

IFL Project Report  
07-06



Rannsóknastofnun  
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Apríl 2006

**Nordic information and communication  
network regarding safety of seafood products  
2<sup>nd</sup> Workshop**

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Titill / Title	Nordic information and communication network regarding safety of seafood products - 2 <sup>nd</sup> workshop		
Höfundar / Authors	Eva Yngvadóttir and Helga Gunnlaugsdóttir		
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Ágrip á íslensku:	<p>Þessi skýrsla greinir frá niðurstöðum seinni vinnufundar í samnorrænu verkefni um myndun upplýsinga- og tengslanets varðandi öryggi sjávarafurða, sem haldinn var í Kaupmannahöfn 21 apríl 2006.</p> <p>Í verkefninu hefur verið þróuð sameignleg Norræn vefsíða (<a href="http://www.seafoodnet.info">www.seafoodnet.info</a>) þar sem safnað er saman á einn stað viðeigandi krækjum sem innihalda upplýsingar um efnainnihald sjávarafurða, bæði óæskileg efni og næringarefni. Ísland hefur séð um að þróa vefsíðuna og sér um að viðhalda henni, en hvert land ber ábyrgð á sínum upplýsingum og á uppfærslu þeirra.</p> <p>Helstu umræðuefnin á fundinum voru:</p> <ul style="list-style-type: none"><li>✓ Hvernig heimsasíðan hafði verið kynnt í hverju landi fyrir sig og hver viðbrögðin hafa verið.</li><li>✓ Hvernig mætti betrubæta heimasíðuna t.d gera hana einfaldari og skýrari.</li><li>✓ Hvernig væri best að kynna heimasíðuna út á við.</li><li>✓ Hvernig hægt er að halda heimasíðunni lifandi eftir að verkefninu lýkur.</li><li>✓ Skilgreina hvar þekkingu vantar á rannsóknarniðurstöðum.</li></ul> <p>Þátttakendur voru sérfræðingar frá Noregi, Finnlandi, Danmörku, Svíþjóð, Færeyjum og Íslandi.</p> <p>Fundurinn var styrkur af NSK og NEF sjóðum Norrænu ráðherranefndarinnar.</p>		
Lykilorð á íslensku:	Sjávarafurðir, upplýsingar, tengslanet, óæskileg efni, næringarefni		



### Summary in English:

This report contains the outcome of the 2nd workshop in a Nordic project called “Nordic information and communication network regarding safety of seafood products and utilisation of the resources from the sea.” The workshop was held in Copenhagen, Denmark on April 21<sup>st</sup> 2006.

In the project a website ([www.seafoodnet.info](http://www.seafoodnet.info)) has been established with links to relevant information regarding the chemical composition of seafood, the safety of seafood products etc. and a common platform for the network has thus been built. Iceland is responsible for updating the website but each country is responsible for its own documents as this ensures that the information is updated and this will help to keep the website alive after this project ends.

The main topics discussed at the meeting were:

- ✓ Promotion of the project in each country and the response.
- ✓ Evaluation of the progress of the project and the website ([www.seafoodnet.info](http://www.seafoodnet.info)). How can it be improved, what information should be added?
- ✓ How should the website be promoted further?
- ✓ Future of the website. How can we ensure exchange of information between partners presently and after the project ends?
- ✓ Identification of research gaps.

The participants were scientists from Norway, Denmark, Sweden, Finland, Faroe Islands and Iceland.

The workshop was funded by NEF and NSK

*English keywords:*      *Seafood, information, communication network, web platform, contaminants, nutrition*

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## 1. INTRODUCTION

This report describes the outcome of the second workshop held in the project "Nordic information and communication network regarding safety of seafood products and utilisation of the resources from the sea" funded by NSK and NEF. It contains the results of the discussions that took place at the workshop and the overheads presented during the workshop.

The objective of this project is to establish a Nordic information and communication network regarding safety of seafood products and utilization of the resources from the sea. The network is a co-operative project with representatives from Denmark, Finland, Faros Islands, Iceland, Norway and Sweden. The project will build the base for co-ordination of information and the reporting of chemical substances i.e. nutrients and undesirable substances in seafood. The project will also be the cornerstone for further networking and innovative transnational research with the participation of scientists in the Nordic countries and EU.

The project started formally in November 2004 and the first project meeting was held in Reykjavik, Iceland on the 4-5<sup>th</sup> of April 2005. The second project meeting was held in Copenhagen, Denmark on the 21<sup>st</sup> of April 2006. Those meetings were attended by experts in the field of research and analysis of undesirable substances in fish and nutrition of fish from Faroe Island, Denmark, Sweden, Norway, Finland and Iceland

From May 2005 we have been developing the website for the Nordic Network [www.seafoodnet.info](http://www.seafoodnet.info). This work was carried out in accordance with a decision made during the first workshop that was held in this project in April 2005. The website is the result of the joint effort of all partners of the project. All partners contributed to the development of the website by sending information/material defined by the coordinator (IFL). IFL was responsible for finding a suitable name and design a logo for the website and for designing the layout of the website and compiling the material sent by other partners in a suitable fashion. IFL is also responsible for updating the website. The website contains links to relevant information regarding the chemical composition of seafood, the safety of seafood products etc and thus builds a common platform for the network (see picture below). Each country is responsible for its own documents since this will ensure that the information is kept updated and will help to keep the website alive after this project ends. This website is one of the main deliverables from this project.



This website was formally opened November 29th, by the Minister of fisheries in Iceland. A promotional meeting was held in Iceland where the project and the homepage were introduced. Around 15 persons came to the meeting from different sectors. The Seafoodnet website was very well received and the introduction of the homepage to the potential users made a lot of difference.

Promotional material in 6 Nordic languages (i.e. Icelandic, Danish, Swedish, Norwegian, Faroese and Finnish) has been prepared. The promotional material is a so-called "A4 one-pager" which contains information about the Nordic project and the Seafoodnet website. One side of this one pager is in one of six different Nordic languages and the other side is in English. Representatives from each country participating in the project have been responsible for the dissemination of information about the project in their home country and they have translated the promotional material into their own language. The idea is that this A4 one-pager should be use as promotional material in the Nordic countries and send to a specific target groups that includes potential users of the Seafoodnet homepage.

The Nordic project and the Seafoodnet website has been promoted in the following manner in the Nordic countries;

- Promotional meeting in Iceland on the 29<sup>th</sup> of November 2005
- Promotional material “one pager” in six Nordic languages as well as in English
- Link to [www.seafoodnet.info](http://www.seafoodnet.info) is available on the homepages of all Nordic institutes participating in the project as well as on homepages for other Nordic Institutes with similar emphasis i.e. environment, fish industry, food and health.
- Information published in an Electronic newsletter sent out by the Icelandic Fisheries Laboratories to approximately 400 recipients
- Information published in the Faroese newspaper “Sosialurin” and “Dimmalætting” and the Swedish magazine “Narturvetaren”

**The objective of the second project meeting was:**

- To evaluate the progress of the project (Nordic information and communication network regarding safety of seafood products utilization of the resources from the sea). What can be improved? What information is missing? Etc.
- To improve the flow of information to the fish industry, exporters and consumers
- To identify research gaps, with focus on seafood safety, especially for traditional Nordic seafood products

## **2. WORK PROGRAMME AND PARTICIPANTS**

**Friday April 21<sup>st</sup> 2006**

**Welcome**

**9:00 Introduction of the development of the project to this date (IFL)**

**9:45 Each Country presents how the project has been promoted**

(5-10 min per country)

Denmark

Faro Island

Finland

Sweden

Norway

**10:30 Coffee**

**10:45 Evaluation of the progress of the project**

For example; *Seafoodnet website, Promotional material, workshops, dialoge between partners*

What can be improved?

What information should be added?

User friendly?

**12:30 Lunch**

**13:30 Identification of research gaps**

**14:00 Future of the Website**

How should we promote the website further?

How to reach the stakeholders; the fish industry & exporters, researchers, consumers, government, dieticians and cooks?

How to ensure exchange of information between partners presently and after the project ends (des 2006)?

**16:00 Coffee and closing of the workshop**



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### **3. PRESENTATIONS**

Appendix 1 contains copies of overheads from the presentations presented at this workshop. The participants were asked to present how the project has been promoted in their home country.

### **4. SUMMARY OF DISCUSSION AND CONCLUSION**

#### **4.1 Promotion of the project**

Each participating country has promoted the project in different ways, see overheads in appendix 1. All have links to the Seafoodnet website through their homepages as well as on homepages for other Nordic Institutes with similar emphasis i.e. environment, fish industry, food and health. Nevertheless, there has to this date been limited response from users to the host of the website and the promotional material prepared in the different languages.

#### **4.2 Evaluation of the progress of the project**

The participants discussed how the website could be improved e.g. what information should be added etc. The main conclusions were that the structure/layout of the website needs to be developed further and the dialog between partners needs to be improved.

The following list describes in more detail suggestions for improvements:

- 1 News should be the front of seafoodnet.info => Relevant news on institutes homepage has to be forwarded to host for seafoodnet.info
- 1 Write guideline with explanatory text or overview on how to use the website and how to find particular information about different subjects e.g. EU limits, Regulations, safety etc. There are links to certain reports on the website however the user is made aware of that there are >100 of reports on the institutes homepages
- 1 Sort the website by dividing links into categories:
  - ✓ Nutrients & contaminants with links to nordic databases
  - ✓ Have an index to fact sheet with links to different sources
  - ✓ Facts about fish
  - ✓ Regulations & guidelines EU
  - ✓ Institutes
  - ✓ Reports and publications
  - ✓ Recepies i.e. Links to websites

- 1 Regular updates
  - ✓ Improve dialog between partners by sending a reminder with an e-mail to contact person for each country, suggested contact frequency every 3 months
  - ✓ Information should be sent regularly to the hosting country
- 1 More information needed?
  - ✓ Activities in Nordic Countries i.e. Monitoring programs & ongoing projects (use flag to identify the different countries). This needs to be updated regularly at least once a year.

### **4.3 Identification of research gaps**

The participants agreed that there are many research gaps that need to be filled but there is lack of funding.

Example of research gaps:

- ✓ Analytical data for nutrients. There is a little knowledge available about the variations of the nutrients depending on e.g. the season or size of the fish species.
- ✓ Fluoride substances
- ✓ Inorganic As in mussels
- ✓ New pesticides e.g. toxaphen, endosulfine

### **4.4 Future of the Seafoodnet website.**

#### **How should the website be promoted further?**

- ✓ NMR website – news bulletin about the project
- ✓ SEAFOODplus website – news bulletin about the project
- ✓ Add questionnaire for users to the website where users are asked where they found the information
- ✓ Define the key words for search on internet

#### **How to reach the stakeholders?**

- ✓ The users of seafood composition data need information quickly.  
The users ( Fish industry, Government, Consumers, Researchers, Dieticians and cooks)

#### **How to ensure that the website will be active after the project ends**

- ✓ A single contact point on Internet is needed for seafood data. Consequently there is a need for this website.
- ✓ One institute should host the web site and update it regularly.
- ✓ Each country selects one contact person who is responsible for responding to incoming requests from the website host.

- ✓ Participants should report to the responsible institute when relevant news or data are available.
- ✓ The work for participants should be minimal.
- ✓ The responsible host institute should contact all the Nordic countries 4 times per year.

## **4.5 Conclusion**

The main conclusion of the discussions was that the website needs to be structured in a different way to make it more user friendly for all stakeholders. This update should be finished September 2006. The participant agreed that it is important to keep the Seafoodnet website alive after the project ends. IFL is willing to continue to host the website and continue to update it in the future with regular inputs and effort from all partners.

## **Appendix 1.**

**Overheads from the presentations presented at the workshop**

# PRESENTATION FROM ICELAND



## Nordic Information and Communication Network

### Seafoodnet

Helga Gunnlaugsdóttir (IFL)  
Eva Yngvadóttir (IFL)  
Ólafur Reykdal (Matra)

21. 04.2006



## Activities in Project

- First workshop held in Reykjavik, Iceland on the 4-5th April 2005
- Report from the first workshop to NMR
- Application to NMR for continued support of the project
- Grant from NMR received in December 2005 for the continuation of the project



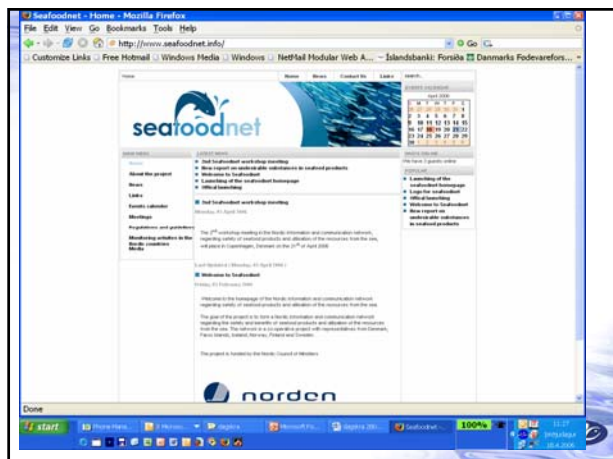
## Promotion in Iceland

- Promotional meeting in Iceland on the 29th of November 2005
  - Official Launching of the Website Seafoodnet.info
  - Minister of Fisheries in Iceland; Einar K. Guðfinnsson,
  - Participants from the Ministry of Fisheries, Environment and Food Agency in Iceland, IceTec, Industry and more



## Promotion in Iceland

- EuroFir
- Promotional material i.e. A4 One-pager in Icelandic and English
- Information published in an Electronic newsletter sent out by IFL to approximately 400 recipients
- Update of the Seafoodnet.info website



## EuroFIR developments

- Food identification
- Component identification
- Method indicators
- Deadline 30th June 2006



## EuroFIR developments

- Food identification
- Component identification
- Method indicators
- Deadline 30th June 2006

## EuroFIR - Contaminants

- Contaminants not part of EuroFIR
- Review of contaminants for future inclusion in databases.
- Jacob van Klaveren, RIKILT.

## Official Internet-based nutrient databases

- No single European nutrient database
- Official nutrient databases on Internet:
  - Denmark ✓
  - Finland ✓
  - Sweden ✓
  - Norway 2006
  - Iceland 2006
- Contaminants: very limited

## www.fineli.fi

More than 1 000 000 visitors / year

## Evaluation of the progress of the project

[www.seafoodnet.info](http://www.seafoodnet.info) :

- Improve the web page
  - Sort the reports, databases, fact sheets, regulations, guidelines, institutes.
  - User friendly
- Regular updates
  - Improve dialog between partners
  - Regular E-mail contacts to search for new information (e.g. data, reports, meetings, conferences, fact sheets).
  - Information reported when available
- More information needed?

## Evaluation of the progress of the project cont.

- Write explanatory text /overview
  - How to use the web page
  - How to find particular information
    - EU limits
    - Safety
    - Regulations
    - Etc.



## Gaps – Iceland Fish for consumption

- Fat soluble vitamins
- Water soluble vitamins
- Cr, Ni, Co, Mo
- Variation for trace elements & fatty acids
- OSPAR and AMAP data: Not consumption oriented.

## Gaps - General

- Data
  - Vitamins
  - Trace elements
  - Proximates
- Data quality
  - Variation

## Future of the website [www.seafoodnet.info](http://www.seafoodnet.info)

- How should the website be promoted further?
- NMR website – news bulletin about the project
  - SEAFOODplus website – news bulletin about the project
  - Add questionnaire for users to the website where users are asked where they found the information
  - Define the key words for search on internet
  - How to reach the stakeholders?
    - The users of seafood composition data need information quickly.
- The users ( Fish industry, Government, Consumers, Researchers, Dieticians and cooks)

## Future of the Seafoodnet cont.

- How to ensure that the website will be active after the project ends
  - A single contact point on Internet is needed for seafood data.
  - One institute should host the web page and update it regularly.
  - Each country selects one contact person who is responsible for responding to incoming requests from the website host within a certain time limit.
  - Participants should report to the responsible institute when news or data are available.
  - The work for participants should be minimal.
  - The responsible institute should contact all the Nordic countries 4 times per year.

# Nordic Information and Communication Network

## Promotion of the Seafoodnet



Arid Fromberg



# Danish information leaflet



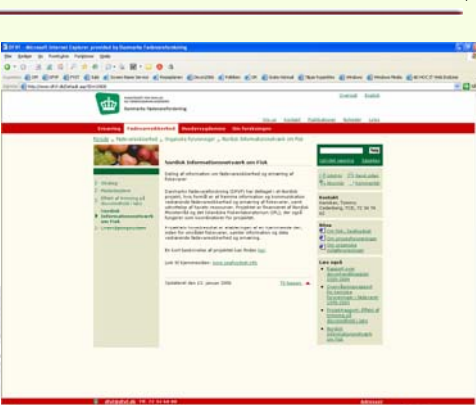



# Information about the project and homepage has been disseminated to relevant Danish institutions within the "fish area" i.e.

- ☞ Danmarks Fiskeriindustri- og Eksportforening
- ☞ Danmarks Fiskeriundersøgelser
- ☞ Dansk Akvakultur
- ☞ Landsorganisationen af Danmarks Detailfiskehandlere
- ☞ Dansk Fisk
- ☞ Fiskeridirektoratet
- ☞ Danmarks Miljøundersøgelser
- ☞ Fødevarestyrelsen



# A link to seafoodnet can be found on the homepage of Danmarks Fødevareforskning



## PRESENTATION FROM THE FAROE ISLANDS

### How the project has been promoted in the Faroe Islands

- Advertized twice in two newspapers
- Dimmalætting ( 23.12.05 and 04.01.06)
- [www.dimma.fo](http://www.dimma.fo)
- Sosialurin (23.12.05 and 04.01.06)
- [www.sosialurin.fo](http://www.sosialurin.fo)


### How the project has been promoted in the Faroe Islands

- On three homepages:
- Food, Environmental and Veterinary Agency, [www.hfs.fo](http://www.hfs.fo)
- Fishery Research, [www.fvg.fo](http://www.fvg.fo)
- The Fishery Laboratory of the Faroes, [www.frs.fo](http://www.frs.fo)

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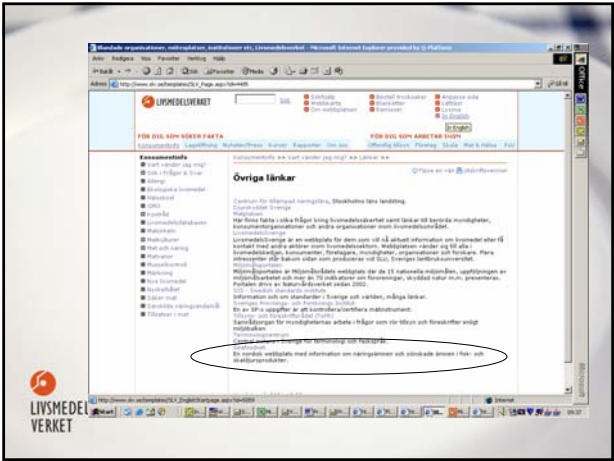
## Promotion of Seafoodnet.info in Finland

1. Promotional material has been translated to Finnish  
<http://www.ktl.fi/portal/suomi/osastot/ymparistoterveys/> , still available in news section
2. Seafoodnet has been introduced to a permanent working group of experts on dioxin issues

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## Promotion of Seafoodnet.info in Finland

3. Links to Seafoodnet have been created:  
In KTL's (National Public Health Institute) website:  
[http://www.ktl.fi/portal/suomi/osiot/tietoa\\_terveydesta/ravitsemus/www\\_linkit/](http://www.ktl.fi/portal/suomi/osiot/tietoa_terveydesta/ravitsemus/www_linkit/)  
In RKTL's (Finnish Game and Fisheries Research Institute) website:  
[http://www.rkti.fi/kala/elinymparistot/haitalliset\\_aineet\\_kaloissa/](http://www.rkti.fi/kala/elinymparistot/haitalliset_aineet_kaloissa/)  
In EELA's (National Veterinary and Food Research Institute) website:  
<http://www.eela.fi/>  
In SYKE's (Finnish Environment institute) website:  
<http://www.ymparisto.fi/default.asp?contentid=162351&lan=FI>  
In EVI's (National Food Agency) website:  
<http://www.elintarvikevirasto.fi> go to "linkkejä" and roll down to "Muu Eurooppa"  
In NMKL's website:  
<http://www.nmkl.org/db>



**History of monitoring undesirable substances in seafood in Norway**

- NIFES surveillance programs started in 1994- in response to increased focus on food safety in the markets
- NIFES surveillance can be divided into two categories:
  - required according to EU legislation and conducted on behalf of the Norwegian Food Safety Authority (e.g. farmed fish)
  - Initialised by NIFES and the Ministry in order to monitor the levels of undesirable substances in seafood from the Norwegian fishery industry (open seas)
- Both monitoring categories are vital in NIFES research into understanding what specific levels of undesirable substances mean for human health – seafood safety



**PROGRAMME FOR THE DATABASE IN 2005 (nutrients will be included from 2005 – number of samples analysed for nutrients given in parenthesis)**

- Tusk - Norwegian Sea - N=25 (10)
- Ling - Norwegian Sea - N=25 (10)
- Hors Mackerel - Norwegian Sea - N=25 (10)
- North Sea herring – N=125/25 (pooled samples) (10)
- Norwegian Spring Spawning herring - Norwegian Sea - N=125/25 (10)
- Atlantic halibut – Norwegian Sea/North Sea - N=30
- Atlantic farmed salmon – N=50 (10)

**Totally samples analysed 205 (90)**

**PROGRAMME FOR THE DATABASE IN 2006 (nutrients are also included – number of samples given in parenthesis)**

- Atlantic cod (fillet, roe and liver): Barents Sea (50/10); Norwegian Sea (25/5); North Sea (25/5)
- Saithe (fillet and liver): Barents Sea (25/10); Norwegian Sea (25/10); North Sea (25/10)
- American plaice: Barents Sea (25/10)
- Polar cod: Barents Sea (25/10)
- North Sea herring (125/25/10) (pooled samples)
- Norwegian Spring Spawning herring - Norwegian Sea (125/25/10)
- Mackerel: North Sea (125/25/10)
- Atlantic farmed salmon (100)

**400 fillet samples, 175 liver samples and 75 roe samples (130 samples for nutrients)**

**Undesirable substances determined**

**Inorganic compounds:**

- Mg, Al, Ca, V, Cr, Mn, Fe, Co, Cu, Zn, As, Se, Sr, Mo, Ag, Cd, Sn, Ba, Hg, Pb, U (specier of As, Hg og Sn)

**Organic compounds:**

- HCb, HCH, DDT, PCBs (28, 52, 101, 105, 118, 138, 153, 156, 180), dioxins og dioxin like PCBs, polybrominated flame retardants, different pesticides (i.e. endosulphane, toxaphene, chlordan etc)

**Radioactive isotope:**

- <sup>137</sup>Cesium, <sup>99</sup>technetium

**Nutrients included:**

- Total protein and energy
- Dry matter, ash, Na, K, Ca, Mg, Fe, Co, Zn, Cu, Mn, F, I, P, Se
- Total fat, fatty acids, and the fat soluble vitamins A, E, D, K and cholesterol
- Water soluble vitamins as thiamine, riboflavin, pyridoxine, B<sub>12</sub>, pantothenic acid, folic acid

**Seafood data**

• April 2006: Searchable database established, available from link on [www.nifes.no](http://www.nifes.no), of data from NIFES monitoring programmes.

• So far 15 undesirable components and 31 species.

**Instructions:**

Choose species and substance(s) and click "Show report".  
Keep the "Of" button down to choose more than one species or substance from the list.

Whole fish is analysed for blue whiting, capelin, Norway pout, small sand-eel, and sprat. The rest of the samples are of fillets unless otherwise specified.

**Sample:**


- Atlantic cod (*Gadus morhua*)
- Atlantic cod - liver (*Gadus morhua*)
- American plaice (*Hippoglossus platessoides*)
- Atlantic salmon - wild (*Salmo salar*)
- Blue whiting (*Gadus poutassou*)
- Capelin (*Mallotus villosus*)
- Celfish (*Arenichthys luekei*)
- Crab - brown meat (*Cancer Pagurus*)
- Crab - claw meat (*Cancer Pagurus*)
- Eel (*Anguilla anguilla*)

**Substances:**

- Arsenic(As)
- Brominated flame retardants (Sum PBDE)
- Chlorine(Cl)
- DDT(Pesticide)
- Dioxin-like PCBs (non-ortho og mono-ortho PCBs)
- Dioxins (PCDD/F)
- HCB(Pesticide)
- HCH(Pesticide)
- Lead(Pb)
- Mercury(Hg)

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PRESENTATION FROM NORWAY



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SEAFOOD RESEARCH

Seafood data  
Undersøkelser i Nutrient  
NORWEGIAN

Species	Year	Cadmium (Cd) (mg/kg)		Lead (Pb) (mg/kg)	
		Num.	Mean (Range)	Num.	Mean (Range)
Atlantic salmon - Farmed (Salmo salar)	2005	20	<0.003	20	<0.01
	2004	12	<0.001	12	0.002 (0.002-0.003)
	2003	25	<0.002	25	<0.01
	2002	45	<0.001	45	<0.01
	2001	45	<0.001	45	<0.005
	1999	18	<0.001	18	<0.005
1995	45	<0.001	45	<0.01	

If no data are shown in the table or cells, you may have chosen a combination of species/substance which has not been analysed for that year.


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All data are based on wet weight.

Last updated: 17 03 2006

**EU maximum limits:**

Cadmium (Cd)	0.05 mg/kg for all species except eel, horse mackerel and sardines: all 0.1 mg/kg. The maximum limit for crab (claw meat) and lobster meat is 0.5 mg/kg. The maximum limit does not apply to: Crab brown meat, lobster internal organs, cod liver.
Lead (Pb)	0.2 mg/kg for all species except eel, horse mackerel and sardines: all 0.4 mg/kg. And prawn, crab (claw meat) and lobster meat: 0.5 mg/kg. The maximum limit does not apply to: Crab brown meat, lobster internal organs, cod liver.



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Undersøkelser i Nutrient  
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Instructions:

Choose species and substance(s) and click "Show report".  
Keep the Ctrl button down to choose more than one species or substance from the list.

Whole fish is analysed for blue whiting, capelin, Norway pout, small sand-eel, and sprat. The rest of the samples are of fillets unless otherwise specified.

Sample:

Substances:

Cepelin(Mallotus villosus)  
Cefish(Arctichas lupus)  
Crab - brown meat(Cancer Pinnatus)  
Crab - claw meat(Cancer Pinnatus)  
Eel(Anguilla anguilla)  
Greenland halibut(Gadomus aeglefinus)  
Haddock(Melanogrammus aeglefinus)  
Horse mackerel(Trachurus trachurus)  
Ling(Mallotus villosus)  
Lobster - internal organs(Homarus gammarus)

Artenic(Ar)  
Brominated flame retardants(Sum PBDE)  
Cadmium(Cd)  
DDTs(Pesticide)  
Dioxin-like PCBs(non-ortho og mono-ortho PCBs)  
Dioxins(PCDD/F)  
HCB(Pesticide)  
HCH(Pesticide)  
Lead(Pb)  
Mercury(Hg)

Show report

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Species	Year	Mercury (Hg) (mg/kg)	
		Num.	Mean (Range)
Greenland halibut (Gadomus aeglefinus)	1999	50	0.09 (0.05-0.15)

If no data are shown in the table or cells, you may have chosen a combination of species/substance which has not been analysed for that year.

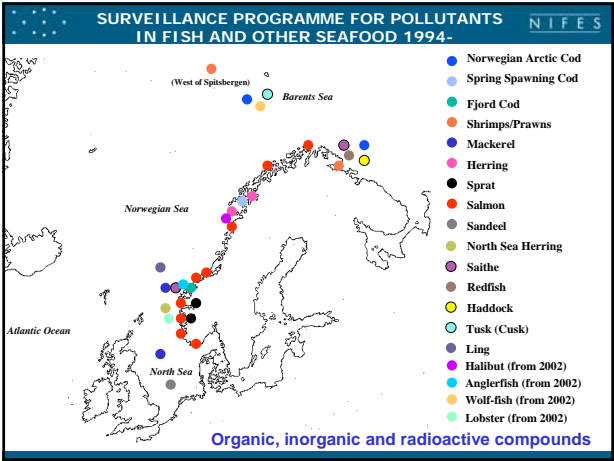
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All data are based on wet weight.

Last updated: 17 03 2006

**EU maximum limits:**

Mercury (Hg)	0.5 mg/kg for all species except redfish, cefish, monkfish, eel and Atlantic halibut where the limit is 1.0 mg/kg. The maximum limit does not apply to: Crab, lobster, cod liver.
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Ongoing surveillance programmes on behalf of the Norwegian Food Safety Authority:

- Program on undesirable substances in blue mussel (*Mytilus edulis*) (EU- Directive 91/492 EEC and 79/923 EEC)
- Program on drug residues and chemical undesirable substances in farmed fish (Directive 96/23 EC)
- EU-program on dioxin and dioxin like PCBs in foodstuffs and feedingstuffs
- Program on chemical and microbiological substances in processed seafood's.
- Program on heavy metals and metal species (mercury, methylmercury, arsenic and inorganic arsenic in selected seafoods.
- Control program on undesirable and desirable substances in complete feedingstuff, fishmeal and fish oil for farmed fish