

## SURFRIDER FOUNDATION EUROPE

# STATEMENT ON THE NEED FOR LEGAL MEASURES TO PREVENT BIOMEDIA POLLUTION IN THE REVISED URBAN WASTE WATER TREATMENT DIRECTIVE

**21 July 2021**

We call on the European Commission to include measures to address and prevent biomedica pollution in its revision of the Urban Waste Water Treatment Directive, in line with its circular economy vision, plastic strategy and zero pollution action plan.

### *Biomedica*

Biomedica also referred to as filter media are small plastic cylinders ranging from some millimetres to some centimetres in size. They are the media used as bacterial biofilm carriers in the wastewater treatment process. They are mainly made of polyethylene (PE) or high-density polyethylene (HDPE) plastic. In waste water treatment tanks, they can represent up to 70% of the volume of the basin. This can represent up to several millions of plastic pieces. Their alveolar structure provides a large colonisable surface and their density, close to that of water facilitates their movement in the tank to attract bacteria. They allow bacteria used to treat water to settle on their surface and proliferate.

Biomedica treatment is a type of water treatment known as fixed fluid culture, as part of the secondary treatment of waste water. They are used today for treating wastewater in public and industrial WWTPs, as well as in individual private systems and also in the farming sector. Member States in the European Union, in accordance with the UWWT Directive, must provide secondary treatment for bigger agglomerations. This secondary treatment consists in supplementing the elimination of solid matter (primary treatment) by breaking down organic substances using bacteria. Among the technologies today available to conduct this treatment are fixed fluid culture using biomedica. Today, most of the leading firms working in the waste water technology have adopted this process and developed their own models of plastic carriers.

### *Biomedica pollution*

Biomedica pollution is affecting European coastlines in dramatic numbers. Once spilled out from waste water treatment tanks, they can spread across huge distances in the environment over huge periods of time.

### **Sources**

The main reason for losses of biomedica into the environment is overflows of the tanks where they are used. In case of malfunctions and because of various existing influent and effluent channels connected to the tanks, biomedica can easily be spilled out from the tanks into the environment. They can be spilled out routinely in small to large quantities or following one-off incidents. In a recent incident in Italy, millions of biomedica ended up in the Mediterranean Sea.

## Impacts

Once in the environment, plastic biomedica as other plastics can be easily consumed by marine wildlife. They have been found in the guts of fulmars and turtles. As other plastics, and especially because they were designed to do so, biomedica can act as toxin magnets and transport mediums for bacteria with harmful effects on ecosystems and possibly on human life and can lead to the dispersal of viruses and diseases.

## Our call for action

In order to make the UWWT Directive fit for the future, it is imperative it addresses the pollution caused by UWWT plants themselves. The loss of biomedica is undermining the key role WWT should play in cleaning our water, sustaining the overall resilience of aquatic ecosystems and protecting their biodiversity, by doing exactly the contrary: further contributing to their pollution and putting in danger the health of the environment and our very own health. As exposed in the Commission's own Evaluation, the Directive is too old to deal adequately with new or emerging concerns such as biomedica pollution. Its revision should allow to address the issue of biomedica spills which are growingly polluting water bodies in Europe.

## Our call for measures

We recommend the introduction of the following measures in the revised UWWTD to prevent and address biomedica pollution:

- Impose to WWTTPs designers and constructors to equip WWTTPs with systems to retain biomedica when this technology is used
- Oblige operators to report on the technologies used in the framework of the secondary treatment of waste water including on the types and formats of biomedica
- Oblige operators and installers to provide instructions for use and storage, as well as details on procedures in place to prevent biomedica spills
- Compel companies to follow and respect strict guidelines to prevent biomedica loss during handling, transport, storage or use of plastic biomedica, and train their staff accordingly
- Set legal obligations for frequent control of waste water treatment plants by public authorities
- Monitor biomedica losses and report on incidents in the event of biomedica spills
- Hold all companies involved in designing, making, using or handling biomedica accountable by law in the event of spills
- Put systems and alert procedures in place to capture biomedica and alert authorities in the event of any accident or failure within the systems where they are used.

## About Surfrider Foundation Europe

**SURFRIDER FOUNDATION EUROPE** is a non-profit organisation whose purpose is to protect and showcase the importance of lakes, rivers, the ocean, waves, and coastlines. It currently has over 15,000 members and is active across 12 European countries through its volunteer-run branches. For 30 years, Surfrider Foundation Europe has been taking action in three areas of expertise: marine litter, water quality and public health, coastal management and climate change. For more information: [surfrider.eu](https://surfrider.eu)

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