

Marine litter and the environment

Measures to mitigate marine plastic waste



What's the problem?

What's the problem?

- Marine litter causes great harm to wildlife, both above and below sea level
- (Micro)plastics is considered the biggest issue
- Ghost fishing high up on the list

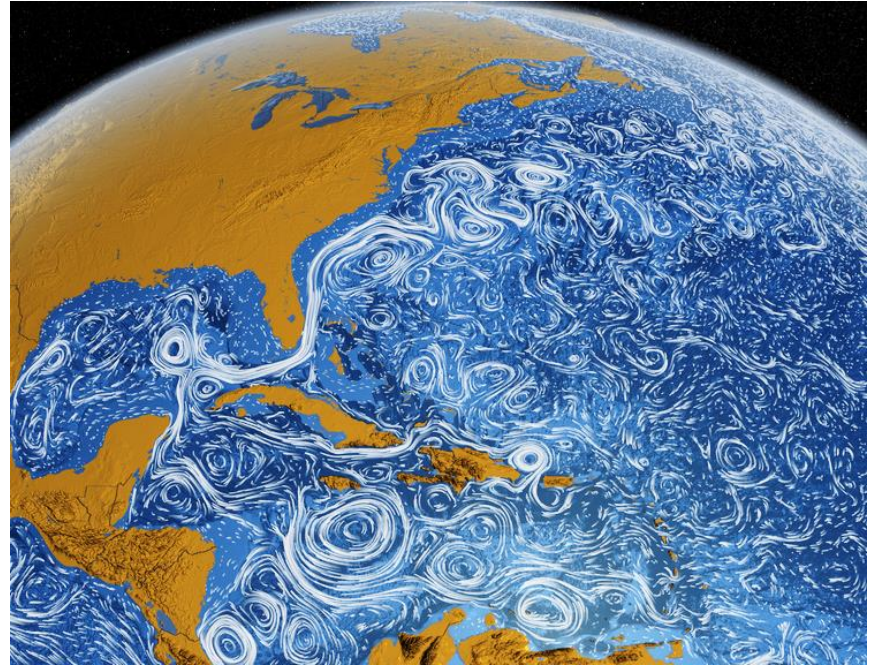


Death by fishing line

Photo: Bård Øyvind Bredesen/Naturarkivet

What's the delivery mechanism?

- Ocean currents are what stirs the oceans
- The litter is transported by the currents, which makes this a world wide problem

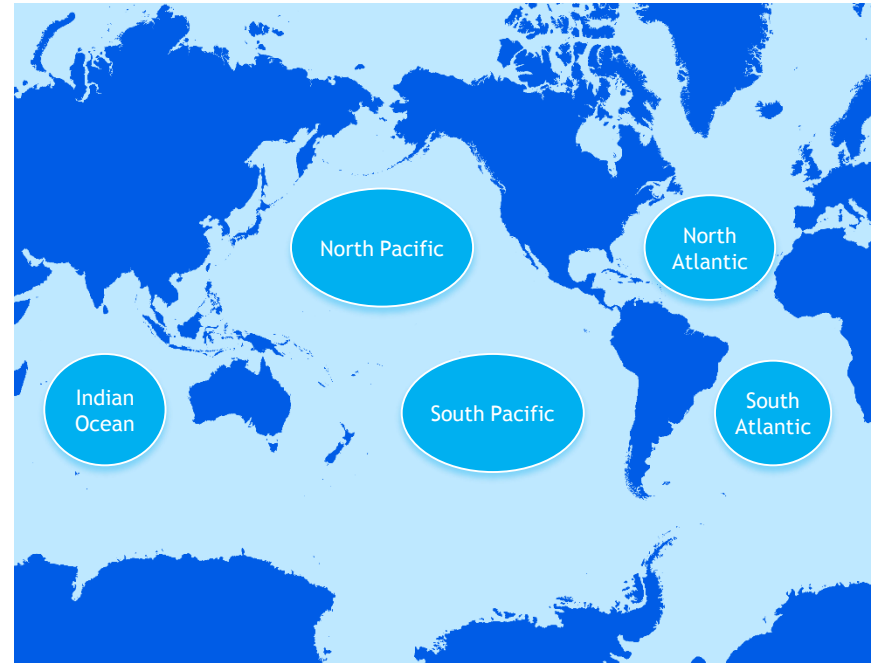


Ocean Currents

Image: NASA/SVS

What's the delivery mechanism?

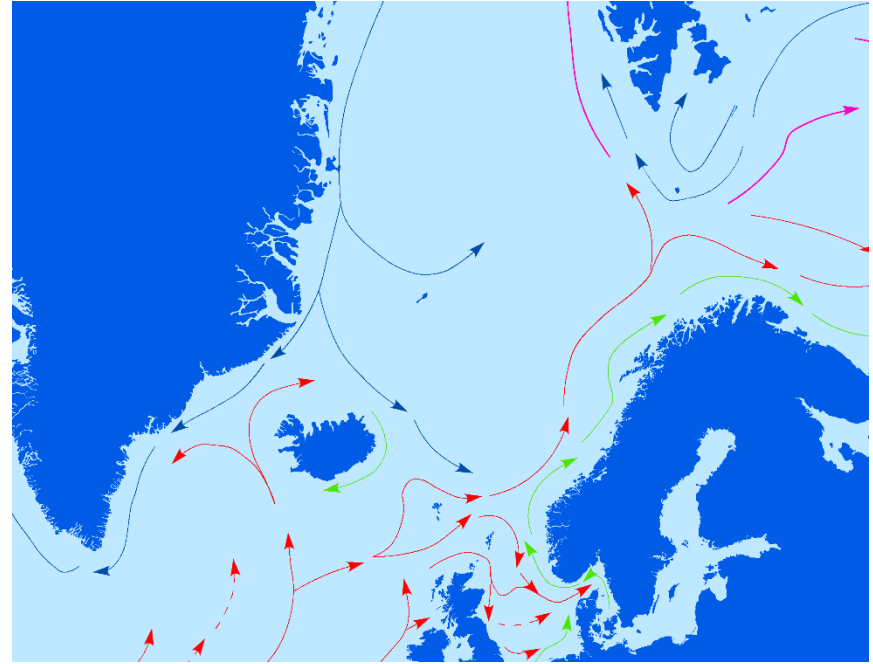
- Garbage patches



Ocean Gyres
Map: Erlend Standal/Miljødirektoratet

What's the delivery mechanism?

- The Norwegian coastal current

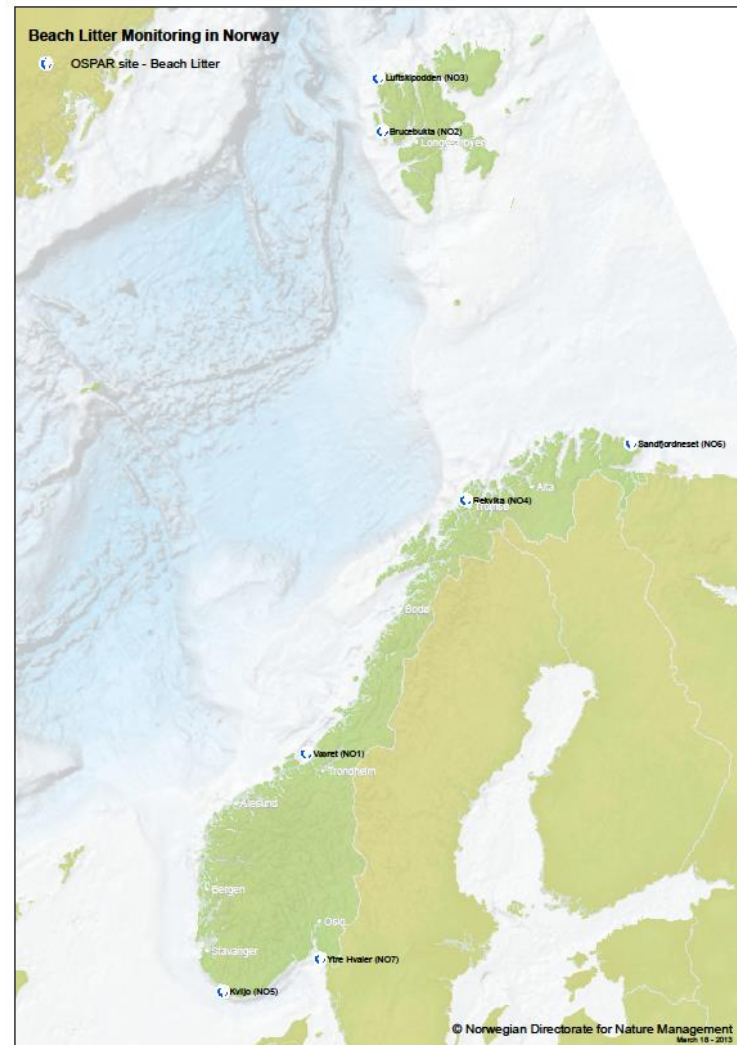


The Coastal Current
Map: Erlend Standal/Miljødirektoratet

Fisheries related marine litter -Monitoring

Beach litter

- Indicator for OSPAR and the Norwegian integrated ocean management plans
- 7 beaches in Norway
- Time series from 2011 on some of them
- Have to look for long-term trends within the same beach





Beach litter - Photo: Erlend Standal/Miljødirektoratet



A lot of the litter is related to the fishing industry - Photo: Erlend Standal/Miljødirektoratet



Smaller pieces of litter mixed with macro algae - Photo: Erlend Standal/Miljødirektoratet

Beach litter

- Plastic has a strong lead
- These figures include fisheries related litter
- Difficult to say whether a small fragment of string has its origin from the fisheries industry

Material types Rekvika - 100 m - 2015

MATERIAL	Total no. of items	Items per m	% of total
Plastic/Polystyrene	4533	45.33	94.99
Rubber	16	0.16	0.34
Cloth	7	0.07	0.15
Pottery/Ceramics	0	0.00	0.00
Metal	13	0.13	0.27
Medical	6	0.06	0.13
Sanitary	38	0.38	0.80
Faeces	0	0.00	0.00
Paper/Cardboard	26	0.26	0.54
Wood (machined)	120	1.20	2.51
Glass	13	0.13	0.27
TOTAL	4772		

Fishing for litter

- OSPAR indicator
- Test project in Norway
 - 2015 Preparations
 - 2016 Started collection of litter in February
 - 2017 End of project - evaluation
- 3 harbours and 21 vessels are included

Fishing For Litter





Fishing for litter

Photo: SALT Lofoten AS/Miljødirektoratet



Fishing for litter

Photo: SALT Lofoten AS/Miljødirektoratet



Fishing for litter

Photo: SALT Lofoten AS/Miljødirektoratet



Fishing for litter

Photo: SALT Lofoten AS/Miljødirektoratet



Fishing for litter
Photo: SALT Lofoten AS/Miljødirektoratet



Fishing for litter

Photo: SALT Lofoten AS/Miljødirektoratet

Fishing for litter – fisheries related litter

- From February to August
 - 28,6 tonnes collected
 - 21,5 tonnes fisheries related litter shipped for recycling (Nofir)
 - 7,1 tonnes of “rest litter”, including a large proportion of fisheries related litter
 - Some of the fisheries related litter not included (a full 35 m³ cargo container with net pots from king crab fisheries)
- Mostly bigger vessels that fish far from the coast

Fishing For Litter



Plastic particles in fulmar stomachs

- Indicator for OSPAR and the Norwegian integrated ocean management plans



Time for dinner
Photo: KIMO

International Measures

OSPAR

- Marine Litter Regional Action Plan (RAP-ML)
 - A set of common measures for all OSPAR countries
 - Suggested national measures
- Fishing for litter



National Measures

Report

- The Environment Agency has produced two national status reports on marine litter
 - Kunnskap om marin forsøpling i Norge 2014 (English: Knowledge about marine litter in Norway)
 - Kunnskap om marin forsøpling i Norge 2010
 - Both are only available in Norwegian, but with English executive summary



M-265 | 2014

Kunnskap om marin forsøpling i Norge 2014



7 suggested measures for marine litter

1. Extended producer responsibility scheme for fisheries and aquaculture
2. Free delivery of marine litter for fishing vessels
3. Extended producer responsibility scheme for packaging
4. Carry forward the annual grant scheme for marine litter



7 suggested measures for marine litter

5. Strengthen the cooperation between the Environment Agency and other governmental bodies
6. Let municipalities impose fines in cases concerning littering
7. Strengthen research and monitoring





www.miljødirektoratet.no

The Norwegian Environment Agency

- The Norwegian Environment Agency is working for a clean and diverse environment.
- Our primary tasks are to reduce greenhouse gas emissions, manage Norwegian nature, and prevent pollution.
- We are a government agency under the Ministry of Climate and Environment and have 700 employees at our two offices in Trondheim and Oslo.