

**Project title:** Mechanical degradation of riverine plastics in the water column

**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. Rivers are also intensively used by inland navigation for the transport of goods. Potentially inland navigation can facilitate the degradation of larger plastic items (macroplastics) into smaller plastic items (mesoplastics and smaller) through mechanical degradation by the ship's propeller.

Fortunately, for the last couple of years together with Rijkswaterstaat Oost-Nederland monitoring of macro- and mesoplastics present in the water column of the intensively navigated river Rhine has been performed. The collected plastic items offer the opportunity to get some insights into the role that inland navigation might play through mechanical degradation.

Therefore the goal of this project is to 1) measure the surface area of recently collected macro- and mesoplastics from the water column of the river Rhine, 2) participate during actual macro- and mesoplastic monitoring (if internship is started before April 2023) and 3) analyse the composition and size of macro- and mesoplastic in light of local inland navigation intensities.