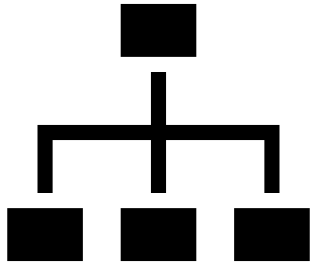




The impact of **plastic** at the coasts
of Germany
(North sea & Baltic sea)

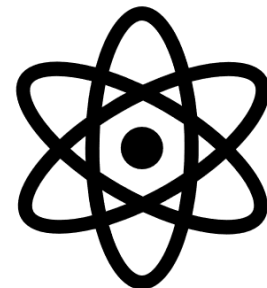
A presentation by the German Erasmus Team



Structuring



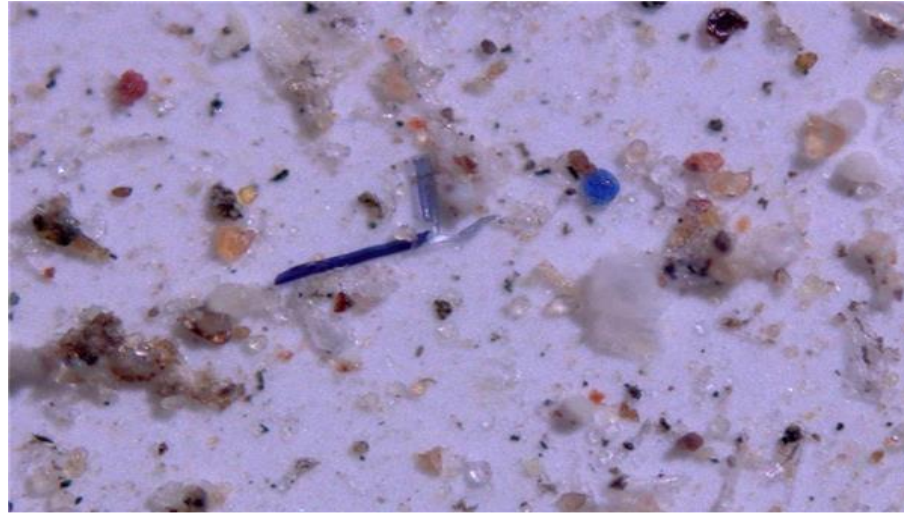
- 1. Microplastic
- 2. Macroplastic
- 3. Ghost nets
- 4. Sources
- 5. The End



Microplastic



Basics:



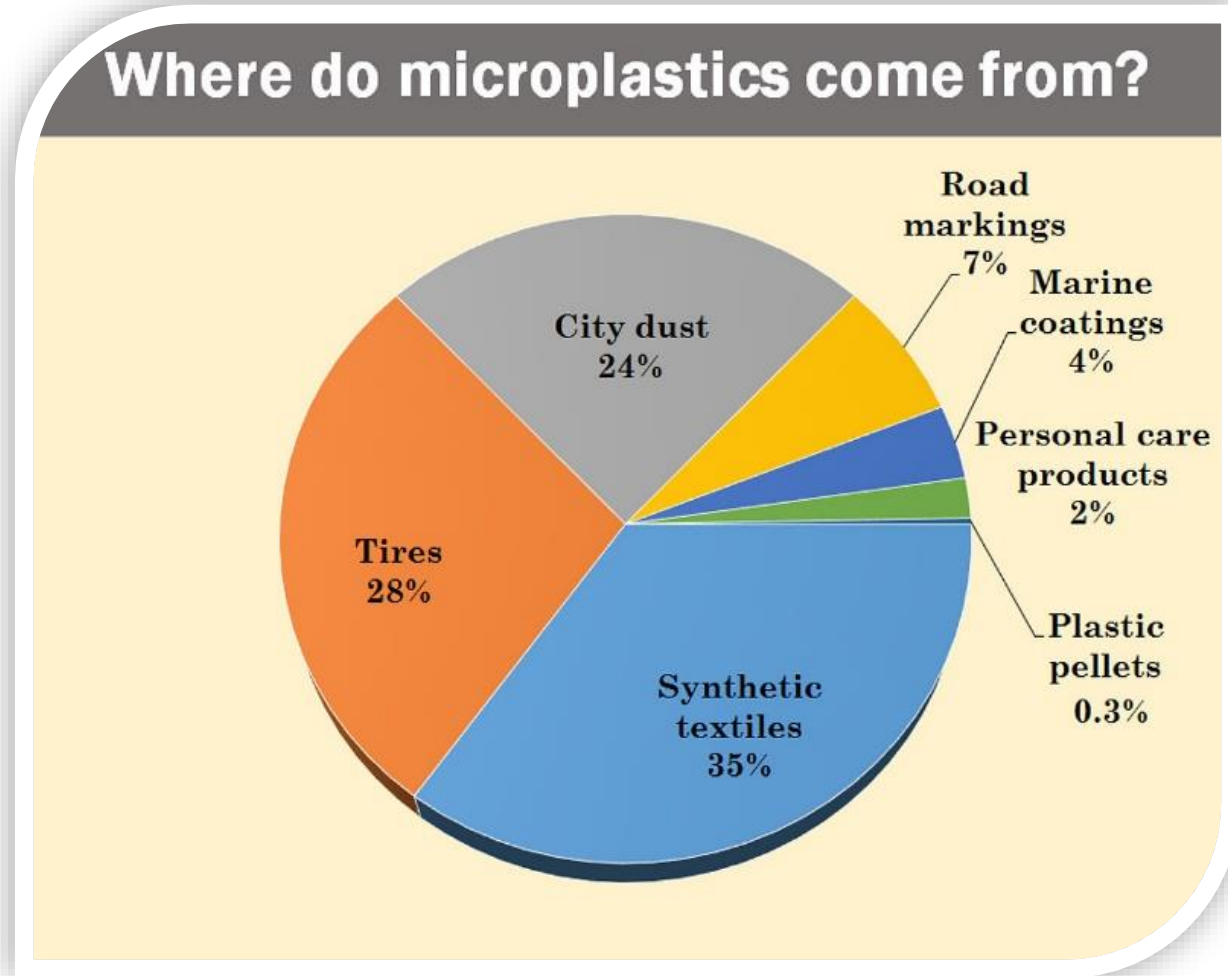
- **What is microplastic?**
Microplastics are fragments of any type of any plastic which are less than 5mm in size.
- They cause pollution by entering the natural ecosystem (for example through: cosmetics, clothing and industrial processes)

What is this waste like?

- **1: Primary microplastics**
plastic fragments or particles - 5.00 mm or less - before entering the environment (microfibers from clothing, microbeads and plastic pellets).
- **2: Secondary microplastics**
- **biological or photothermal degradation (breakdown) of larger plastic products** (like water/soda bottles, fishing nets, plastic bags, microwave containers and tea bags)



Where does it come from?



How is the situation today?



North Sea:

- Fulmars ingest plastic particles from the water surface, 94% of the birds found dead have / 0.1 g plastic in their stomach
- Microplastics are found in all compartments (beach, sea surface, sediment).
- Pilot monitoring of plastic particles in the stomach and intestinal tracts of 258 fish living in open water and 132 on the seabed in the North Sea and Baltic Sea (herring, sprat, flounder, dab and plaice).
- On average, microplastics smaller than 1 millimetre were detected in 69 percent of the fish samples examined.

Baltic Sea:

- Microplastic pollution is already high and will increase in the future (samples from Fehmarn: Baltic Sea, contained twice to four times as much microplastic as samples from Norderney: North Sea island)
- A wide range of marine organisms mistake the particles for food. Not also are the toxins which are part of the plastic a danger to those microorganisms but also potentially dangerous microorganisms living on them
- This endangers the marine food web

An underwater photograph showing a large, clear plastic bag floating in the water. The bag is the central focus, appearing as a large, crumpled, transparent object. The water is a deep blue-green color. In the background, there are some dark, rocky structures and other pieces of debris, including a piece of shiny, metallic-looking material. The overall scene illustrates marine pollution.

Macroplastic

What is this waste like?

- Known as plastic litter
- plastics larger than 5mm
- cans, cups, food wrappers, bottles, etc.
- **environmental problems:**
 - Decomposition takes a long period of time
 - Pollution of the oceans & instant danger to sea animals
 - Adding up in food chain



Where does it come from?

- It is estimated that **81%** of ocean plastics come from **Asian rivers**.
- If we want to tackle plastic pollution we need to stop it from entering the ocean from our rivers.
- To prioritize mitigation efforts we need to understand which of these rivers transport plastic to the sea, and which ones contribute the most.

What is the situation today?

- In 2020 were about **100 to 142 million tons of macro plastic** in the oceans. This is the equivalent of one truck filling of plastic per minute.
- **800 animal species** are endangered because of the plastic.
- **Fish, birds** and other animals can be trapped in the plastic or swallow small chunks of it. The effect : dead, because of hunger or suffocation.
- **39 kilograms** of plastic waste per head in Germany.
- Humans are exposed to the plastic via food, water and small particles can be inhaled.
- **The situation today is getting worse and worse...**



Ghostnets



What is this waste like?

- **North and Baltic Sea:** 10 % of plastic are ghost nets
- Slowly turned into microplastic
- very strong material: death trap to sea animals that get stuck in them and suffocate or starve.



Where does it come from?

- fishers losing them at sea or purposely throwing them out
- 1/3 maritime sources (mostly the fishing industry)
- 1/3 tourism and other activities (on land and in the ocean)
- 1/3 others



What is the situation today?

- Every year 5 to 10 thousand more nets
- Ghost nets are hard to locate - no removing
- Call for action: mandatory labelling for ghostnets, so it can be determined who is responsible
- 11 kg per km² on the seabed in North and Baltic Sea

Sources

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THE END

Thank you for watching & listening!