



Measuring plastic transport in rivers

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Plastic pollution of aquatic ecosystems is growing environmental risk. Every year, around 1 million metric tonnes of plastic waste is emitted from rivers into the world's oceans [Lebreton *et al.*, 2017]. Unfortunately, data on the origin and fate of riverine plastics are scarce, partly due to the lack of standardized observation methods. We recently proposed a new methodology to characterize macroplastic (> 5 mm) transport in rivers [van Emmerik *et al.*, 2018], which offers a high degree of flexibility and a gradient in complexity. The methodology combines visual observations and sampling with hydrological data to characterize the quantity, composition and spatiotemporal variation of riverine plastic transport. Because of its flexible nature, the methodology can easily be applied to river systems around the world. In this presentation we demonstrate the various components of the methodology, and their field applications across various rivers around the world. Finally, we address several ways forward to facilitate global upscaling of riverine plastic measurements.

References

- Lebreton, Laurent CM, *et al.* "River plastic emissions to the world's oceans." *Nature communications* 8 (2017): 15611.
- van Emmerik, Tim, *et al.* "A Methodology to Characterize Riverine Macroplastic Emission into the Ocean." *Frontiers in Marine Science* 5 (2018): 372.