Against microplastics in wastewater: pilot project started in Copenhagen

- **Further development of the URBANFILTER funding project of the Audi Environmental Foundation and the Technical University of Berlin (TU Berlin)**
- **Project partners BAIONYX and GKD are starting practical tests with a filter design that is specifically adapted to the typical street sweepings in the Frederiksberg district of the Danish capital**
- **Further expansion stages in Copenhagen an the Nordics are planned**

Copenhagen, November 29, 2024 – Each person consumes five grams of microplastics per week: This was the conclusion reached by the Australian University of Newcastle in 2019. The small plastic particles, up to five millimeters in size, enter the environment through food, cosmetics and washing clothes, for example, and into our bodies via the water cycle. In order to reduce the proportion of microplastics, the city of Copenhagen uses a special microplastic filter. It is intended to capture microplastics such as tire abrasion that is washed from the street into the sewage system. The filter is based on a funding project from the TU Berlin and the Audi Environmental Foundation. A filter structure that is specially adapted to the waste typical for the area of operation will be piloted in the city of Copenhagen from November and is intended to make a contribution to clean water.

Microplastic particles from traffic are washed into the sewer system when it rains. The wastewater pipes do not always lead to the sewage treatment plant - some also lead the street wastewater directly into natural surface water. That's why the TU Berlin is working on the so-called URBANFILTER. This modular system consists of up to nine filter modules that can be combined with each other in almost any way. This means that the filter can be optimally adapted to the respective location and filter out plastic particles before they enter the water cycle. The Audi Environmental Foundation has been supporting the project since 2020. The GKD company is further developing a special filter combination design for the area of Fredriksberg. This filter is now being rolled out in several expansion stages by the Danish company BAIONYX which specialized in filter technology and will be scientifically validated by TU Berlin. “Interest in the URBANFILTER and its flexible application options is growing. We continue to receive requests for cooperation and hope to implement further model projects with our partners in the future,” says Rüdiger Recknagel, Managing Director of the Audi Environmental Foundation. “Clean water is a focus of our foundation. We are pleased that a development from the URBANFILTER project is being implemented in Denmark and that we will support this together with the scientific expertise of the TU Berlin and the newly founded URBANFILTER SUSTAINABILITY HUB.”

“The majority of tire abrasion discharged into bodies of water comes from urban areas,” says Johannes Neupert from the TU Berlin. Another source of microplastics is tire wear, which is increasingly caused by braking and accelerating. The previous practical tests were therefore carried out in areas with a lot of traffic. Long-term test runs in Berlin's Clay-Allee and at an ADAC (General Gernman Automobile Club) test site delivered promising results: the filter was able to capture up to 97 percent of the solids.

The findings from this pilot project flow into the so-called URBANFILTER SUSTAINABILTIY HUB. Successful implementations and knowledge about suitable filter module solutions are bundled there

in order to offer municipalities an incentive to participate and to further develop promising initiatives. The HUB, which is also funded by the Audi Environmental Foundation, focuses on projects to address tire wear and road runoff. The HUB facilitates connections with filter manufacturers and provides a platform for collaborations and knowledge exchange between policymakers, industry, municipalities and local authorities. With a commitment to an open source approach, the HUB promotes the spread of innovation and the development of evidence-based solutions for environmental sustainability and scaling up efforts.

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The Audi Environmental Foundation is an active supporter of research in new technologies and scientific methods for a livable future. Its declared aim is to help protect the environment and to create and promote opportunities for sustainable action. The foundation focuses in particular on the support and development of environmentally compatible technologies, on measures for environmental education, and on the protection of the natural resources for humans, animals, and plants. Established by AUDI AG in 2009 as a fully owned subsidiary, the foundation is a part of the company's social and environmental policy involvement.