



CLIMATE AND  
POLLUTION  
AGENCY

# National screening selection procedure Norway

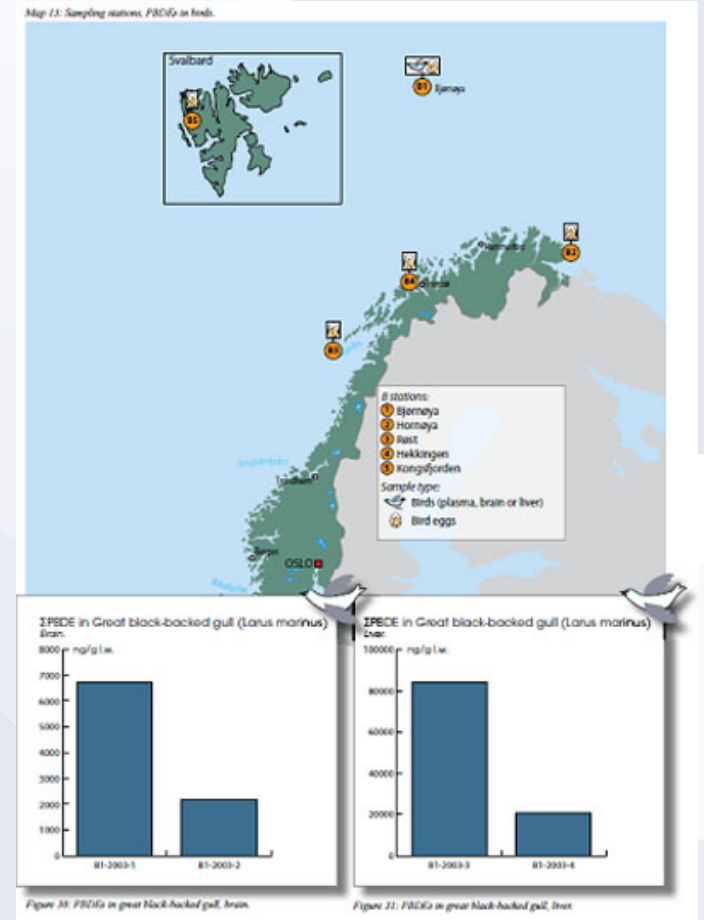
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Norman-network March 2<sup>nd</sup> 2012

Bård Nordbø (Climate and Pollution Agency)

# Contents

- Screening projects in Norway
- Selecting substances
- Examples on screened substances
- Some results



# Objectives Norwegian screening

- **Mapping emissions, levels in nature and risk from emerging pollutants in Norwegian and Arctic environment**
- **Results will be used in local, national and international measures. Assess for trend monitoring**
- **Mainly emerging pollutants, classic pollutants in new perspectives.**



# Screening projects in Norway

## National screening

- Every year, mainland, Arctic, literature survey
- New stations/matrixes every year
- Biota to WWTP
- Since 2002
- Budget 3-6 mill NOK
- Hotspot and background locations
- International measures EU/conventions
- Local measures

<http://www.klif.no/Tema/Miljoovervakning/Statlig-miljoovervakning/Kartlegging-av-nye-miljogifter/>

Future without pollution



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# Some examples

- Brominated flame retardants (HBCDD og PBDE)
- Perfluorinated organic compounds (PFOS, PFOA)
- Chlorinated paraffin's (MCCP, SCCP)
- DEHP (Diethylhexylphtalate)
- Bisphenol A
- Nonyl- and octylphenols
- Siloxane
- "Emerging" brominated flame retardants
- Phosphor organic flame retardants
- Some pharmaceuticals and personal care products
- Teflu- og diflubenzurons
- Sucralose



# Process – Norwegian screening

1. Selecting substances

2. Prepare screening program (tender DOFFIN/TED)  
3. Consultant conduct screening exercise

Low risk

Moderate to high risk

No follow-up

Consider a follow-up screening/monitoring

Consider local/national measure or international initiatives

# Selecting substances

## Invite experts

- Invite experts to propose substances for screening (food safety, institute of public health, research institutes, universities etc.)
- Nordic countries
- Experts at Climate and Pollution Agency

## Proposals discussed and prioritized (Expert group)

- Experts on Industry, inspections and control, products, chemicals
- Prioritization
- Final list of substances presented for managing director



# Identify substances with the highest hazard potential

- Often most info on chemical properties and use
- Some info on emissions/discharges.
- Less information on monitoring data
- Little or no information from risk assessments
- Selection is often based on chemical properties and use.
- Data requests in EU/conventions
- **Need more information – Literature surveys**

Property data

Use

Data on emission,  
discharges

Monitoring data

Risk data



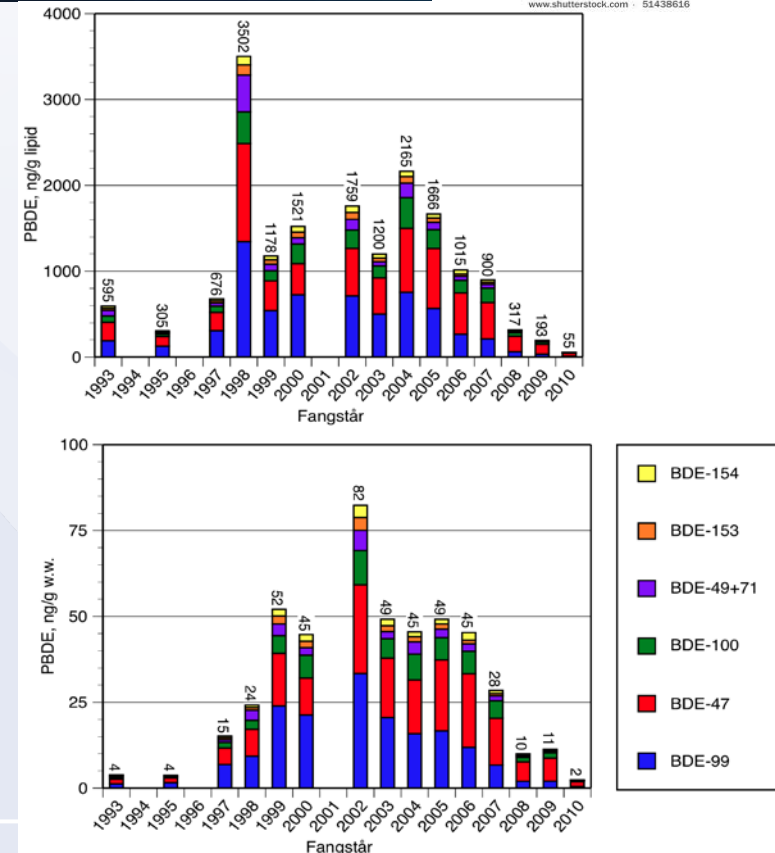


# Where it started: Lake Mjøsa



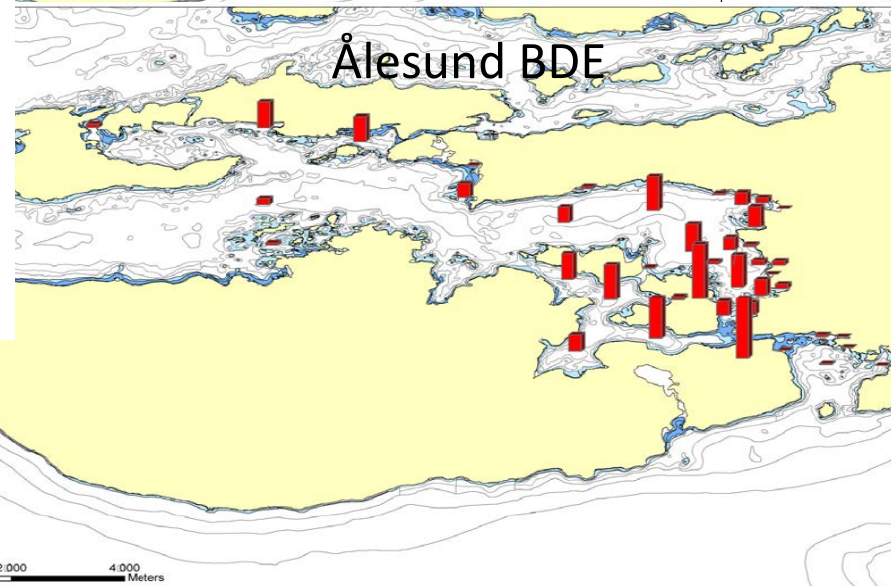
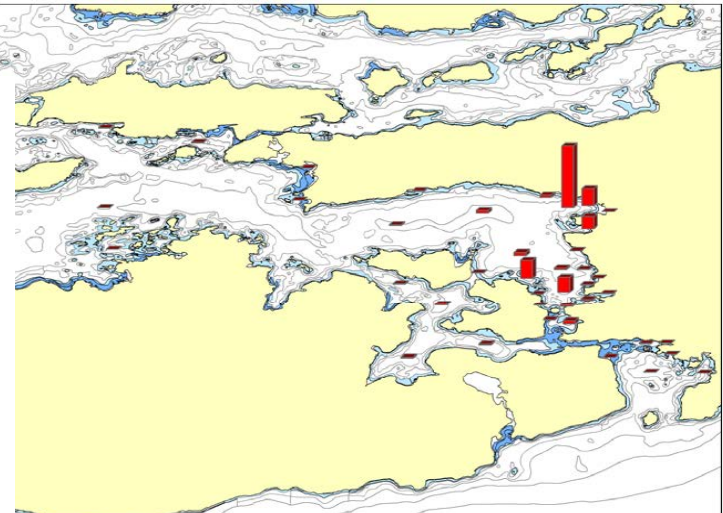
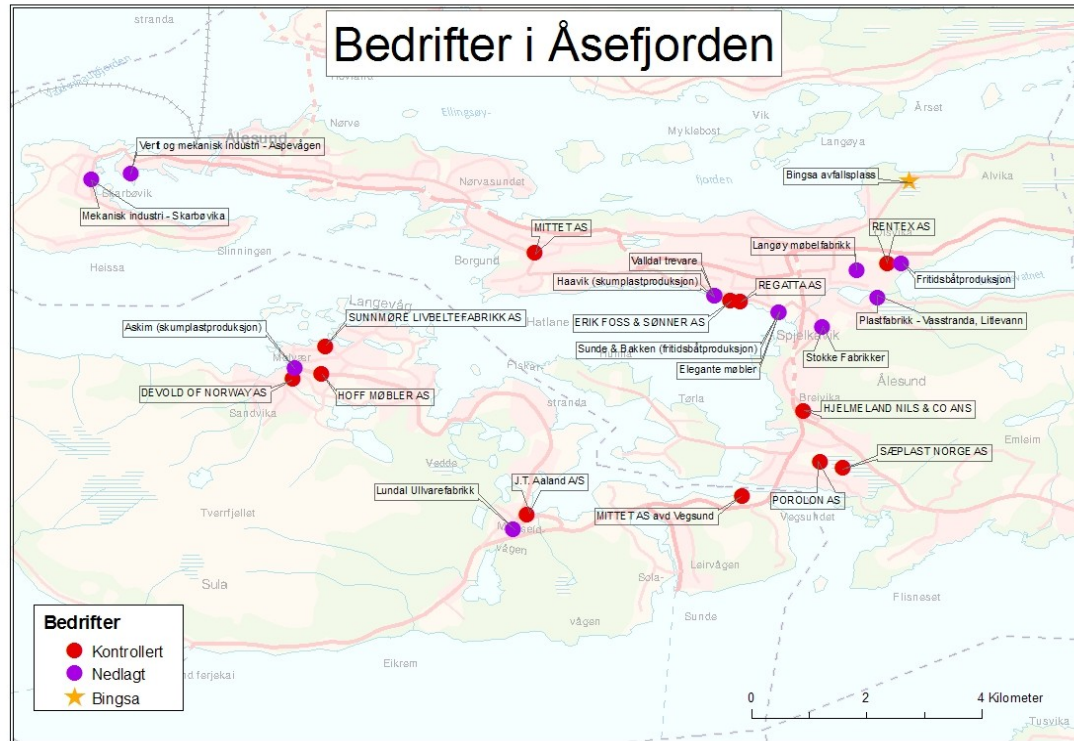
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- First screening 2002
- High levels of PBDE in fish and crustacean (*Mysis relicta*).
- Inspections- Local source stopped
- Reduced levels in fish



# Screening and local measures

Ålesund HBCDD



Future without pollution

# Selected substances 2010

## **Phosphorus flame retardants (PFR)**

- Arctic and main land
- Marine and fresh water sediment, biota.
- Bird eggs and blood

## **Mapping substances in WWTP (sludge)**

- Brominated flame retardants
- Perfluorinated organic compounds
- Musk Compounds
- Silver
- Bisphenol A

## **Veterinary products in aquaculture**

- Diflubenzuron
- Teflubenzuron



# Results PFR

- **7 out of 14 compounds in Arctic – Long range transport**
- **Found in biota**
- **Highest levels in Arctic fox and sediment**
- **Relative low levels all over**
- **Increased use – replaces banned flame retardants**
- **Keep watching these substances**



# Selected substances for 2011- report 2012

## **Nonyl- octylphenols (ethoxylates)**

- Endocrine disruptor
- Arctic and mainland

## **Bunnstoffet Zineb**

- Possible endocrine disruptor
- 2 marinas, one refance staion

## **N,N-dimetylsulfamid**

- Metabolite from a biocide used in paint .
- Carcinogen

## **2<sup>nd</sup> generation rat poisons**

- Anticoagulants - highly toxic.
- Bird of prey

## **Pesticides in Arctic**

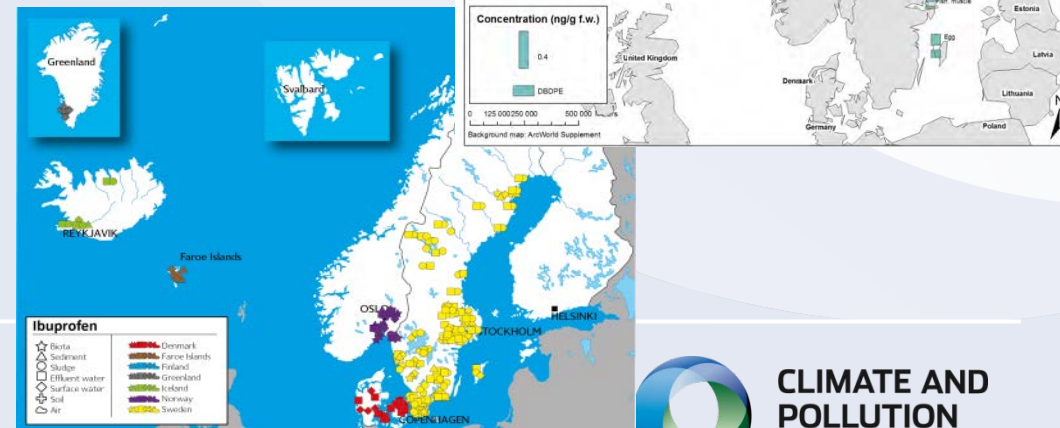
- Birds, bird egg, seal and fish



# Nordic screening group

- Nordic Council of Ministers
- Surveys and seminars
- Denmark, Sweden, Faroe Island, Iceland, Finland, (Greenland)
- Geographic differences/similarities
- Latest work new BFR/PPCP/plasticizers and sweeteners
- Seminar Sweden May
- Telephone meetings

<http://nordicscreening.org/>



# Thank you!

