

## Plastics workstream: achievements 2019/2020

Implementation: September 2019

Speaker:  
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RESEARCH  
PROGRAM ON  
Water, Land and  
Ecosystems



UNITED NATIONS  
UNIVERSITY

**UNU-FLORES**



**WAGENINGEN**  
UNIVERSITY & RESEARCH



**Main outcome: Two guidelines**  
Sponsored by Norway

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# Water Pollution by Plastics and Microplastics: A Review of Technical Solutions from Source to Sea

← Published in 2020

Josiane Nikiema, Javier Mateo-Sagasta, Zipporah Asiedu, Dalia Saad and Birguy Lamizana

In press



## **Monitoring Plastics in Rivers and Lakes: Guidelines for the Harmonization of Methodologies**

Katrin Wendt-Potthoff, Tamara Avellán, Tim van Emmerik, Meike Hamester, Sabrina Kirschke, Danielle Kitover and Christian Schmidt



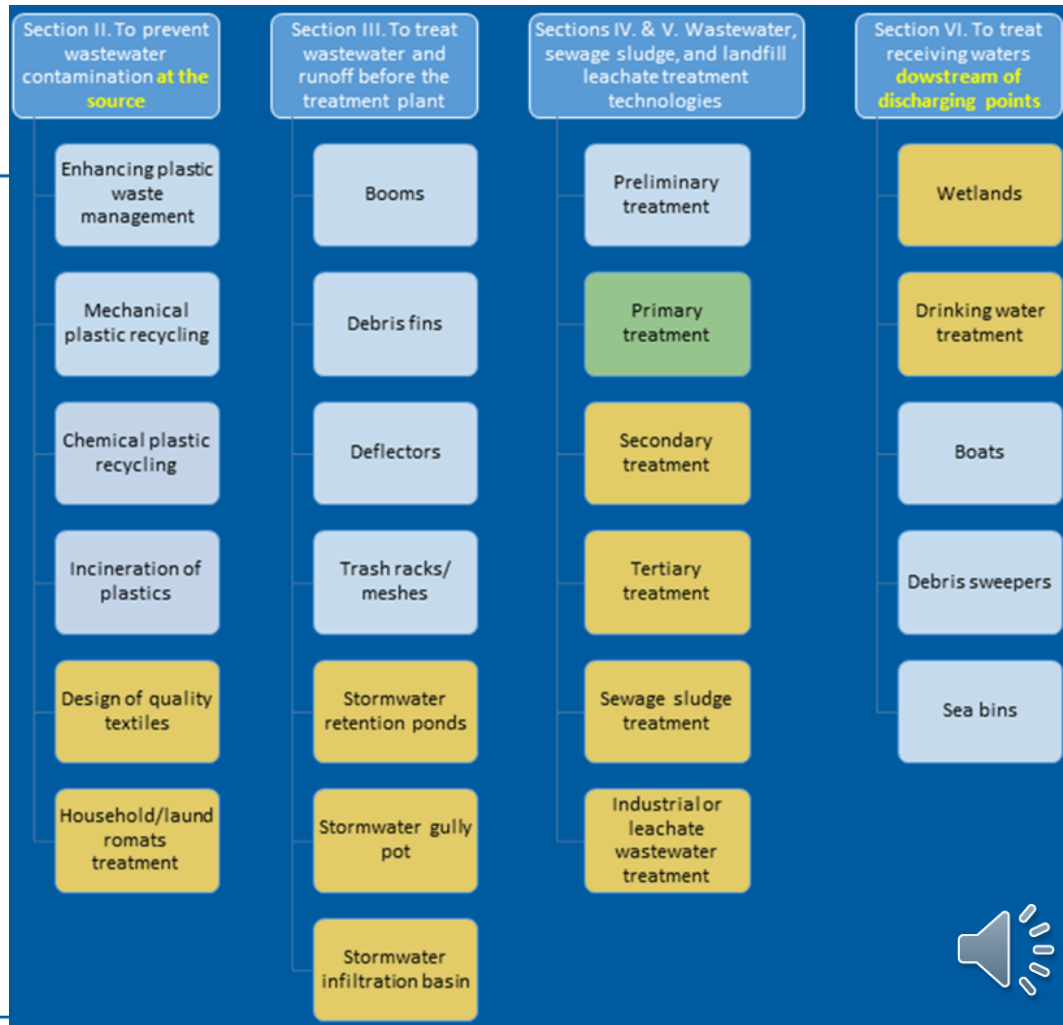
# Solutions and technologies for waste management

... address four sections of the water system

Macroplastics only

Microplastics only

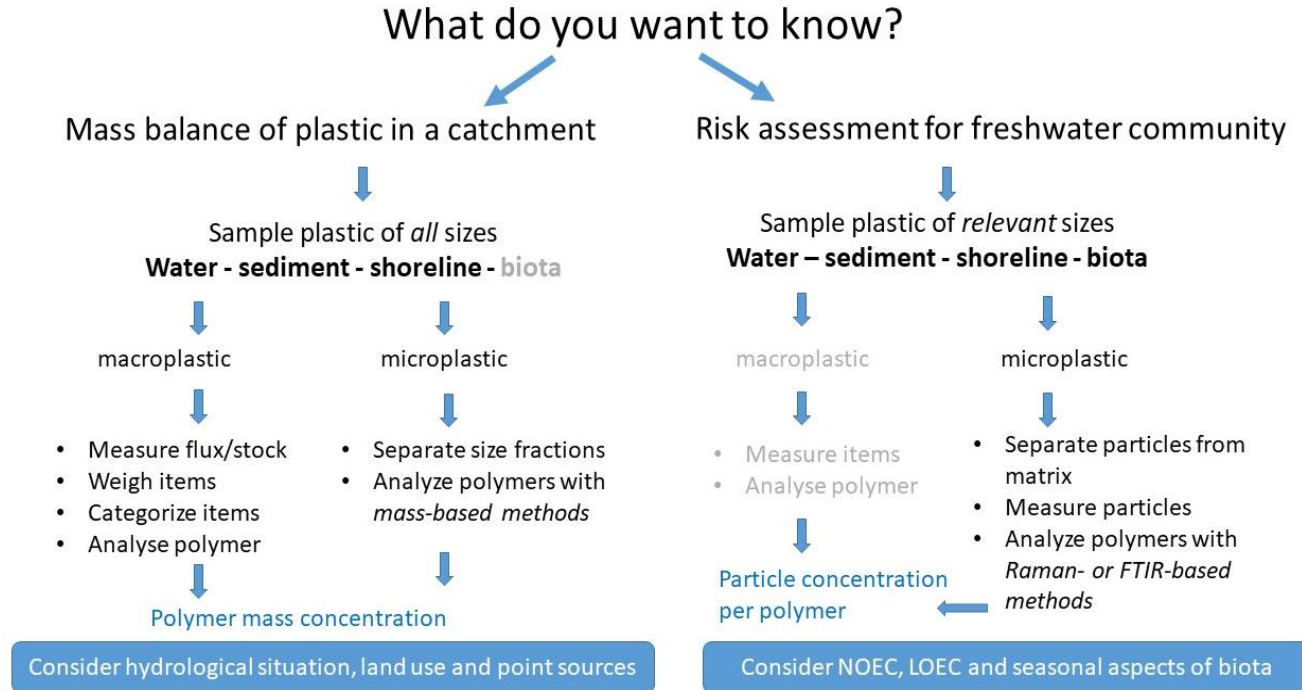
Both macro- and microplastics



# Types of plastic-related assessments in freshwater environments

Depending on the expected outcome or decision to be taken

- Light grey elements are considered less important for the specific purpose
- Hydrological situation: weather extremes and dams are important

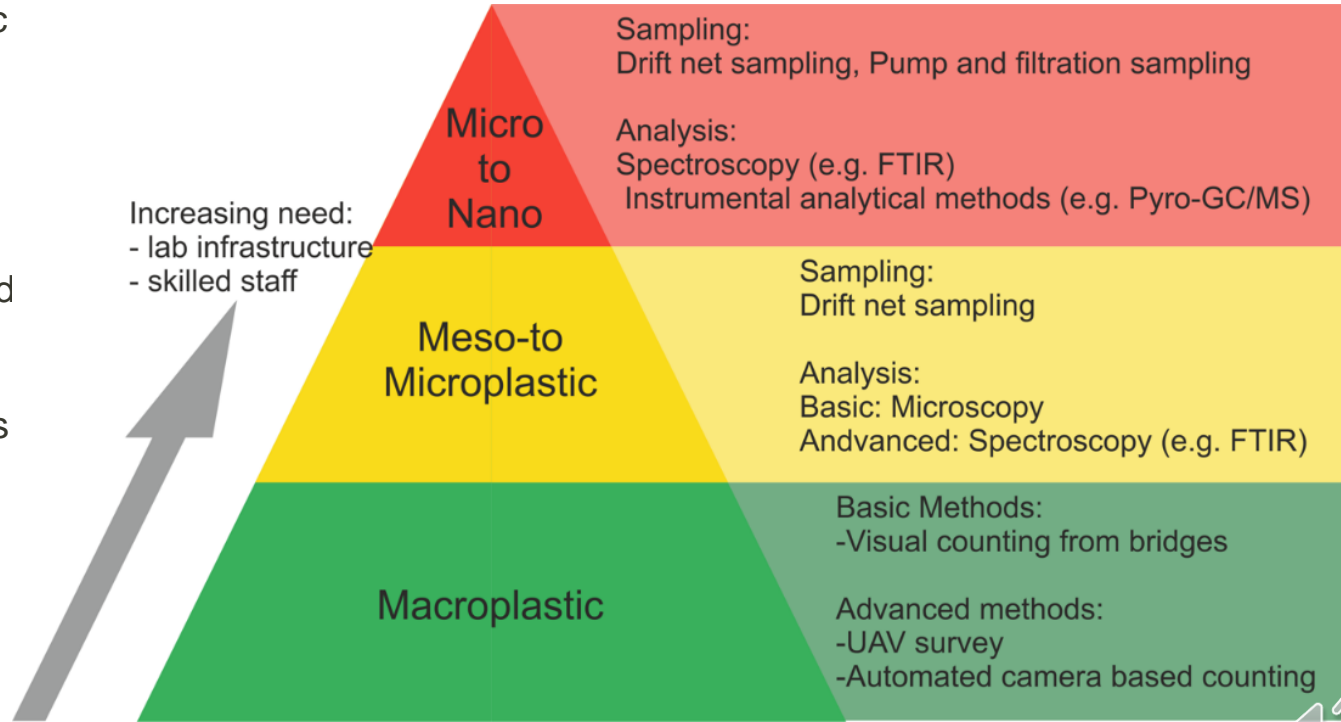


NOEC / LOEC: no observed effect /lowest observed effect concentration

# Sampling and analysis methods for freshwaters from macro- to microplastics

## Decreasing particle size, increasing complexity

- Macro- and mesoplastic sampling can be supported by citizen scientists
- The need for lab infrastructure and skilled personnel are driving the costs and the time needed to obtain results



# Perspective of the Plastics workstream

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- Renew workstream for 2021
- Advertise and pilot the guidelines (networks, conferences)
- Initiate and plan case studies in different selected catchments in a participative manner (seed funding application)
- Collect feedback from stakeholders (intensity also depending on additional funding)

**Thanks for your attention!**

