

Utkast til norsk innspill til EU's Grønnbok om maritim politikk (5.2.07)

In the following more specific answers to the many of the questions, Norwegian experiences and examples of "best practice" are given. Our response is structured according to the structure of the Green Paper.

1. Introduction

Should the EU have an integrated maritime policy?

Norway welcomes the initiative of the European Commission to formulate a vision for a future maritime policy. Norway supports the EU's holistic and integrated approach to maritime management where all relevant sectors and aspects of the matter are taken into account.

Norway appreciates that the approach should rest firmly on two pillars; the Lisbon Strategy and the improvement of the status of the ocean itself.

The challenge we are faced with is how to maintain the leading position of Europe in the maritime industries in a globalised economy. The maritime policy will make an important contribution to fulfilling the aims of the Lisbon strategy by stimulating economic growth, competitiveness and jobs in a sustainable way. Thus, maritime activities should be managed in a way that secure a sound and healthy marine environment. Key to this challenge is stimulating entrepreneurship and innovation through scientific knowledge and a well educated and experienced workforce.

In order to maintain and improve the state of the marine environment, ecosystem-based management, built on scientific knowledge is essential. The Thematic Strategy for the Marine Environment is of great significance in this respect.

Reducing congestion on roads, providing more environmentally friendly transport and transferring transport from road to sea is of great importance. The development of sustainable and efficient transport corridors, where sea transport plays a substantial part, is therefore necessary.

How can the EU add value to the many national, local and private initiatives which already exist in the maritime field?

An integrated approach will result in better regulations and maybe even less regulation. However, the individual sectors have special characteristics which will still need sectoral policy approaches.

Many European nations including Norway have strong maritime clusters covering a range of maritime activities. The European maritime cluster is based on innovation and knowledge. Interaction and flow of information and knowledge between different parts of the cluster is fundamental for each part of the cluster to develop its competitiveness. Fierce global competition, also between European companies, is a driving force for innovation and quality.

2. Remaining Europe's Leadership in Sustainable Maritime Development

How can European maritime sectors remain competitive, including taking into account specific needs of SMEs?

A precondition for the success of the European shipping industry has been the political commitment at national, and EU level, to secure a globally competitive and stable fiscal environment. Through the State Aid Guidelines, confirmed until 2011, net subsidies to EEA shipping is prohibited and a harmonised level playing field has been established. We believe that a stable regulatory environment is important in order to ensure sustained growth within the sector. Therefore, the State Aid Guidelines need to be maintained.

Some particular intra EEA maritime transport trades like ferry operations, are not exposed to full global competition. Nevertheless the EEA states, including Norway, use large funds to support these activities in order to create a level playing field within the internal market. We therefore suggest that the EU Commission examine if the State Aid Guidelines should be revised in order to reduce the need for applying matching subsidies in this particular market.

According to a study of the Irish Marine Institute, aquaculture is one of the sectors with largest growth potential. We would therefore like to draw attention to opportunities emerging in the EU on the basis of the extensive Norwegian exports of non processed seafood. This represents a considerable input into the EU seafood industry and opens opportunities for a large number of jobs in the marine/maritime sector (see 2.3).

What mechanisms should be in place to ensure that new maritime development is sustainable?

Efforts should continue to be concentrated on transposition of existing EU and international maritime legislation into national legislation. New initiatives should be based on a recognised need, and should be taken in areas where an EU initiative will contribute with a real added value.

Maritime transport is a truly global industry. Challenges in shipping therefore require international cooperation and global solutions and rules. We need to ensure high global standards of safety and environment at sea, and we are

hopeful of a close cooperation with the European Union on these issues. Wherever possible, European regulation should be in line with those of other international trading partners.

A major objective in shipping policy is to improve safety at sea. We all suffer when an accident occurs. The reputation of the shipping industry is eroded, the environment may be damaged and last but not least, lives are lost. The answer to this challenge is development of international rules for safety and environment through the IMO, efficient flag state and port state control systems and the continuous efforts by able shipping companies and seafarers where education, training and safety management systems are key words.

In this respect we agree that there are recent IMO conventions in need of urgent ratifications. Ratifications and entry into force of the International Convention on the Control of Harmful Anti-Fouling Systems on Ship (AFS) and the International Convention for Control and Management of Ships Ballast Water will substantially contribute to a healthier marine environment and more environmentally friendly shipping. In Box 2 we have described the development of new technology for ballast water treatment.

Norway supports normal competitive conditions in all maritime industries, including the shipbuilding industry. We therefore hope that the negotiations in the OECD concerning a new shipbuilding agreement will reopen. We believe that the negotiations are essential in order to minimize the use of schemes that distort competition, e.g. support measures, guarantees and tax schemes. It is important that the EU's maritime policy addresses issues and practices that concern the competitive framework for maritime industry, on national and international levels. As long as there is a pause in the shipbuilding negotiations, Norway finds the activities in the Working Party 6 in OECD on Shipbuilding to be very useful and is prepared to participate in the discussions.

2.2 The importance of the Marine Environment for the Sustainable Use of our Marine resource

How can a maritime policy further the aims of the Marine Thematic Strategy?

In our view a maritime policy should secure a holistic and ecosystem-based approach to sustainable management of our surrounding oceans, based on scientific knowledge. The challenge for the EU will be to develop a maritime policy based on a strong marine strategy (Thematic Strategy for the Marine Environment) that has the necessary mechanisms to ensure a holistic and integrated approach. The marine strategy does not cover management of fisheries and maritime transport. Accordingly the maritime policy will have to contribute to the holistic approach by further integrating marine environment concerns into these sectors.

Marine management has to be based on thorough understanding of the various mechanisms that govern the state of the marine environment and its living resources. This includes both anthropogenic as well as natural driving forces. The challenge is to establish a scientific and monitoring framework that secure continuity in the observations of the oceans behaviour and thereby strengthen the tools for prediction of changes. Better understanding of possible future changes is fundamental for political governance.

Coordination of marine monitoring and research within EU as well as transparency in all activities that may have an impact on the oceans are of major importance for holistic management of a sustainable maritime development (ref. 2.3).

The plan for “Integrated management of the marine environment of the Barents Sea and the sea areas off the Lofoten Islands”, adopted by the Norwegian Government in March 2006, may be used as an example for the process of developing a management plan for a sea-area. The purpose of the management plan was to provide a framework for the sustainable use of natural resources and goods derived from the Barents Sea, and at the same time maintaining the ecosystems of the area. Norway considers it very important to encourage broad-based and varied industrial development in the North Norway. A fundamental premise for the management plan was therefore to facilitate the co-existence of different industries, particularly the fisheries industry, maritime transport and petroleum industry. The plan is now available both in English and Russian. The experiences from this work and the follow-up plans will be used as an important basis for our further work to develop integrated management plans for the rest of the Norwegian sea areas. In making a management plan for the North Sea close cooperation with neighbouring countries will need to be established.

The planning process is described in more detail in Box 1.

Box 1: The planning process – management plan for the Barents Sea

The planning process was lead by an intergovernmental panel consisting of seven ministries under the direction of the Ministry of the Environment. All involved sectors were responsible for assessing and reporting on the relative importance of the impacts from the different activities. To ensure a broad participation in the preparations, transparent procedures were followed and various interested parties were included in the work.

The proposals in the plan will be followed up systematically, and the plan will be adjusted according to new knowledge, changes in activity levels, or trends in the state of the environment. The plan will be reviewed on a regular basis, the first time in 2010, based on new and more systematic assessment and monitoring programs. As part of the follow-up a monitoring group has been established to coordinate these activities and ensure presentation of the data collected. A forum on environmental risk analysis associated with acute pollution and a forum for scientific discussions have also been established. In addition two distinct research and monitoring

programs are connected to the follow-up activities. One program, MAREANO, will monitor sea bed conditions and the effects of human activities on the sea bed while the other, SEAPOP, will map the distribution of sea birds.

The Norwegian integrated management plan for the Barents Sea and the areas off Lofoten, applies to the Norwegian parts of the sea area. But as marine ecosystems are dynamic and have open borders, water masses and marine living resources are not restricted to certain areas.

Box 2: Ballast water :

The Norwegian Parliament has agreed to ratify the International Convention for the Control and Management for Ships' Ballast Water and Sediments. Several Norwegian companies and research institutes are taking part in developing new technologies for ballast water management. The Norwegian Institute for Water Research (NIVA) has established, in cooperation with the class society DNV a test station (The Marine research Station Solbergstrand (MFS)) which is the only test station in the world with the ability to test ballast water technologies in accordance with the IMO guidelines. Three new Norwegian controlled technologies, The OptiMar Ballast System, the Oceansaver Ballast Water Management System and PureBallast Water Management System are in the forefront of developing new technologies. These technologies are now being tested on board Norwegian ships, and are in line to be tested at the Marine research Station Solbergstrand (MFS). This is an example of how complete maritime clusters through cooperation can solve environmental problems and create new business opportunities. Furthermore, this case also demonstrates that international regulations are a driving force for new technological solutions.

How can risk assessment best be used to further safety at sea?

Norway wants to emphasize the importance of a common approach across different sectors in establishing sound risk management systems. An integrated risk management model must create a common understanding of risk and facilitate the use of risk analysis, and it is important that risk analysis of different sectors can be compared.

As mentioned earlier in Box 1, The Norwegian government has established a *forum on environmental risk management* focusing on acute pollution in the Barents Sea. This forum is composed of agencies working with the management of oil resources, environment and sea transport. The broad approach is improving risk management both across and within sectors. The purpose of the forum is to provide better information on risk trends in the area, especially regarding acute oil pollution. Other tasks will be to further develop the monitoring of risk trends and to coordinate monitoring activities applicable to risk management, especially in relation to maritime transport.

This risk management model may be used on a European level in border crossing sea areas.

Norway shows great interest in different Interreg projects, such as the INTERREG Project Safety at Sea, see Box 3.

Box 3: INTERREG Project Safety at Sea

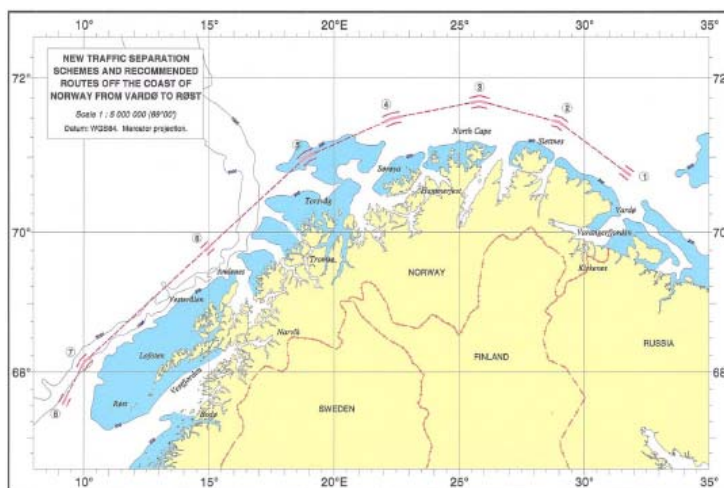
Risk assessment is also the main focus of the INTERREG Project Safety at Sea, led by the Norwegian Coastal Administration and with a broad partnership covering the North Sea Area (www.safetyatsea.se). This project focuses on risk assessment of oil transport, new and innovative use of AIS technology, procedures for oil spill preparedness, risk assessment of forecasted offshore wind farms, decision support for marine rescue coordination centres, and increased knowledge about safety measures for small and high speed crafts.

As a result of risk assessments and scenarios following a further increase in transport of petroleum products in northern waters, the establishment of routeing scheme was identified as a measure to improve the maritime safety in the area. The pre-identification of places of refuge and beaching is another important measure in order to meet the risk associated with increased traffic along the Norwegian coast.

Box 4: The establishment of a routeing scheme on the distance Vardø – Røst

The establishment of routing schemes is an important element in the development of future transport corridors. By shifting the traffic out to a safe distance from the coast, the maritime safety is substantially enhanced, and thus the protection of the environment. This is to the benefit of the coastal state as well as the maritime transport industry.

Norway is now establishing a routeing system on the distance Vardø – Røst in the north of Norway as approved by the IMO. The about 600 nautical miles long routing scheme consists of eight traffic separation schemes and seven recommended routes combining them. The aim is to shift the traffic out to about 30 nautical miles from the coast of Norway to improve the response time for operations against oil-spill pollution.



The establishment of the routing scheme, combined with AIS coverage of the new vessel traffic service centre in Vardø, operational from January 2007, will provide an integrated system for regulation and traffic control in the northern area. This particular routeing scheme is likely to be developed as an element in an international transport corridor, with relevance for energy supply to the EU.

Box 5: Places of refuge and places for beaching

As part of the Norwegian Oil Spill Contingency, Norwegian authorities have identified about 70 possible places of refuge and about 60 possible places for beaching in cases of acute pollution stemming from ships. Local authorities as well as regional and governmental entities responsible for environmental matters were consulted in the process of identifying the possible locations. The democratic process contributes to a broader understanding of the concept of limiting environmental damage and the need to identify possible locations before an accident should occur. The lists of places of refuge and beaching are not exempted from public disclosure. The list is subject to review in line with both traffic development and environmental considerations.

According to the IMO-guidelines relating to the handling of vessels in distress the Norwegian Coastal Administration is authorised to take decisions on the use of place of refuge or beaching. In this situation the list of pre-identified locations is an important planning tool but the Coastal Administration is not restricted from the use of other locations if the situation so requires.

Norway believes that it is a good practice to combine the involvement of local and regional authorities and other bodies in the planning phase, and then to have one agency authorised to take the necessary decisions during operations.

Risk assessment for Maritime Transport

In order to make a proper assessment of risks to safety at sea, analyses and data could be provided by EMSA, including investigation of best means to achieve desired goals. EMSA could work as “consultants” to the Member States’ administrations providing analyses upon request. The EU/EFTA- countries can identify areas where they wish to receive this kind of assistance from EMSA. The Green Paper identifies a need for a sustained collection of marine datasets, and need of cooperation and dialogue within the area of marine research. The identified areas under EMSA must become part of the EMSA work programme. EMSA’s work must always be accompanied by openness and transparency in its relations with its member states.

The Norwegian offshore industry has for years used risk analyses to demonstrate fulfilment of requirements for operation on the Norwegian continental shelf. As for the Norwegian domestic shipping industry, a regulation has been in force since 1 January 2000 requiring all domestic operators of ro-ro passenger ships to carry out yearly risk analyses to demonstrate compliance with the required maximum risk level for passengers using such transport mode.

The European Union could consider introducing the same concept (risk analysis) as a more efficient tool for reaching the desired safety level as an alternative to strict compliance with relevant prescriptive regulations in force. This would be in line with IMO’s Formal Safety Assessment (FSA), which is frequently used in the legislation making processes of IMO, and other similar uses of risk analyses initiatives (Safedoor by Det Norske Veritas).

2.3 Remaining at the Cutting Edge of Knowledge and Technology

Science, technology development and innovation are crucial in order to maintain Europe’s lead in advanced products and services and also to make sustainable policy choices for a healthy marine environment. Thus marine related science and technology should be one of the main pillars for a future European maritime policy. Although a lot of coordination and cooperation of marine related research is going on within the EU Framework Programmes and Technology Platforms and International organisations, it is a general view that marine related research in Europe is too fragmented. We believe that marine related research in Europe should be considered as a whole and that coordination and cooperation should be significantly improved. Therefore, a vision and a strategy for marine related research in Europe is needed in order to avoid duplication, close gaps and create synergies.

We would like to mention the need for cross-sectorial research in the marine area and for further research on the North Sea ecosystem. The plan for the Barents Sea revealed a need for cross-sectorial research on the impacts on the marine environment, in order to better analyse and understand the combined effects of impacts from different sources. Changes to ecosystems are often a result of multiple causes.

The North Sea ecosystem shows today every sign of an ecosystem in change. It seems that higher temperatures lead to shifts in zoo- and phytoplankton, which further lead to less favourable feeding conditions for the fish larvae. This, among other factors, leads to bad recruitment for important fish stocks. Fishermen lose their income. Seabird populations decrease. But there may be others factors at play. The petroleum industry has been present in the North Sea for more than 40 years and we have a long history of over-fishing our resources in this area. We now register other pollution problems. The sugar kelp forest is disappearing from the Norwegian coasts of Skagerrak and the North Sea. The content of nutrients and organic particles in the water increases and there are changes in the sea temperature that may relate to climate change.

There is a need to clarify the interrelations, and the combined impact of all factors to be able to take further actions. We would therefore like to propose a large scale cooperation research programme concerning the North Sea ecosystem. The programme should be jointly undertaken by countries being neighbours of the North Sea. One could also consider to introduce this as an idea for the work Programme of the Seventh Framework Programme in 2009.

Box 6: The concept of boosting new industry development. The aquaculture case of Norway.

Norway's aquaculture industry has since the 1970's developed remarkably from being a small-scale local income supplement activity, to a vital, full-scale and advanced production, technology and know-how industry. With an annual production of around 600.000 tons, the country ranks amongst the worlds' leading marine aquaculture producers.¹

European framework programmes for research have supported a broad range of projects addressing the consumer, the industry and the public interest in sustainable aquaculture and underpinning the importance of aquatic animal health, food safety and food quality. Norway has contributed considerable within these projects to enhance the competitive and innovative strength of the aquaculture industry and to set internationally accepted standards for farmed seafood.

Europe is well positioned to provide a global lead in developing the world's most competitive knowledge-based aquaculture industry. The aquaculture industry is critically dependent on advanced knowledge and technologies which require expensive infrastructures, including large experimental facilities and data logistics. Available research infrastructures and scientific cooperation across countries, universities and research laboratories are crucial for the aquaculture industry's competitiveness and performance.

¹ The production of farmed salmon and trout has mounted increased from 100 tonnes in 1970 to nearly 600.000 tons in 2006. The exports of seafood had a total value of € 4,3 billion in 2006. The share of aquaculture farmed seafood mounted to € 2,26 billion. New cultivated cold water species like cod and halibut are now well in the pipeline to enter international markets.

The Seventh Framework Research Programme and the Competitiveness and innovation framework Programme (CIP) provide coherent frameworks for a holistic and integrated approaches in the aquaculture area.

How can a European marine related strategy be developed to further deepen our knowledge and promote new technologies?

A marine related strategy should take into account all types of marine and maritime research, including marine biology, chemistry, climate, hydrology, oceanography, geophysics, socio-economy as well as technology and maritime transport. It is therefore important that institutions and organisations dealing with all these different disciplines and issues cooperate and coordinate marine related research in order to be able to have a cross sectoral approach where needed.

We believe that the European Commission should establish an advisory group of international marine related organisations, marine research institutes and networks and national research councils to develop a vision and a strategy for marine related research in Europe. The advisory group should take into account the Framework Programmes (all relevant instruments including marine related ERA-NETs), Technology Platforms (Waterborne and others), national funded activities, and work in marine related international research organisations. The strategy should include methods and mechanisms for improved cooperation and coordination between all types of stakeholders, common thematic priorities and instruments and methods for increased funding.

Concerning FP 7, we would like to emphasise the need for well-functioning operational mechanisms to coordinate the marine related research across the different themes. In this respect, we would first of all like to underline the importance of coordination of marine related research within the Commission; between the different units within DG RTD and between the different relevant DG's (such as RTD, ENV, TREN and ENTR). Secondly, we would like to propose that the marine related scientific experts in the different advisory groups (for the nine themes) should form a kind of coordinating body/group in order to assess and follow up the marine related cross-cutting issues, synergies and priorities. Thirdly, the Commission should consider the possibility that national delegates with marine/maritime expertise in the Programme Committees meet (regularly) to discuss marine related cross-cutting issues. Furthermore, it might be an idea that the Commission establishes appropriate mechanisms for coordinating the different marine related ERA-NETs.

Should a European marine related research network be developed?

There are already many marine related networks developed, both within the Framework Programmes and between different marine related institutes and

organisations. In addition to these more specific networks, we believe that organisations dealing with all areas mentioned above should meet regularly to discuss priorities, possibilities for better cooperation and coordination.

It is our view that the best way forward is to build on existing organisations or networks and expand their mandate or work. One possibility is that ESF Marine Board could broaden their activities and arrange a yearly forum to bridge the gap between all types of marine related research, from biology to technology.

For Norway it is of major importance that the research cooperation within the International Council for the Exploration of the Sea, ICES, is recognised and strongly supported. ICES has more than 100 years of experience of cooperation in the field of marine sciences and its scientific advices about marine living resources and the marine environment are fundamental for a sustainable management of our oceans.

In addition to that, The Commission should consider to arrange an annual conference to discuss marine related research in Europe as a whole, how the priorities in the Framework Programmes and Member States could support the research needs of the future European Maritime Policy, and how better coordination and cooperation in Europe as a whole could be achieved. In these discussions all relevant stakeholders; governments, research councils, research institutions, private industry and NGO's, should be involved.

What mechanisms can best turn knowledge into jobs?

Knowledge is a prerequisite for new and better jobs. The challenge is to bring new and good ideas from research to the market, which could create new enterprises and jobs. In this respect public and private funding of research, economic incentives and closer cooperation between universities, research institutes and industry are crucial.

Increased public long-term funding and economic support throughout the whole value chain is of great importance; from basic curiosity driven research to applied research and further from pilot projects to demonstration projects to possible market introduction. Reference is made to the Lisbon goal of 3 % funding (1/3 public and 2/3 private) of research by the year 2010. Norway has the same goal. It is of great importance to increase public funding and economic incentives in the years to come, both in the Framework programmes and the national funding schemes. Norway has established a tax deduction scheme as incentives for research in private companies, see Box nr 7. Furthermore, there is a general view that there is a lack of financial support (risk capital, venture capital) when moving from research results and ideas via pilot and demonstration projects to market introduction.

Box 7: “Best practice” on economic incentives

“Skattefunn”, the Norwegian tax deduction scheme, is the government instrument that supports the largest amount of private sector R&D. “Skattefunn” gives companies an incentive to enhance their own innovative capacity. The tax deduction is 18% for large businesses and 20% for small and medium sized businesses. The maximum project value is between 200 000 and 500 000 Euros. Projects are defined as pre-competitive or industrial research. The private sector underlines the great importance of this scheme for their R&D activity.

Norway has, in addition to more ordinary research programmes and activities, established “Centres of Excellence” and “Centres for Research-based Innovation”, several of them being marine related (see Box nr x). The centres are involved in a lot of international cooperation. It might be a possibility that these centres also could be part of networks/mechanisms of cooperation at European level where appropriate.

Box 8: “Best practice” on basic research and innovation

The Norwegian government has established 21 Centres of Excellence (long-term basic research) and 14 Centres for Research-based Innovation (CRIs).

The Centres of Excellence have the intention to bring more Norwegian researchers and research groups up to a high international standard. The centres are devoted to long-term basic research. Four of these centres are marine related:

- *Centre for integrated petroleum research*
- *Aquaculture Protein Centre*
- *Ships and ocean Structures*
- *Bjerknes Centre for Climate Research*

The main objective for the CRIs is to enhance the capability of the business sector to innovate by focusing on long-term research based on forging close alliances between research intensive enterprises and prominent research groups. Five of these 14 centres are marine related:

- *MabCent: CRI on marine bioactives and drug discovery (marine bioprospecting)*
- *The Michelsen Centre for Industrial Measurement Science and Technology (oil and gas (subsea systems for processing of oil and gas), fisheries (systems for measuring and characterising fish catch) and monitoring of the marine environment (parameters in deep sea))*
- *CREATE: Centre for research-based Innovation in Aquaculture Technology*
- *Centre for e-field and Integrated Operations for Upstream Petroleum*
- *Multiphase Flow Assurance Innovation Centre (petroleum)*
- *Centre for Geo-biosphere Research – Deep Sea Floor, Deep Biosphere & Roots of Life*

2.4. Innovation under changing circumstances

What further steps should the EU take to mitigate and adapt to climate change in the marine environment?

Climate change

The Earth's climate has become noticeably warmer during the past hundred years. Unless emissions of greenhouse gases are reduced, we risk major climate change and serious environmental problems in the future. Many industrial countries, amongst them Norway, have ratified the Kyoto Protocol, agreeing to reduce their overall greenhouse gas emissions. Norway has committed to reducing emissions of greenhouse gases at 1 per cent above the 1990 emission level in 2008-2012. The Norwegian greenhouse gas emissions increased from 1990 to 2004. New measures are being developed to decrease the emissions.

Norway would like to include emissions from international shipping in a committing regime after 2012. With respect to shipping such a framework must apply equally to all ships regardless of flag of register. There is a need for improved emission data from these sources, and methodological work with regard to allocation of emissions to the countries involved. In this regard, Norway will host a workshop on methodological issues regarding emissions from aviation and shipping in October 2007. The workshop is a joint EU-Norway workshop, where the EU will contribute in the planning of the workshop as well as on the practical and financial side. We hope that the workshop can lead to removing some of the remaining obstacles for including emissions from international shipping and aviation in a future commitment period.

The IMO has adopted an assembly resolution with a strategy on reducing emissions of greenhouse gases from shipping. Both Norway and the EU are active in the work under the Marine Environmental Protection Committee (MEPC) of the IMO, which is responsible for implementing the strategy. At the last meeting (MEPC 55) a work plan for the next years was adopted. This year it will be important to contribute with submissions containing information and views on *inter alia* market based solutions (such as emission trading). In this work, we hope for strong cooperation between Norway and the EU, for example preparation of joint submissions. At MEPC 55 it was also decided to update the IMO Study on greenhouse gas emissions from 2000. The next MEPC should adopt Terms of Reference for this study. Norway intends to contribute with financial support for this work, and we call on EU countries to do the same.

CO₂ –sequestration

Norway is deeply concerned about the impacts on the marine environment of increased concentrations of greenhouse gases in the atmosphere. Norway views the capture and geological storage of CO₂ as one in a portfolio of measures to mitigate climate change and ocean acidification. In November 2006, the first meeting of contracting parties to the London Protocol 1996 adopted an amendment to the Protocol, to allow for CO₂ sequestration in sub-seabed geological formations. Norway, France, Spain and the UK had all co-sponsored the Australian proposal to amend the Protocol. Subsequently, Norway, co-sponsored by France, the Netherlands and the UK, has submitted a proposal for equivalent amendments to be made to the

OSPAR Convention 1992. The proposal will be considered for adoption at the upcoming meeting of the OSPAR Commission in June 2007.

Norway believes these amendments to be important, for the facilitation and further development of this technology – and in order to provide a coherent international legal framework regulating such activities. We also attach great importance to – and actively participate in - the development of further technical guidance for the geological storage of CO₂. The work on such guidance is currently well under way, both in the London Protocol and the OSPAR Convention. In OSPAR, it is envisaged that a first version of such guidance will be ready for adoption at OSPAR 2007.

We have noted with pleasure the EU commitment to install carbon capture and storage in several fossil fuel power stations by 2015, as highlighted in Commission's package of energy and climate proposals, which was launched on 10 January 2007. Also, in this context we would like to highlight that we sincerely hope for the support of the EC Commission, as a contracting party to the OSPAR Convention, in the amending of the OSPAR Convention and the development of sound technical guidance under the auspices of the Convention.

How can energy efficiency improvements and fuel diversification in shipping be achieved?

Air pollution

An important aspect of enhancing environmentally friendly shipping is to ensure reduction of air pollution from ships. Important steps have been taken to reduce air pollution from ships, such as the entry into force of Annex VI to MARPOL 73/78 on 19 May 2005, and the designation of the Baltic Sea and the North Sea as sulphur oxide emission control areas. However, there are concerns that if no further measures are introduced, by 2020 emissions of SO_x and NO_x from international shipping around Europe may have surpassed the total emissions from all land-based sources in the 25 EU Member States combined. This will have an impact on environment and health.

The proposal from Finland, Germany, Italy, the Netherlands, Norway, Sweden and the United Kingdom to review MARPOL Annex VI was well received at the IMO. The terms of reference for the revision includes future emission limits of NO_x and SO_x, future control of VOC emissions and particulate matter, as well as further clarification of the Annex. Norway strongly welcomes this work, and we encourage the EU to support this revision and to seek for stricter requirements, including the development of cleaner marine fuels.

Gas as fuel

Using gas as fuel reduces emissions of CO₂ by about 20 per cent and NO_x by about 85 per cent. There are no emissions of sulphurous gases. The Norwegian Government emphasises the role of environmental incentives and taxes to motivate companies and individuals to a more environmentally friendly behaviour. The Government will as of 1 January 2007 introduce a tax on NO_x emissions. The tax will, among others, include all vessels sailing between Norwegian ports. Norway also has taxes on emissions of CO₂ and SO₂ in domestic sea transportation of goods and the offshore fleet in operating in Norway. It is essential that such taxes are flag neutral in order not to distort competition between ships from different flags.

Box 9: Fuel diversification – gas as fuel

Within the next few years it is likely that a significant number of Norway's approximately 100 "fjord ferries" will be fuelled by environmentally friendly natural gas or other alternative technology. One such ferry is already in use: the gas fuelled ferry M/F "Glutra" and five new ferries are soon due in operation. Through tenders or other contracts the public road administrations have a unique opportunity to introduce best practice by demanding the use of fuel from natural gas or use of environmental technology. The overall environmental benefits of the five new ferries will be substantial:

- *Emissions of CO₂ will be reduced by 25 %.*
- *Emissions of NO_x will be reduced by 83 % (corresponding to the effect of 190.000 passenger cars, the equivalent to all the cars of the city of Oslo).*
- *Emissions of SO₂ will be eliminated.*
- *There will be no emissions of particles.*

How can innovative offshore renewable energy technologies be promoted and implemented?

Offshore wind energy systems

More research, development and demonstration of offshore floating wind energy concepts are needed to enable a sound and environmental friendly development of the abundant offshore wind resources in deep waters. The objective must be to develop robust, reliable, cost effective and low-maintenance offshore wind energy systems which are easy to transport and to install. Furthermore, cost-effective and accurate wind mapping for offshore applications is needed.

Based on the experience and competence gained from many years of offshore oil and gas developments, hydropower production and electricity distribution, combined with a long history as a marine nation, Norwegian

research institutions and industrial companies are presently active in developing offshore wind energy systems.

2.5. Developing Europe's Maritime Skills and Expanding Sustainable Maritime Employment

How can the decline in the number of Europeans entering certain maritime professions be reversed and the safety and attractiveness of jobs ensured?

Employment in the maritime sector is a significant contributor to general employment. Seafarers represent a vital source of knowledge for the maritime sector. Keeping in mind that the Norwegian shipping industry is the largest recruiter of European seafarers, the question of attracting people to the seafaring profession becomes of great relevance to Norway.

The Norwegian Government wishes to ensure that maritime competence is maintained and has therefore extended the tax support scheme for seafarers. This scheme covers approximately 9 700 seafarers. With regard to further actions on boosting employment in the European maritime sector and attracting young seafarers to the profession the following actions could be taken²:

- Enhancing the general image of shipping and the maritime sector towards the wider public
- Promotion of a positive image of the seafaring profession, inter alia by enhancing its social reputation and attracting young people to work at sea
- Securing the benefits of more extensive participation by women and promoting social inclusion
- Encouragement for the shipping industry to engage more fully with shore-side support companies in order to decide how best to maintain the skills level of the maritime sector, while containing total industry labour costs
- Encouragement for the creation of maritime clusters, which increase competitiveness by encouraging an active network of mutual support and cooperation among seaborne and shore-side companies
- Encouragement for ongoing maritime education and training for seafarers to adapt to emerging new skills and to the needs of the shipping industry and the shore-side industries.

Norway supports the statement in the paper that a key factor to reverse the downward recruitment trend is to encourage the mobility between sectors. Thus, a career on the sea should qualify for a later career at land, and experience from work as fishermen should give credits in the same manner as for other seafarers.

² Reference is also made to Council Conclusions from the 2695th Council Meeting Transport, Telecommunications and Energy, Brussels, 1/5 December 2005

In Norway, maritime training is organized by own agencies owned in partnership by private companies and the state authorities responsible for education. These agencies arrange introduction courses for young people, giving them a taste of all the possibilities in a marine/maritime career. Some of these introduction courses are specifically oriented towards women.

How can the quality of education, training and certification be assured?

In Box 10 a foundation, trainee programme and a recruitment campaign are described.

Box 10: Norwegian maritime competence foundation, trainee programme and recruitment

In 2003 a Norwegian Parliament Resolution established the Norwegian Maritime Competence Foundation. The Foundation administers a fund to improve competence and to initiate recruitment activities for the maritime industries, especially directed towards the training for a career at sea. The Foundation claim and administer a fixed amount per employee in companies who are subject to the Norwegian support scheme for seafarers, the net-wage arrangement. Also Norwegian shipping companies that not use the net wage arrangements can apply for contributions from the Foundation. Approximately 1000 training positions were covered by the foundation in 2004. In 2005 approximately 1650 positions were covered.

The Norwegian Shipowners' Association launched a two-year post graduate trainee programme in August 2005. The purpose of the programme is to recruit highly qualified graduates for on-shore careers in the maritime industry and to give each trainee a basic understanding so that he/she becomes capable of mastering numerous management functions within the maritime industry, already at an early stage of his/her career. It consists of a combination of working in one company, visiting another trainee company and an academic program of 35 days. The cross industry program involves 21 companies; ship owners, ship yards and maritime equipment companies, oil rig companies, classification societies, law firms, banks and ship brokers. More than 4000 applications were received for the 25 positions in 2005. New candidates will be recruited to the program in 2007.

In January 2007 Norway's Maritime Forum launched a 3-year programme for recruiting students to high school and university-level programmes in the maritime sector. The program is called "Education that gets you far" and a web portal "www.ikkeforalle.no" is the main

element. The development of the portal content has been focused on the mix of education and entertainment for the digital generation. The web portal has a broad range of content, from school contact information to mini-interviews with young people working at different ships. Different professions are represented in the interviews as are different types of ships.

How can better working conditions, wages and safety be combined with sectoral competitiveness?

We agree that better working and living conditions for seafarers, as they are laid down in the Maritime Labour Convention 2006, are essential. They are also important in order to recruit well trained and competent seafarers. This in turn may maintain/improve the European competitive edge, as the clause of "no more favourable treatment" is introduced in the Convention. This implies that ships from countries which have not ratified the Convention will have to go through time-consuming port state controls.

The Convention should enter into force as soon as possible. It is in this respect important that a sufficient number of ratifications is reached. Ratification/entering into force of the Consolidated Maritime Labour Convention 2006 will provide an instrument to fight substandard operators who do not comply with the ILO-standards.

2.6. Clustering

What role can maritime clusters play in increasing competitiveness, in particular for SMEs, in improving the attractiveness of maritime jobs, and promoting a sense of maritime identity?

Recent studies have demonstrated that the Norwegian maritime industry is one of our strongest national clusters. The cluster comprises of shipping and shipbuilding companies, classification enterprise, manufacturers of ship equipment, ship brokers, ship finance and insurance companies as well as maritime offshore activities. Norwegian maritime manufacturing constitutes 7-9 percent of the world market. Shipbuilding, maritime equipment industry and maritime service providers are world leading because of the closeness to the shipping companies, offshore oil & gas, fishing and aquaculture industry. There are also many and close links to R&D institutions.

The Norwegian marine/maritime cluster is also a cornerstone in the larger European maritime cluster where an increasing number of Norwegian companies have branches, alliances and other relationships with companies in a large number of countries.

Local, national and European networks of interrelated maritime companies and institutions are able to increase competitiveness within the global

economy. Maritime clustering should be used as a vehicle for achieving policy objectives, for example by sharing knowledge, carrying out joint research and innovation, pooling education and training.

How can the EU promote synergies between interrelated sectors?

The many local maritime/marine clusters along the Norwegian coast may serve as good examples on how local coastal communities have developed. The historically strong interrelationship between ship building, shipping and fishing industries has secured workplaces, initiated industrial development and for centuries fuelled the creation of technologies and marine products with international market potential.

Over the last 3-4 decades, this strong industrial relationship has served as an invaluable technological and competence basis for mastering the extraction of oil and gas from the North Sea and the development of a whole new industrial foundation for a number of Norwegian coastal communities. Today, the economically very important oil and gas industries in turn give rise to stimulating technology transfer back to the marine/maritime sector, again based on industrial development in the coastal zone. The development of on board security equipment, the line from off shore-vessels to the development of modern trawlers, and the anchoring of big fish farming cages in rough waters are some examples.

The message here is that the different facets of the globally leading maritime clusters stimulate each other, utilize the same technological platforms, human effort, infrastructure etc. Thus, public measures to stimulate clusters through research, innovation and education should reflect this broad approach.

A Norwegian Maritime Strategy

The Norwegian Government is currently developing national growth strategies for some business sectors where Norway has a comparative advantage; among those are the maritime industries. The strategy for the maritime sector will be developed within the framework of the work now taking place on the European level. The purpose of developing this strategy is to launch initiatives, tools and systems that will reinforce the competitiveness, innovation, growth and employment in the maritime industries.

M ARUT is the Norwegian equivalent to the Waterborn programme of the EU, see Box 11. See Box 12 for example of new offshore ship design. In 2006 the Norwegian government has introduced a program called Norwegian Centres of Expertise, see Box 13.

Box 11: MARUT

MARUT is a joint cooperative effort seeking to promote research and innovation in the Norwegian maritime sector. MARUT was established by the organisations of the maritime industries, governmental agencies and the

Ministry of Trade and Industry. Inspired by insight from cluster theory and experience from the successful maritime industries in Norway, MARUT aims to stimulate research and innovation by building arenas for cooperation and communication. MARUT has initiated a broad strategic discussion on future challenges for the Norwegian maritime cluster. Through its various bodies, the maritime actors are working on identifying common goals and actions aimed at securing Norway's future position as a leading maritime nation. MARUT resembles the WATERBORNE and the LeaderSHIP 2015 programmes of the EU.

Box 12: Ulstein/Bourbon

The maritime cluster at Møre is the cradle for new offshore ship design and technology developments. The Ulstein Group has designed and built one AHTS (anchor handling, tug, supply) and two PSV (platform supply vessel) offshore vessels with a unique design for the nearby-located French owned Bourbon Offshore Norway. The vessel has a backward leaning bow that cleaves the waves and reduces noise and vibration. The hull shape provides major buoyancy and reduces slamming against the vessel. There is also little sea spray on deck. These properties are important contributions toward greater work safety in rough seas. A vessel with the new bow will also have greater fuel economy and can sail at higher speeds in poor weather conditions than vessels with a conventional bow.



Box 13: Norwegian Centres of Expertise

In 2006 the Norwegian government has introduced a program called Norwegian Centres of Expertise. The aim is to trigger innovation and internationalization, and hence value creation, through building and strengthening cooperation within selected clusters. Six Centres of Expertise have been selected so far. One of them is a maritime cluster, and several of the other five are also related to the maritime sector. Central activities include facilitating cooperation and creating meeting places both within each cluster and between the clusters. The program will also increase SME's possibilities for growth, development and cooperation, either as suppliers or sub suppliers to the different clusters.

2.7. The Regulatory Framework

How could the regulatory framework for the maritime economy be improved to avoid unintended and contradictory impacts on maritime goals?

As outlined in the Green paper the regulatory framework for the maritime sector will benefit most from international rules and regulations. Priority should continue to be given to establishing a level playing field for regulatory matters for the maritime sector at international level. It is important to avoid introduction of new procedures in EU that will hamper or delay revision of existing legislation in UN/IMO and ILO and in EU.

In this respect we would suggest that the EU Council and the EEA Council on a regular basis review and publish a "score board" of EEA Member States' ratification of (the most important³) international maritime Conventions; thus giving an impetus for speedy ratification, entry into force and implementation. – A draft model for a score board is presented below:

EEA Member state	IMO Ballast Water Convention (2004)			ILO ConMarCon (2006)		
	Date of ratification	Reason for delay	Expected ratification	Date of ratification	Reason for delay	Expected ratification
Country x	01.12. 2005	-	-			06 2007
Country y	?	Delay in parliament	01 2008			
Country z						

³i.a. conventions such as the IMO Anti Fouling Systems (AFS) Convention and Ballast Water Management (BWM) Convention, MARPOL Annex VI (prevention of atmospheric pollution), the Limitation of Liability of Maritime Claims Convention (LLMC), the Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS) Convention and the ILO ConMarCon)

In order to increase environmentally friendly behaviour it may be necessary to evaluate the State Aid Guidelines for environmental support. One issue that seriously restricts the use of public incentives, is that the benefits from any increase in capacity and cost savings during the **first five** years of the life of the investment has to be deducted when calculating the net support amount. This clause limits the possibility for the Government to establish support programmes, for example rebuilding of engines on existing vessels that will provide more environmentally friendly transport.

Improvements in the updating of the maritime transport- regime would be achieved by speedy ratification of international regulations and a harmonised implementation of the requirements. Incitements for ratification by EU Member States would in this context be useful. Since shipping is a global industry with a need for stable framework conditions and worldwide regulations, new EU – initiatives should be based on a recognised need and should be limited to areas where a EU-initiative will contribute with real added value.

We underline the importance of adequate and improved mechanisms for securing implementation and enforcement of international rules and regulations. The IMO flag state audit scheme, implementation of the consolidated ILO Convention on seafarers conditions, efficient port state control and mandatory implementation of international rules in Europe are tools that will contribute to such implementation and enforcement.

When introducing new regulation the administrative burden for administrations and end users should be assessed by a standardized method. Any new piece of legislation should be preceded by a thorough impact assessment. All EU legislation needs to be based on solid facts and a clear link between the chosen means and the desired ends. Stakeholders should be invited to identify existing pieces of EU legislation, which they would like to have simplified.

Unintended and contradictory impact on maritime goals resulting from poor coordination between the various marine regulatory sectors should be avoided. A good example on efficient horizontal cooperation was when DG-TREN Maritime in June 2005 invited DG- fisheries and DG- Health and safety - working time, to a COSS- meeting (Committee on Safe Seas and the Prevention of Pollution from Ships) on the possible need for revision of Directive 97/70/EC on safety level for fishing vessels. The conclusion of the meeting was the paramount importance of addressing the human factor issue (fatigue/ working time in connection with quotas) for improving the safety level in the fishing sector.

During recent years EU has brought forward a number of measures on maritime transport through Communications and legislative initiatives, including the three packages with legislation following the disasters with the ships Erika and Prestige. We are not convinced that a bundling of proposals on maritime affairs in packages with the presumption that they should be

passed as a package, will secure that the rules and regulations receive the necessary scrutiny and consideration that they individually deserve.

Which exclusions of the maritime sector from some EU social legislation are still justified? Should further specific legal instruments on employment conditions in the maritime sector be encouraged?

As a consequence of different working conditions on land and on board ships, special regulations suited for seafarers and ships have been developed to meet their needs. Land based solutions are often not suitable on board ships. For instance regarding working time on board a sailing ship, there is a desire to use the time on board for work and gather leisure time for time off on land.

Norway is positive to cooperation with the social partners on maritime sector. We therefore supported the close evaluation by the social partners of the regulations on working time leading to Council Directive 99/63/EC implementing sector agreement on working hours based on approved tariff agreements. Accordingly working hours for fishermen has been regulated in Directive 2000/34/EC, last updated by Directive 2003/88/EC.

Furthermore, Norway encourages early ratification of the ILO Maritime Labour Convention and has started national procedure on this.

What further EU action is needed to deal with the inadequacies of sub-standard flags and to provide incentives to register under European flags?

The EU should work in favour of increased openness and transparency in relation to IMO audits. To ensure equal regimes in EU and IMO, EU-introduction of mandatory Flag State Audit Scheme should await the finalisation of the work in IMO.

Norway supports fighting sub standard flag using the history of ships flag as one of the criteria's for targeting ships for port state control. We therefore support this criterion as used in the new inspection regime worked out under Paris MOU in cooperation with the Commission and EMSA following up the Third Package on port state control.

As a tool to fight sub standard flag Norway also supports continued work on more efficient port state control targeting sub standard ships in the new regime. In the view of Norway incentive mechanisms for owners and operators to promote quality shipping is the right way forward. Norway therefore appreciates the work on the new inspection regime where an incentive by less control of quality ships is emphasized.

Norway would suggest that the European Community takes part in a review of flag state performance for fishing vessels and reefers as a measure to curb IUU fishing.

Should an optional EU register be made available?

Norway in 1987 introduced a register containing flexible manning options – the Norwegian International Ship Register. The NIS register is a national quality register that gives the shipping companies a competitive alternative to the flags of convenience registers. EU Member States have adopted similar measures. The question is therefore if the creation of an EU register would add any value.

As a general principle incentives to promote quality shipping should be general, and cover all European shipowners – not just those who might have chosen to register under an EU register. The EU should refrain from any initiative that could be interpreted as introducing any form of flag preference in international shipping. Incentives in favour of attracting quality shipping should be based on the community guidelines on state aid.

To what extent can economic incentives, self-regulation and corporate social responsibility complement government regulation?

The regulatory framework for shipping needs to be international. Support should therefore be given to the development of Goal Based Standards in IMO. Examples of international standards are the Common Structural Rules for Tankers and Bulk Carriers developed by the classification societies and implemented uniformly by all members of IACS. These rules ensure that more than 95 % of world fleet by tonnage of these ship segments are designed, built and operated at a level of safety acceptable to the global community.

The Clean ship approach is the concept of vessels designed, constructed and operated in an integrated manner with the objective to eliminate harmful discharges and emissions throughout their working life; the approach addresses all vessel operations and possible impacts on the environment, and will provide an increased opportunity for transport managers to choose environmentally sound sea transport options. To further promote the clean ship approach, the use of economic and other incentives play an important role in improving the environmental performance of shipping. These incentives may include differentiated port and fairway dues, differentiated tonnage taxes or other systems.

Within the context of the North Sea Conferences the Netherlands and Norway in cooperation are prepared to take on work to identify and formulate technical criteria for the international environmental indexing of ships, i.e. a system for evaluating environmental performance based on certain commonly agreed parameters, for use in international, regional or national incentive schemes.

A big Norwegian shipping company is leading a joint effort in setting standard indicators for operational and environmental performance, see Box 14.

Box 14: Shipping Key Performance Indicators

A big Norwegian shipping company is leading a joint effort in setting standard indicators for operational and environmental performance, commonly accepted by the shipping industry and the public. This includes communication of operational performance and will represent the image of the industry's "Corporate Social Responsibility" and "Corporate Governance" issues in a manner that makes sense to the public society. The initiative managed by MARINTEK is an international approach in the shipping industry with more than 20 international leading shipping and ship owning companies.

How should the Common Fisheries Policy be further developed to achieve its aim of sustainable fisheries?

It is important that the model for sustainable marine resource management is based on certain key principles: sustainable harvesting, ecosystem approach, adequate regulations and an efficient control and enforcement scheme.

The major challenge in the fisheries cooperation with the European Union is to rebuild major stocks in the North Sea to sustainable levels. Norway and the European Union have both adopted comprehensive regulations and measures to control fishing activities and to promote rational exploitation of fish resources.

From our perspective a revision of EU discard policy seems to be essential for rebuilding the fish stocks in the North Sea. We suggest that EU introduce a ban on discards. The discard ban should be accompanied by a comprehensive range of measures intended to enable fishermen to abide by the ban. These measures could include detailed specifications on gear, rules for bycatch, closure of fishing grounds, prohibition to fish during a fixed period of the year and use of selective gear. Minimum mesh size and use of grids make it possible to have an exploitation pattern where recruits and undersized fish are saved, and where unwanted bycatch can be minimized. Norway closes areas when monitoring shows that undersized fish are present in the catches. Some areas are closed on a more permanent basis, for instance in order to protect vulnerable bottom habitats, like coral reef.

The Norwegian prohibition of discards is implemented to minimize waste and to ensure that the quantity actually fished is recorded and thereby can be reflected in the quantitative limits fixed for each stock. Such numbers will also provide a better basis for the scientific advice on the possible fishing quotas for each stock. Our experience is that this measure has improved management and provided for a sustainable harvest of marine living

resources. Discard of fish has also an ethical dimension as it may be looked upon as unnecessary waste of food.

To provide for sustainable fisheries it is also necessary to meet the challenge of overcapacity. In this context decommissioning schemes are important as well as other measures intended to reduce the number of fishing vessels.

Norway has implemented a quota-transfer system to manage overcapacity in the fishing fleet. The Structural Quota System (SQS) allows the owner of two vessels to merge the quotas and fish both quotas with one of the vessels, on the condition that one vessel is scrapped. The latter is in place to make sure catching capacity is actually reduced, and to prevent those vessels which are stripped of their quotas through the SQS from entering other fisheries, either nationally or internationally. The SQS is a voluntarily and optional arrangement, and thus the system has to provide the necessary incentives for the vessel-owners to utilise it. The system has contributed to a significant reduction of vessels in the Norwegian fishing fleet. The legal framework for the system is presently being revised.

Implementing an ecosystem-based approach includes identifying and taking action on influences that are critical to the health of the ecosystem. There is a need to consider not only how fishing affects individual commercial species and the food web, but also how by-catch of non-commercial species, discarding and physical disturbance affect the marine ecosystem, including benthos, birds and marine mammals.

3. MAXIMISING QUALITY OF LIFE IN COASTAL REGIONS

3.2 Adapting to Coastal Risks

How can our shores and coastal waters be better policed to prevent human threats?

Through integrated coastal and marine spatial planning and implementation of an ecosystem-based approach where the biological diversity, structure, function and productivity of the ecosystems is maintained. As part of this, to establish a representative and ecological coherent network of marine and coastal protected areas (MCPAs), covering a representative selection of all marine and coastal habitats. The MCPAs should be effectively managed according to goals for each of the areas.

Piracy and armed robbery

The European countries share a common interest in an enhanced European effort against incidents of piracy and armed robbery and thus securing safe conditions for European ships and seafarers in the global shipping trade. The momentum created by the November 2005 IMO Assembly resolution

and the March 2006 statement from the UN Security Council offers a natural starting point for further increased efforts on this important issue.

The EU countries can co-operate actively at a global level including within the IMO to further enhance the international commitment to the fight against piracy and to explore new modes of assisting the administrations of relevant third countries to the mutual benefit of both littoral and user states. The countries can e.g. support the IMO's initiatives against piracy and provide technical assistance through the IMO by participating in regional seminars on e.g. anti-piracy procedures and capacity building in high-risk areas.

Priority should be given to co-operation and dialogue with the relevant third countries in order to create the necessary understanding of the seriousness of the problem at hand and the need to act. However, in addition to this EU external policy measures, e.g. in the form of economic influence with third countries, can be used to require action to be taken by them to improve security in relation to piracy and armed robbery, and the prosecution of perpetrators.

3.4 Managing Land/Sea Interface

Bringing transport from road to sea in the framework of transport corridors

There are several ongoing important processes connected to (sea)-transport in the EU. Both the initiatives on freight intermodality and the rising focus on the development of Motorways of the Seas are important parts of this picture in order to promote transportation on Sea. It is of utmost importance that policymaking and measures taken in the field of transport is sufficiently connected to an integrated approach to maritime policy. The establishment of viable, safe and secure transport corridors, with sea transport as its core, is an important instrument in this respect.

The success of establishment new and alternative transport corridors calls for international cooperation. Therefore, Norway participates in the task forces for the development of Motorways of the Sea in the North Sea, and the equivalent organisation for the Baltic Sea. Norway also supports the view of extending the North Sea MoS corridor all the way up to the Barents Region, as proposed by the High Level Group report on the extension of the TEN – T to neighbouring countries and regions. The INTERREG project Northern Maritime Corridor (NMC), led by the Norwegian County Rogaland, is focusing on the development of the Sea Route from continental Europe to the Barents Sea. This project has a broad partnership that includes Russia and six other countries that surrounds the North Sea (www.northernmaritimecorridor.no).

In addition, Norway is working on establishing transport corridors within the framework of OSCE and through bilateral cooperation with China, Russia, Iceland and USA. Norway definitely shares interests with the European Community in establishing safe and secure transport corridors.

Norway is already an active partner in developing transport corridors affecting the European economy, and would like to develop the co-operation with the EU on this matter.

Box 15: N.E.W. Corridor a new transport chain between Asia and USA.

The N.E.W. corridor is an intermodal chain that is foreseen to take cargo from central China on rail through the rail/ sea terminal in Narvik and on sea to the North American East Coast. The realisation of this transport corridor will promote commercial interactions between the East and the West, and facilitate global trade by using less congested infrastructure. The N.E.W Corridor is also interesting as a major east-west axis for freight transport within the Barents region, covering North-West Russia and northern parts of Norway, Finland and Sweden. In addition, Narvik as the hub for NEW corridor could develop to a significant hub on a north-south axis connecting continental Europe with this East – West link.



How can ICZM be successfully implemented?

In addition to fisheries and fish farming there are a large number of activities that require access to the coastal zone. These include i.a nature conservation, recreation, tourism, housing, harbours and waterways, kelp harvesting, collection of shellsand, waste disposal, oil and gas pipelines, subsea cables, military activities, dredging and dumping. There are large regional differences between the impacts of these different interests. It is therefore a challenging task to find ways of enabling the different users and stakeholders in the coastal zone to find means of coexistence, and to manage trade-offs between competing interests.

In our experience the key to successful ICZM systems seems to be strong involvement and empowerment of local authorities combined with active participation of all stakeholders in the planning process.

Furthermore an important element for a successful integration of ICZM is to have an integrated and coherent regulation of spatial management, which is supplemented with necessary sector specific regulations.

Of the 283 municipalities along the Norwegian coast, 212 have either developed or are in the process of developing coastal management plans. There are also established county plans for most regions with coastal areas.

How can the EU best ensure the continued sustainable development of ports?

In order to make seamless transport corridors and to promote maritime transportation as such, a European port policy should focus on ports as efficient logistic terminals in the overall transportation network.

Ports face a variety of challenges. While large ports experience problems related to congestion, the smaller ports on the fringe of Europe put their efforts to concentrate a sufficient amount of cargo to make sea transport a sustainable alternative to land transport. However, small and less congested ports, for example in Norway, still play an important and necessary role in the European network. The opening up of new transport corridors, which utilize less congested ports and routes, is therefore strongly recommended.

As major ports are often situated inside/near major cities, expansion is limited and port areas are often attractive for alternative use. For this reason it is necessary to increase the awareness of ports as crucial parts of the movement of people and cargo. On the other hand, this calls for efficiency improvements, partnerships and specialisation in the port sector. In addition it is vital that a common port policy takes into account the differences among existing ports in Europe with regard to size, location and function.

Today, the more heavy security rules in the field of maritime transport compared to other modes imply a distortion of competition between transport modes. Further evaluation is necessary for the need of an extension of security rules towards critical infrastructure especially in relation to existing security rules for ports and ships. Unnecessary and costly duplication of controls must be avoided.

Even though the proposed directives on market access to port services failed, there is a need for an adequate and coherent policy framework for seaports, i.e. transparent competition within and between ports, clear rules for public contributions to investments, and sustainable development of port capacity. However, being an important element of the supply chain, policy making on this sector must focus on and ensure the commercial flexibility in ports. The dependence on good hinterland connections should be

underlined, as well as the integration in the land based infrastructure as such.

In order to make sea transport fully integrated into the logistic chain and through this more competitive, work should be done on harmonizing message and information standards and systems. Norway is currently working on extending the scope of SafeSeaNet so that the number of messages the ships is obliged to send to governmental agencies can be dramatically reduced, in other word a “single window solution”. This will make the ship-to-shore contact more efficient and also contribute to a more seamless integration of sea transport in the logistic chain. In addition the work on IMO/ FAL is important, as well as supporting a more uniform message standard within the logistic chain.

Box 16: ShortseaXML – Marco Polo Common Learning Project – 2006-2008

Shortsea XML is a message standard for exchange of messages between parties in a short sea transport chain. The project will demonstrate practical use of Shortsea XML and promote the use of Shortsea XML to shippers and transport providers throughout Europe. A major focus will be put on mutual training in process integration using Shortsea XML and EDI. Based on international standards (ebXML as developed by UN/CEFACT), it is expected to be a global standard for all kinds of transport and forwarding.

A range of European, commercial partners such as shippers, lines, and ports will be involved in devising, proving and promoting the standard. The project partners comprise shippers, ports, lines, IT suppliers, standardisation bodies and Shortsea Promotion Centres from multiple European countries. The European Shortsea Network (www.shortsea.info) currently comprising 20 Shortsea Promotion Centres (SPC) is an important network for the project.

The aim is to make intermodal short sea shipping more competitive by improving customer service, reducing transport administration cost by up to 10-15%, and improving the utilization and load factor of transport units; resulting in modal shift from road to sea and waterways with the associated environmental benefits.

The Norwegian company NorStella was recently given the assignment from EU to enhance transportXML to cover ShortSea transportation – and therefore intermodal transport, together with several European organisations. The action is to develop, implement, promote and provide training for ShortseaXML, which will become the open message standard for exchanging data between all parties in a door-to-door short sea logistics chain.

For more information about the project please visit the following homepage: www.shortseaxml.org

4. Providing the Tools to manage our Relations with the Oceans

4.1. Data at the Service of Multiple Activities

On what lines should a European Atlas of the Seas be developed?

As an example of establishing Atlas of the Sea we will mention our MAREANO program aimed at detailed and systematic mapping of the seabed's physical, biological and chemical environment, and further to systematise the information in a marine area database that will cover Norway's coastal and marine regions.

The MAREANO Programme will contribute to better management of coastal and marine regions through the publication of vital knowledge to decision-makers and users in the public sector, fisheries, aquaculture, the offshore industry, etc. An example is the discovery of large deepwater coral reefs that which i.a. leads to the establishment of preservation areas for coral reefs.

How can a European Marine Observation and Data Network be set up, maintained and financed on a sustainable basis?

European cooperation in marine observation and data-storage is a major part of the work of the International Council for the Exploration of the Sea, ICES. The data collected and stored are mainly contributions from national fisheries and oceanographic institutes. National strengthening of such monitoring activities and encouraging further reporting to the ICES database will secure continuation of the existing long time series.

A European Marine Observation and Data Network may be established by building on already existing organisations and cooperation and by giving some financial support to a small new secretariat with scientific and information technology expertise and to national activities that traditionally have the task of collecting marine monitoring data.

Should a comprehensive network of existing and future vessel tracking systems be developed for the coastal waters of the EU? What data sources should it use, how would these be integrated, and to whom would it deliver services?

Norway welcomes the European Commission's initiative for establishing one system to support collection and exchange of information in the European Community VTMISS. Norway emphasise the importance of establishing one system applicable to all Member States to enhance maritime safety in the EU/EEA waters. The maritime information and exchange system, SafeSeaNet (SSN) is from Norway's point of view the best suitable tool in this matter.

Norway finds it advisable to require Member States to establish local electronic ship reporting systems that can be interconnected with SafeSeaNet as proposed by the European Commission in the amending Directive to Directive 2002/59/EC *Establishing a Community vessel traffic monitoring and information system*. SafeSeaNet will simplify vessels' obligations in regard to notification and will improve possibilities of exchanging maritime information between Member States. The potential use of the system relies however on a harmonised implementation of SafeSeaNet by Member States throughout Europe. If Member States use other systems, the utmost potential use of SafeSeaNet is weakened.

Exchange of maritime information between Member States has given rise to confidentiality issues among interested parties. Norway appreciates that measures is taken by the European Union to meet these concerns. However, we emphasize that confidentiality can be secured without restricting Member States use of this information in different relations such as to enhance security, to protect the environment or to enhance efficient maritime transport, but through Member States national regulation of authorizing access to this information.

Norway is participating in a regional network and fully supports the proposal from EMSA to develop existing regional systems for exchanging AIS information.

Norway has established 35 shore-based Automatic Identification Installations to receive and utilise information from AIS systems in regard to identifying and receiving information on ships. This information is available trough SafeSeaNet. Furthermore Norway supports the Commission's initiative to integrate information from Long Range Identification and Tracking systems to SafeSeaNet.

4.2. Spatial Planning for a Growing Maritime Economy

What are the principles and mechanisms that should underpin maritime spatial planning systems?

The Norwegian Integrated management plan of the marine environment of the Barents Sea and the sea areas off the Lofoten Islands is an example of comprehensive spatial planning at sea. For more information see our comments regarding this under 2.2 "The importance of the Marine Environment for the Sustainable Use of our Marine resources".

Two illustrations from the Integrated Management plan for the Barents Sea and the Sea areas off the Lofoten Islands show how the envrionmental status of the area has been reflected in the framework for economic activities (petroleum industry) in the same area (see Annex I).

4.3. Making the Most of financial support for Coastal Regions

How can EU financial instruments best contribute to the achievement of maritime policy goals?

In the regulations for the structural fund period for 2007 – 2013 maritime issues have been named as one of the possible priorities within the transnational programmes of the European territorial cooperation. In the transnational programmes for the Baltic Sea, North Sea and Northern Periphery maritime issues have been specifically mentioned as an area which will be supported. Within the present transnational programmes for the Baltic Sea, North Sea and Northern Periphery there has been a number of projects addressing maritime issues like the earlier mentioned NMC.

We believe that the future transnational programmes can contribute to achieving the maritime policy goals by supporting future projects addressing maritime issues in general, but also by utilising the results from present projects addressing maritime issues. It is also important to involve concerned regional and national authorities, but also organisations like the CPMR in project development.

Is there a need for better data on coastal regions and on maritime activities?

The European Spatial Planning Observation Network (ESPON) is set up to support policy development in the field of territorial development. The main aim is to increase the general body of knowledge about territorial structures, trends and policy impacts in an enlarged European Union. ESPON covers EU-27, but also Switzerland and Norway. The project “Territorial impacts of European fisheries policy” documented a lack of regionalised data on a number of issues related to maritime questions. Examples are total employment in fisheries and income, fleet structure etc. We will therefore recommend that one looks closer at the issue of regionalised data (NUTS 3) related to maritime issues.

5. Maritime Governance

5.1. Policy Making within the EU

What principles should underlie it?

The underlying principle should be promotion of competitiveness, economic growth, environmental sustainability and employment. When new regulation is introduced it needs to be considered whether it pursues the right goals, the consequences for all sectors and the costs involved.

Principle of subsidiarity/ involvement of regional and local authorities:
Many important sectoral policies dealt with in the Green Paper are subject to national legislation. However, most of them involve regions and local communities. From a democratic perspective, it is important that regions and local communities, especially people living in coastal areas and islands, are being invited to take an active part in the consultation and policy - shaping process. The regions should also have a role in the decision – making process. Financial instruments to achieve concrete results, involving partners from all layers of administration and private sector, should be considered.

5.2. The Offshore Activities of Governments

Should an EU coastguard service be set up? What might be its aim and functions?

From a Norwegian point of view, increased cooperation between Coast Guards is desirable in for example combatting IUU fishing and enforcement of environmental rules. The modalities of such cooperation could be designed in different ways, but pooling of resources in order to achieve optimal monitoring and control should be encouraged

For what other activities should a “Common European Maritime Space” be developed?

The common rules that apply in Europe for safety, security and environmental protection are not regional European rules, but they are based on international regulations. We subscribe to that approach as shipping is global in nature. One should refrain from introduction of regional measures that would seriously undermine the international institutions like IMO and ILO.

The maritime industries in Europe are major exporters of goods and services. They depend on liberal, predictable and non-discriminatory access to foreign and international markets. Any policy signal of a future “Fortress Europe” in maritime transport would put the free-trade credentials at risk. Such action could also give precedent to similar measures in other regions of the world. The risk for regional protectionism is real, and has increased after the breakdown of the WTO Doha development round. Protectionism would seriously harm the interest of European maritime exporters in general, and in particular the European shipping industry, which to a large extent engage in transports between ports overseas. It would therefore not serve the overall interests of the European maritime industries if international Short Sea Shipping trades in Europe should be promoted through market access restrictions. We would therefore advise against

introduction of any market access restrictions for international Short Sea Shipping trades within a “Common European Maritime Space”.

We welcome policy initiatives that would further promote Short Sea Shipping with a focus on intermodality. The exercise to identify bottlenecks in door-to-door shipping should continue, and we would like to contribute in similar exercises of identifying concrete bottlenecks to efficient freight logistics.

5.3 International Rules for Global Activities

How can the EU best bring its weight to bear in international maritime fora?

UNCLOS is regarded as the Constitution of the Oceans and sets out the adequate legal framework within which all activities in the oceans and seas must be carried out. This universal instrument represents a delicate balance between the varying interests of different states and the parties must cooperate to maintain its integrity and secure its full implementation in order to meet the current challenges related to the oceans and seas.

The Green Paper also raises the question on how to encourage flag states to comply with their duties and refers to the discussion on "genuine link". Norway supports initiatives to establish better compliance by flag states. In particular we support the application of IMO Assembly resolution (A.974 (24)) on the Voluntary IMO Member State Audit Scheme of November 2005. The implementation of the Scheme is underway and audits have commenced. At the 97th session of the Council in November 2006 the Council encouraged Member States to continue to nominate auditors and to volunteer for audits. As of 10 November 2006 67 auditors had been nominated and 24 Member States had volunteered (Norway has volunteered). Support and contributions by the EU Commission and the Member States in this process are important, in order to enhance the level of compliance by flag states to international rules and regulations for the global shipping industry. However, we see no merit or solution in reviving the 1986 UN Convention on Conditions for Registration of Ships in order to discipline flag states.

What action should the EU undertake to strengthen international efforts to eliminate IUU fisheries?

The EU and Norway have cooperated well on the topic of measures against IUU fishing during the latter years. In our view, the following measures should be given high priority during the next years:

- Comprehensive implementation of the port state control regime in NEAFC;
- Strengthening of all RFMOs, for example through better Port state Control regimes and enhanced institutional capacities;

- A review of flag state performance in the fisheries sector, especially of all parties to the UNFSA agreement;
- Evaluation and implementation of a system of tracking of fish and fish products in order to deny imports and exports of illegally caught fish;
- Ever closer cooperation and exchange of data between fisheries control authorities
- Negotiations within the FAO of a global and legally binding instrument on port state control

5.4. Taking Account of Geographical Realities

The High North is a strategic priority for Norway. It is indeed one of the regions of Europe that is undergoing the most rapid and dramatic changes. Most of the key challenges we are facing in the Barents Sea and the waters around Svalbard today, be they climate change, pollution or IUU –fishing, have one thing in common; they are transboundary. As such, they need to be met through international cooperation between Norway, the EU, Russia and others who share the general interest in protecting the environment and preserving the marine resources in both national and international waters in the High North.

Russia.

Activities in Russia may have important direct and indirect impacts on economic activities and the quality of the marine environment in the North East Atlantic. A close and constructive relationship with Russia is therefore of outmost importance.

Norway has over the years established close cooperation with Russia on a range of issues concerning the management of marine resources and economic activities in the northern seas. These include bilateral environmental cooperation, fisheries management, civil society participation, oil spill recovery and contingency planning and monitoring of ship traffic. A Norwegian – Russian fisheries commission has 30 years of experience in managing the harvest of the marine living resources and the scientific cooperation in this field goes 100 years back in time. More recently a joint Norwegian – Russian working group on the marine environment was established.

Norway is increasingly basing its cooperation with Russia on the principles of eco-systembased management as implemented in the management plan for the Barents Sea. Since 1976, the Joint Norwegian-Russian Fisheries Commission has served as an enduring institution to settle quotas on shared stocks, facilitate marine scientific cooperation and cooperation on control activities between the two countries

Petroleum activities in the High North

The High North is likely to become the next major European petroleum province. The resources of the Barents Sea are strategically placed in relation to the growing demand for gas (LNG and through pipelines) in Europe. So far only one project, the Snohvit project in the Norwegian part of the Barents Sea, is in development with export of LNG starting in 2007. The management plan for the Barents Sea (see xx) provides a framework for ensuring that petroleum activities will take place under the most stringent environmental regulations. In the years to come Norway will contribute significantly to petroleum related R&D to meet the particular environmental and technological challenges the industry is facing in the Arctic.

Safety measures taken in the Northern parts of Norway

The establishment of efficient transport corridors requires that appropriate safety and security measures are taken into account. Norway's approach to meet the challenges in relation to the increase in the oil-related traffic in the North has two main elements. At first, Norway emphasise the importance of an integral solution including VTS, AIS, routing systems and the establishment of sufficient tug boat capacity. Secondly, it is crucial to develop close cooperation with neighbouring countries and other countries sharing the same interests.

Given the estimates for future increase of transport of petroleum and petroleum products in northern waters, the Norwegian authorities have concluded that measures based on this integral solution are needed to ensure that this transport takes place in the safest possible way, see Box 4.

Safe maritime transport is also in the interest of the oil and gas and fisheries industries. In determining the exact position of the new routeing scheme in the northern part of Norway, consideration has therefore been given to petroleum activities and to the areas where fishing is most intensive, in addition to safety and environmental concerns. Rules will be drawn up for fisheries and petroleum activities within the area covered by the scheme.

In 2003, government emergency tugboat services were established for maritime transport off Finnmark, Troms and the Lofoten Islands. An increase in the level of petroleum activity also means that the tugboat service is scaled up.

Uniform systems for maritime safety information and vessel traffic monitoring within Europe is essential to enhance maritime safety. Norway believes that it is important to develop systems with potential to include adjacent waters to the EU/EEA. Cooperation with non-EU/EEA states with sea boarder to the Community is of mutual benefit and of great importance.

To enhance the maritime safety level in the high north Norway has signed a Memorandum of Understanding (MoU) with Russia on the strengthening of the cooperation on maritime safety in the Barents Sea. This MoU includes

the establishment of a common vessel traffic monitoring and information system (BARENTS VTMISS), see Box 17.

Box 17: BARENTS VTMISS

Barents VTMISS is a Norwegian-Russian vessel traffic monitoring and information system for the Barents Sea. Barents VTMISS will include a mandatory Maritime Safety Information System and the exchange of AIS-information (Automatic Identification System) between the vessel traffic control centres in Vardø and Murmansk. Barents VTMISS will partly be based on the SafeSeaNet-technology, and could potentially serve as an extension to the SafeSeaNet. Norway emphasizes the importance of establishing a system that could be a basis for further cooperation involving the EU.

Sea Route from the Barents Sea to Europe

We wish to emphasise the importance of the Sea route between the North Sea/Baltic Sea and the Barents region. This is, and will to an increasing extent, become a major transport axis as economic activity in this area is expected to accelerate in the years to come. This Sea Route has also been proposed to be appointed Motorway of the Sea within the TEN-T.

The Barents area holds important industries and is extremely rich in many natural resources such as petroleum, minerals, forests and fish that need efficient transport routes within Europe and to other markets. The importance of this sea route will only increase, in pace with the oil and gas developments in the High North (ref. Box 14 on N.E.W. Corridor)

Research and monitoring

Norway's ambition is to play a leading role with respect to R&D of relevance to the High North. Norway's strategy for the High North, presented in December 2006, emphasises the importance of strengthening knowledge development and research in several areas relevant to maritime policy. These include climate change, aquaculture, marine bioprospecting, pollution and other environmental issues, polar issues and technology related to the oil and gas industry. To secure the knowledge base necessary to follow up the management plan for the Barents Sea, as mentioned above, is also a priority. Norway will be seeking international cooperation towards these ends. As part of the strategy for the High North, the "Barents 2020" was launched as an initiative to strengthen international cooperation within the fields of research, development and education. Barents 2020 is a platform for cooperation between relevant Norwegian and foreign scientific institutions, companies and industries interested in the High North.

Multilateral cooperation

The Arctic Council is an important multinational forum dealing with several Arctic issues of relevance to the Maritime strategy. Norway has the chairmanship of the Arctic Council from 2006 to 2008 and then Denmark

and Sweden will take over until 2012. Key topics for the Scandinavian chairmanships will include the need for understanding and adapting to climate change (see 2.4) as well as the need for establishing a framework for sustainable and ecosystem based exploitation of natural resources. This may provide opportunities for the EU to work more closely with the Arctic council on Arctic marine issues in the years to come.

The Arctic Climate Impact Assessment (ACIA) produced by the Arctic Council provides extensive documentation of the expected changes to the Arctic caused by climate change. Facing these challenges requires coordinated efforts by many actors, including the EU. Increased knowledge is important both for improving the international regulatory regimes aiming to mitigate emissions as well as to enable us to prepare for and adapt to the changes that will take place. Norway will strengthen its efforts related to monitoring the levels and impacts of climate change.

Understanding and adapting to climate change is a key topic for the Norwegian Chairmanship of the Arctic Council. Norway will give high priority to increased international cooperation and to follow up the ACIA report. The Norwegian NorCIA report that will be presented in 2009 will be the first national assessment of the impacts of climate change in the Arctic. As such it might be of interest to the EU as an example of how climate change impact assessments can be carried out on a regional or national scale

