

Project title: Methods matter: variability in riverine plastic characteristics collected using various nets

Level: Bachelor or Master

Start: Anytime

Project duration: 12 weeks to 6 months

Project form: Laboratory work, Field surveys, Literature review, Data analysis

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Description of the project:

Rivers are major transport corridors for plastics into the marine systems. Though, there is increasing evidence that shows that rivers can also act as (temporary) sinks of plastics. Vital for understanding the role that rivers play in plastic movement is monitoring. Hence in recent years riverine monitoring of plastic (macro- meso- and microplastic) has increased. The technique used for monitoring often focusses on plastic items on the shore or floating items but information regarding plastics present in the water column are lacking.

Fortunately, for the last couple of years together with Rijkswaterstaat Oost-Nederland monitoring of macro- and mesoplastics present in the water column has been performed using a variety of techniques (e.g. using a stow net, larvae net). The used techniques do give insight in the concentration of plastics but so far the actual characteristics of plastics collected have not been compared.

Therefore the goal of this project is to 1) measure the surface area, circumference and weight of recently collected macro- and mesoplastics from the water column of the river Rhine using larvae nets, stow nets and trawl nets, 2) participate during actual macro- and mesoplastic monitoring (if internship is started before april 2023) and 3) compare the plastic characteristics between the various methodologies.