



## MICROPLASTIC EMISSIONS FROM LAUNDRY

*Master thesis project from Linköping University*

### **Who is responsible for controlling the emissions?**

Microplastics emitted from textiles during wash has been highlighted as a large source of microplastics to the wastewater treatment plant. There are possible reduction measures that can be implemented both at the laundry machine and further downstream at the wastewater treatment plant. There are also preventive measures that can be taken before the garments are washed, such as changes in knitting techniques and consumption and washing behavior.

Consequently, there are many different actors in the system that can influence emissions of microplastics from laundry.

### **WHAT IS MICROPLASTICS?**

*Marine littering is one of the greatest environmental challenges of our time and plastic is one of the most common types of garbage in the sea. Microplastics are plastic particles that are smaller than 5 mm in size.*



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### About the study

This study is a master's thesis project at the Department of Management and Engineering at Linköping University, Sweden in cooperation with the company Mimby AB and Sweden Water Research. In total, eight actor categories that can impact the emissions of microplastics from textiles were identified: designers, textile producers, retailers, consumers, washing machine producers, industrial laundries, filter solutions and wastewater treatment plants. These actors were interviewed regarding their views on responsibility and possibilities to control the emissions, as well as their drivers and barriers for taking action.

### Findings

Most actors allocated the largest responsibility to the designers as they are the ones putting the garments on the market. A sustainability profile within the organization was the most common driver for implementing microplastic reduction measures. However, at this point, all actors experienced more barriers than drivers. Lack of knowledge and lack of potential measures, such as no suitable alternatives, were the most common barriers. Overall, the actor furthest upstream in the system (designers) and the actor furthest downstream (wastewater treatment plants) had the highest number of already implemented measures, self-identified possibilities for reduction measures, as well as most drivers and barriers.

### ABOUT THE REPORT

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## FANPLESSTIC-SEA

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*This fact sheet has been produced within FanpLESStic-sea, a project working with preventing and decreasing the pollution of microplastics in the water and the Baltic Sea.*

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