

## Global plastics production doubles every tenth year.

One third of all the plastic produced globally is meant for packaging. A major part of this share is for single-use. Once introduced into the sea, oceanic currents transport garbage into the oceanic gyres.

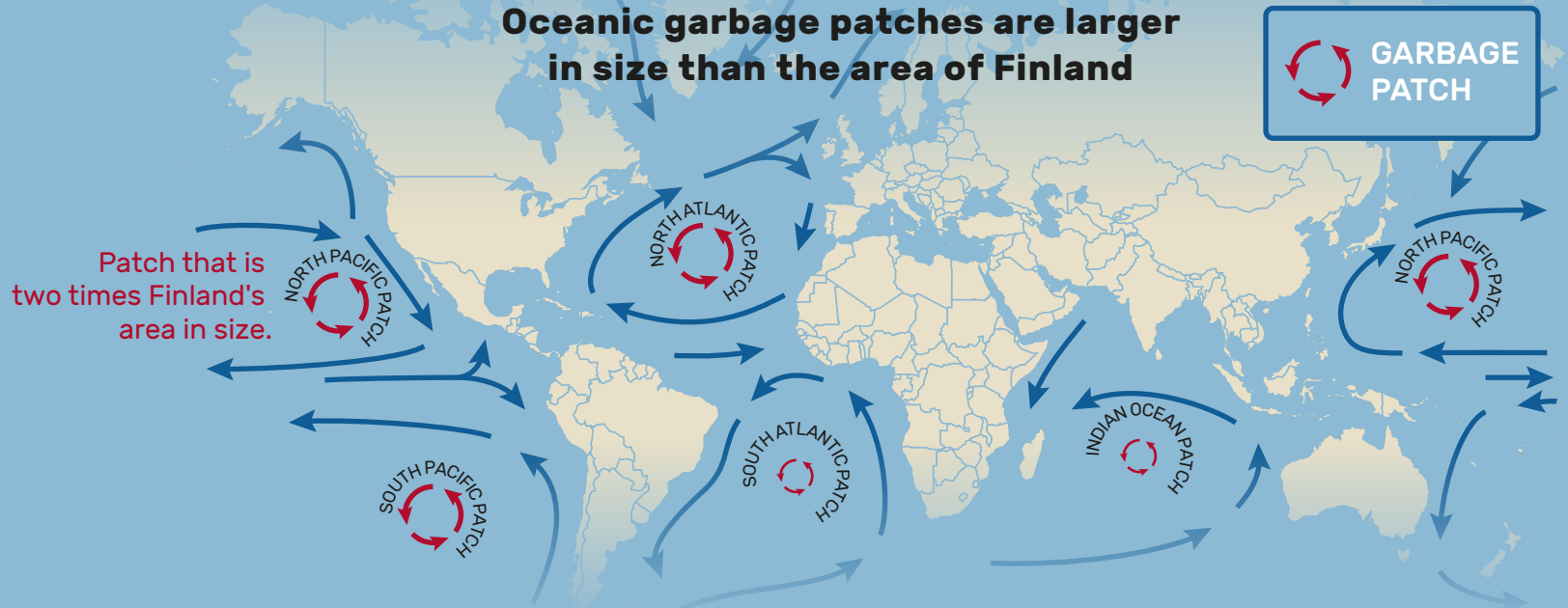
### Do like this:

Ask for your local shopkeeper to change plastic fruitbags to biodegradable ones. Use shopping bags made from fabric. Do not take along disposable coffee cup's plastic cover. Recycle all plastic you buy and use.

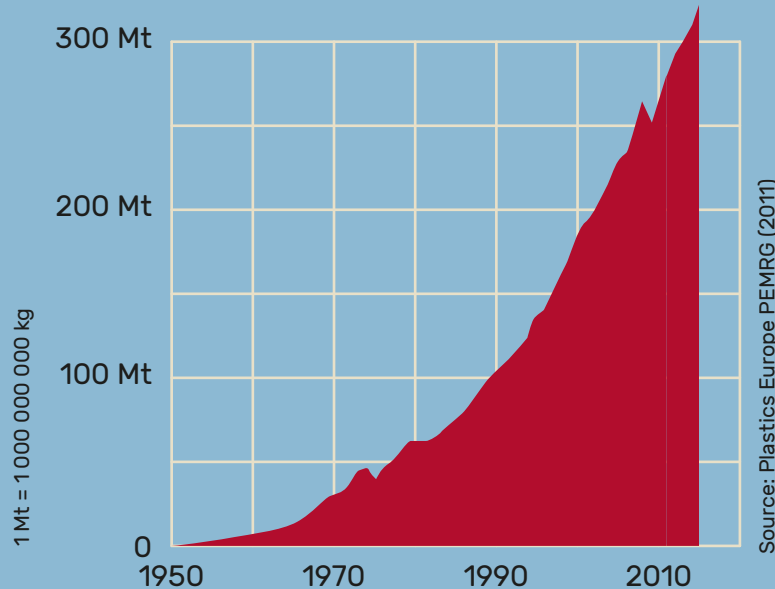


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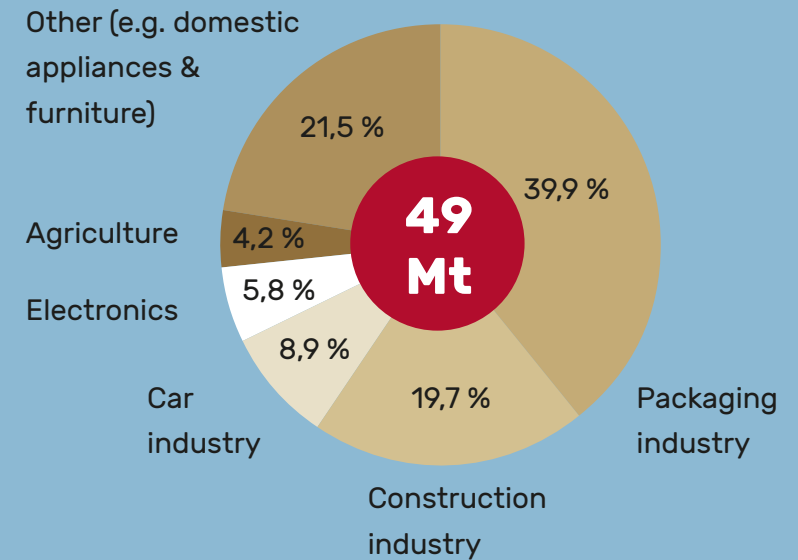
# Oceans receive huge amounts of plastic garbage



**Global plastics production**



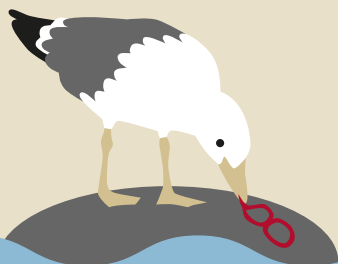
**European plastics consumption 2015**



**If nothing is done, in 2025 there will be one kg of plastic per three kg of fish in the oceans.**

Marine animals get tangled with plastic litter, and litter items may block animal's alimentary canal. Plastic litter also contains harmful substances.

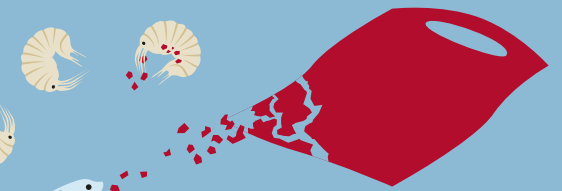
# Plastic litter ends up in marine animals



Plastic litter ends up inside sea birds and marine mammals either unintentionally or by animal's search for nutrition.

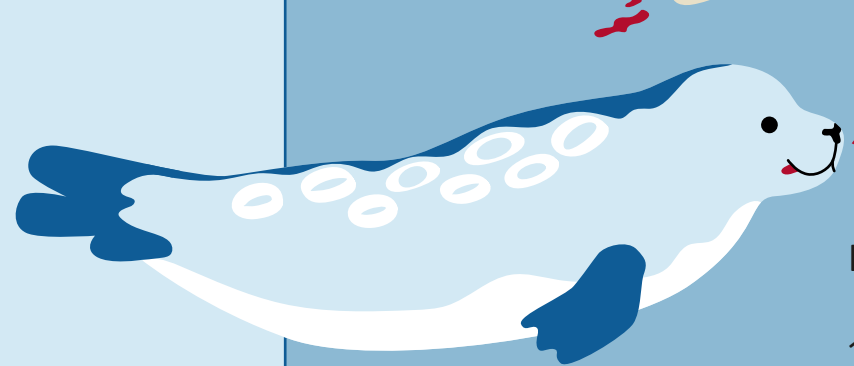


Items found inside marine animals



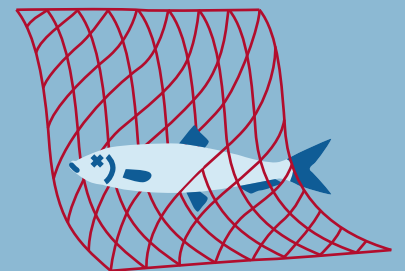
## PLASTIC LITTER TRAVEL FROM AN ANIMAL TO ANOTHER

Large pieces of plastic litter fractionate into smaller pieces of such a size class that they are able to enter planktonic animals.



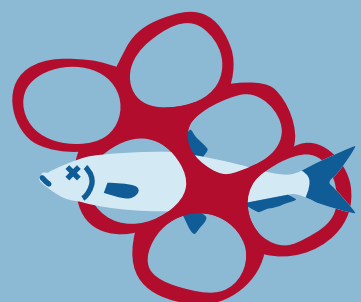
## Most typical causes of death

1. Litter items block the alimentary canal. Animal starves to death or suffocates.
2. Animal gets tangled to litter, loses its ability to swim or fly, and starves to death or gets caught.
3. Sharp plastic litter ruptures the alimentary canal.



## GHOST NETS

Abandoned or discarded fishing nets that keep on catching fish for years to come.



## ENTANGLEMENT

Globally, plastic litter causes the death of **1 000 000** sea birds and **100 000** marine mammals every year.



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**Plastic litter in the beach is mainly an aesthetic nuisance for people, but in the sea it turns into a real problem for animals.**

Plastic litter decomposes extremely slowly, and degrades into smaller and more harmful microplastics.

**Do like this:**

Do not leave your garbage on the beaches. Do not leave trash beside a full trash can. Wind and birds often carry trash to the water.

# Shores are littered in Helsinki

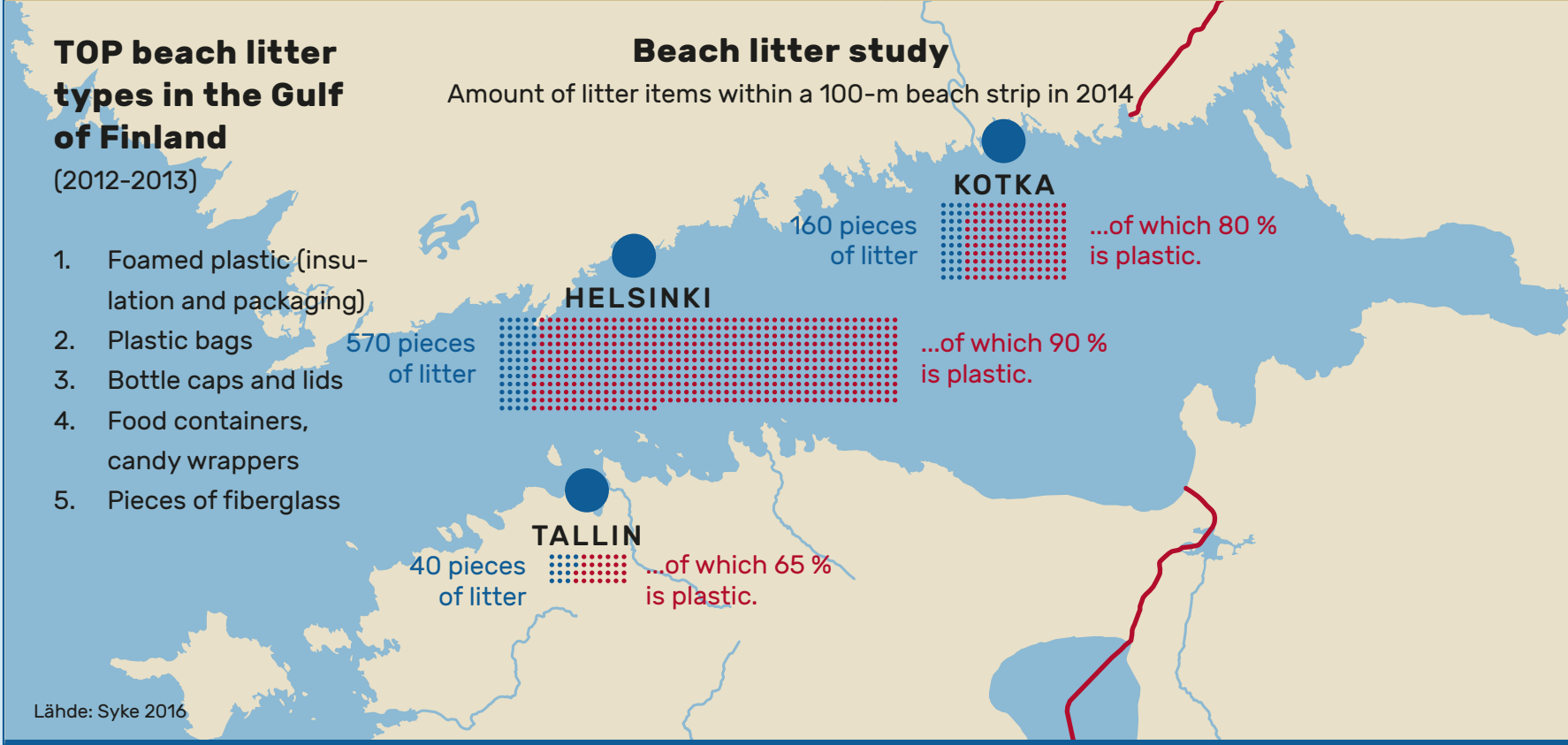
## TOP beach litter types in the Gulf of Finland (2012-2013)

(2012-2013)

1. Foamed plastic (insulation and packaging)
2. Plastic bags
3. Bottle caps and lids
4. Food containers, candy wrappers
5. Pieces of fiberglass

## Beach litter study

Amount of litter items within a 100-m beach strip in 2014



Lähde: Syke 2016

NEWS-PAPER

6 weeks

## How long it takes for a litter item to disintegrate in the sea?



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Finnish Environment Institute

[www.syke.fi/en-US](http://www.syke.fi/en-US)

**In Finland, 300 million plastic bags are used every year.**

Have you come to think that if you leave a plastic bag beside a trash can, the bag will often end up in the sea.

Wind carries trash over long distances. Rivers, trenches and urban run-off water sewers carry trash, too. Waste water treatment plants do not remove all the litter items from the effluent.

**Do like this:**

See that your trash go to trash cans. Do not dispose any trash into toilet bowls.



S Y K E

# Most of the marine litter comes from the land



**Sources of marine litter:**

- Littering in general; full trash cans
- Litter coming via sewers
- Lost fishing equipment
- Litter from maritime traffic
- Beach littering

**80 % OF MARINE LITTER COMES FROM THE LAND AND 20 % FROM THE SEA**

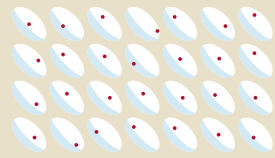
**Plastic is everywhere in the modern society.**

Thus, microplastics are introduced into the sea from industry, households, traffic and people's everyday life.

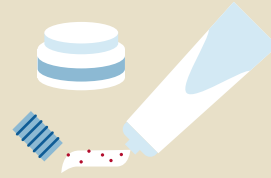
Microplastics contain harmful substances: included in the plastic material itself and adsorbed onto the plastic particles.

# Sources of microplastics and pathways to the sea

## Intentionally manufactured microplastics

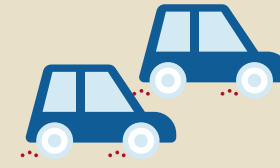


Plastic pellets



Microplastics in cosmetics and personal care products

## Microplastics originating from consumables



Traffic



Textiles



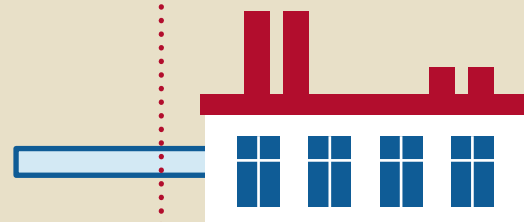
Plastic items

Accidental (transport) and operational losses

Dust from vehicle tyres and road markings

Washing fibres

Fragmentation



WASTE WATER TREATMENT PLANTS



SLUDGE

WATERCOURSES

SEA



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