Inappropriate discharges affecting water quality: Some companies are located in regions where water quality is vital to the local population, resulting in increased responsibility for industrial wastewater management.

They also see the need to address water issues for the following main reasons

- Economic savings: Many companies see reducing water consumption as a way to reduce operating costs, as large volumes of water use significantly increase costs.
- Identify and improve weaknesses in water use and pollution.
- Environmental compliance: The need to comply with stricter environmental regulations, both at local and European level, to avoid penalties and ensure business continuity.
- Reducing environmental impact: Seeking to minimise its water footprint and improve its wastewater management to reduce the negative impact of its activities on the environment, which also contributes to more sustainable production.
- Customer demands: Customers are demanding more sustainable products, so companies need to improve their processes to offer products with a lower environmental impact and remain competitive in the market.
- Reputation and competitiveness: Some companies recognise that adopting sustainability measures, such as reducing water consumption, improves their image with consumers, partners and regulators, which can strengthen their brand and reputation in the marketplace.
- Long-term sustainability: Addressing water issues is necessary to ensure the future viability of companies, especially in regions where water scarcity is a growing challenge.
- Production process efficiency: Optimising water use not only reduces costs, but also improves the efficiency of production processes, which can increase productivity and reduce waste.

Participating companies have developed and/or implemented various action plans to reduce the water footprint of their technological activities. These action plans include a variety of strategies and practical measures designed to address the specific challenges of the sector. The planned actions focus on reducing water consumption, reusing and recycling water in production processes, and improving efficiency through advanced technologies and changes in operational management. Below is a summary of the main actions and strategies that the companies in the partner institutions' countries have already implemented in some cases, have adopted since the contacts with them during the implementation of the project, or intend to adopt in the near future:

- Reduction in Water Consumption:
 - Implementation of advanced technologies and machinery that enable more efficient use of water in key processes such as dyeing and finishing.
 - Replacement of manual taps with automatic taps and the installation of aerators at all points of use to reduce water flow.

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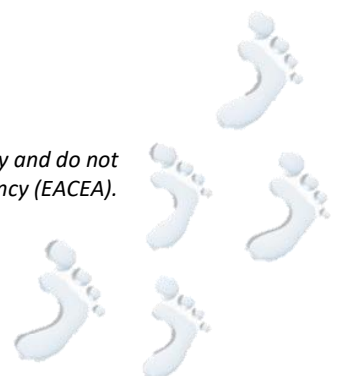
- Water Reuse and Recycling:
 - Reuse of final rinse water in initial dyeing and finishing processes, thus reducing the need for fresh water.
 - Establishment of wastewater treatment systems, such as reverse osmosis plants and filtration systems, which allow for the recycling of water within the production plant.
 - Installing a water storage system for reuse in several washing cycles and steam generation.
 - Pilot microplastic treatment plants to address problems related to plastic particulate pollution in effluents.
- Process optimisation:
 - Grouping of dyeing batches to minimise wash and rinse cycles, significantly reducing water consumption.
 - Production planning and sequencing to maximise water use efficiency and minimise waste.
- Employee training and awareness:
 - Ongoing staff training on sustainable practices and efficient water use.
 - Implementation of awareness programmes to raise awareness of the importance of water conservation and sustainable practices.
- Acquisition of new technologies:
 - Investment in machinery and equipment that allow finishes to be applied with a lower bathing ratio, thus optimising water consumption.
 - Research and adoption of new technologies that improve the efficiency of water use in all production processes.
- Use of more environmentally friendly chemicals:
 - Change to 'green chemistry' chemicals that require less water for application and generate less polluting waste in the dyeing and finishing process.
 - Use of new technology dyes, which significantly reduce the demand for water.
- Monitoring and evaluation:
 - Establishment of continuous monitoring systems to assess water consumption and efficiency of implemented measures.
 - Conduct periodic audits to ensure compliance with water footprint reduction targets and adjust strategies as necessary.
 - Many companies are carrying out sustainability audits or water footprint assessments to identify water consumption hotspots and define specific strategies to reduce water use.
 - Implementation of sustainability criteria in annual audits to control water use in their production processes.
- Evaluate and select suppliers based on sustainability criteria and purchase certified sustainable fabrics.

In Annex, more extensive and detailed information and action plans are provided by the participating companies.

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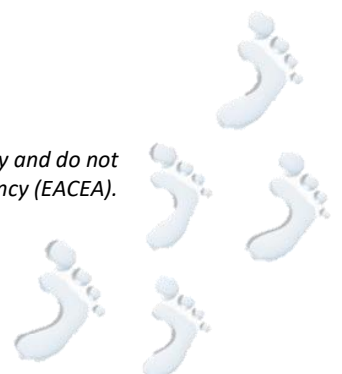
These 25 action plans not only help textile companies to comply with environmental regulations, but also improve their operational efficiency, reduce costs and strengthen their commitment to sustainability. Collaboration between different companies and the adoption of shared best practices are key to making a significant impact on reducing the water footprint in the textile sector.



7. CONCLUSION

The textile industry faces significant challenges related to water consumption and management. Growing concerns about environmental sustainability and the need to comply with increasingly stringent regulations have led textile companies to look for innovative and efficient ways to manage this vital resource. Reducing the water footprint is not only necessary to minimise environmental impact, but also to ensure long-term economic viability and improve corporate reputation. The action plans developed in this context provide concrete guidelines and strategies for textile companies to optimise water use, improve process efficiency and comply with environmental standards.

This document provides a detailed framework for other textile industries to adopt and adapt these good practices to their own contexts, promoting greater water efficiency and sustainability in the textile sector.



8. ACKNOWLEDGEMENTS

We would like to thank all the companies participating in the development and implementation of action plans and during the development of the activities of the REWAFT Project for their commitment and cooperation. Without their participation and contributions, some of the results would not have been possible to achieve.

As well as their dedication to implement sustainable and water-efficient measures not only contributes significantly to the protection of the environment, but also sets an inspiring example for the entire textile industry. We appreciate their willingness to share their experiences and best practices, providing valuable examples for other companies in the sector. Their entrepreneurship and responsibility in adopting sustainable practices are essential to move towards a more sustainable and responsible future.

We are also grateful for the financial support received from the European Commission in the framework of the Erasmus+ funded project REWAFT reference 2022-1-LT01-KA220-HED-000086367.

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9. ANNEX – ACTION PLANS

Aware of these challenges related to intensive water consumption and pollution associated with textile production processes and committed to continuous improvement, textile companies in Lithuania, Spain and Greece have developed and adopted a series of action plans aimed at reducing their water footprint. These plans not only address water consumption and operational efficiency, but also consider the importance of complying with increasingly strict environmental regulations and improving corporate reputation in the global market.

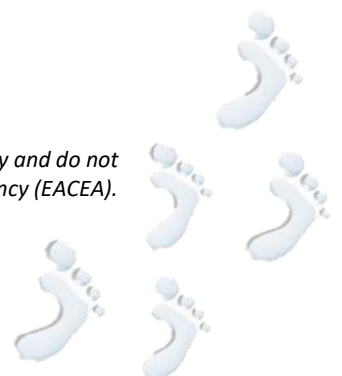
A total of 25 action plans are attached based on a template with different questions and information requested from companies. These action plans have been classified:

- ANNEX I: Action plans of companies that only have mechanical processes (spinning, knitting, weaving, etc.), without high water consumption.
- ANNEX II: Action plans of companies that have some chemical process in their production line, with high water consumption (dyeing, printing, finishing, etc.).



ANNEX I:
**Action plans of companies that only have mechanical processes without high
water consumption**

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General Information

Country of residence/registration: **Spain**

Sector in which you work: **Weaving**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Water supply problems and legislation.

Why is it important for your company to address these water issues?

- ✓ Cost savings (water consumption) and water consumption savings (environmental impact).

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Change of manual taps to automatic taps at company level: offices and production area.
2. Installation of aerators on taps in all company taps: offices and production area.

Provide time plan for these actions.

1. Change of manual taps to automatic taps at company level: offices and production area.
2. Installation of aerators in all company taps: offices and production area.
 - I. Request for Quotation and Purchase - January 2025
 - II. Installation - February 2025



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Manufacture of knitwear and home textiles**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ We face with high water consumption, low water consumption efficiency compared to companies with the latest washing process equipment.

Why is it important for your company to address these water issues?

- ✓ Reducing water consumption would reduce operational costs and make the production process more sustainable, which is important to us and our customers. Although we do not avoid the washing process, instead of aggressive detergents, we have been using ecological, environmentally friendly, standardized detergents for many years.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

We plan to upgrade the washing facilities to the maximum and install a two-stage water storage system that would allow to reuse water for several washing cycles or create the possibility to use it for a hot steam generator and supply drying and ironing/styling processes.

Provide time plan for these actions.

Renewal of washing equipment from January 5, 2025 to January 30, 2025. Water purification, filtration and storage system for secondary use - from January 1, 2026. Until 2026 June 1.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Apparel manufacturing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ As we do not use water in our manufacturing processes, the main issues related to water use, costs and pollution can be attributed to our fabric suppliers.

Why is it important for your company to address these water issues?

- ✓ Many countries implement strict environmental requirements and regulations that require responsible water use. Modern producers and consumers pay more and more attention to corporate sustainability policies and ecological commitments. A responsible approach to water use and sustainability can improve a company's reputation and enhance its brand.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Evaluation of suppliers.
2. Buy certified sustainable fabrics, leading by example and strengthening supply chain sustainability initiatives.

Provide time plan for these actions.

We plan to carry out these actions within 6 months.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Apparel manufacturing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Our water use processes are not optimized enough. We lose a lot of water due to old technologies and inefficient processes. Although we use preventive measures.

Why is it important for your company to address these water issues?

- ✓ We are currently using more water than the industry average, so this is a big cost.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Optimize water use processes: We will conduct a comprehensive water use audit to identify the main sources of water loss and take steps to reduce them. This can include upgrading technology, automating processes and training staff to use water more efficiently.
2. We plan to invest in new, advanced dyeing technologies that use less water. For example, water-saving dyeing facilities or dry dyeing processes.

Provide time plan for these actions.

1. Water use audit – after 6 months.
2. Investments in advanced technologies - within 24 months.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Apparel manufacturing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

Our company does not use water in its production processes, the main issues related to water use, costs and pollution can be related to the supply chain and the future strategy for fabric procurement. In the future we plan to:

- ✓ Create an evaluation system for reliable suppliers, including requirements for audits and certificates.
- ✓ Cooperation with independent audit companies that can verify the information provided by suppliers and ensure its reliability.

Why is it important for your company to address these water issues?

- ✓ Many countries implement strict environmental requirements and regulations that require responsible water use. Failure to comply with these requirements may result in fines, restrictions or even legal action.
- ✓ Today's consumers pay more and more attention to corporate sustainability policies and ecological commitments. A responsible approach to water use and sustainability can improve a company's image, increase brand value and attract more loyal customers.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Evaluation and selection of suppliers based on sustainability criteria.
2. Actively seek out and purchase certified sustainable fabrics, leading by example and strengthening supply chain sustainability initiatives.

Provide time plan for these actions.

We plan to carry out these actions within 10-12 months.

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General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Wholesale of sewing industry accessories.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ As we do not use water in our production processes, the main issues related to water use, costs and pollution can be attributed to our suppliers. In the future, we plan to create an evaluation system for reliable suppliers.

Why is it important for your company to address these water issues?

- ✓ Many countries are introducing strict environmental requirements and regulations to ensure responsible water use. Failure to comply with these requirements may result in fines, restrictions or even legal action.
- ✓ Today's consumers are increasingly interested in corporate sustainability policies and ecological commitments. Responsible water use and sustainability can improve a company's reputation, increase brand value and attract more loyal customers.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Develop and implement a supplier evaluation system that includes clear sustainability criteria. These criteria would include the use of water saving technologies, water recycling systems and minimum pollution levels.
2. Actively search for and buy certified sustainable raw materials.

Provide time plan for these actions.

We plan to carry out these actions within 1 year.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Manufacture of other knitted (knitted) and crocheted clothing.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

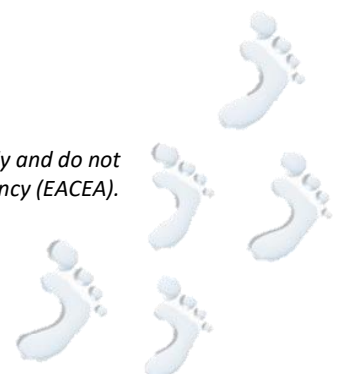
The management of the company pays great attention to compliance with environmental protection standards. Since 2010 for the environmental protection management system, the company applies Regulation (EC) of the European Parliament and the Council no. 1221/2009 requirements (EMAS). From 2018 the company updated its environmental protection system in accordance with European Union Commission Regulation (EU) 2017/1505 and Commission Regulation (EU) 2018/2026. A systems approach to environmental management provides top management with information that helps create long-term success and opportunities to contribute to sustainable development in the following ways:

- the environment is protected by preventing or reducing negative effects on the environment;
- reducing the potential negative impact of the environmental condition on the company;
- helping the company to fulfil its compliance obligations;
- increasing the effectiveness of environmental protection;
- managing the methods of development, production, distribution, consumption and disposal of the company's products, using a life cycle perspective, which would not allow environmental protection impacts to shift unexpectedly to the next stage of the life cycle;
- obtaining financial and performance benefits that can be obtained by implementing environmentally friendly alternatives that strengthen the company's position in the market;
- communicating environmental protection information to appropriate stakeholders.

The following environmental requirements have been implemented so far:

- Sorting of fabric scrap waste, transferring it for secondary use, i.e. for the creation and production of new products.
- Energy consumption of renewable resources (solar energy).

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Today, we understand that the use of water in the production process must be managed, the processes need to be optimized.

Why is it important for your company to address these water issues?

- ✓ Tighten environmental requirements and regulations to ensure responsible water use.
- ✓ Our suppliers' responsible use of water and ensuring sustainability can further enhance the company's reputation.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Update the environmental protection assessment system, which would include clear sustainability criteria. These criteria would include the use of water-saving technologies, water recycling systems and minimum pollution levels.
2. Continue to actively search for and buy certified sustainable raw materials.

Provide time plan for these actions.

- 1 year plan.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Nonwoven products, including: geotextiles, insulating materials, filters, and hydroponic materials.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- We are not consuming a lot of water, as we are using processes that requires almost 90% less water. Our non-woven manufacturing involves processes like bonding fibers together through thermal means.
- We use Non-Woven Process: Spunbond and Meltblown: These processes generally have lower water requirements since they involve extruding polymer materials that are bonded without water.
- The dyeing process is performed by other company.
- The two main types of nonwoven fabric (NWF) is in polypropylene (PP) and NWF in Spunbond-Meltblown-Spunbond (SMS), depending on the process used to create them.
- NWF in polypropylene. Polypropylene is a fabric made of soft textured plastic fibers which are fused together using ultrasound and steam. There are different thicknesses of this material and due to its hygienic characteristics it is ideal in the health sector due to the high safety it provides to doctors, patients and the user in general, in addition to the cost-effectiveness it offers.
- NWF in Spunbond-Meltblown-Spunbond (SMS). Meltblown. Like a spunbond nonwoven, a meltblown nonwoven also uses polypropylene, but it is fed through a linear matrix to form long, thin fibers. These fibers are cooled by bursts of hot air, which are then forced through a collector mesh to form a fabric that creates a fine filter and is self-adhesive.

Why is it important for your company to address these water issues?

- ✓ We still use some amount of water, and we are trying to be 100% sustainable company.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

In the past we were using these two types of processes that required more water:

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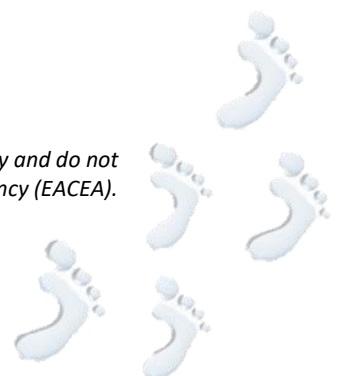
- Hydroentanglement (Spunlace): This process can be water-intensive because it involves using high-pressure water jets to entangle fibers.
- Wet-laid Process: This process also requires significant water use, similar to paper-making, where fibers are suspended in water and then formed into a web.

With the thermal process we reduce the water consumption by 90%.

We are using Spunbond and Meltblown: These processes generally have lower water requirements since they involve extruding polymer materials that are bonded without water.

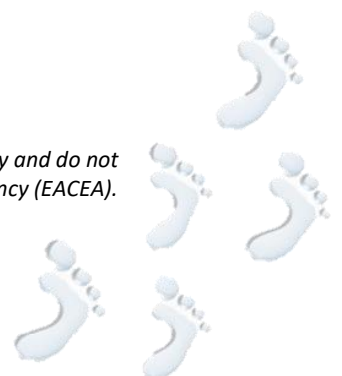
Provide time plan for these actions.

- We have already changed our process to spunbond and meltblown.



ANNEX II:
**Action plans of companies that have some chemical process in their
production line, with high water consumption**

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General Information

Country of residence/registration: **Spain**

Sector in which you work: **Dyeing and finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ High water consumption for dyeing, washing and finishing processes.
- ✓ Discharge water.
- ✓ Legislation.

Why is it important for your company to address these water issues?

- ✓ Savings in water consumption are savings in water costs.
- ✓ Compliance with legislation.
- ✓ Discharges with a lower pollutant load.

Actions taken and planned

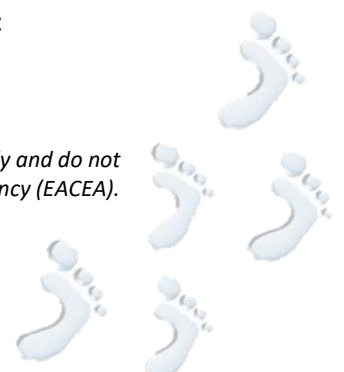
What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

- 1.-Work/research is being carried out on the reduction of the bath ratio used in the foularding processes of textile finishes.
- 2.-Grouping dyeing batches to minimize the number of washing and rinsing cycles..

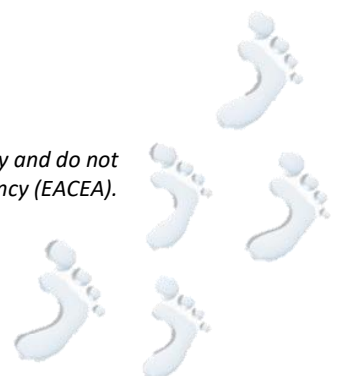
Provide time plan for these actions.

- 1.- Reduction of bath ratio in textile finishing processes:
 - Laboratory scale tests: bath ratio reduction for application of some finishes to textile products. Product analysis. Dates: January 2023 - July 2024.
 - Satisfactory results: scaling up to production level. Finished product analysis. September 2024-May 2025.
 - Satisfactory results: implementation. From June 2025.
- 2.- Group dyeing batches to minimise the number of washing and rinsing cycles:

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- Make planning proposal for batch production by dyeing/colour groups. Preparation of report. January-February 2025.
- Present at Management meeting. March 2025.
- Approval: Production planning 2025-2026.



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Dyeing and finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ High water consumption dyeing and finishing processes.
- ✓ More regulated environmental regulations.
- ✓ Water supply problems.

Why is it important for your company to address these water issues?

- ✓ Improving process efficiency, saving costs and reducing environmental impact.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Reuse of water from the final rinse of the dyeing process to prepare subsequent dye baths.
2. Installation of a system of taps with sensors throughout the company to save water consumption at a global level: offices, toilets, washing area and warehouse.

Provide time plan for these actions.

Reuse of final rinse water from the dyeing to prepare subsequent dye baths:

1. Analysis and Study (April 2024 - December 2024):
 - I. Analyse the current dyeing process and identify reuse points. Investigation of alternatives.
 - II. Acceptance and budget approval by the company.
2. Design and Preparation (January 2025-June 2025):
 - I. Design the reuse system. Request for technical visits and budgets. Conduct pilot tests. Proposal planning
 - II. Acceptance and budget approval by the company.
3. Implementation (July 2025-December 2025):
 - I. Acquisition of equipment and components

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- II. Installation of the components and integration of the system into the production process.
- III. Carry out initial tests and adjustments.
- IV. Training of personnel involved.

Installation of a system of taps with sensors throughout the company to save water consumption at a global level: offices, toilets, washing area and warehouse:

- I. Inventory of necessary material/Budget/Approval/Purchase - September 2024 - October 2024.
- II. Installation - November 2024.



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Dyeing and Finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ High water consumption in the dyeing processes.
- ✓ High discharge water parameters.
- ✓ Legislation on discharges.

Why is it important for your company to address these water issues?

- ✓ Economic savings.
- ✓ Compliance with legislation.
- ✓ Customer requirements.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Acquisition of machinery with technology that allows savings in water consumption.
2. Study of production planning to group production and reduce water consumption, avoiding additional washing between changes in production batches.

Provide time plan for these actions.

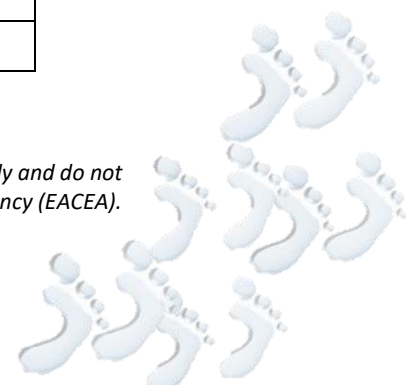
1. Acquisition of machinery with technology that allows savings in water consumption. See Annex A.
2. Study of production planning to group production and reduce water consumption, avoiding additional washing between changes in production batches. See Annex B.



Annex A -Acquisition of machinery with technology that allows savings in water consumption.

Phases/Stages	Estimated time
Initial Phase Problem Statement	
Company Management Meeting: Definition of the project and stakeholders to define objectives and scope.	1-3 months
Establishment of the project team.	1-3 months
Water Consumption Study	
Evaluation of current water consumption (historical).	1-4 months
Identification of critical areas and points for improvement.	1-4 months
Technology Research	
Investigation of technologies available on the market.	1-6 months
Contact and meetings with suppliers for detailed presentation of machinery.	1-6 months
Cost-Benefit Analysis and supplier selection	
Detailed cost-benefit analysis of different machinery options.	3-5 months
Selection of the most viable options.	1-2 months
Request for proposals to selected suppliers.	2-3 months
Evaluation of proposals.	1-2 months
Selection of final proposal-supplier.	
Project Plan Development and Approval	
Creation of a detailed project plan together with the supplier: Planning and budget.	3-4 months
Management approval of plan and budget.	1-2 months
Selection and Contracting	
Signing of contracts with selected suppliers.	2-3 months
Delivery and installation of machinery.	1-3 months
Installation and Training	
Installation of the new machinery in the plant.	1-3 months
Testing to ensure correct operation of machinery.	2-3 months
Initial adjustments as required.	2-3 months
Staff training	
Training of personnel in the use and maintenance of new machinery.	1-2 months
Documentation of operating procedures.	1-2 months
Implementation and Monitoring	
Monitoring of the equipment during the first batches of operation.	1-2 months
Collection of data on water consumption and machine performance.	1-2 months
Comparison with baseline data to assess initial impact.	1-2 months

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Evaluation of the results obtained and the impact of the new equipment.	1-2 months
Progress report to management.	1 month
Improvements	
Identification of areas for further improvement.	Continuous
Development of a continuous improvement plan.	Continuous

Annex B - Study of production planning to group production and reduce water consumption, avoiding additional washing between changes in production batches.

Phases/Stages	Estimated time
Initial Phase Problem Statement	
Company Management Meeting: Definition of the project and stakeholders to define objectives and scope.	1-4 weeks
Establishment of the project team.	1-2 weeks
Water Consumption Study.	
Assessment of current water consumption (historical).	1-2 months
Identify areas where additional wash downs occur between batch changes.	1-2 months
Data Collection	
Collect detailed data on production cycles, product types and batch change frequencies.	1-2 months
Analyse current production sequence and wash down times.	1-2 months
Production Analysis	
Analyse production plans and batch changeover requirements.	1-2 months
Identify possible product groupings to minimise changeovers and additional washings.	1-2 months
Establish new planning for production grouping.	1-2 months
Present the plan to management for approval.	1 month
Implementation	
Train staff involved.	1 month
Implement new planning and data collection.	1-2 months
Monitor data on water consumption and washing times.	1 year
Evaluate the impact of implemented strategies on reducing water consumption.	1 year
Make continuous adjustments.	Continuous
Generate progress reports and present results to management of 1 year collection data.	1 year



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Dyeing and Finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ The dyeing and finishing processes consume a lot of water.
- ✓ The wastewater obtained has a high load of pollutants.

Why is it important for your company to address these water issues?

- ✓ Economic savings.
- ✓ Compliance with regulations.
- ✓ Competitiveness (improvement of the company's image).

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Reuse of the water from the final rinse after dyeing for initial dyeing or finishing processes.
2. Acquisition of new equipment for the application of finishes (water-repellent) by foularding that uses a lower bath ratio.

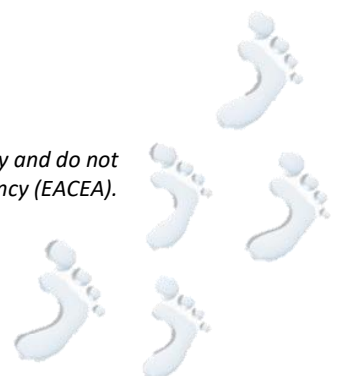
Provide time plan for these actions.

1. Reuse of the water from the final rinse after dyeing for initial dyeing or finishing processes.
 - I. Laboratory tests (6 months):
 - To carry out laboratory tests on the use of water from the last rinse of one of the dyeing lines for the initial bath. To carry out tests with different types of dye-dye.
 - Obtaining results.
 - Feasible results, report to management.
 - II. Study of the water reuse system in one of the dyeing lines (6 months):
 - Study and design of the reuse system in one of the equipment.
 - Contact with different suppliers.
 - Study and visits with a technician.
 - Budget request.

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- Planning proposal.
- Budget and planning approval by Management.
- III. Implementation (6 months):
 - Purchase and acquisition of equipment.
 - Technical intervention in the installation of the necessary equipment.
 - Start-up, initial tests, monitoring and adjustments.
- 2. Acquisition of new equipment for the application of finishes (water-repellent) by foularding that uses a lower bath ratio (12 months):
 - I. Technical study for installation and layout.
 - II. Establishment of specifications and requirements.
 - III. Contact with suppliers, presentation of available equipment and quotations.
 - IV. Decision on equipment that best meets specifications/requirements.
 - V. Approval by management of the most viable option.
 - VI. Purchase and acquisition of equipment.
 - VII. Installation and set-up of equipment.
 - VIII. Set-up, initial testing, monitoring and adjustments.
 - IX. Employee training.
 - X. Batch production.



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Chemicals used (discharges).
- ✓ Wet finishing processes (amount of water used).
- ✓ No data is currently available on which process or stage consumes the most water.

Why is it important for your company to address these water issues?

- ✓ Improved process efficiency.
- ✓ Economic savings.
- ✓ Customer demand.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

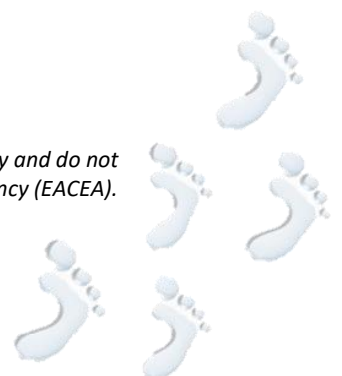
1. Carry out a study on water consumption by process and stage, to detect the critical points of highest water consumption and to be able to propose specific improvements to the processes.
2. Installation of automatic taps (with sensor) in production areas and employee training in responsible water consumption at points where the water supply is not automated (manual washing area, toilets, etc.).

Provide time plan for these actions.

1. Carry out a study on water consumption by process and stage, to detect the critical points of highest water consumption and to be able to propose specific improvements to the processes. (manual washing area, toilets, etc.).
 - Estimated execution time: 4 months (Sep 2024-Dec2024).
 - Department responsible: Production and Maintenance Department.
2. Installation of automatic taps (with sensor) in production areas and employee training in responsible water consumption at points where the water supply is not automated (manual washing area, toilets, etc.) : 12 months.

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- Start: January-2025.
- End: December-2025.
 - Necessary documentation will be established to be filled in by workers who relate production orders-batches with the water consumption established for each stage.
 - Departments involved: Production Dept. and Quality Department.



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Spinning, Weaving, dyeing, printing and finishing. Home textiles**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Risk of water scarcity for production processes, increasingly stringent regulatory requirements.

Why is it important for your company to address these water issues?

- ✓ Measuring our environmental impact, communicating truthfully and verifiably, developing reduction plans based on reliable data.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Osmosis plant to regularise processes and avoid re-operations with more water.
2. Microplastics treatment pilot plant with Aitex (centre for research, innovation and advanced technical services for the textile, garment and technical textile industries).
3. System for reuse of internally treated water in selected processes.

Provide time plan for these actions.

1. Osmosis plant to regularise processes and avoid re-operations with more water. Already implemented.
2. Microplastics treatment pilot plant with Aitex (centre for research, innovation and advanced technical services for the textile, garment and technical textile industries). Already implemented.
3. System for reuse of internally treated water in selected processes, by 2024-2025.



General Information

Country of residence/registration: **Spain**

Sector in which you work: **Care Applications® is a technology company that research and develops unique methods and devices to install in existing garment wash and dye machines, giving a second life to them aimed to reduce resources (water, energy and chemicals optimisation) to finish any kind of fibres, cellulosic, protein and synthetics except PES.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Garment processing (wash, dye and finishing) happens inside rotating machines, belly (horizontal), front loading (vertical) for cellulosic fibres mainly cotton and their blends and paddle for protein mainly wool. Belly washing machines, mainly located in Asia, normally use 1:20 L:R and vertical machines from 1:5-1:15. The use of water in garment wet processes are huge, as an example, for reactive garment dye for cotton fibre which is widely used, 9 baths are used so to dye 1 kg of cotton with L:R 1:10, 90 liters of water per kg. of garment are used. This pollute water is very difficult to treat as the conductivity is very high and impossible to recycle.

Why is it important for your company to address these water issues?

- ✓ Water footprint assessment at the companies is important to know the exact usage of water and the company. This will help to be able to improve it and to take action.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

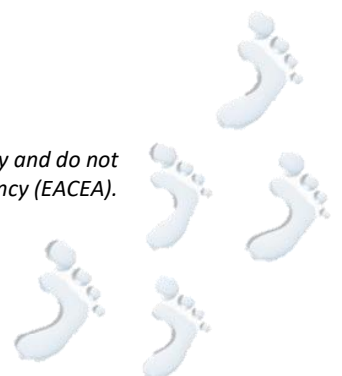
With the technology called ECOFinish by Care Applications®, water consumption is reduced about 60% to 70% with no electrolyte which can be a path to open to water recycle.

Provide time plan for these actions.

We are step by step implementing all the steps in the process. We are researching the yield of chemicals applied with our technologies to substitute all the products with high polluting impact with others that don't leave pollutant residues.

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We reduce the conductivity of the water and the amount of water used, consumed and polluted. We extremely reduce the use of oxidizing agents in Denim wash as we neutralise the oxidant on the fiber and so we deliver water already without oxidising agents. We also eliminate the use of pumice stones that produce polluting sludges .



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Weaving and finishing. Fabrics from filament viscose and acetate yarns**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Dyeing processes we are using are consuming too much water. This water needs to be heated. This leads not only to water consumption, but also to higher carbon footprint. There is high pressure from the market to reduce water consumption and carbon footprint.

Why is it important for your company to address these water issues?

- ✓ We need to understand what we are doing wrong now, in order to take actions to improve situation.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. We implemented automatic dyestuff and chemical dispensing system, installed more modern washing range in order to reduce water consumption. Continuously we are working with recipes and processes used in dyehouse.
2. At the moment we are trying to find better dyeing technology for acetate fabrics.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Knitting, dyeing, finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ High water consumption costs a lot of money and increasingly stringent environmental regulatory requirements.

Why is it important for your company to address these water issues?

- ✓ We assess our impact on the environment, communicate correctly and reliably, and prepare reduction plans based on the reliable data.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Water collection and secondary use in cooling processes.
2. Installation of new dyeing machine and modernized the steam boiler. Training of employees on water use.



General Information

Country of residence/registration: **Lithuania**

Sector in which you work: **Yarn dyeing → weaving → finishing → sewing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ 65 years of work experience has taught us a lot as manufacturers, from how to choose the highest quality fiber to the awareness of the consequences of our actions, which can create a chain reaction on the way to a better tomorrow. We use little water in our production process. In the process of spinning linen, we cannot completely abandon the use of water, but we strictly control these amounts for the following reasons:

1. Cost control.
2. Quality requirements.

Why is it important for your company to address these water issues?

- ✓ There are 2 main reasons:
 1. Economic impact.
 2. Stricter sustainability requirements.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

Our company plans to continue to control the use of water in the production process.

Provide time plan for these actions.

Every year, we conduct a production sustainability audit. From 2025 We will supplement the sustainability assessment criteria with a water use indicator.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Finishing.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Chemicals used and problems related to water discharges.
- ✓ High amount of water reuse.

Why is it important for your company to address these water issues?

- ✓ Customers demand for more sustainable products.
- ✓ Cost savings.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Use of more ecologic chemicals: Green chemistry.
2. Lab tests for reduction of water consumption.
3. Water footprint assessment to identify the weak points and address them.

Provide time plan for these actions.

- Water footprint assessment by a specialist (next 6 months).
- Sustainability certification ISO 14001 (by September 2025).



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Materials for the mattress and furniture industry, non-woven and spunbonded materials**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ The dyeing process consume a lot of water.

Why is it important for your company to address these water issues?

- ✓ The materials we are using are ecological, nontoxic and recyclable. Our products are made from natural materials from renewable resources with respect to the environment as well as to consumers. However, we need to address the water use, less water.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. New machinery.
2. Reuse of water after dyeing.

Provide time plan for these actions.

The company is constantly upgrading its equipment with new machinery. The complete and automated production line along with the fully integrated machinery and equipment.

- Purchase and acquisition of equipment (December 2024).
- Experimental study for the possibility of water reuse after dyeing (Horizon programme, submitted proposal).



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Cotton production and processing, Yarns and fabrics, natural-synthetic, Weaving, Dyeing and finishing**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ High water consumption for dyeing, washing and finishing processes of cotton. The company has two ginning installations in Thessaloniki, with capacity to gin about 500 tons of seed cotton per 24 hours. The biggest percentage of the production is exported.
- ✓ Pollution of water due to washing, dyeing and finishing, legislation about discharge, high costs for water use.

Why is it important for your company to address these water issues?

- ✓ Saving water consumption, high costs for water.
- ✓ Water pollution.
- ✓ Promotion of our product as Eco & Sustainable, costumers' requirements.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Grouping to minimise the number of washing cycles.
2. Purchase of new equipment using less water.

Provide time plan for these actions.

- Lab tests in the following six months.
- Purchase of new equipment/ machinery, expected next year.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Technical fabrics, non-woven, woven geotextiles**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Operational risks, water intensive.
- ✓ Environmental risk due to water effluents.
- ✓ Regulatory issues.

Why is it important for your company to address these water issues?

- ✓ Economic savings.
- ✓ Compliance with regulations.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

1. Reuse of the water after dyeing for dyeing/finishing processes.
2. Use of water footprint tools.

Provide time plan for these actions.

- Laboratory tests on the reuse of water (1 year).
- Understanding of weak points in water use and improve the water use, as part of our environmental policies.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Silk products (yarns+fabric), weaving, dyeing-finishing of silk fabrics, digital printing.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Large amount of water use in the dyeing process.

Why is it important for your company to address these water issues?

- ✓ Compliance with environmental national legislation. The location of the factory is a traditional town, very touristic, there is not many industries around.
- ✓ Town legislation about industrial activity and water discharges.
- ✓ Customer requirements for more sustainable products, the reason we changed to digital printing, less amount of water.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

- Research proposals in EU and National projects in the area of sustainability, digital printing, recycling of water.
- Research in recycling of water of dyeing process in situ.

Provide time plan for these actions.

- Programs are submitted and expected to be funded the following 6 months.
- Already planned Unit of water recycling in the factory – Expected in about 1 year, September 2025.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Manufacturing synthetic yarns and ropes, Dyeing and Finishing Weaving**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Legislation, national and European.
- ✓ Water discharges.
- ✓ Dyeing process generates high amount of polluted water.

Why is it important for your company to address these water issues?

- ✓ Reduction of water costs.
- ✓ More sustainable products - Environmentally friendly (owner of OEKO-TEX).

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

- Use new methods and technology, new machinery.
- Recycling of water in some processes.

Provide time plan for these actions.

- New methods and machinery - Request for Quotation and Purchase - January 2025.
- Installation of water Unit for wastewater treatment and reuse.



General Information

Country of residence/registration: **Greece**

Sector in which you work: **Cotton. Knitting and dyeing.**

Problem identification and objectives

What problems related to water use, consumption or pollution do you face in your company?

- ✓ Operational risks are high, because we are water intensive. Reducing availability of water, as well as deterioration of the quality of water, will be very significant for our operations.
- ✓ Environmental risk is high, because our water effluents are big volumes with significant contaminants concentrations.
- ✓ Financial risk of water availability/price is not important for us, as long as it does go to unforeseen extremes.
- ✓ Regulatory issues are not significant at this moment, but we expect them to be important in the near future, since we foresee that the water footprint of textile industries will be strictly regulated by EU.
- ✓ Reputational is not an issue now, but may be important in the future, since we are located in a farming region and there will be competition for water between different sectors. Agriculture will have an advantage in this competition, due to socio-political reasons. On the other hand, we are a part of the agriculture chain value and this will be an advantage for us as well.

Why is it important for your company to address these water issues?

- ✓ We want to discover weak points in water demand and pollution and improve them, as part of our environmental policies.

Actions taken and planned

What measures do you plan to take at company level to reduce water consumption or improve water sustainability in your company?

- Changed to new technology dyes, that reduce water demand significantly.

Provide time plan for these actions.

- Already implemented.

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Images:

- Image 1. Proyecto ChemUp – AITEX. <https://www.aitex.es/portfolio/chemup-spinning-yarn-from-biopolymers-and-chemically-recovered/?lang=en>
- Image 2. Alexandro Garmets Treatment. <https://www.alexandros-com.gr/services/industrial-washing/>
- Image 3. Ecotextile. (2020). Dyeing auxiliary improves water savings <https://www.ecotextile.com/2020092426723/dyes-chemicals-news/dyeing-auxiliary-improves-water-savings.html>
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