



Ministerie van Infrastructuur  
en Waterstaat



# (Micro)plastics in rivers

*How the river cruise industry can aid to combat the issue*

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26 November 2024



# The issue of (micro)plastics

- Plastic soup
- Rivers as plastic reservoirs (Emmerik et al. 2022)





# Why are (micro)plastics an issue?



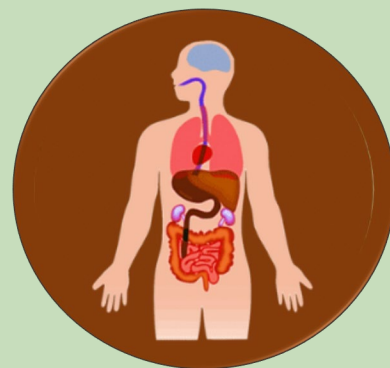
Effects plant growth and health  
Sedimentation



Limits food intake  
Negative effects on growth and reproduction



Damages intestines  
Food intake  
Alters behaviour



Microplastics found in:  
blood, lungs, placentas,  
brain tissue,  
reproductive organs  
Effects uncertain

**NON-BIODEGRADABLE**

**ACCUMULATIVE**

**WIDESPREAD**



## Program Plasticfree Rivers

- Monitoring plastics in Dutch rivers
- Preventative action to tackle sources of plastic pollution close to rivers, collaborating with:
  - Governmental authorities
  - Producers
  - Industries along the river, i.e. river cruise industry





# River cruise industry

Sources of (micro)plastics from river cruises:

- Packaging material
- Treatment paints
- Laundry
- Toilets....





## Wet wipes

- Wet wipes often contain microplastics
- Often disposed of in toilet rather than in waste bin
- Clogs sewerage
- Sewers overflow into rivers, spreading microplastics in rivers





# Pilot project

## Goals of the project:

- Passengers dispose of wet wipes in the designated waste bins on board rather than flushing them down the toilet
- Increase awareness around microplastics in rivers
- Reduction in sewer blockages on board
- Prevention of (micro)plastics entering the waste water and river

## Partners





# Behavioural intervention

## System 1

95%

**Continuous**  
*Automatic pilot*  
*Unconscious*  
*Fast*  
*Does not require*  
*a lot of energy*





# Results

- Increased awareness
- More passengers enacted target behaviour
- Passengers used less wet wipes overall
- Cost-effective intervention + fitting to the luxury image of the river cruise industry

## **Recommendations**

- Also engage staff in project
- Scale up and further finetune interventions



# Toolkit for River Cruises

*How you, as a cruise operator, can contribute to solving the plastic problem in rivers*

This guide provides tips for interventions that you can apply on your river cruise. With behavioural interventions, you can influence passengers' habits regarding their use of wet wipes and how they dispose of them. Ready to get started? Scan the QR code and download the toolkit for river cruises!

Wet wipes are a popular product. They are convenient and hygienic to use. However, they also cause problems, as wet wipes often contain plastic fibres. After usage, many wipes end up in the environment, posing a danger to flora and fauna.

It often goes wrong during disposal: used wet wipes are often flushed down the toilet instead of being thrown in the bin. This can cause blockages in the sewage system. However, not all problems are immediately visible. The plastic fibres in wet wipes break down and enter the environment as microplastics. These issues occur both by use of wet wipes on land and on water, for example, during river cruises.

The improper disposal of wet wipes calls for both policy adjustments and consumer education. As a cruise operator, you can also help reduce the flow of wet wipes into rivers, by implementing this toolkit.



Scan the QR code to download the toolkit or visit [www.schoudersonderschoon.nl/toolboxen](http://www.schoudersonderschoon.nl/toolboxen)



**1** The captain, the figurehead of the cruise ship, should include in their welcome speech the importance of disposing of wet wipes in the bin and not flushing them down the toilet.



**2** Invite all passengers who are checking in to sign a pledge promising that they will dispose of their wet wipes in the bin.



**3** After submitting the signed pledge at the reception, passengers receive a branded cardholder to keep their room key in.



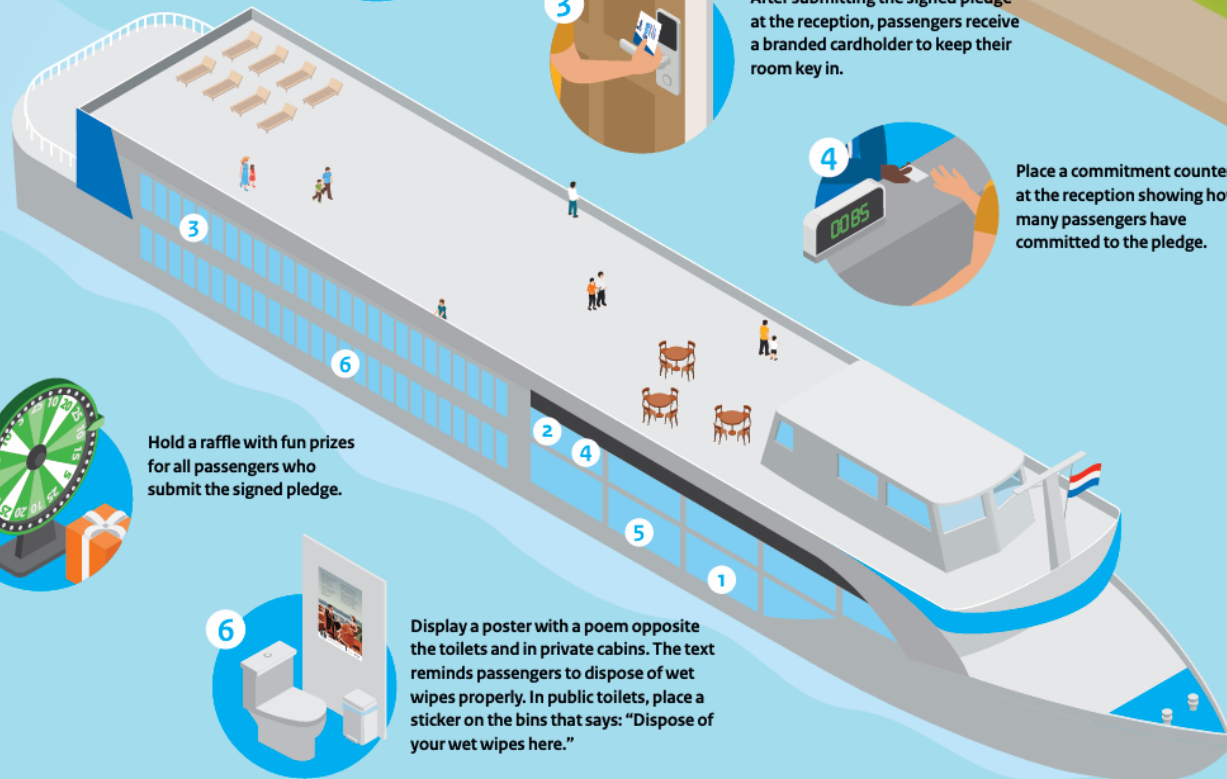
**4** Place a commitment counter at the reception showing how many passengers have committed to the pledge.



**5** Hold a raffle with fun prizes for all passengers who submit the signed pledge.



**6** Display a poster with a poem opposite the toilets and in private cabins. The text reminds passengers to dispose of wet wipes properly. In public toilets, place a sticker on the bins that says: "Dispose of your wet wipes here."





# Call to action

- (Micro)plastics are a persistent and urgent issue
- We should all take on our role to combat the issue
- Don't wait, act now

