

Plastforurensning og marin forsyøpling

Vår største utfordring?



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12.11.14



The 24th First Annual
Ig[®] Nobel
Prize Ceremony



FIGURE 2. Lead author disguised as a polar bear approaching a group of Svalbard reindeer. Limited supplies of white clothing left the back of the observer uncovered. Photos by M. Kardel.

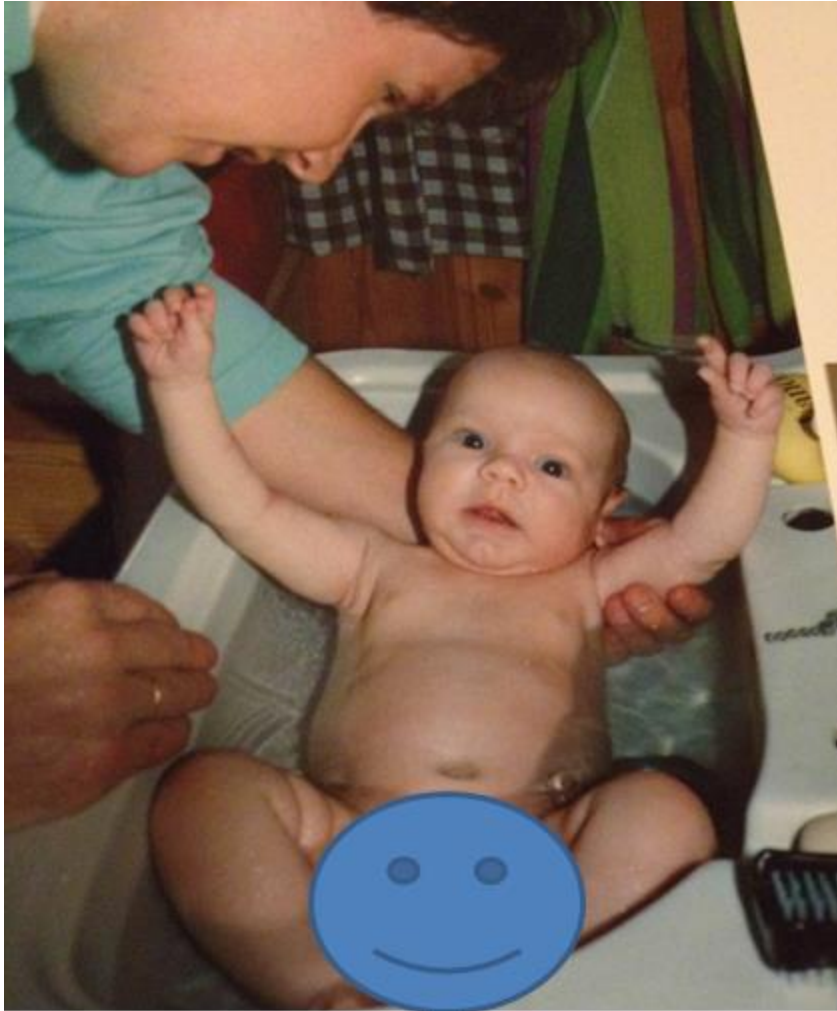


Midway

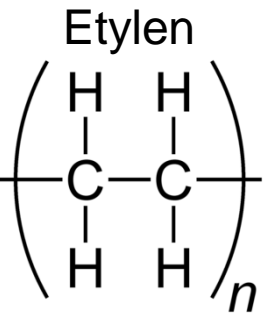
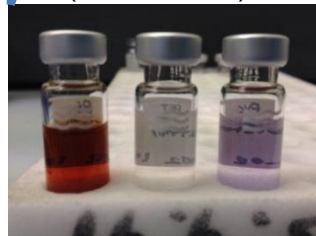
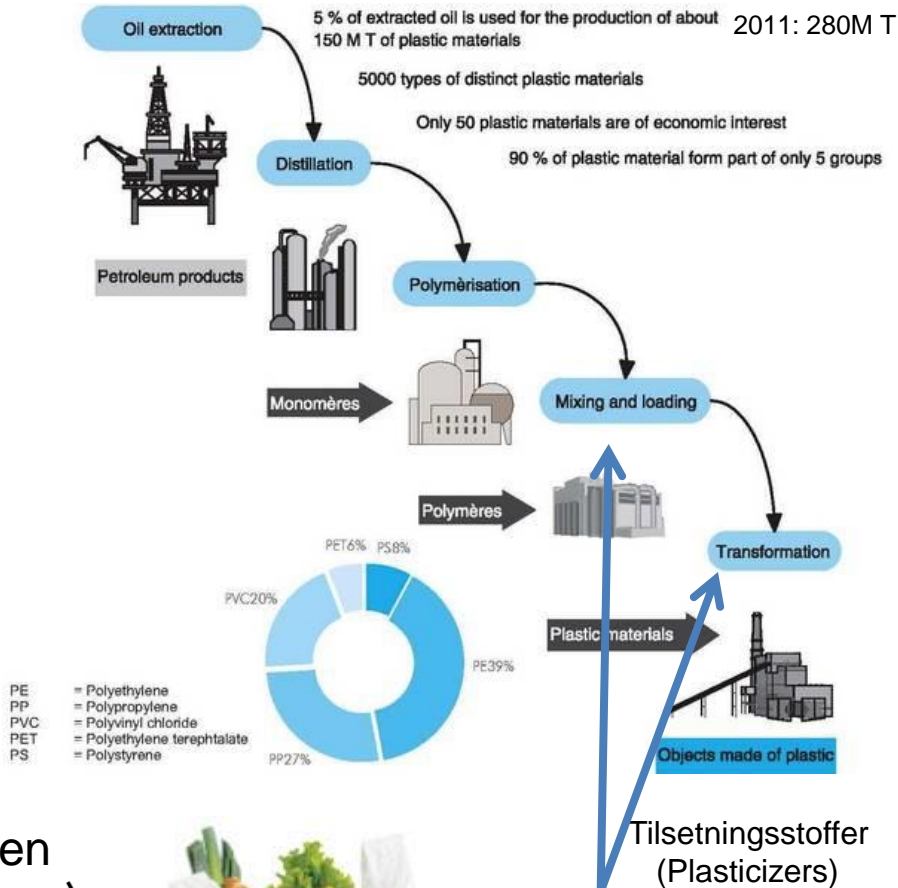


<https://www.youtube.com/watch?v=ozBE-ZPw18c>

1989



Hva er plast?



Allsidighet

Lett

Slitesterkt

Billig

Fleksibelt



53% plast

Miljøintrodusering

50% av verdens befolkning lever mindre enn 75km fra kysten

10% av all plast som produseres ender opp i havet

80% av all plast i havet kommer fra land



Nedbrytning

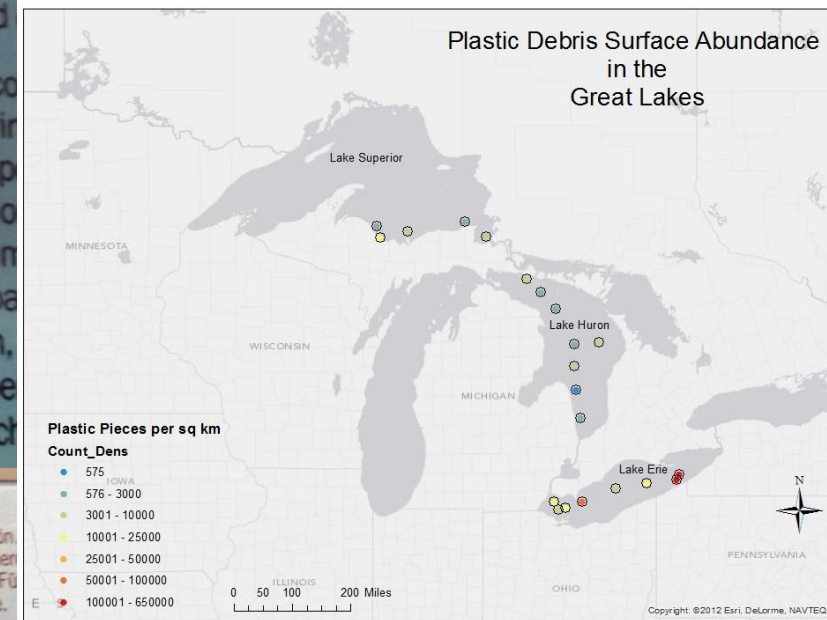
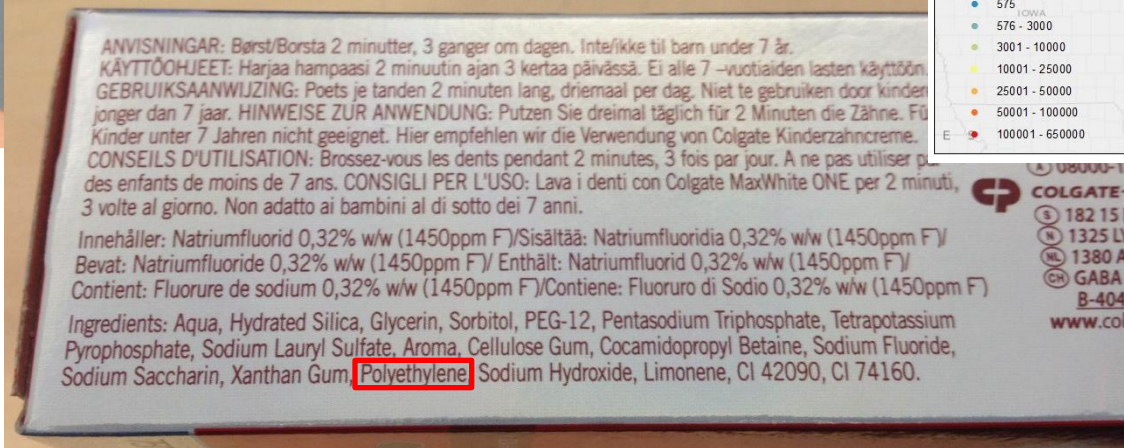
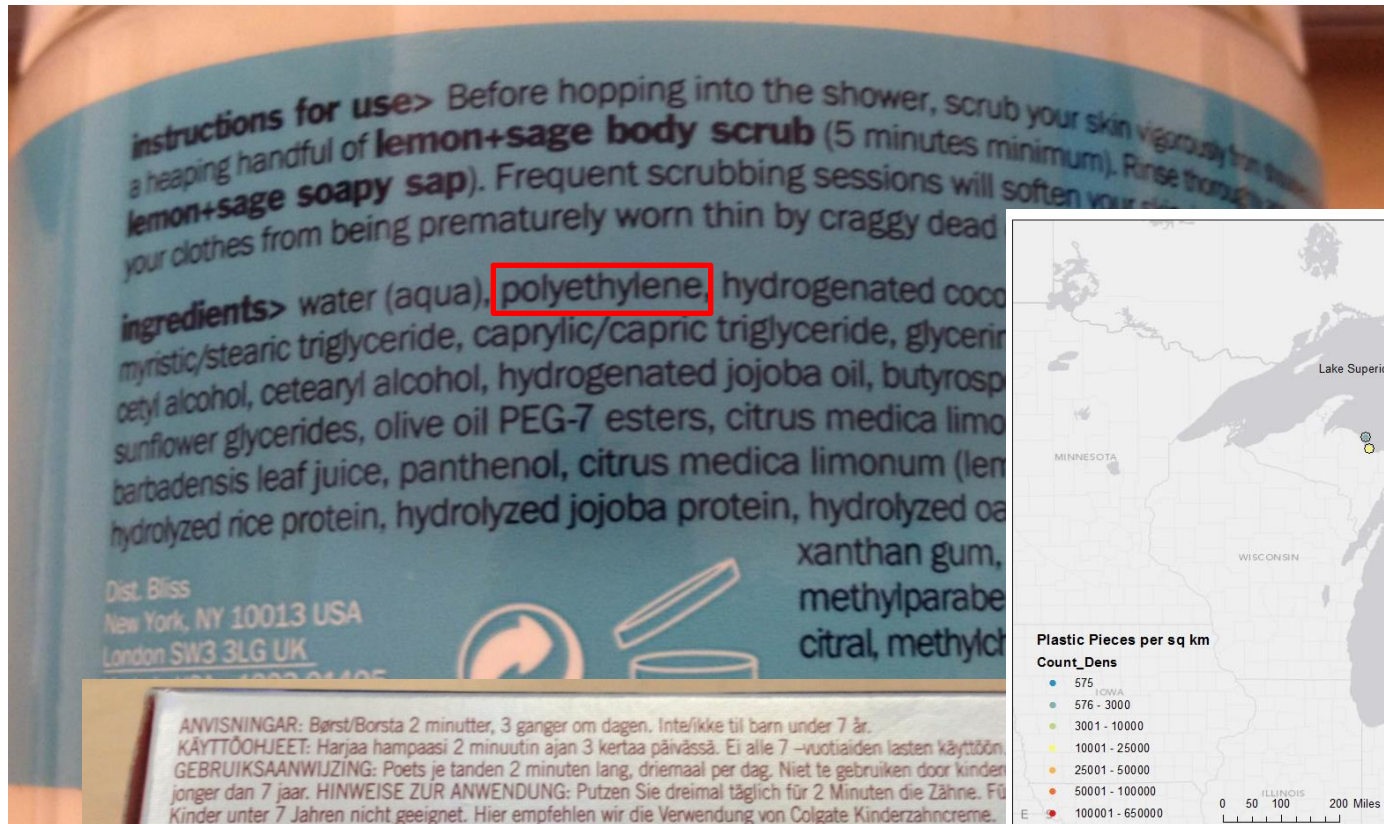
Makroplast: >5mm



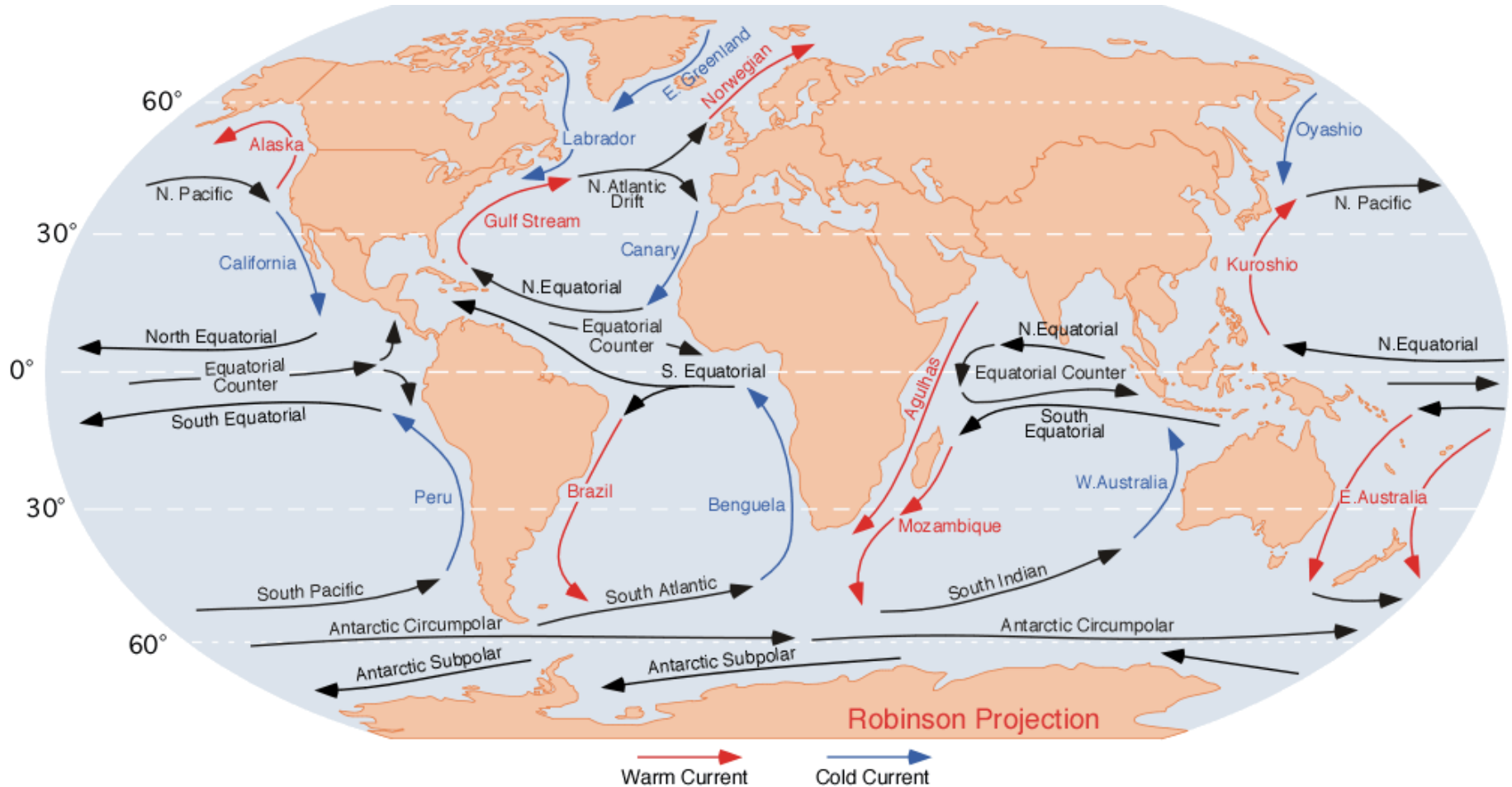
Mikroplast: <5mm



Mikrobeads i kosmetikk?!



Akkumulering / opphopning



The Great Pacific Garbage Patch



VG KLIMATRUSSELEN

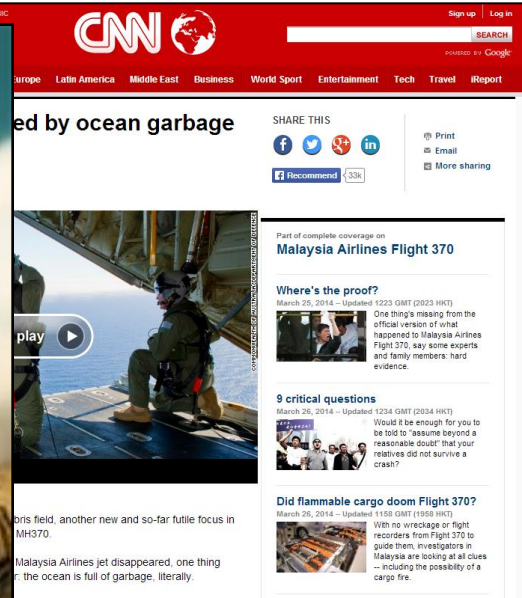
Enorme søppelmengder truer med å...

STRANDSØPPEL. For ette senere ender mye av søppelet opp på land. Dette er fra stillhetsturen i Torsvik. Foto: Ole...

Publisert 16.12.13 - 13:19, endret 16.12.13 - 14:26 (VG NETT)

Av Tore Ulstrand Johansen

SISTE 3



CNN

ed by ocean garbage

Part of complete coverage on **Malaysia Airlines Flight 370**

Where's the proof?
March 26, 2014 - Updated 12:23 GMT (10:23 HKT)
One thing's missing from the official version of what happened to Malaysia Airlines Flight 370, say some experts and family members: hard evidence.

9 critical questions
March 26, 2014 - Updated 12:24 GMT (10:24 HKT)
Would it be enough for you to be told to "assume beyond a reasonable doubt" that your relatives did not survive a crash?

Did flammable cargo doom Flight 370?
March 26, 2014 - Updated 11:58 GMT (11:58 HKT)
With no wreckage or flight recorder from Flight 370 to guide them, investigators in Malaysia are looking at all clues - including the possibility of a cargo fire.



THE INDEPENDENT ENVIRONMENT

DEBORAH ORR
We should return to council housing

News Opinion **Environment** Sport Life & Style Arts & Ent

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The world's rubbish dump: a garbage tip that stretches from Hawaii to Japan

By Kathy Marks, Asia-Pacific Correspondent, and Daniel Howden

Tuesday, 5 February 2008

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Rubbish dump found floating in Pacific Ocean is twice the size of America

Updated at 00:20:00 February 2008

Comments (72) Add to My Stories

Rubbish dump twice the size of the United States has been discovered floating in the Pacific Ocean.

The vast expanse of debris, made up of plastic junk including footballs, kayaks, Lego bricks and carrier bags, is kept together by swirling underwater currents.

It stretches from 500 nautical miles off the Californian coast, across the northern Pacific, past Hawaii and almost as far as Japan.

Figur: noaa.org, imagecomics.com, Skjermdump: independent.co.uk, vg.no, dailymail.co.uk, seattlepi.com

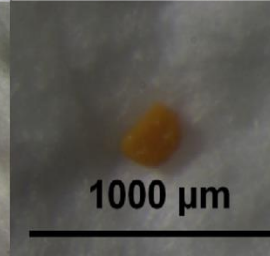
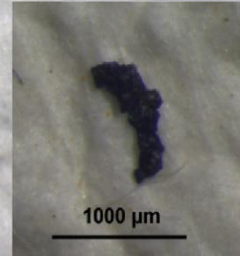
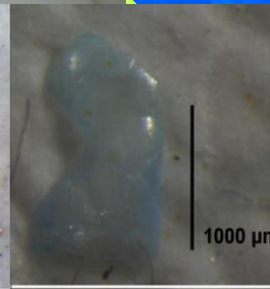
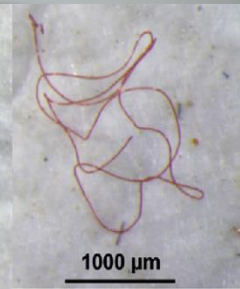
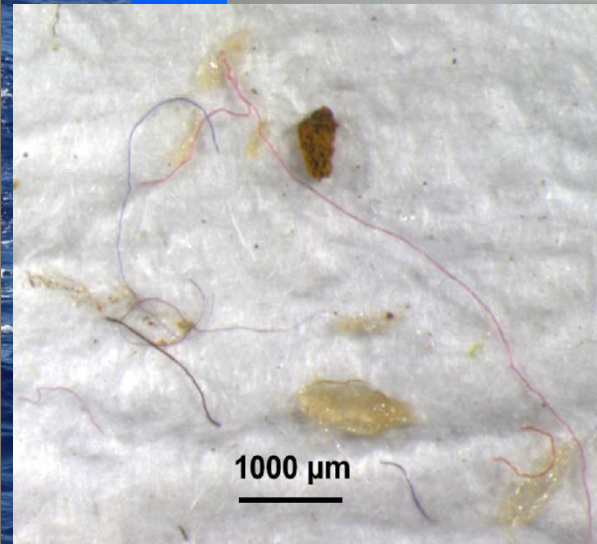
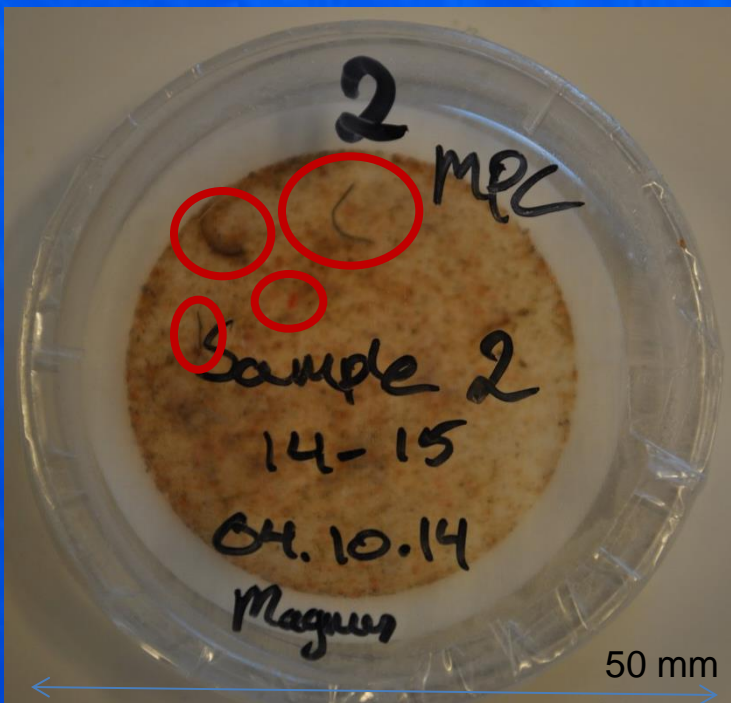
The Great Pacific Garbage Patch





Mikroplast (2mm – 200 µm)

N.Ø. Atl.h. ~400 000
Norge ???
Bergen ???



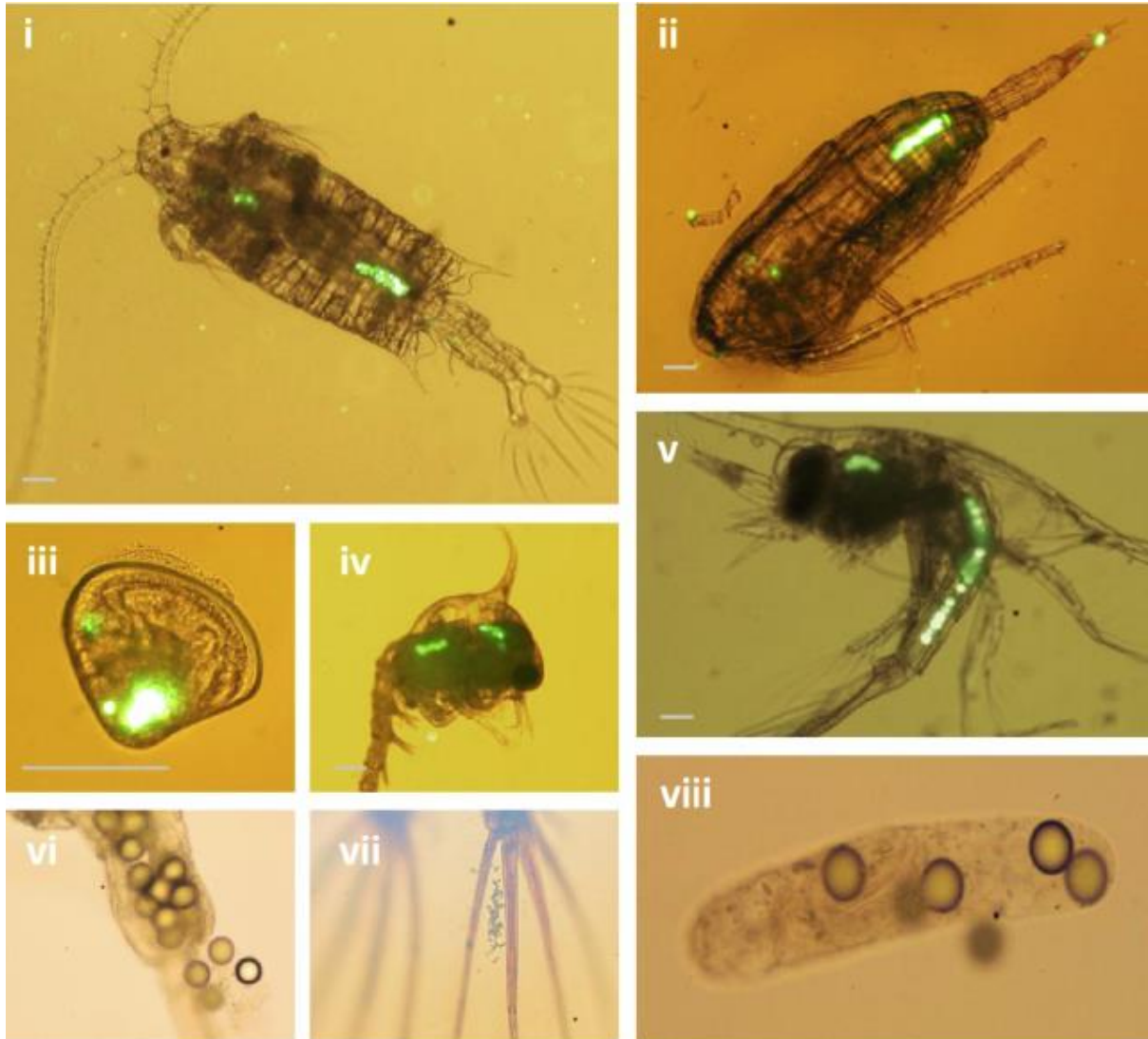
Miljøtrusler



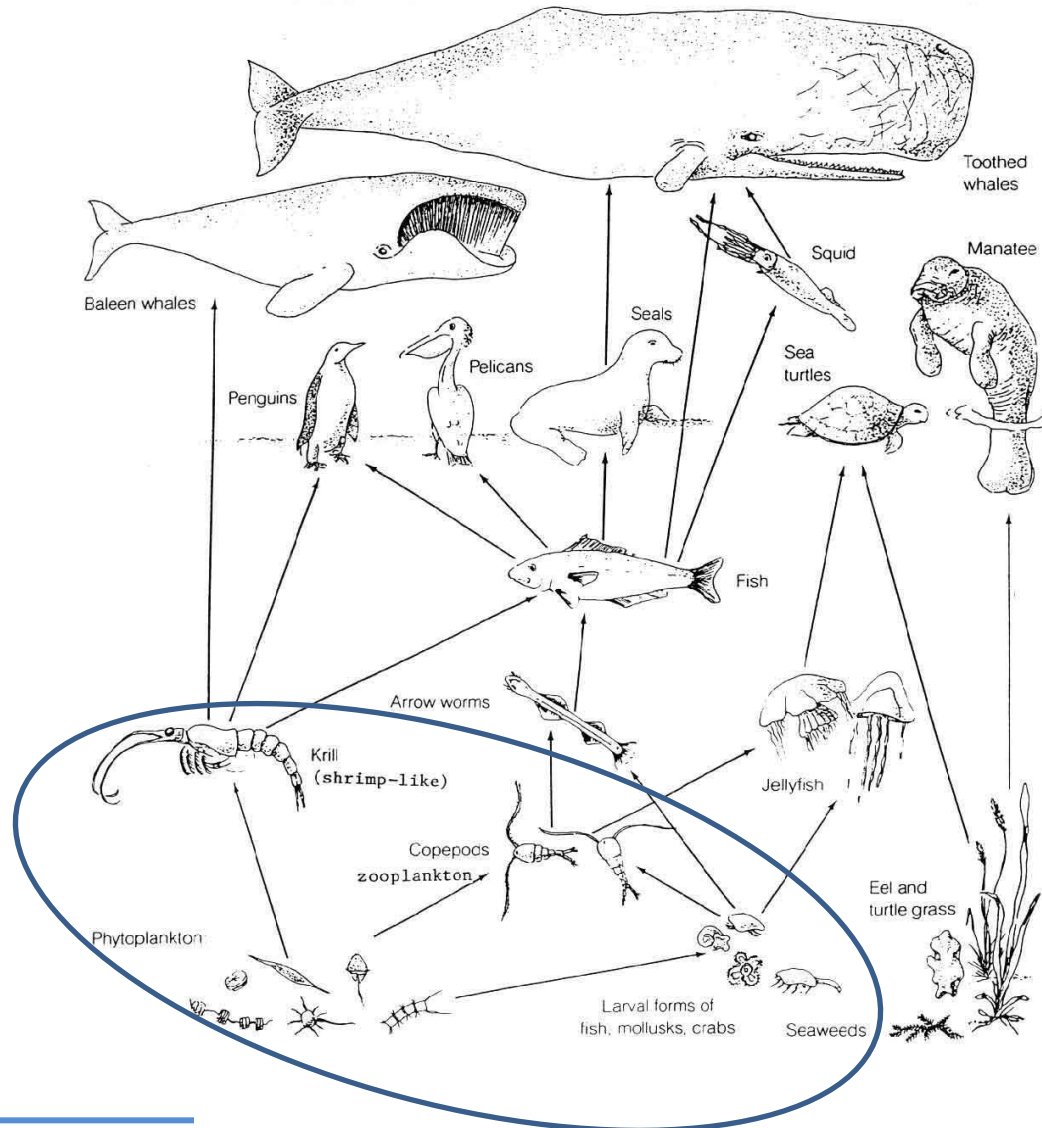
Inntak / fordøyelse



Inntak / fordøyelse

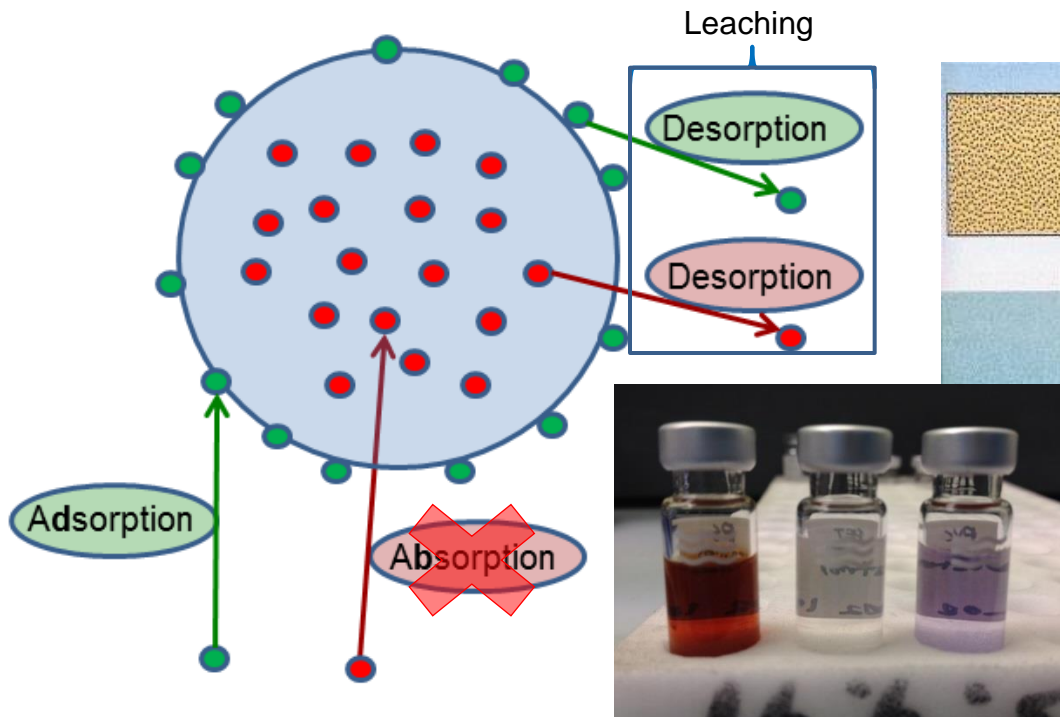


Inntak i næringskjeden



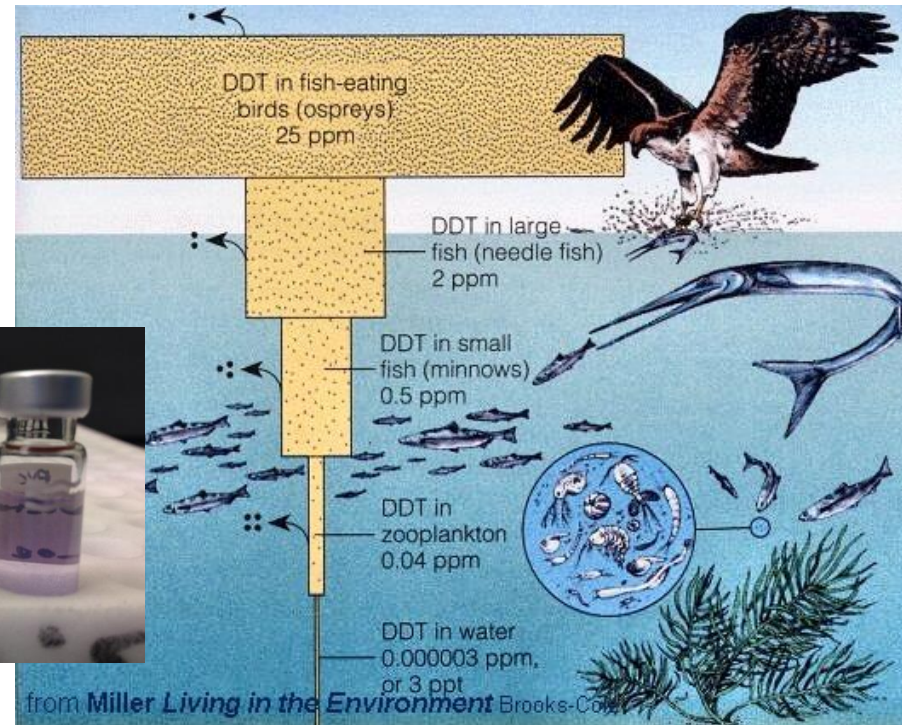
Plasticizer leaching & gift adsorpsjon

Adsorpsjon vs Absorpsjon



- POPs (PCB, DDT etc.)
- Plasticizers (Nonylphenol, BPA etc.)

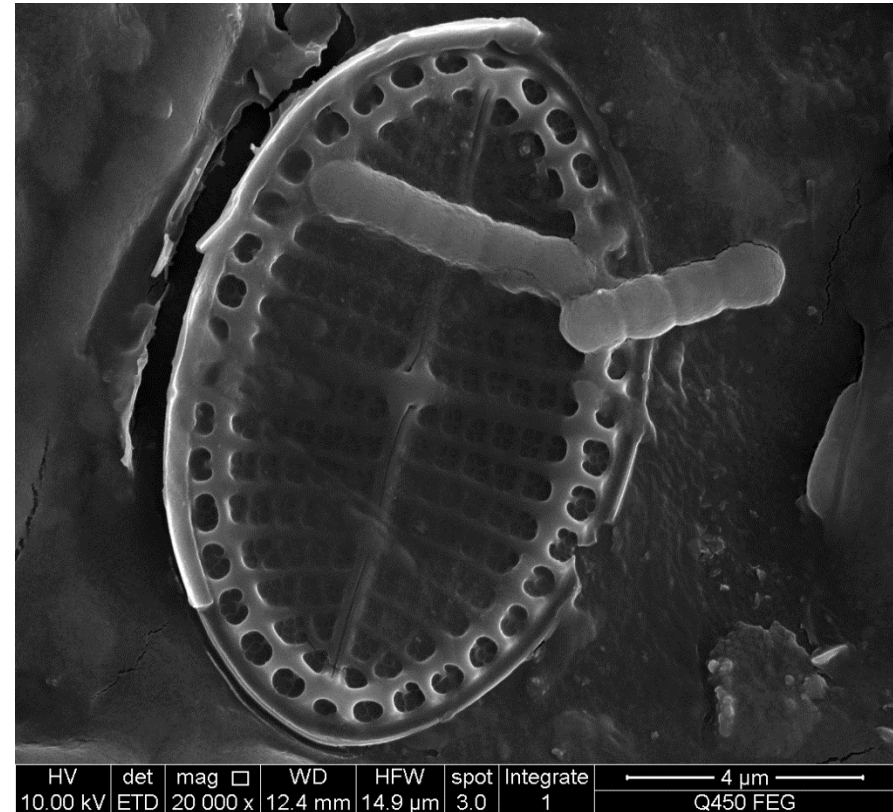
Bioakkumulasjon & biomagnifikasjon



Innvikling



“Haiking”



Kan vi fikse problemet?

Utfordringer:

- Større
- Små
- Økologisk
- Dynamisk
- Tidlig

Home / News / 19-year-old inventor finds way to clean up the world's oceans in under 5 years time

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Boyan Slat: How the oceans can clean themselves

11/11/2015

CONTACT

WATCH THE TEDx TALK HERE

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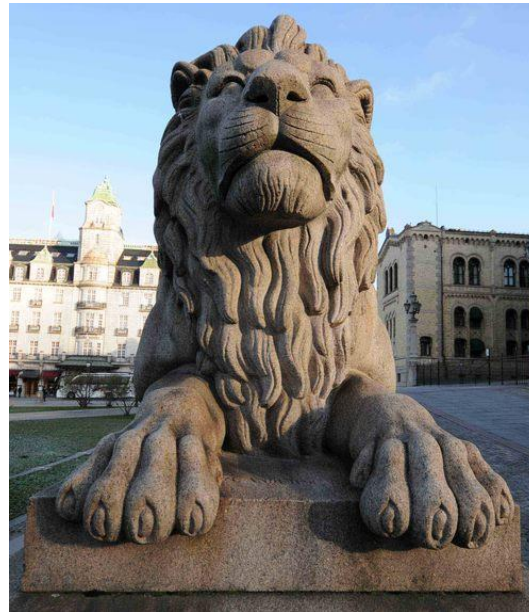
© Boyan Slat - carbon neutral website

Løsninger

Teknologi



Lovgivning



Motvirkning



Pant alt. Alltid.



holdNorgent

Løsning: Teknologi

Nedbrytbar plast



Om Stormberg

Klimavennlige handlenett

I 2008 sluttet Stormberg å bruke plastposer i sine butikker. Plastposene ble erstattet av klimavennlige og nedbrytbare handlenett, ClimateBag. Handlenettene er laget av polypropylen som er et slitesterkt, giftfritt og nedbrytbart materiale.

Produktinformasjon

Miljøvennlig sports-

stort miljøproblem, og flere steder i verden er det allerede kommet forbud mot plastposer. I tillegg til å forsøple verden, dør både fugler og sjødyr som følge av plastposer.

Forskning viser at ren polypropylen C_3H_6 som inkuberes med **tilpasset samfunn av mikroorganismer under oksygenbegrenset forhold** uten foreløpig kjemisk eller fysisk behandling gjennomgår biologisk nedbrytning. Den omdannes da til vann, CO₂ og/eller metan og biomasse.

(Stormberg, pers. komm. 28.02.14)

handlenett

Super- og ullundertøy

Vinterjakkeguide

Løsning: Teknologi

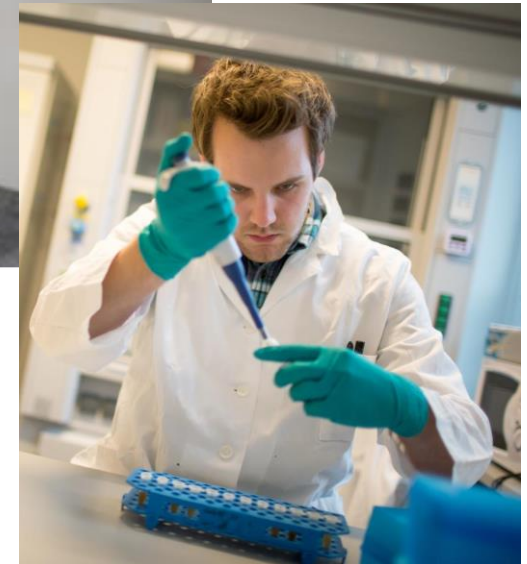
Nedbrytbar plast

Komposterbar plast

Resirkulerte produkter

Fremtidens oppfinnelser

- Alle miljø
- Tilbakeføring til naturlige bestanddeler
- Trenger mer forskning



Løsning: Lovgivning

Bag ban eller skatt

Gjennvinningsavgift

Isopor ban

Mikrobead ban



europa.eu

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Environment: Commission proposes to reduce the use of plastic bags
European Commission - IP/13/1017 04/11/2013
Other available languages: FR DE DA ES NL IT SV PT FI EL CS ET HU LT LV MT PL SK SL BG RO HR

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EUROPEAN COMMISSION

PRESS RELEASE

Brussels, 4 November 2013

Environment: Commission proposes to reduce the use of plastic bags

Today the European Commission adopted a proposal that requires Member States to reduce their use of lightweight plastic carrier bags. Member States can choose the measures they find most appropriate, including charges, national reduction targets or a ban under certain conditions. Lightweight plastic bags are often used only once, but can persist in the environment for hundreds of years, often as harmful microscopic particles that are known to be dangerous to marine life in particular.

Environment Commissioner Janez Potočnik said: "We're taking action to solve a very serious and highly visible environmental problem. Every year, more than 8 billion plastic bags end up as litter in Europe, causing enormous environmental damage. Some Member States have already achieved great results in terms of reducing their use of plastic bags. If others followed suit we could reduce today's overall consumption in the European Union by as much as 80%."

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Løsning: Motvirkning

Gjenvinning

Bedre infrastruktur

Formidling

Strandrydding



PLASTICS. TOO VALUABLE TO WASTE. RECYCLE.™



Pant alt. Alltid.

Hva kan du gjøre?

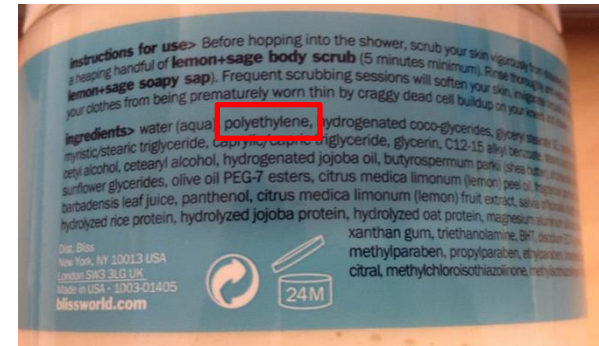
Slutt med kosmetikkproukter med mikrobeads
(Polyethylene)

Rydd en strand!

Gjennvinn og pant!

Fortell andre om det!

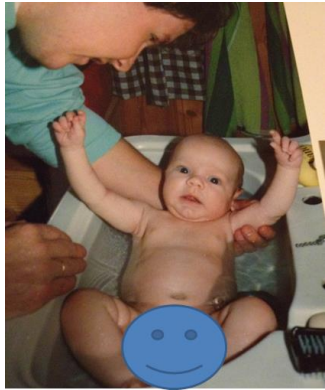
Vær kritisk til hva som skrives...



Pant alt. Alltid.



2049



Austevoll



Takk for oppmerksomheten!

What Lies Under - Ferdi Rizkiyanto - 2011



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