



# Sewage as a gateway for microplastics to the environment

Hrönn Jörundsdóttir



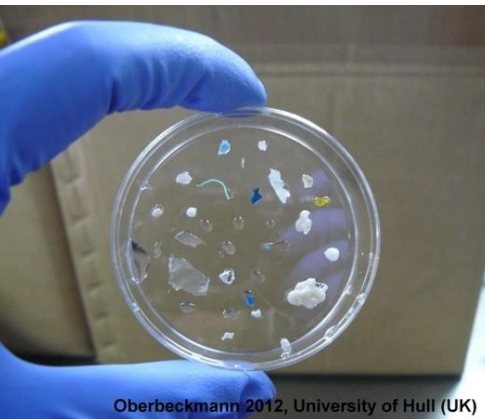
# Consortium of Three Nordic Countries

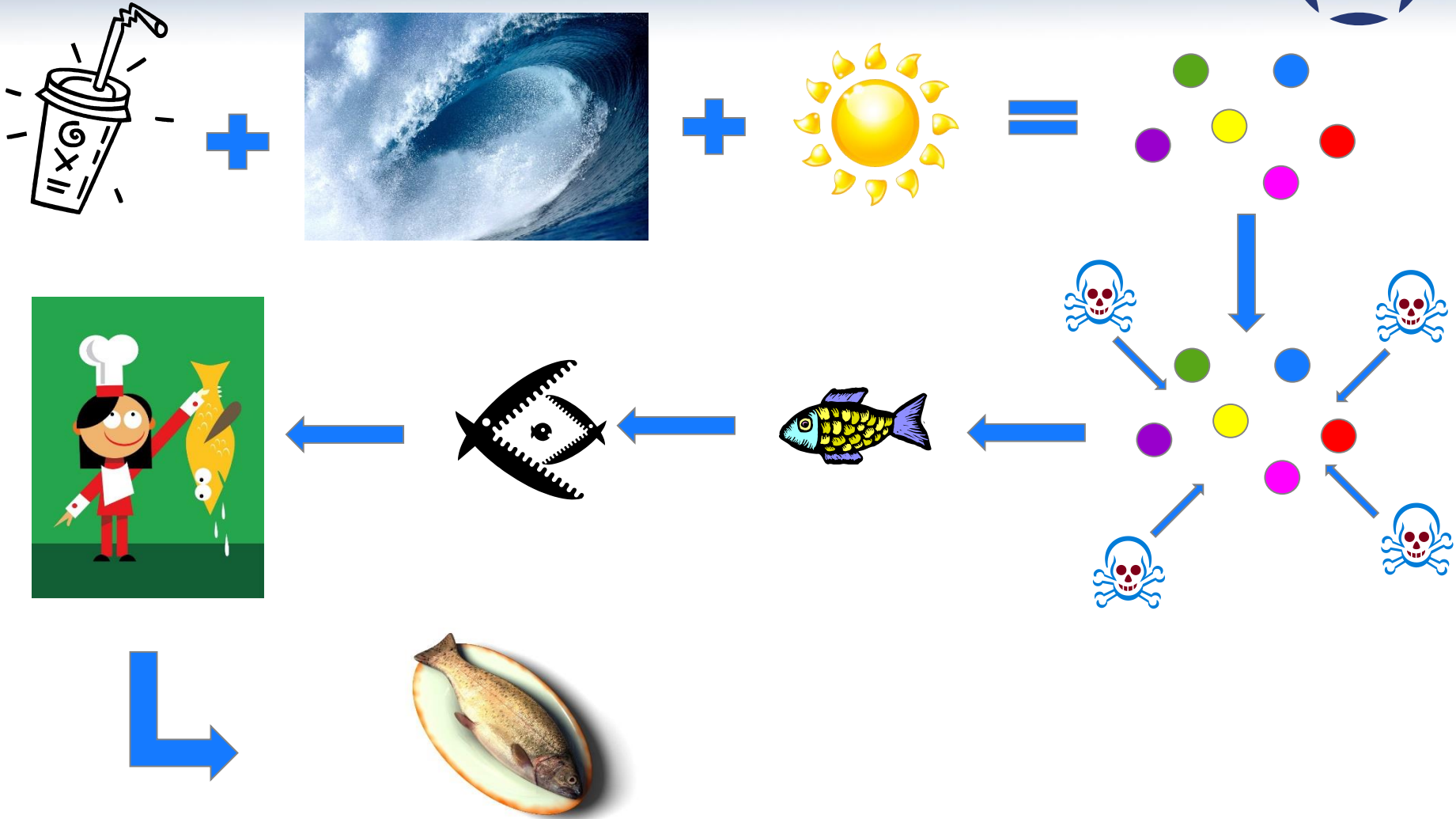
- **Sweden**
  - **IVL, Swedish Environmental Research Institute**
- **Finland**
  - **SYKE (Finnish Environment Institute)**
  - **Aalto University**
- **Iceland**
  - **Matis, Icelandic Food and Biotech R&D**

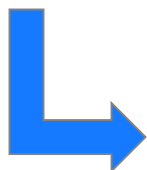
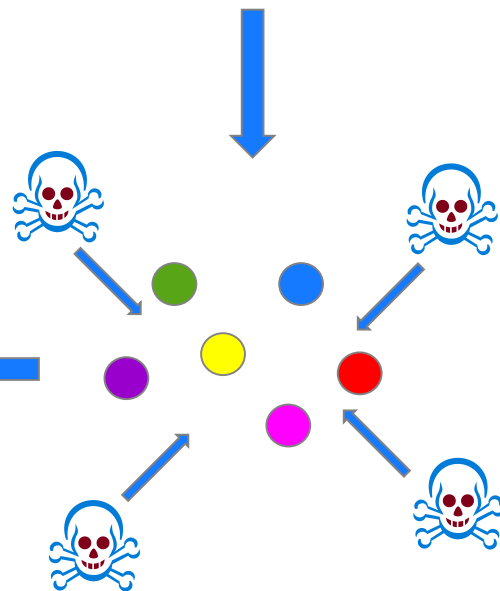
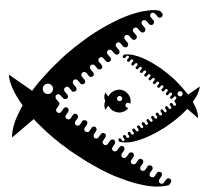
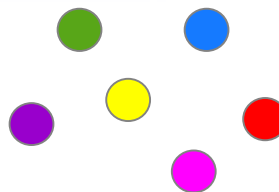


## We use the term *Microlitter*

- **Particles/fragments/fibers <5mm size (<1mm),**
- **Microplastic commonly due to degradation of plastic items**
- **Threatening marine environment**







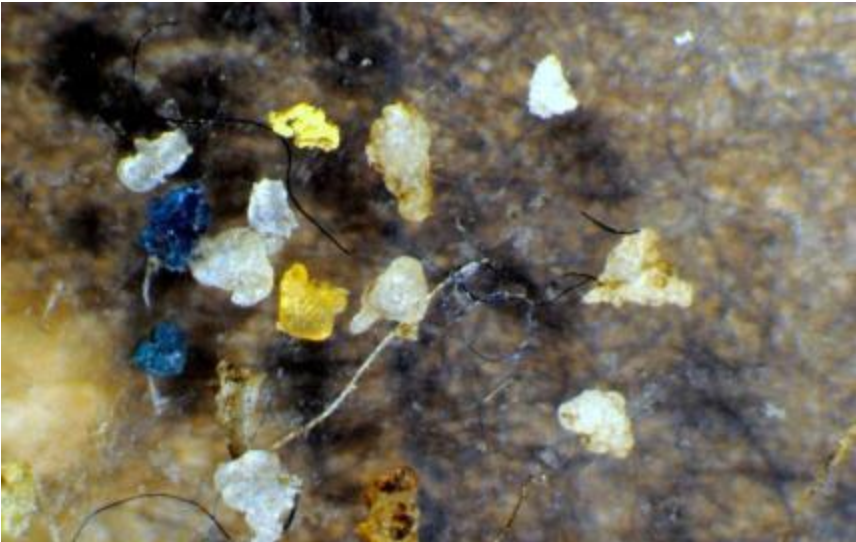
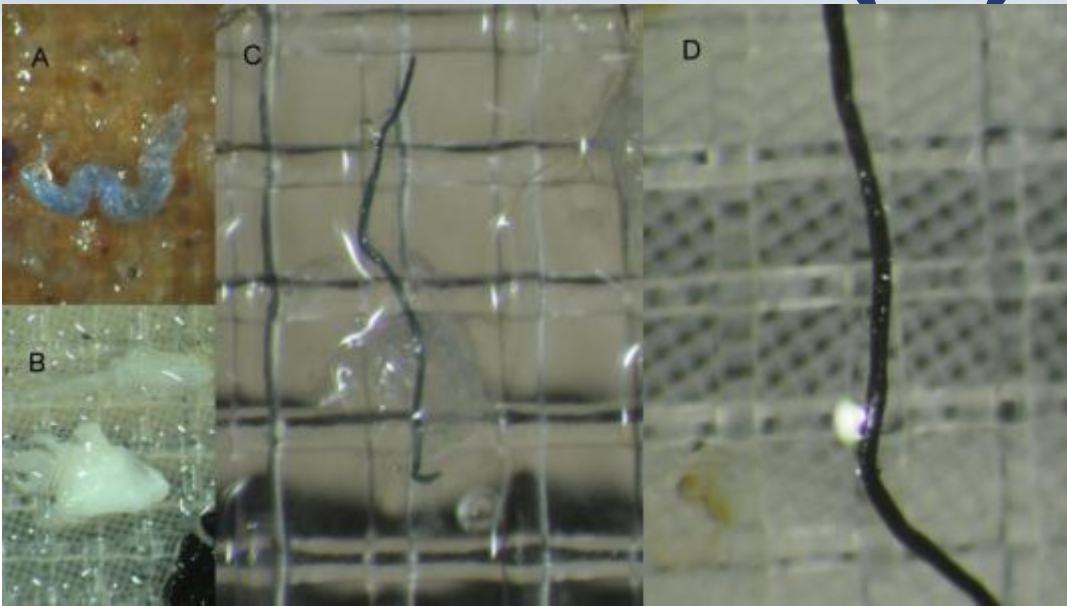




Investigate the WWTP as a gateway for microliter to the environment

Investigate the presence in the recipient, gathering knowledge for assessing impact on recipient biota

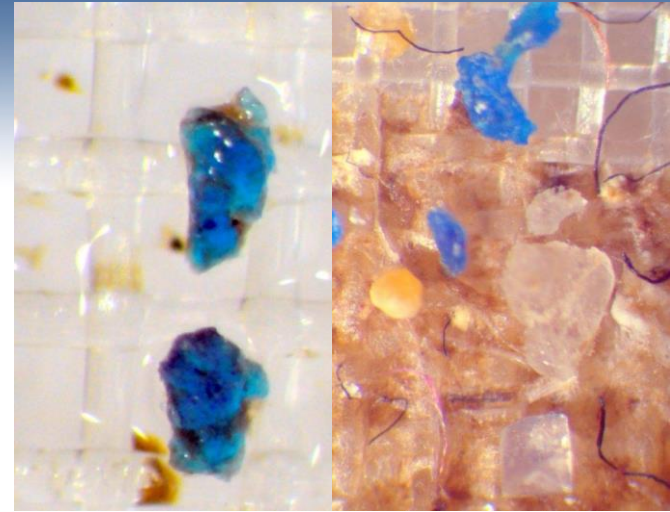
# Example of microplastic from sewage samples



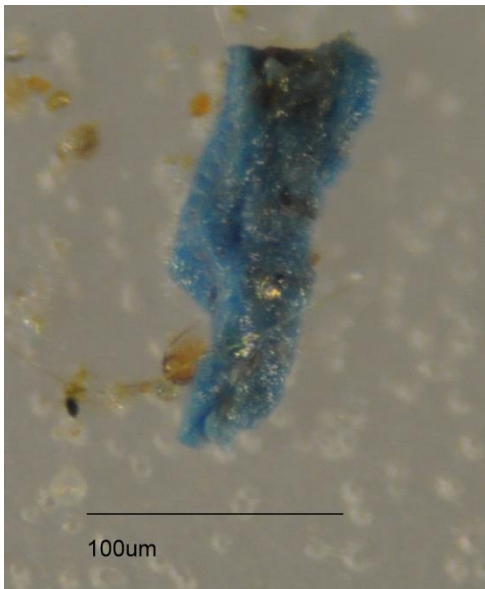




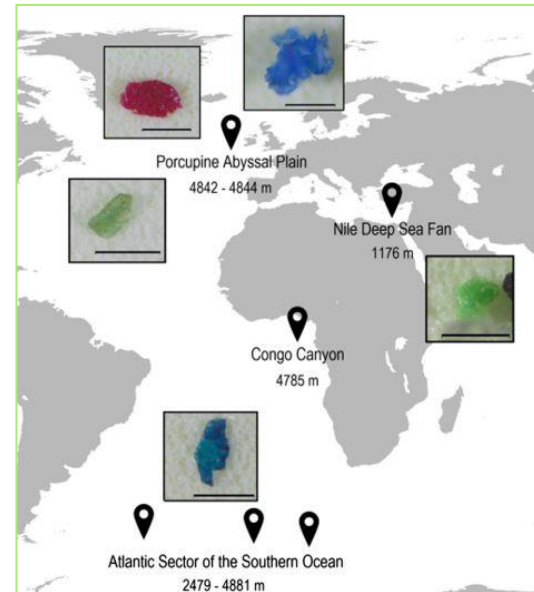
Relining of sewage pipe



Particles in sewage outlet. *Magnusson 2014*



Particles in coastal water. *Norén 2014*



Deep sea sediment. *Van Cauwenberge 2007*

## Difference in Waste Water Treatment Plant technique

- **Coarse filtering in Iceland – limited cleaning**
- **Finland and Sweden more extensive cleaning – disk filter**
- **Microparticles still escaping WWTP in FI and SWE**

## How can we remove microplastic and other particles?



# Thanks for listening

Dr. Hrönn Jörundsdóttir  
Matis  
[hronn.o.jorundsdottir@matis.is](mailto:hronn.o.jorundsdottir@matis.is)