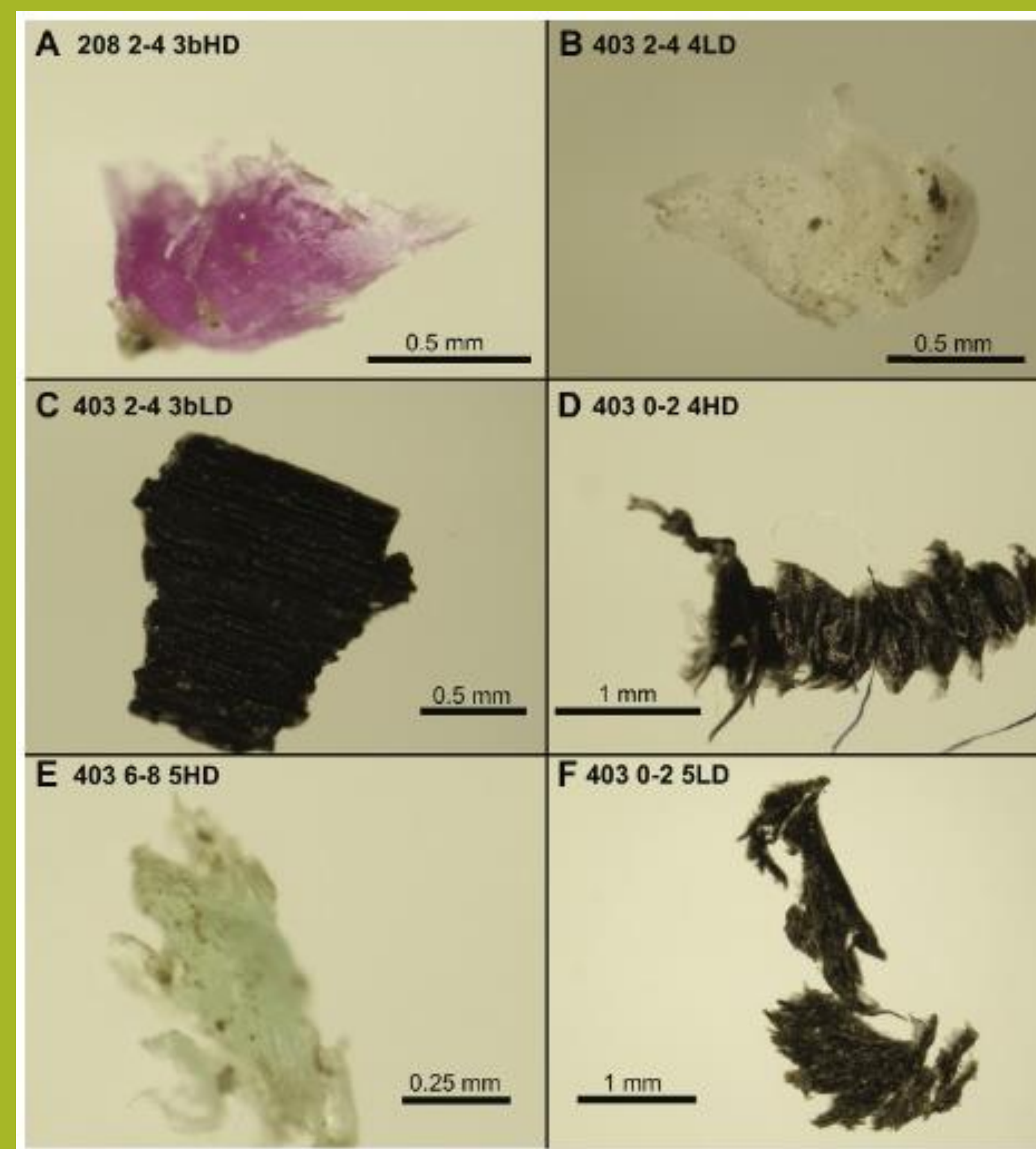


# MIKROPARTIKLAR AV PLAST ÖKAR I SEDIMENT

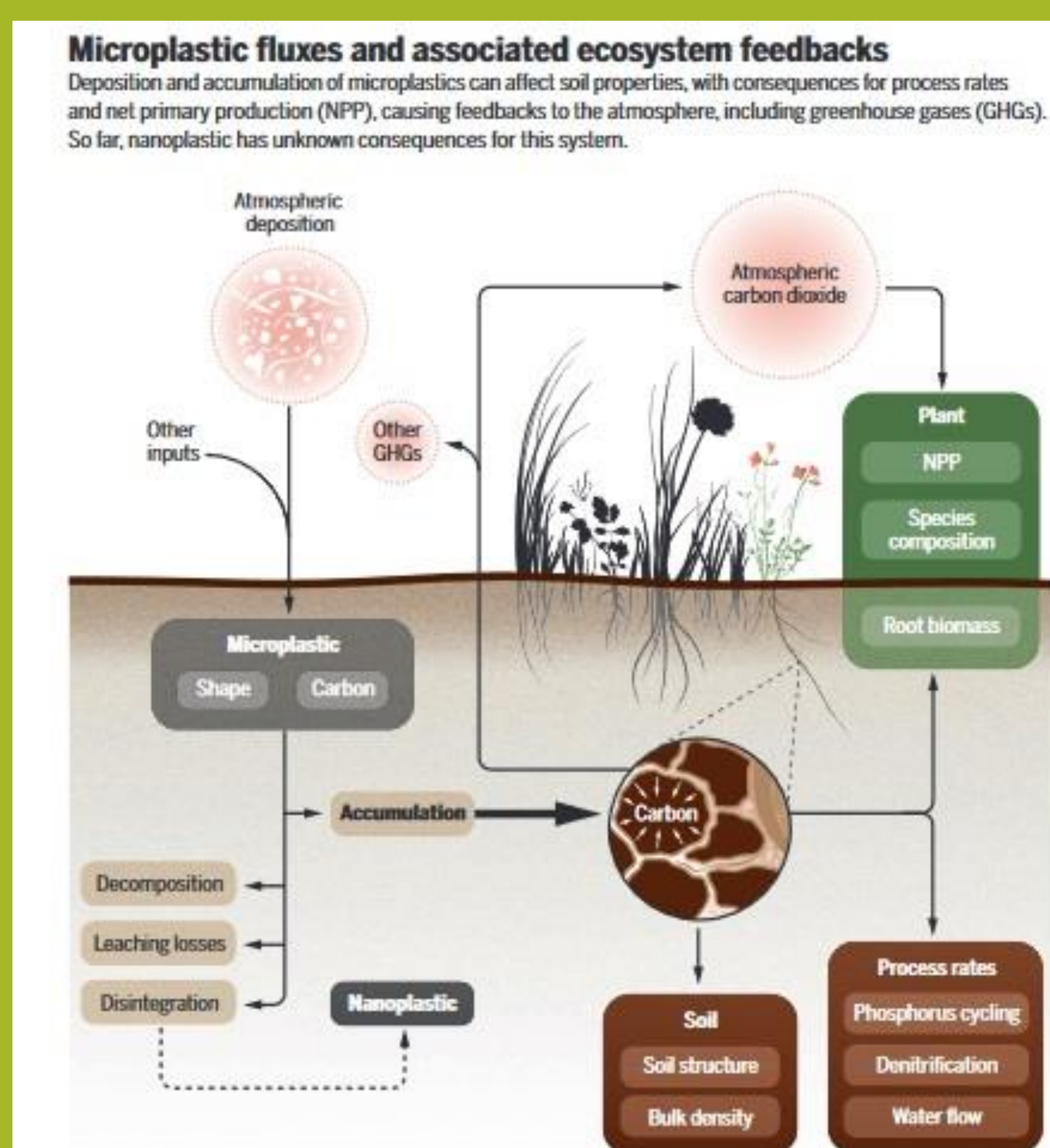
Industrin för plastmaterial har tillverkat plast sedan 1950. Allt sedan dess har vi gjort oss beroende av många olika sorters plaster. Här följer ett engelskt abstract om mitt kandidatarbete.

## English Abstract

Microplastics (MPs) are a major pollution concern since the start of their mass production in the 1950s. They form A) when they are produced intentionally to be part of beauty products and B) when plastics are broken down into smaller particles by sunlight, wind, and rain. This is called A) primary and B) secondary microplastics, respectively. MPs are a concern because they can carry toxic substances with them and become deposited in sediments where they are impossible to be removed. Studies from China, Europe and India show that microplastics are accumulating and increasing worldwide, and reaching former pristine waters and environments, such as the Arctic and natural reserves in Spain. The study from India shows that harbors and tourist beaches are especially polluted areas.



Photos of microplastics from Lake Ontario Canada // Fotografier av mikroplast funna i sjöbottensediment från Lake Ontario. A) består av polyeten B) av polypropen och kisel, C) består av NC-plast, D) och E) består av polyeten, F) består av polyeten, kalcit, kisel och glimmer. Ur artikeln "Hidden plastics of Lake Ontario, Canada and their potential preservation in the sediment record" av Corcoran et al. 2015.



The plastic cycle. From Rillig & Lehmann 2020: "Microplastic in terrestrial ecosystems"

When deposited on dry land, MPs can go into the plastic cycle and be transformed into carbon in sediments. This carbon can transform into greenhouse gases through biological processes, thus MPs are indirectly contributing to the greenhouse effect. The interest of MPs has increased over the years 2011 to 2021, with more articles being published on the Web of Science. In this bachelor degree project, the Tisza river's MP pollution is compared with other rivers, such as the Thames and the Elbe. The conclusion is that almost everywhere in the world, the amount of MP is increasing, especially when taking into consideration the Andong salt marsh in China and an urban river in the United Kingdom. The MP pollution is reaching an all-time high and in this project, the importance of recycling and legislation is discussed as a means of limiting pollution.

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