

Strengthening the  
**potential** of the  
**Maritime Transport**



**PRESS 4 TRANSPORT**  
improving EU surface transport media visibility



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## EXECUTIVE SUMMARY

This thematic fiche focuses on **European maritime transport** which is a great potential for Europe and is currently under-exploited.

The fiche highlights the importance of fostering the following key factors: **intermodality, trans-national and international collaboration, and sustainable management of the seas from a Northern European perspective.**

EU Policy aims to promote the use of the maritime transport mainly through the adoption of the intermodal and co-modal schemes, with a greater emphasis on integrating the individual elements of a sustainable EU in a maritime policy.

Research programmes issued at a European level have been

incentivising the maritime transport supporting the development of sustainable technologies and the adoption of the maritime concept: Motorways of the Seas.

Shifting to a local level the European Commission has been supporting the maritime transport sector also through the **INTERREG programme**. In this fiche, three Northern European projects within this programme have been analysed. Although having different objectives and schemes for development – respectively *security, accessibility and maritime business management* – they see the maritime sector as a highly dynamic sector and the projects are instruments that can contribute to the realisation of a sustainable development of the maritime transport sector through the focus that they have on trans-national collaboration, adaptation to pending changes within the EU. These projects are

part and parcel of research and development activities that seek to take up the future challenges that are involved in ensuring the sustainable management and global competitiveness of European maritime transport. The dissemination of the knowledge generated by projects is an important part of these activities.

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# PROMOTING MARITIME TRANSPORT

## The scope of the Topic

Sustainable development is at the very heart of the EU agenda. This entails the challenge to ensure economic growth, social welfare and environmental protection in order to enhance EU competitiveness.

The **implementation of a sustainable development in maritime transport** can be pegged down by utilising the knowledge that already exists in the industry, through many years of history and tradition. This includes knowledge of the sea, extensive experience, know-how and an ability to seize new challenges, combined with a strong commitment to the protection of the resource base. Maritime Transport

The **shift of freight from road to rail and water** is one of many EU strategies **to reduce the negative impact of the increasing transport volume on the environment**. In an EU context, maritime transport means a focus on **Short Sea Shipping and Inland waterway transport**.

**Inland water transport** is considered a sustainable mode of transport and the inland waterways cover around 28 000 km. Especially Western Europe where approximately 200 million Ts. of goods are transported every year and South-Eastern Europe where around 70 million Ts. are carried forms extraordinary good infra structures. Yet these figures amount to only “seven per cent of goods transported on inland waterways in the European Union (road carries 79% while rail carries 15%)” (UNECE Feb. 2010).

Some countries, especially along the Rhine corridor, have very

high shares of freight transport by inland waterways, e. g. the Netherlands (44%), Belgium (14%) and Germany (13%).

**Short Sea Shipping (SSS)** is a variation of maritime transport and is viewed as a viable alternative to road transport. SSS is now promoted through the 2003 programme and there are currently 22 Short Sea Promotion Centres (SPCs) operating in Europe and the **European Short Sea Network (ESN)** working to promote intermodal transport. The EU Commission strongly supports these centres, their work and their networking and expects this support to be matched at national level. Research in SSS has focused on the economic consequences (REALISE 2005), the development of new ship technologies (EROCAV 2003) and IT and network (EMBARRC 2004). Although SSS has grown over the last decade (CEC 2009a), **there is still an even greater potential that should be utilised in order to battle**

**with existing and pending congestion problems in EU.**

Studies show vital parameters regarding competition between SSS and land transport that must be attended to in order for SSS to increase.

**Motorways of the Sea** is a special feature of Short Sea Shipping and consists of a range of sea-based transport services that are integrated in door-to-door logistic chains.

The initiative is introduced by the EU Commission to make better use of the enormous capacity of Europe's seas and large river systems.

*The following is an adaptation of text from EU (2001), EU (2006A), EU (2006B) EU (2007) and EU 2009.*

### The situation in Europe

Europe basically consists of a peninsula and a large number of

islands. It is surrounded by four seas: the Mediterranean, the Baltic, the North Sea and the Black Sea; and by two oceans: the Atlantic and the Arctic. EU therefore has thousands of kilometres of coast – longer than that of other large land masses such as the United States or the Russian Federation. This geographical reality means that over two thirds of the Union's borders are coastal and the maritime spaces under the jurisdiction of its Member States are larger than their terrestrial territory. Europe's geography, therefore, has given a special relationship to the oceans and the oceans have played a leading role in the development of European culture, identity and history.

Today between 3% and 5% of Europe's Gross Domestic Product (GDP) is estimated to be generated by marine based industries and services, without including the value of raw materials, such as oil, gas or fish. The maritime regions within

EU account for over 40% of the GDP.

The **EU is in some areas the leading maritime power in the world**, in particular with regard to **shipping, shipbuilding technology, coastal tourism, offshore energy**, including renewables, and ancillary services. Other maritime sectors with **high growth potential** appear to be **cruise shipping, ports, aquaculture, renewable energy, submarine telecommunications and marine biotechnology**.

Shipping and ports are essential for international trade and commerce. **90% of the EU's external trade and over 40% of its internal trade is transported by sea**. Currently approximately **40%** of the world fleet are controlled within Europe. At the same time some 3.5 billion tonnes of cargo per year and **350 million passengers pass through**

## **European seaports.**

Approximately 350 000 people work in **ports and related services** which together generate **an added value of about € 20 billion.**

Maritime transport is also a **catalyst** for other sectors, notably marine equipment. Maritime ancillary services such as insurance, banking, brokering, classification and consultancy are other areas where Europe has a strong position.

Offshore wind energy, ocean currents, waves and tidal movements represent a vast source of renewable energy and aquaculture, are just some examples of income generating activities linked to the sea.

European companies have developed know-how in marine technology, not only in the offshore exploitation of hydrocarbons, but also in **renewable marine resources, deep-sea operation,**

**oceanographic research, underwater vehicles and robots, maritime works and coastal engineering.** These

technologies will be increasingly used and will enhance the growth of the European marine technology sector, particularly in worldwide export markets.



**The North Sea is the fourth largest source of oil and gas in the world** after Russia, the US and Saudi Arabia. The seas around Europe also play a major role in the energy sector as a means for the transportation by

an increasing number of tankers, of a great proportion of the oil and gas consumed in Europe.

## Intermodality

For an effective integration of the different transport modes there seems to be a need for harmonized standards of loading units. In 2004 the EU Commission proposed a directive for intermodal loading units as the coordination of the different entities within the transport chains which is seen as a serious challenge.

Co-modality as a door-to-door solution is considered a viable concept to avoid congestion on the roads, but in order to facilitate the transfer of goods between different modes of transportation there is a need for developing and exploiting new interfaces in transport.

The EU Commission is currently examining ways to promote a wider concept of

multimodality based on the existing structures.

## International collaboration to promote a global industry

The EU Commission has of late been working on regulation harmonisation within EU, in order to simplify trade and administration between Member States. The objective in this work is to secure a maritime transport industry without barriers within EU. The 2004 initiative by the EU commission: **“Authorised Regular Shipping Service”** was introduced to ease the transfer of community goods between two Member States and reduce the number of formalities. With the concept of European maritime transport space without barriers, the EU Commission proposes to extend this facilitation to all vessels involved in intra-Community trade and sailing between European ports.

Another initiative in the communication and action plan aiming at minimizing barriers is the deployment of e-maritime services in year 2013.

The initiatives to minimise barriers within EU maritime transport cannot however stand alone, due to the fact that the maritime industry is global and must be understood as such in order to ensure competitiveness.

There are already many good relations between **research** and **industry**, which have together established EU supported projects within vehicle emissions, transport safety and fuel dependency. These activities must be maintained and enhanced where possible, and research in alternative energies must continue at a more aggressive pace in order to battle the increasing congestion problems, environmental pollution and the eminent shortage of fossil fuels if we are to ensure a sustainable Europe of tomorrow.

# POLICY BACKGROUND

## Measures to utilise the Maritime potential

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This section focuses on EU level policy that affects maritime transport. In most cases national level policy is in accordance with the EU level policy and can therefore relate to the overall objectives of the EU policy. The major policy documents are:

- The **2001** Transport White Paper
- The **2006** mid-term review of the 2001 transport white paper
- The **2006** Maritime Policy Green Paper
- An **Integrated Maritime Policy (IMP)** for the European Union

The publications are briefly described below.

### The 2001 Transport White Paper

In September 2001 the European Commission published the White Paper “European transport policy for 2010: time to decide”.

In this White Paper the Commission proposes some **60 measures** aimed at developing a European transport system capable of shifting the balance between modes of transport, revitalising the railways, **promoting transport by sea and inland waterways** and controlling the growth in air transport. A large part of the white paper was naturally devoted to passenger transport and road transport as the dominant mode but the white paper also outlined some interesting directions for developments within maritime transport.

One policy that was enhanced was **“linking up the modes of transport”**. The attention was raised to the fact that even though maritime transport carried up to 70% of the trade

between EU and the rest of the world the intra-European use of maritime transport was quite low. This pointed to a need for a policy that could support **intermodality** as an alternative to road transport. The proposal that was put forward (and later implemented) was to launch a large-scale programme (Marco Polo) to support intermodal initiatives and alternatives to road transport in the early stages until they become commercially viable. It was also stated that “Inter-modality will also require rapid introduction of a series of technical measures, particularly on containers, loading units and the profession of freight integrator”. The final recommendations from the Commission with regards to maritime transport were to initiate the following work programme:

- To include the concept of “**Motorways of the sea**” in the future revision of the trans-European networks;

- To introduce a new “Marco Polo” programme in order to promote **intermodality** that must be operationalized by 2003;
- To encourage the emergence of freight integrators and **standardise loading units** (containers and swap bodies). Proposals to this end must be submitted in 2003.

As the following section “RESEARCH CONTEXT AND PROGRAMME” will show, the first two policy recommendations were followed.



## The 2006 mid-term review of the 2001 transport white paper

This Commission communication takes stock of the European transport strategy set out in the 2001 White Paper. In this mid-term review, the Commission reaffirms the strategy's main guiding principles. It also draws attention to the changes in the context since 2001 – EU enlargement, the acceleration of globalisation, international commitments to fighting global warming and rising energy prices – and the need to take these into account.

The most interesting policy innovation in the mid-term review was the introduction of **co-modality**, i.e. the global and efficient use of different modes on their own and in combination. Based on experiences from the road and aviation sector it was put forward that efficiency gains supported by EU policies should make notably waterborne (and rail) transport more competitive,

in particular on longer routes. It meant that mobility should be disconnected from its negative side effects using a broad range of policy tools. Due to this, future policy should have to optimise each mode's own potential to meet the objectives of clean and efficient transport systems.

With regards to waterborne transport it was noted that, "**...especially Short Sea Shipping has over the years grown as strongly as road freight transport and clearly has an even stronger potential. It can help to alleviate congestion and environmental pressure on other modes, provided pollutant emissions from shipping are reduced**".

This pointed to two **key challenges** for coastal transport:

1. There is as yet no ***seamless internal shipping market***: sea journeys from one Member State to another are considered external due to international regulations.
2. The expected ***growth of sea transport*** will need to be absorbed through the EU's ports infrastructure.

As goes for the first key challenge it was concluded that the Commission will build on the debate set in motion by the Green Paper on a future EU maritime policy to develop an integrated maritime transport strategy around a "common European maritime space".



## The 2006 Maritime Policy Green Paper

In June 2006 the Commission published the Green Paper “Towards a future Maritime Policy for the Union: A European vision for the oceans and seas” [EU (2006B)].

The aim of the Green Paper was to launch a debate about a future Maritime Policy for the EU. The Green Paper was built on existing EU policies and initiatives and was seeking to **strike a balance between the economic, social and environmental dimensions of sustainable development.**

The Green paper argued that the way forward was to use principles of good governance and suggested the need for a European maritime policy that embraces all aspects of the oceans and seas. This policy should be integrated, inter-sectorial and multidisciplinary. The Green Paper therefore had

quite a broad focus on the following themes:

- Retaining **Europe’s Leadership in Sustainable Maritime Development**
- Maximising Quality of Life in Coastal Regions
- **Providing the tools** to manage our relations with the oceans
- Maritime Governance
- Reclaiming **Europe’s Maritime Heritage** and Reaffirming Europe’s Maritime Identity

The Green Paper initiated a consultation process that helped formulate the suggestion for “An Integrated Maritime Policy for the European Union”.



## RESEARCH CONTEXT AND PROGRAMMES

### Key research areas and actions at EU and National levels

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Based upon policy and recommendations mentioned in the previous sections the European Commission has initiated a number of programmes with focus on both research and more practical implementation. Some of the programmes are specifically oriented towards the maritime industry, whereas others are more generic with a maritime dimension.



### Framework Programs (FP)

EU has traditionally bundled research related initiatives and activities into Framework Programmes. The current Seventh Framework Programme (FP7) plays a crucial role in reaching the EU goals of growth, competitiveness and employment.

The broad objectives of FP7 are grouped into four categories:

- **Cooperation.** The programme supports all types of research activities carried out by different research bodies in trans-national cooperation and aims to gain or consolidate leadership in key scientific and technology areas. One of the theme areas under this category is transport. The central objective of this theme is to develop safer, greener and smarter transport systems for Europe that will benefit citizens, respect the environment, and increase the competitiveness of European industries in the

global market. This objective has led to identification of a number of activities where the most relevant for maritime transport is the development of clean and efficient engines and power trains, reducing the impact of transport on climate change and inter-modal regional and national transport.

- **Ideas.** The objective is to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries.
- **People.** This category aims at attracting and retaining highly trained and qualified researchers.
- **Capacities.** This programme focuses on Research infrastructure.

### Marco Polo (I & II)



**Marco Polo** is the European Union's funding programme for projects which shift freight transport from the road to sea, rail and inland waterways. The aim is fewer trucks on the road and thus less congestion, less pollution, and more reliable and efficient transport of goods.

**Marco Polo I** was active for four years (2003-2006) with a budget of **75 M€**. The current, Marco Polo II programme runs from 2007-13 and has a **450 M€** budget. The **Marco Polo** program is limited to operational support for initiating activities and the support has to be returned if the activity proves to be financially viable within the project period. Only projects concerning freight transport services may be supported by the **Marco Polo** programme. Infrastructure projects, research

or study projects are not eligible for support. However, also mixed passenger-freight services and RoRo Ferries services may be proposed, but the support would then only be given to the freight part.

The **Marco Polo** program has divided **activities** into:

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- **Modal shift.** This is aid to start-up services that are robust, but not innovative: - just *shift freight off the road*.
- **Catalyst.** This is aid to *overcome structural market barriers* and has to be highly innovative: causing a real breakthrough.
- **Common learning.** This is aid to *improve co-operation and sharing of know-how* e.g. mutual training: coping with an increasingly complex transport and logistics market.

- **Motorways of the sea.** This is aid to *support modal shift* by introducing a door-to-door service of short sea shipping and other modes of transport. It is limited to projects relating to category A ports within the Trans-European Transport Network.

- **Traffic avoidance.** This is aid to *integrate transport into production logistics* to avoid a large percentage of freight transport by road without adversely affecting production output or workforce.

Common for all five types of actions is that the project has to include a dissemination of results and more importantly, the project must not lead to distortions of competition.

## TEN-T

In order to establish a single network that integrates land, sea

and air transport networks throughout the Community, the European policymakers decided to establish the Trans-European transport network (TEN-T).



The European Community is supporting the TEN-T implementation by several Community financial instruments where especially “**Motorways of the Sea (MoS)**” is of interest from a maritime perspective. The “Motorways of the Sea” concept aims at introducing new intermodal maritime-based logistics chains in Europe. These chains should be more sustainable, and commercially more efficient, than road-only transport.

TEN-T gives three main objectives for MoS projects:

1. Freight flow concentration on sea-based logistical routes,
2. Increasing cohesion,
3. Reducing road congestion through modal shift.

Four corridors have been designated for the setting up of projects of European interest:

- **Motorway of the Baltic Sea** (linking the Baltic Sea Member States with Member States in Central and Western Europe, including the route through the North Sea/Baltic Sea canal) (by 2010);

- **Motorway of the Sea of western Europe** (leading from Portugal and Spain via the Atlantic Arc to the North Sea and the Irish Sea) (by 2010);

- **Motorway of the Sea of south-east Europe** (connecting the Adriatic Sea to the Ionian Sea and the Eastern Mediterranean, including Cyprus) (by 2010);

- **Motorway of the Sea of south-west Europe** (western Mediterranean, connecting Spain, France, Italy and including Malta and

linking with the Motorway of the Sea of south-east Europe and including links to the Black Sea) (by 2010).

It is up to industry, Member States and the Community to implement financially and operationally sound projects to use these maritime resources better for new intermodal maritime-based transport systems.

To make Motorways of the Sea a success, **three conditions** must be present for each project.

- First, in order to obtain the necessary concentration of freight flows, *choices have to be made concerning ports and*

*intermodal corridors and services.*

- Second, *all actors in the supply chain have to be committed to these projects.*
- Third, Motorways of the Sea must feature *the best available quality throughout the chain* in order to be attractive for users.

The TEN-T program and thereby also the Motorways of the Sea concept are both coordinated at a national level, meaning that project proposal can only be put forward by the member states.

For further information:

**Seventh Framework Programme:**

[http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)

**TEN-T:**

[http://ec.europa.eu/transport/infrastructure/networks\\_eu/motorways\\_sea\\_en.htm](http://ec.europa.eu/transport/infrastructure/networks_eu/motorways_sea_en.htm)

**Marco Polo:**

[http://ec.europa.eu/transport/marcopolo/home/home\\_en.htm](http://ec.europa.eu/transport/marcopolo/home/home_en.htm)

## The Interreg programmes: The North Sea Programme

Interreg programmes are established to promote regional cooperation through cross border, trans-national and interregional schemes.

quality projects in innovation, the environment, accessibility, and sustainable and competitive communities.

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### The North Sea Region Programme 2007-2013



The **North Sea Region Programme 2007-2013** is one of the programmes included in the trans-national type fostering the corporation between Member States in larger regions such as the North Sea Region, the Baltic Sea or North-West Europe.

It works with cutting edge policy areas in regional development through trans-national projects.

A principal aim of the Programme is to expand the scope of territorial cooperation and focus on high

*Keywords of the* **North Sea Region Program:** Innovation, Environment, Accessibility and Sustainable Communities.

# RESEARCH RESULTS

## Benefits from Interreg projects

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In this section the fiche presents three individual Interreg projects that focus on European maritime transport challenges. One project is anchored in the Interreg IVA programme and two are anchored in the Interreg IVB programme. All projects view the maritime sector as **dynamic** and a sector with an **under-exploited potential**, and there are easy gained opportunities that can be harvested in order to prepare to meet the future challenges of a globalised industry.

The projects tap into the very central elements of a European Maritime transport industry, such as intermodality, Short sea shipping and the Motorways of the sea, trans-national collaboration, and

adaptation and competitiveness in a changing EU.

More information about **INTERREG**:

### Interreg programme A

[http://ec.europa.eu/regional\\_policy/atlas2007/eu/crossborder/index\\_en.htm](http://ec.europa.eu/regional_policy/atlas2007/eu/crossborder/index_en.htm)

### Interreg programme B

[http://ec.europa.eu/regional\\_policy/cooperation/transnational/index\\_en.htm](http://ec.europa.eu/regional_policy/cooperation/transnational/index_en.htm)

### Interreg programme C

<http://www.interreg4c.eu/>

## The **STOCA** project:

### To study cargo flows in the Gulf of Finland in emergency situations

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#### Brief description and objectives

Finland and Estonia are very dependent on maritime transport and inland connections. In addition to their own imports and exports, Finnish and Estonian ports handle a major share of the Russian transit traffic. Any kind of emergency situation can dramatically alter these essential cargo flows, and the preparedness for tackling malfunctions requires careful planning.

To facilitate the preparedness, the **STOCA** project generates knowledge that will be available for strategic planning on how to maintain a functioning society

and infrastructure, in a scenario where the common cargo routes or ports face serious disturbances. This includes an analysis of the capacity and potential for alternative routing in Finland and Estonia as well as estimations on the changes in traffic patterns and size of vessels.

An additional outcome of the **STOCA** project is an advanced simulation model for different types of emergency situations in the Gulf of Finland. Based on the model, the project makes suggestions on the strategies required in preparing for a potential malfunction in cargo flows.



## Result/expected results

- Analysis of the extreme situations (stable and emergency situations) that could affect the Gulf of Finland cargo flows and the business development.
- Analysis of the possibilities to change the cargo flows including flows on the roads, railroads and sea.
- Cost estimation of present and alternative routing, both in monetary and environmental values.
- Estimation of the maximum operative capacity of fixed and long-term logistics infrastructure in emergency situations.
- Suggestions to increase readiness of the actors

involved for alternative operative situations.

## Impact and benefits/potential benefits

This study analysis can show possible risks and opportunities that involved states should prepare themselves for in case of serious disturbances and in emergency situations. The idea is to maintain the basic social activities and infrastructures that are indispensable for **safeguarding the population's living conditions, maintaining a functioning society, and sustaining the material preconditions for upholding national defence**. The analysis will include current and future cargo flows, risks, environment, infrastructure and actors in the Gulf of Finland. Furthermore, combining the aspects of cargo flows, risks and environmental effects to simulation models produces tools for assessing how states can prepare themselves to

emergency situations that are very close to real-life situations. It is possible that this study can generate models that can be used in risk assessments of similar situations in EU. In conclusion, the **STOCA** project points at a need for **trans-national collaboration** including expanded networks and **further research and development studies** that can support the decisions that the states will make in order to secure a steady supply of goods in an emergency situation.

### Potential application

The study area for the **STOCA** project is the Gulf of Finland with special focus on **Finland** and **Estonia**. However this way of modelling extreme events could be applied to all European seawaters with focus on both short- and deep sea shipping. Finally, the **STOCA** study is a small study of how an approximate area of actors within EU can adapt to sudden

changes. Although small, the study does provide a window of opportunity. The knowledge generated here can be harnessed and used to conduct other studies of demarcated areas within EU. These studies could focus on **how involved actors adapt to a relevant change and can be used as part and parcel in EU's challenges on a larger scale**, namely congestion problems, and the need for more sustainable systems in maritime transport. It is vital if these

*For further information:*

**STOCA** - Study of cargo flows in the Gulf of Finland in emergency situations

[www.merikotka.fi/stoca](http://www.merikotka.fi/stoca)

challenges are to be addressed, to collect knowledge where **trans-national collaboration** and adaptation to change go hand in hand.

# The StratMos project to strengthen the role of ports and hinterland facilities in door-to-door transport chains

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## Brief description and objectives

The existing transport network in Europe cannot absorb the forecasted increase in freight volumes. It is therefore essential to develop alternative, more sustainable and cost efficient transport systems in order to alleviate congestion and reduce emissions harming Europe's economy and environment. Against this background the European Commission Transport White Paper from 2001 called for a shift of balance between the transport modes in favour of

sea-based intermodal transport, and for decoupling economic and transport growth. These concerns were addressed by introducing the Motorways of the Sea (MoS) concept.

MoS is intended to concentrate flows of freight on sea-based logistical routes with a view of reducing road congestion and/or improve access to peripheral and island regions.

The experience so far indicates at least four problem areas that should be addressed in order to make the MoS function as envisaged:

- Different transport corridors and axes are not treated in a sufficiently coherent manner, overlooking how the single corridor has to function as part of an overall transport network.
- The sea leg is not sufficiently integrated into the overall logistics chain, lacking proper linkages to hinterland connections.

- The effectiveness of intermodal transport chains are suffering from lack of cooperation and communication between the various actors in the hubs, as well as from missing infrastructure and administrative bottlenecks.
- Intermodal transport is conceived by the market as costly and time consuming, often overlooking the savings in the total transport chain.
- The understanding of what characterises a MoS (as opposed to short sea shipping services) and what could make up a MoS project is sometimes lacking in the private sector.



The project will address these problems both at a strategic overall level in the work packages (WP) and at a more concrete practical level through implementation of demonstration projects (DP).

### Result/expected results

The StratMos project aims to promote and facilitate the shift of cargo from road to sea based inter-modal transport. StratMos strives to improve accessibility within the North Sea Region by supporting the implementation of the Motorways of the Sea concept and related transport networks in integrated logistical chains.

### Impact and benefits/potential benefits

From a strategic perspective, the project intends to provide input for the Master Plan to be developed by the North Sea MoS Task Force as well as to EU entities. From an implementation perspective, practical demonstration projects will be carried out in order to demonstrate actions to be taken by public and private actors. These projects seek to improve the effectiveness of

intermodal transport in general, and particularly the transport that is related to hubs and hinterland connections. Accessibility is an essential part of the EU plan for a sustainable future for transport (2009) and there is a potential in this project to utilise the advantages in the Mos concept that are realized through transnational collaboration.



# The Northern Maritime University Project

To provide maritime business managers in the North Sea Region with knowledge from trans-national universities in order to cope with future challenges

## Brief description and objectives

With markets becoming increasingly global, the maritime industry and its related sectors need to emphasize innovation, competency and trans-national collaboration. The potential to learn, collaborate and innovate faster than one's competitors becomes the sustainable source of competitive advantage in an emergent knowledge-based society.

However, the maritime sector in the North Sea and Baltic Sea Regions is facing a lack of well trained maritime business managers. Adequate qualification offerings must reflect the underlying needs that exist in the industry and the demand for education and qualifications must enhance the innovation capacity of the maritime industries, one of the most globalised of industries.

Expertise in specific aspects of the maritime sector already exists at several centres of excellence housed within universities in the North Sea Region. This broad range of knowledge and expertise needs to be connected and harnessed, in order to utilise the synergies by creating a common and lasting network of universities.



The "Northern Maritime University" (NMU) will meet these challenges by

building up a strong trans-national network of universities in the **North Sea Region (NSR)** which intensively and continuously integrates relevant stakeholders from the maritime business sector. The **objective** of the NMU is to:

- **Strengthen the maritime business sector** and increase its capacity for innovation within the North Sea Region (as well as in the Baltic Sea Region);
- Contribute significantly to **enhance the innovation capacities of the beneficiaries from SME and maritime industry** with the development of the NMU qualification offerings. This will ultimately lead to more effective, and a greater absolute level of, investment in product and process innovation by the trained maritime business actors in the North Sea Region;
- Utilise the **likely future growth potential** in the fields

of short sea shipping (SSS), port operations and global maritime transport and related industries (e.g. logistics services);

- **Strengthen the competitiveness of the industry and services sector** and to step up efforts in the areas of industrial policy and the service market;
- Contribute to **sustainable development of the growing maritime transport business sector** especially in terms of environmental protection;
- Establish a **European Area of Research** and innovation for the maritime business sector also reaching beyond the project period;
- **Strengthen the competitiveness of the European education industry** in the maritime business sector in comparison to global competitors and

remove obstacles for labour, academic and student mobility.

### Result/expected results

- **Common curricula for North Sea Region oriented maritime business management programmes** with qualifications at Bachelors, Masters and CPD levels,
- Identification of the **maritime sector's educational needs** in the NSR,
- **Qualification offerings in maritime business management** including e-learning modules,
- **NMU portfolio and a roadmap for programme** and content development that meets future challenges in the NSR,

- **Professional accreditation of programmes** and qualifications,

- A **trans-national (NMU) network of universities** and stakeholders in the NSR.

### Impact and benefits/potential benefits

The "**Northern Maritime University**" will directly address many of the future challenges to maritime transport. In preparing maritime business managers to cope with growing maritime traffic, port development, and rising environmental challenges, by developing multidisciplinary and internationally oriented qualifications at Bachelor and Master level, NMU is thereby working towards establishing an Area of Research and Innovation for the maritime industry in the North Sea Region. This also contributes to the Lisbon strategy to create a more effective and competitive maritime business sector.

### Potential application

Even though the main focus of the NMU project is the North Sea Region it has the potential to be applied Europe-wide. The NMU project has achieved a trans-national collaboration and founded a platform for uniform and highly qualified education offerings that are accessible for all EU maritime business managers. This format can be developed further in its current form or be copied and established in other areas of EU, hereby creating a strong maritime knowledge-base in EU, which will contribute to realizing EU as a strong competitor on the global maritime scene. The NMU project accommodates the EU objectives trans-national and international collaboration and a sustainable European Maritime Transport sector. In that the NMU has established good relations to stakeholders, which is also still in growth, this can feed potential new collaborations

and networks and further projects. This fruitful trans-national collaboration between science and industry that has been established through the NMU is a vital contribution in securing EU as a maritime standard setter.



The **NMU** is online at:

<http://www.nsr.nm-uni.eu/>



## CONCLUSIONS: key outcomes from the two projects

This concludes the presentation of three different projects within the Interreg programme and **potential outcome analyses**.

Each project invokes eminent '*low hanging fruits*' that can contribute to EU's general plan for a **sustainable transport industry** and to EU's specific plan for utilising the potential of maritime transport. The three projects focus on the very fundamentals of European Maritime transport, **intermodality, short sea shipping, education, trans-national collaboration and adaptation to existing and pending changes within EU.**

Although this thematic fiche is narrow in its scope from an EU perspective, there does seem to be results that can be adopted and applied to other areas of EU which can evolve to further projects.

# EUROPEAN POLICY IMPLICATIONS

## What next?

The different approaches to developments in the maritime sector call for a policy not only focused on the current development trends but the policy should also be robust towards **more drastic changes**.

An example could be the current focus upon technological development for reducing emissions from maritime transport. This policy very much relies upon a continued use of heavy oil as mean of energy for ship propulsion. But if the ship propulsion technology suddenly changes (to LNG, electricity, nuclear power or something else) all developments based on a policy focusing on the consumption of heavy fuel might be useless.

This points to a **need for an e.g. scenario based testing of**

**policies** in order to evaluate the robustness of the policy against different types of developments and the inclusion of stakeholder knowledge and scientific research.



Innovation is, of course, a fundamental issue. If Europe is to adapt to the future challenges that lie ahead and maintain its position as a frontrunner in maritime transport, there is an eminent need for both policy-makers and industry to be innovative.

**Maritime transport is global** and it is imperative that EU policy is developed within that context in order to maintain industrial competitiveness and address the further globalization that lies ahead due to the economic growth in developing countries. The process involved in **combining studies, debate**

**and stakeholder consultation** has been instantiated by the EU, and **such a process however resource demanding should continue** in order to ensure that transport policies are close to a reflection of future challenges as possible (EU 2009).

To enhance passenger and freight transport accessibility and competitiveness it is necessary that this be solved at a **trans-national and an intermodal level** together with **an international outlook**.

So far, **EU policies on maritime transport, industry, coastal regions, offshore energy, fisheries, the marine environment and other relevant areas** have been developed separately. Naturally EU has tried to ensure that their impact on each other was taken into account. But this effort has

to some extent failed in regards to the broader collaboration between the areas. There is a **need for a systematic investigation of how policies could be combined in a way that they can reinforce each other**. Ultimately EU has a strong focus on bringing all of these elements together and designing and implementing new policies that will support and utilise synergies.

# OUTLOOK ON RESEARCH

## What next?

As noted, the three projects presented in this fiche, point at eminent 'low hanging fruits' that can be utilised in further research projects. It is possible to transfer knowledge and experience generated from the three projects that have been described here into further developments along the same vein or new areas where formats generated in one area of EU can be re-used in a new context within EU. Also, a continuing focus on the dissemination of research is vital for innovation in EU.

**Short Sea Shipping** has been subject to discussion for many years in maritime transport and it is still necessary to map out ways in which SSS can be a preferred and competitive form of transport to

road transport. The Mos concept can also be further developed as this also has potential of absorbing many of the difficulties and intermodal solutions involved with congestion that exist within EU.

Trans-national collaboration is vital in order to harness future challenges in EU, and productive trans-national research and development studies could be monitored by EU in regards to support and facilitation of further projects, which in turn will promote an effective utilisation of collaborative synergies and EU funds. Finally, if EU is to ensure a 'Policy-fits-reality' approach, it is imperative to continue to incorporate stakeholder views (EU 2009), cross-disciplinary and trans-national research and development studies and realistic reflections of future challenges.

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