



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

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PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

## **PLASTIC- Plastic Litter As Sediment Transported In Channels**

Plastic pollution is a growing global concern. In just a few decades since the start of mass plastic production plastic debris is now ubiquitous even in the most remote parts of the earth. Rivers have been suggested as important vectors for plastic debris to reach the world's oceans. However, to date there is no comprehensive research on the sources, transport and fates of plastics in river systems, with current research largely restricted to ecotoxicological effects on freshwater organisms. Simply put, we do not know exactly where the abundant plastic in the world's oceans is coming from, or how it is transported, and so we cannot design effective measures to limit plastic pollution. As plastic litter continues to build up around the globe, with potentially damaging ecological effects, it is imperative and urgent that regional and global action is taken to tackle this problem. The key challenge for this research is to conceptualise a freshwater "plastic cycle" and to quantify the abundance and fluxes of plastic at different points within this cycle. I am ideally placed to lead this research project as I have a track record of studying the behaviour and fates of buoyant materials in freshwaters. Furthermore, I have shown I am capable of conceiving, managing and delivering transformative and interdisciplinary geomorphology research. As an independent research fellow I will be able to demonstrate I can deliver a complex project with impact to academic and non-academic partners; propelling me towards the next stage in my career as a future research leader in this new field of freshwater plastic sedimentology. It will allow me to develop skills twinning cutting end remote sensing with field based techniques, as well as formulating lasting international networks. This work will deliver high quality outputs including not less than four journal articles, public dissemination through stakeholder magazines and blogs as well as public research fairs.

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**Coordinator:** Università degli Studi di Padova (Italy)

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**Find out more:**