

Plastic pellet flux in the port of Antwerp

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What?

Plastic pellets

Small plastic granules used as raw materials by the plastic industry



Polyethylene (-terephthalate)
Polypropylene
Polystyrene
Polycarbonate
...

White, transparent, black, yellow, blue,...

Regular shape

Size 3-5mm - Weight ca. 25 mg

Where?

Harbor of Antwerp

11.467 ha

Leading polymer hub in Europe



750.000 m² storage capacity for polymers in silos

Control and clean-up measures are taken by Port of Antwerp and the companies of the entire plastic value chain

Why?

Marine environment

Plastic pellets are a source of plastic pollution



Potential risk for birds foraging in the Scheldt estuary has been identified



Little is known about how to create insights in the effectiveness of the implemented measures

First part of the study

Recent pellet losses on the public road

How many pellets are still being released and where is this occurring?

How?

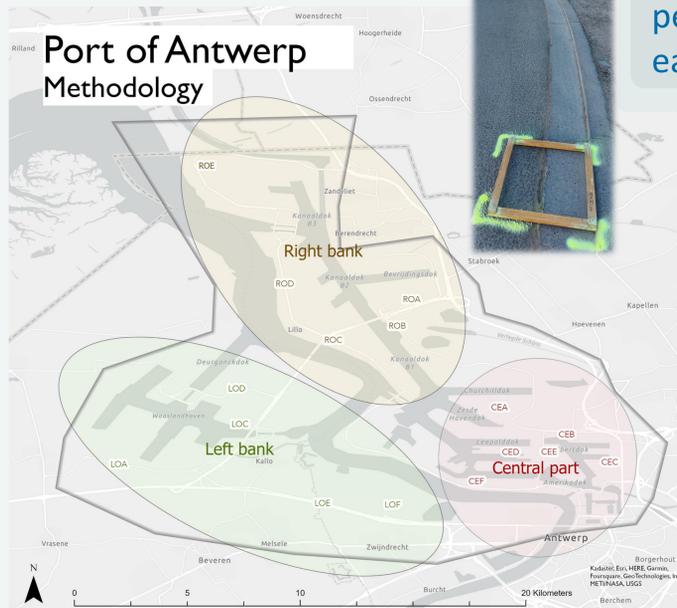
Target based sampling

Port of Antwerp divided in 3 zones

Each zone divided in 5-6 plots = 17 plots

Each plot divided in 3-6 subplots = 57 critical points

Port of Antwerp Methodology



Systematic sampling

Each subplot, 3 replicas are taken (5 meters in between) = 171 replicas

Each season, 5 samples of each replica = 855 times picking up pellets from the quadrant each season

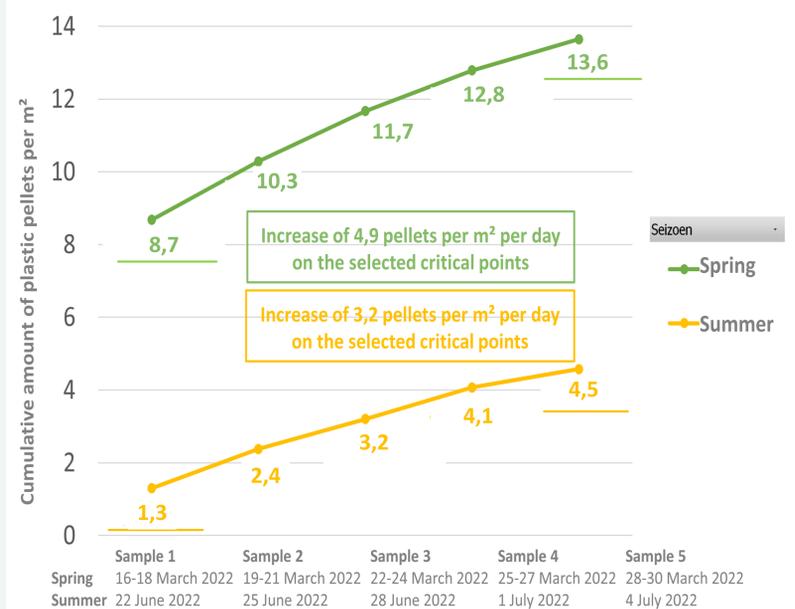
Quadrant 50 x 50cm

Each sample on exact the same point to be able to see a trend



! Sampling started right after the road was swept

Results



After spring and summer companies were informed about the results

New monitoring campaigns are planned in autumn and winter

Keep on sharing the results with Port of Antwerp and each company

Providing insight and incentive to continue working on reduction of pellet loss



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