

Wet wipes, pads and tampons in wastewater

The plastic content in the products pollutes the environment – causes and measures



During heavy precipitation events, wastewater is often released directly into bodies of water to relieve the pressure on sewage treatment plants. Wet wipes, sanitary pads and tampons, among other things, get swept along with the wastewater and pollute the environment.

Photo: © FIW

„Existing regulations cannot stop the pollution caused by wet wipes, pads and tampons. A new strategy is required.“

Dr. Maria Daskalakis, University of Kassel

Wet wipes, sanitary pads and tampons¹ are important hygiene products that are often partially made of plastics. If disposed of improperly via the toilet, they can end up in the environment. The EU has therefore included these products in the Single-Use Plastics Directive. The directive relies on product labeling, educational measures and the assumption of costs by manufacturers. These measures are insufficient.

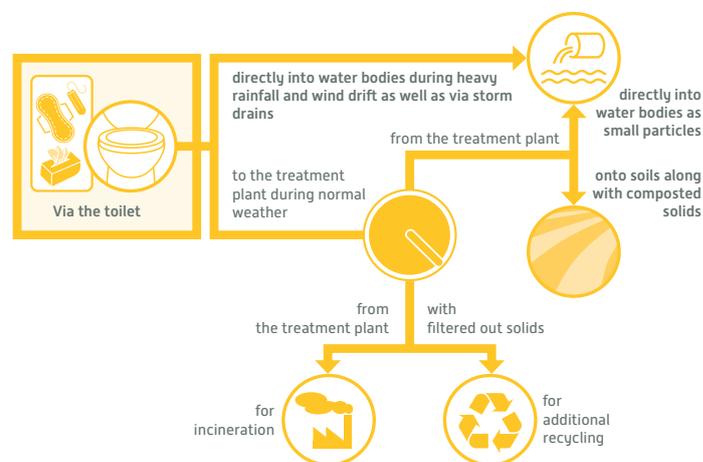
How do wet wipes, sanitary pads and tampons enter the environment via wastewater?

If wet wipes, pads and tampons, along with protective covers, adhesive strips and applicators, are improperly disposed of in the toilet instead of in the residual waste bin, they end up in wastewater treatment plants. In Aachen alone, **23 million wet wipes and 3 million sanitary pads and tampons²** are disposed of each year!

From the sewage treatment plants, fibers and parts of the products can enter water bodies directly via the effluent and can also end up on fields through the spreading of compostable solids. Direct discharge from the sewage system into bodies of water during heavy rainfall via combined sewer overflows from retention basins is another problem, as shown on the cover picture.

Various aspects must be taken into account when taking measures against pollution:

1. It is not possible to completely eliminate the pollution caused by these products.
2. Because it is not possible to determine who is disposing via the toilet, direct countermeasures are impossible.



Wet wipes, pads and tampons disposed of via the toilet can enter the environment with wastewater through several pathways.

Graphic: © Maria Daskalakis/pixabay.com

¹ In this fact sheet, panty liners are also counted as menstrual pads.

² Including other components such as protective sleeves, adhesive strips, and applicators.

Research on the prevention of plastics entering wastewater

The interdisciplinary project „Environmental Policy Instruments to Reduce Plastic Pollution of Inland Waters via Drainage Systems“ examines and classifies the occurrence of plastic pieces of at least 1 mm in size in wastewater treatment

plants and street drainage systems in the municipalities of Aachen, Roetgen, Simmerath and Stollberg. Surveys and a laboratory experiment support the analyses. Based on these findings, proposals for environmental policy instruments to prevent these plastic waste inputs are being developed.

- Wet wipes, sanitary towels and tampons are also disposed of via toilets in public places and in companies.
- Experience shows: Information to promote correct behavior, as provided for in the Single-Use Plastics Directive, as well as financial incentives only have a limited effect.

The problem requires effective measures against the input into the environment

The most effective approach is a complete switch to durable alternatives and plastic-free products. For this to succeed, the Single-Use Plastics Directive would need to be expanded in this direction, among other measures. However, this directive alone cannot stop the general environmental pollution caused by plastic products. What is needed is a comprehensive plastics strategy that addresses all the players involved.

 Legislators	<ul style="list-style-type: none"> Expanding the Single-Use Plastics Directive Developing a program on the basic handling of plastic materials
 Users	<ul style="list-style-type: none"> Using plastic-free, sustainable alternatives Not disposing of them in the toilet
 Retailers	<ul style="list-style-type: none"> Offering long-lasting alternative products and plastic-free products
 Manufacturers	<ul style="list-style-type: none"> Producing durable alternative products and plastic-free products Assuming responsibility
 Public authorities	<ul style="list-style-type: none"> Encouraging and enabling correct disposal Preventing wastewater from entering waterways and soils

To prevent environmental pollution, many players are needed. Legislators must lay the groundwork.

Graphic: © Maria Daskalakis/pixabay.com



Recommendations for measures against plastic pollution caused by wet wipes, sanitary pads and tampons.

Graphic: © Maria Daskalakis

IMPRINT

Authors

Daskalakis, Maria*; Kaser, Simon**; Breitbarth, Marco*; Hentschel, Anja**; Kaskel, Myriam*; Kollmorgen, Florian*

Institution

University of Kassel, Working Group Environmental Policy*; Darmstadt University of Applied Sciences, Department of Environmental and Energy Law**

Contact

daskalakis@uni-kassel.de

Design

Noreen Matthes, Ecologic Institute; Tanja Dohr, FiW Aachen

Status

April 2022

<https://www.bmbf-plastik.de/en>

 @plastik_umwelt

This fact sheet was prepared as part of the research focus „Plastics in the Environment“ (duration 2017-2022), funded by the German Federal Ministry of Education and Research (BMBF). The authors are solely responsible for the contents of the fact sheet. They do not reflect the official opinion of the BMBF.

Daskalakis, Maria; Kaser, Simon; Breitbarth, Marco; Hentschel, Anja; Kaskel, Myriam; Kollmorgen, Florian (2022): Wet wipes in wastewater: Plastic content pollutes the environment - causes and measures. Fact sheet 16 of the BMBF Research Focus Plastic in the Environment.

All fact sheets in this series can be found at:

<https://bmbf-plastik.de/en/results/factsheets>