

Slide 1


FISKERIDEPARTEMENTET
Norwegian Ministry of Fisheries

Irish Presidency of the Council of Fisheries Ministers of the
European Union – Ministerial & Stakeholders Conference

*“Fast Tracking the Development of Environmental-
Friendly Fishing Methods”*

Norwegian efforts and perspectives, by
Minister of Fisheries, Mr. Svein Ludvigsen

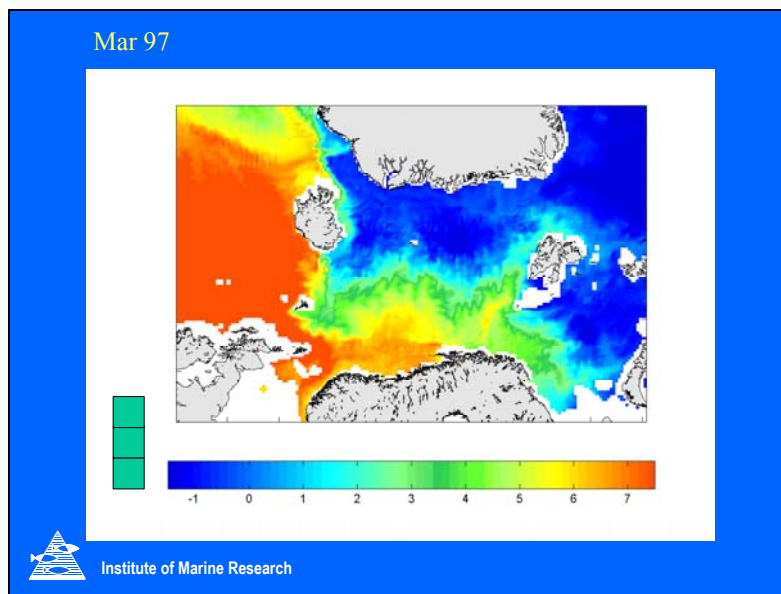
 

Dear Dermot, Colleagues, Ladies and Gentlemen

First I will commend our host for taking the initiative in his presidency period to call for a conference addressing a most pressing topic, namely to develop environmental friendly fishing methods.

Secondly I will express that I am delighted to get the opportunity to participate and share with you our experiences and thoughts in this respect. Although Norway is not a member of the European Union, we share the same waters and we jointly manage a number of common fish-stocks, thus our fisheries sectors are closely interlinked.

Slide 2

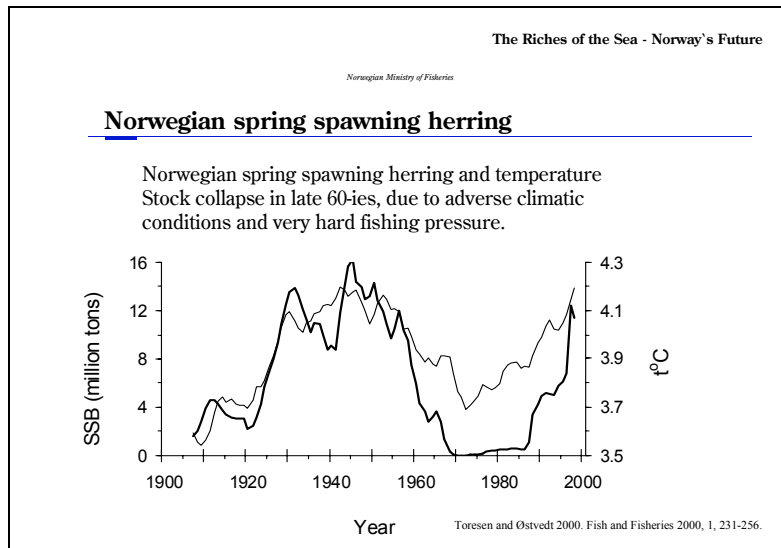


The Gulf Stream is the major source for the rich and abundant marine life in the North Atlantic. The influx of great masses of warm waters creates the environment for a large primary production of algae and plankton. This in its turn forms the basis for a food chain

ending up in our rich fisheries, creating livelihood for our costal populations and income to our societies at large. In addition to nutritious and tasty food for human needs and well being.

We have, however, to care for our resources. Even if the Golf Stream continues to provide the basis for large fisheries, our nations are so technically advanced and efficient that we have the means to deplete these resources far beyond their carrying capacity.

Slide 3



There is no doubt that climatic conditions, especially temperature changes, affect the size and distribution of the production in our seas. And as a consequence the size of important fish stocks.

And when the natural conditions are negative, it is of extra importance that the fishing pressure as well as all other human activity affecting the fisheries resources, are balanced to prevent that the natural fluctuations are worsened.

The stock of Norwegian Springs Spawning Herring is on average the largest stock in the North Atlantic, presently with a spawning stock biomass over 5 million tonnes. This large fish stock was during the late sixties totally fished down – there was for a period a fear that the stock had been extinct. This was a consequence of two factors, the development of new effective fishing methods that increased the fishing pressure several times, and negative natural conditions – fall in temperature, as this graph shows.

Before I show some concrete examples of work undertaken to develop fishing methods that reduce unwanted negative effects on the target species, on juvenile fish and on the habitat, let me shortly review the changes in the concept of fisheries management.

Slide 4

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Fisheries management in short retrospect

- Till 1970-ies: free fishing, few regulations – depletion of stocks
- Quotas (TACs), licenses, effort regulations
- Sustainable development/fisheries (FAO/Rio)
- Responsible fishing (FAO/CoC, Cancun)
- Precautionary Approach to Fish. Management.
- Conservation of biodiversity
- **Ecosystem based fisheries management**

Until the 70-ies, our fisheries to a large extent was not regulated, we had free access to fishing and few regulations – that was the period the depletion of stocks took off.

When the consequences of this lack of management became apparent, we introduced Quotas (TACs), fishing licenses, effort regulations, and technical regulations.

In the 90-ties, mainly through global environment processes, the concept of sustainable development and sustainable fisheries was elaborated, in the Rio conference and Agenda 21 from 1992 and through the FAO Code of Conduct for responsible fisheries of 1995.

And further the concepts of applying the Precautionary Approach to Fisheries Management as well as the conservation of biodiversity has challenged the traditional ways of managing fisheries.

And at present we are developing an understanding of what requirements ecosystem based fisheries management put on us – on fisheries managers.

Slide 5

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Ecosystem based fisheries management (EBFM) goals:

- Healthy marine ecosystems
- Healthy, productive fish stocks
- Balanced harvest at different trophic levels from plankton feeders to top predators
- Healthy fishing industry and coastal communities
- Healthy seafood

An eco-system based fisheries management requires that we keep several objectives in our minds at the same time, as we shall opt for; healthy marine ecosystems, healthy, productive fish stocks, and for balanced harvest at different levels from plankton feeders to top predators

In addition we need to provide for a management regime that gives healthy seafood as well as a healthy fishing industry and coastal communities.

To achieve this we obviously not only need fisheries managers with another focus, but we need scientifically based advice from a broader scope.

Slide 6

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Ecosystem based advice for fisheries management, elements:

- 1. Advice for "healthy" oceans as a sound basis for marine life and seafood production
- 2. Improved scientific management advice by incorporating ecosystem information in fish stock assessments and forecasts
- 3. Reduced ecosystem effects of fishing by advice on improved fish capture methods

Some of the elements, which an ecosystem based advice for fisheries management need to comprise, will be that we are given advice for "healthy" oceans as a sound basis for marine life and seafood production.

And we also need improved scientific management advice where ecosystem information is incorporated in fish stock assessments and forecasts.

And finally the advice has to include how to reduce ecosystem effects of fishing by advice on improved fish capture methods.

This is a major challenge to our scientific community and I am glad that the International Council for the Exploration of the Seas (ICES) will focus on these issues at their next dialogue meeting to be arranged in Dublin next month.

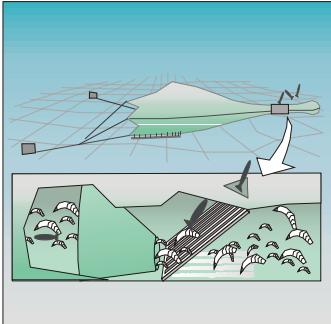
To achieve the objectives that an eco-system based fisheries management puts us up to, environmentally friendly fishing methods are a must. Let me then revert to show you some examples of what has been achieved.

Slide 7

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Nordmøre grid for separating shrimp and fish



- Retains shrimp
- Releases fish by-catch
- Improves quality of target catch
- Reduces sorting work onboard
- Increases yields of non-targets for other fisheries
- Mandatory in a number of fisheries

The Nordmøre Grid was developed in the late eighties, and has been taken widely in use.

The grid has a number of virtues as it retains shrimp and releases the fish by-catch. As a consequence it also improves the quality of the target shrimp catch and reduces sorting work onboard. And as an indirect effect the released fish increases the yields for other fisheries.

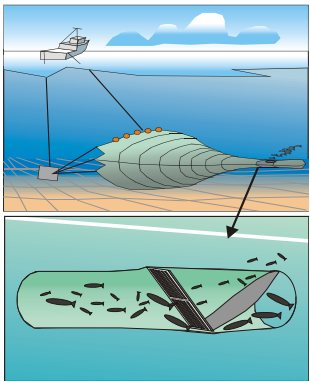
The grid has been mandatory in Norwegian shrimp fisheries since 1990.

Slide 8

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Size-sorting grid



- Small, juvenile fish are released
- Size sorting with grids is less dependant on high catch rates than meshes
- Properly designed and used size sorting grids may allow fishing to continue in areas where the abundance of young fish is high

Another development is size-sorting grids. The virtues of these grids are that small, juvenile fish are released

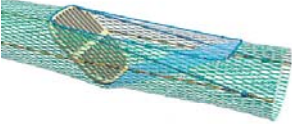
The size-sorting grids are in addition less dependant on high catch rates than using mesh-size to avoid juvenile fish, and therefore when the size-sorting grids are properly designed and used these grids allow fishing to continue in areas also where the abundance of young fish is high.

Slide 9

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Eurogrid



- A hinged flexible whitefish grid system for demersal towed gear fisheries, developed in an EU project (Scotland, France, Denmark, Sweden, Norway).
- Can be wound around net drums of smaller vessels, - easy to handle.
- Selectivity comparable to other grid systems.
- A good grid option in fisheries where grids are made mandatory by legislation or used on voluntary basis by the industry

The Eurogrid has developed earlier grid-technology further, through a EU-financed project with participants from Scotland, France, Denmark, Norway and Sweden, with the Institute of marine Research in Bergen as project coordinator

The Eurogrid is a hinged flexible whitefish grid system for demersal towed gear fisheries. Its selectivity rate is comparable to other grid systems, and it is easier to handle and can be wound around net drums of smaller vessels.

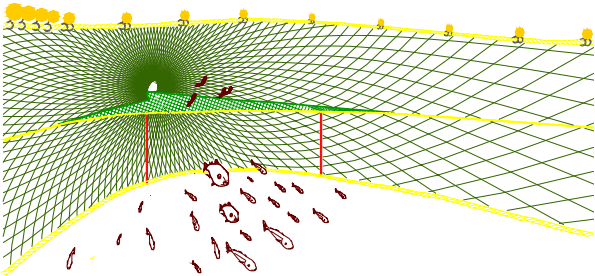
Therefore the Eurogrid is found to be a good grid option in fisheries where grids are made mandatory by legislation as well as used on voluntary basis by the industry.

Slide 10

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Species selectivity: Trawling with horizontal separator panel



In developing the grids our scientists are focusing at some important key-factors.

One is the species selectivity. Especially in mixed fisheries, like the North Sea, species selectivity is of major importance to avoid discard.

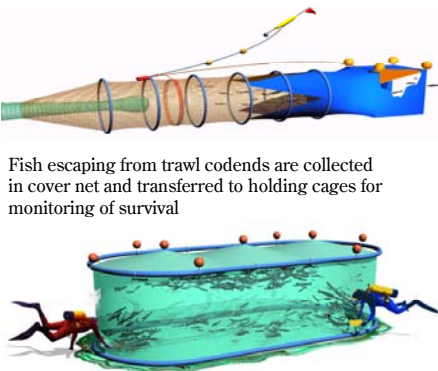
Discard represents a major threat to sustainable fisheries and our efforts to stop it should be strengthened by all means.

Slide 11

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Survival of fish escaping from fishing gears



The diagram shows a trawl codend (a cone-shaped net) and a holding cage (a rectangular tank). Fish are shown escaping from the codend and being collected in the holding cage.

Fish escaping from trawl codends are collected in cover net and transferred to holding cages for monitoring of survival

The survival of gadoid fish like cod, saithe and haddock seem to high in general, although there are still certain aspects of gadoid survival that needs to be investigated.

The survival of pelagic species like mackerel and herring is lower. Development of new selectivity devices for these species should always be linked to studies of survival.

Another key factor is the survival of fish escaping from the fish gear, and thus the development of new selectivity devices has to address the issue of survival.

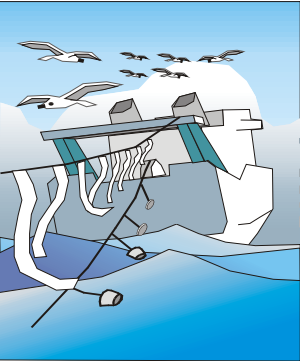
We know that survival rate when escaping from gear differs between different fish species, and thus the development of fish gear intended for different fisheries has to be constructed to address these differences.

Slide 12

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Bird-Scaring line to reduce seabird capture during longline fishing

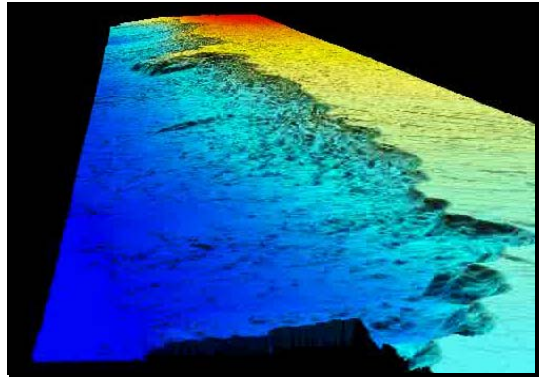


The illustration shows a longline fishing vessel with a longline extending into the water. Seabirds are shown flying around the vessel, and one is shown being hooked by the longline.

- Seabirds try to take bait from hooks during setting of longlines and might self be hooked
- This is particularly a problem for albatrosses and petrels in Southern Oceans
- Mitigations tools such as scaring lines significantly reduce the problem

But we cannot only focus on the fish-fish relations. Addressing the issue of eco-system based management, by-catch of other marine living species has to be included. The number of seabirds is in many areas down to critical levels, and thus fishing gear that reduces the capture of seabirds needs to be developed.

Slide 13



Norway has also addressed another topic that presently receives much attention in environment fora worldwide. That is cold water coral reefs.

What we see here is an animation of a 3D-figure, made by multi beam echo sounder, from the world's largest known cold-water reef, outside the Lofoten Islands in northern Norway, called the Røst Reef. The coral reefs are on the slope down from the continental plateau.

Slide 14

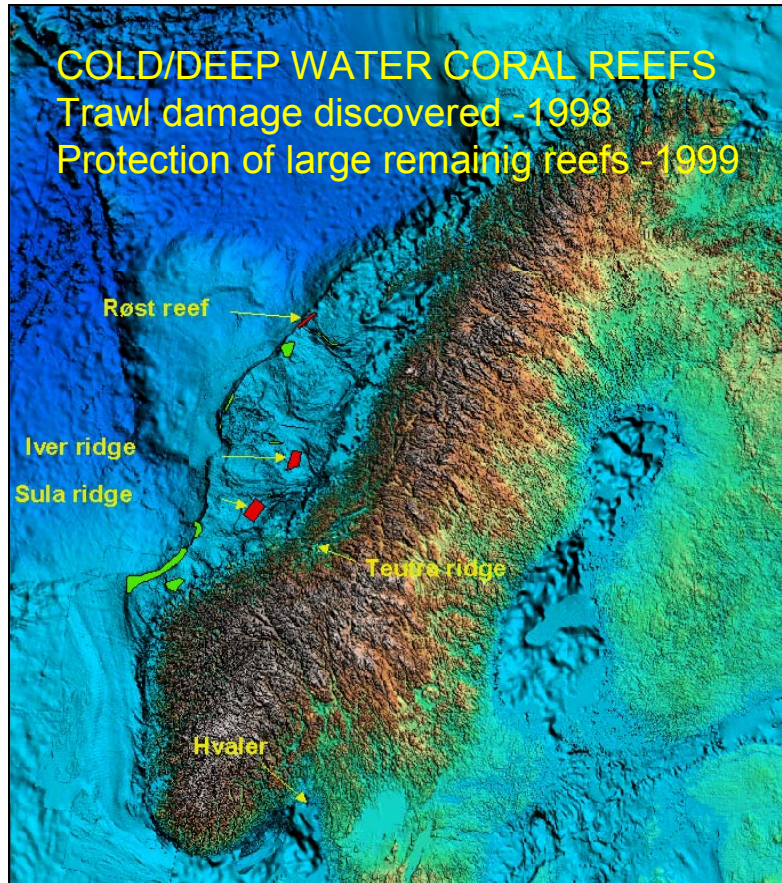


These pictures taken by a mini-sub on around 400 meter depth shows details from the corals, of the Lophelia type, and it shows the rich life of fish and other organisms living in the reef.

In 1999 the Norwegian Government decided to protect coral reefs. It was found several damages on reefs that were explored. We recognised the importance of the coral reefs as a natural heritage, as well as their importance in the marine ecosystem. And a number of means of protection was put in place:

There is a general ban of conducting fishing activities that may destroy coral reefs.

There is also a specific ban to conduct trawling or other harmful activities close to known reefs.



A number of reefs have been mapped, and government regulations these areas have been protected from human activity that may harm them.

* ----- * ----- *

To conclude:

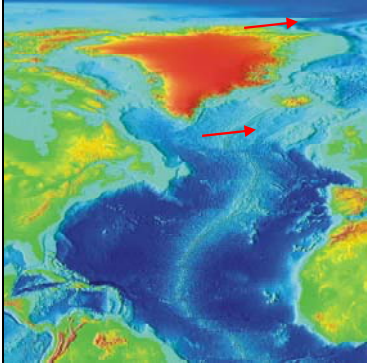
The challenge ahead of us, in order to promote sound management of our living marine resources in a way that benefits our industries as well as take care of our environment, is immense.

We can only achieve this through close cooperation. Our marine institutes cooperates closely, we know that. And that is required as marine research is costly. The research platforms, the vessels, are expensive but necessary tools. Our task is to see to that forces are joined and our resources are combined in concerted action.

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

The Census of Marine Life pilot project (Mar-Eco):
Patterns and processes of the ecosystems of the Northern Mid-Atlantic




Area: Iceland – Azores

Taxa/components:
Pelagic, benthopelagic and epibenthic macrofauna.
Fishes, cephalopods, gelatinous plankton, crustaceans.

Planning phase: 2001-2003

Field phase: 2003-2005

Analytical phase: 2004-2008



The Mar-Eco expedition that will cover the area on the Mid Atlantic Ridge from Iceland to the Azores is such a concerted action. Norway will participate with our newest research vessel, the “G.O.Sars”. This project will bring us important new knowledge. It will provide the necessary basis for good management of these common water areas and the vulnerable fish resources waters through the North East Atlantic Fisheries Organization NEAFC.

We cannot, however, ever be content with what we have done, as there always will be new challenges ahead of us, new knowledge that has to be revealed.

I therefore will suggest that we fisheries managers, and all other stakeholders concerned with the marine resources and marine environment, supports the suggested Ocean Research Programme as one major element within the 7th EU research programme.

The Riches of the Sea - Norway's Future

Norwegian Ministry of Fisheries

Themes that need further research

Ideas for an Ocean Research Programme:

- New knowledge
 - Marine ecosystem functioning and dynamics
 - Biodiversity
 - A clean sea
 - Marine habitat mapping
- Methodology
 - Ecosystem modelling
 - Observation methodology
- Exploitation
 - Ecological quality objectives
 - Responsible fishing



The image shows a white research vessel with a green deck, labeled 'R/V G.O. Sars', sailing on the dark blue sea. The vessel has a complex superstructure with various antennas and equipment.

Elements of such an Ocean Research Programme could be to establish new knowledge with respect to topics as marine ecosystem functioning and dynamics, with respect to biodiversity, to our need for a clean sea and improved marine habitat mapping.

The programme could also include the development of new methodology with respect to ecosystem modelling as well as observation methods.

And with respect to the exploitation and use of the resources the programme should cover the development of ecological quality objectives and standards and methods for responsible fishing.

I can assure you that Norway will participate in such an ocean programme with all available marine scientists and scientific infrastructure. Our Institute of Marine Research is prepared to take part in any preparation and planning work as of tomorrow.

* *

Finally, I will point at the urgent need for us to cooperate to promote responsible fisheries. We need to cooperate in order to minimize discard and other harmful practices. It must be our goal that all fish caught is landed and used. We have to cooperate to combat illegal fishing. The global efforts to stop IUU fishing deserve the support from all of us. We also have to cooperate closely on monitoring and control in order to achieve this.

The objective is to promote our fisheries industry, to create a sound economic basis for fishing activities, to maintain or rebuild stocks to support a high sustainable catch level, at the same time as we balance use and protection. This can only be achieved if we increase and improve our cooperation.

As we share the fish we also share the fate.

Thank you very much for your kind attention.