
Microplastic and Mesoplastic Pollution near the River Emajõgi

— Team Ljubljana —
2023

The place - The Expedition

- 8th August
- River: Emajõgi
- Researched: sandy beach, waterline and road





● sand

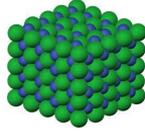
● water line

● road

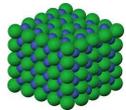
Research Questions

- What is the meso- and microplastic pollution near the River Emajõgi?
- Where does the plastic pollution originate from?
- Is mesoplastic the source for secondary microplastic pollution?

Materials



- Bowls (to collect the mesoplastic in)
- Tweezers (to pick up the samples without contaminating them)
- Trashbags (to pick up bigger pieces of trash)
- Ruler (to measure the samples)
- Water (rinse samples)
- Salt (to float any microplastic particles in the water)
- Filter papers (to filter out any microplastics or other particles)
- Filtering device
- Microscope (to inspect our microplastic samples)



What Did We Do

- Collected plastic from site
- Cataloged the mesoplastics
- Rinsed and strained out mesoplastics
- Filtered the leftover water for microplastic
- Cataloged the microplastics



Mesoplastic Findings (5-25mm)

	Sand			Road		Waterline
Teams	Team1	Team2	Team3	Team4	Team5	Team6
Liters of litter	3	0.5	1	1	1	0
Number of mesoplastic found	17	9	26	15	32	4
Colours	red/blue	blue	yellow	red	blue	white/ transparent
Shapes	round	angular	angular	angular	angular	round/ angular

Microplastic Findings (less than 5mm)

	Sand			Road		Waterline
Teams	Team1	Team2	Team3	Team4	Team5	Team6
Number of microplastic found	2	8	-	16	7	3
Colour	blue	red/blue	-	red/blue	blue	blue
Shape	angular	fibre	-	fibre	angular	fibre

Summary

- Microplastics were found most abundantly in sand and road study sites and were mostly fibres.
- Mesoplastics were found in all study sites and were mostly angular shaped.
- Most of the pollution came from visitor activities not from upstream.
- Some of the microplastic most likely originates from mesoplastic.
- Abundant colors were red and blue.
- Always check the weather forecast before an expedition. :|

Thanks for Watching!



Pictures



