

REGIONAL DEVELOPMENT PERSPECTIVES AND CONCEPTS - in the North Sea Region

Annex 1.2.2 to the Final Report



June 2005/07

PREFACE

This paper has been written as part of the SUTRANET project (Work Package 1: Transport Research and Development Network). SUTRANET (**'Sustainable Transport Research & Development Network in the North Sea Region'**) is a project within the framework of the European Commission's (EC's) Interreg IIIB North Sea Programme.

The aim of this paper has been:

- to specify the common framework for research and development activities of the SUTRANET project including case studies, in order to pursue and guide the project objectives;
- to ensure the contribution of SUTRANET to the transnational strategy of the Interreg IIIB North Sea Programme as specified in the SUTRANET Project Application.

The paper has been elaborated by a team of researchers at Aalborg University, Department of Development and Planning. It has benefited from useful comments and contributions received from other partners of SUTRANET.

Aalborg University, Department of Development and Planning

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Jørgen Kristiansen
Hans Henrik W. Johannsen
Leif Gjesing Hansen
Carsten Jahn Hansen

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Jørgen Kristiansen, Aalborg University, Denmark

Acronyms used in the Paper

BSR	Baltic Sea Region
ESDP	European Spatial Development Perspective
EU	European Union
NSR	North Sea Region
NUTS	Nomenclature of Territorial Units for Statistics (Eurostat)
SME	Small and Medium-sized Enterprise
SMS	Short Message Service
SSS	Short Sea Shipping (short sea shipping)
TEN	Trans-European Network
TEN-T	Trans-European Transport Network
UK	United Kingdom
VAT	Value Added Tax
WP	Work Package (SUTRANET)

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INTRODUCTION

The paper is presented in two parts:

Part 1

Part 1 aims at providing a clarification of regional definitions and requirements related with SUTRANET within the scope of the Interreg IIIB North Sea Programme.

Part 2

Part 2 offers a presentation of the overall spatial policy strategies and perspectives behind the North Sea Programme initiatives. This is followed by a specification of the expected contributions of SUTRANET to these policy strategies, in the form of functional relations and SUTRANET study areas within the North Sea Region.

Text in italic is generally indicating direct quotations from the sources in question.

Part 1

This part of the paper includes a short presentation of:

- the eligible area of the North Sea Region;
- the aim and objectives of the SUTRANET project; and
- the objectives and priorities of the Interreg IIIB North Sea Programme with a view to the regional perspectives in relation to SUTRANET.

1.1 The North Sea Region (NSR) Eligible Area

The overview maps in Figure 1 below present the geographical extension of the eligible area of the North Sea Region (NSR) as defined in the Interreg IIIB North Sea Programme. The map to the left indicates the boundaries at local government (county) level. It should be noted that a local government reform will be in force in Denmark as from January 2007, which reduces the number of Danish counties to five local 'regions'. The map to the right presents the NSR eligible area divided into NUTS 2 zones (see later).

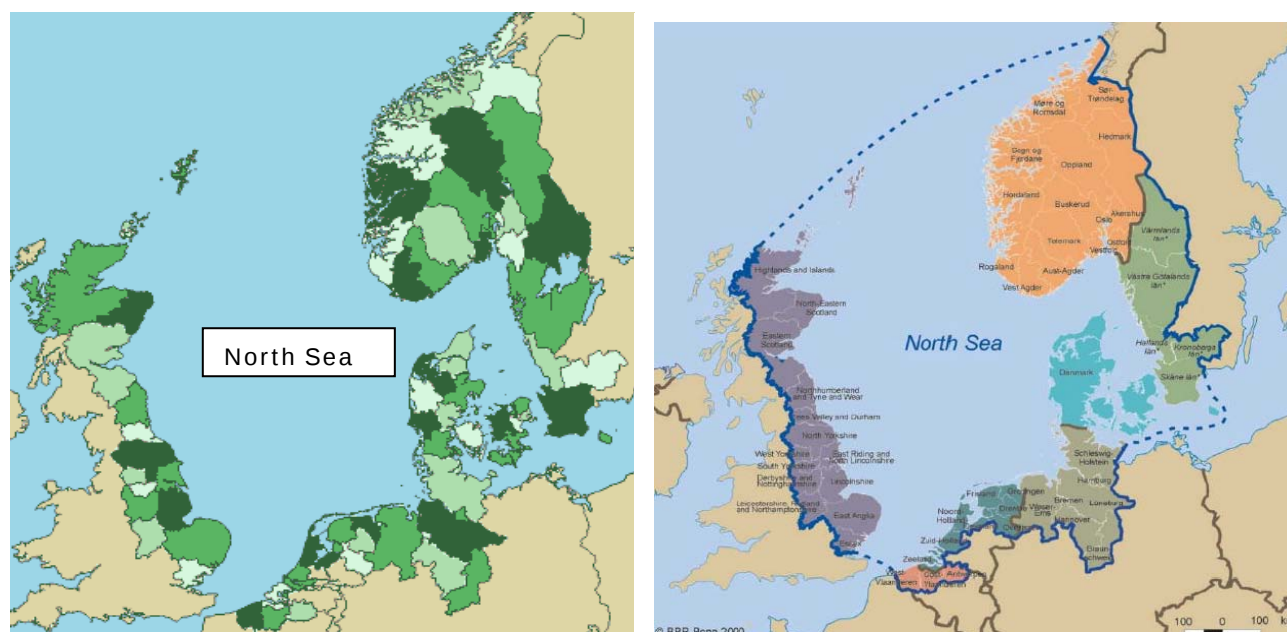


Figure 1: The eligible area of the North Sea Region

(Sources: Interreg IIIB North Sea Programme website, and BBR Bonn 2000)

According to the above figure the geographical extension of the NSR eligible area includes: Scotland except for the utmost western parts; the eastern part of England; Antwerp and Flanders in Belgium; the Netherlands except for the south-eastern counties; seven Federal States (Länder) in north-western Germany; the whole of Denmark; five counties in western and southern Sweden; and the whole of southern Norway (15 Norwegian counties).

1.2 Aim and Objectives of the SUTRANET Project

The overall aim of the SUTRANET project has been to improve the knowledge base for decision-making, both at the policy and operational levels. This is with a view to enhancing an efficient and sustainable development of transport networks and intermodal transport in the NSR.

The Project Book of the Interreg IIIB North Sea Programme presents the aim of the SUTRANET project as follows:

“SUTRANET's aim is to expand the reserve of knowledge upon which transport related policy is based in the North Sea Region. SUTRANET believes that decisions based on a greater understanding of this field will lead to the improved efficiency and sustainability of transport networks. The scheme's partner organisations hope to resolve operational shortcomings by recommending a readymade strategy of practical and user-oriented solutions. They will follow an integrated approach evaluating transport both between different ports and between the port and the final destination. The goal is to investigate factors affecting the smooth running of connections so that regional transportation as a whole can be optimised. Throughout the project, SUTRANET aims to develop transport solutions of minimal environmental impact, and to improve general practice in this area, including promoting measures for the reduction of fuel emissions.

One final aim is to create the necessary enthusiasm and networks between different groups involved in transport research and development in the North Sea Region, in order to raise support for the suggested changes, including regulatory improvements. With this end, SUTRANET is working to secure concerted, cross-sectoral commitment from a range of stakeholders, such as regional policy-makers, public authorities and transport operators.”

SUTRANET was divided into four Work Packages (WPs), each focusing on the following specific objectives:

- WP1: To establish a sustainable research and development network, and elaborate a first step of a region-wide trade and transport information system.
- WP2: To analyse the major seaports and maritime routes in the North Sea Region and further develop the ‘Motorways of the North Sea’ concept.
- WP3: To develop innovative transport systems and concepts through the use of transport and logistics centres.
- WP4: To elaborate a training approach in order to enhance the qualifications and skills of SMEs and operational staff in intermodal transport.

In the sections below it will be further explained how these objectives adhere to the priorities and measures of the North Sea Programme.

1.3 Objectives of the Interreg IIIB North Sea Programme in a Regional Perspective

The Interreg IIIB North Sea Programme is presented at the North Sea Programme website:

*The **Interreg III programmes** are a European Community Initiative to stimulate transnational co-operation in the EU between 2000 and 2006. Interreg IIIB programmes cover larger transnational areas and the North Sea Region comprises areas of Sweden, Denmark, Germany, The Netherlands, The Flemish Region of Belgium, UK and Norway. The areas in the region share many of the same problems and challenges and by working together and sharing knowledge and experiences it is hoped that a sustainable and balanced future will be secured for the whole region.*

Priorities and Measures

Every project that applies to the North Sea Programme has to seek funding for activities addressing one of the programme's priorities. The following four priorities have been identified for the North Sea Region.

1. *Transnational spatial development strategies and actions for urban, rural and maritime systems in the North Sea Region.*
2. *Efficient and sustainable transport and communications and improved access to the information society.*
3. *Sustainable management and development of the environment, natural resources and cultural heritage.*
4. *Water management.*

The SUTRANET project is primarily connected with **Priority 2**:

This priority covers a wide range of transport issues from improving transport systems in rural areas and promotion of sustainable transport to the development of inter-modal transportation networks. It also addresses access to the information society and improving the application of information and communication technologies for public services, SMEs and the wider public (Source: North Sea Programme website).

In the North Sea Programme description the term 'sustainable transport' is mainly understood as 'environmental sustainability', and the term 'efficiency' is focused on economic efficiency and commercial viability. In the SUTRANET context, the term 'sustainable transport' has a broader implication i.e. transport systems and networks aiming at integrating economic, social and environmental concerns. This broader definition of sustainable development is in line with the 'ESDP' and 'NorVision' documents (see the following Part 2 of this paper). The issue of sustainability is being addressed in more detail in a SUTRANET paper 'Sustainability concepts, criteria and the use of indicators'.

Each of the four priorities of the North Sea Programme is divided into a number of measures that address different and more detailed aspects of the issues covered in the specific priority. Every project that applies has to state which measure it will work on.

SUTRANET has addressed **Measure 2.3**, which concerns the ***Development of spatial integrated strategies on transportation networks and the promotion of intermodal transport systems*** in the North Sea Region. *This Measure aims at improving transportation networks with an emphasis on intermodality. Projects submitted under this Measure will be expected to contribute in a significant way towards:*

- *Improving transportation networks.*
- *Increasing use and effectiveness of intermodal transport systems.*

(Source: North Sea Programme website).

Intermodality and Multimodality

A distinction is made between ‘intermodality’ and multimodality’ (see the SUTRANET paper ‘Transport Systems Concepts and Definitions’).

Multimodality implies that there is a choice between at least two different modes of transport on a particular route or in a particular transport corridor (e.g. between road and rail, road and ferry transport/SSS¹, or rail and ferry transport/SSS).

A definition introduced by the Commission (in COM(97) 243 final) suggests that intermodality is the characteristics of a transport system that allows at least two different modes (e.g. road and rail, road and ferry transport/SSS, or rail and ferry transport/SSS) to be used in an integrated manner to constitute a door-to-door passenger or freight transport chain.

Thus multimodality indicates a possibility for the choice between more than one modal option on a particular transport route or in a transport corridor. Intermodality is a characteristics and quality connected with the individual transshipments or transport operations.

The North Sea Area as a Region

Some authors have proposed that a distinction could be made between macro-regions, mezo-regions and micro-regions. The European Union (EU) is an example of a political and socio-economic **macro-region** that unites parts of the former historical European regions, which have developed around the various seas (e.g. the Baltic Sea, the North Sea and the Mediterranean) and river systems. **Mezo-regions** are established in the form of trans-national co-operation about separate socio-economic development issues. The North Sea Region (NSR) has been presented as an example of such a mezo-region (Gerner, 1990). **Micro-regions** are areas of a more limited geographical extension and characterised by a common

¹ SSS = Short Sea Shipping

history, language and culture, although separated by new nation-state borders established in the 19th century or following the first and second World Wars.

It has been suggested (Veggeland, 1992) to apply the following criteria or aspects in order to analyse the geographical extension and functions of a particular region:

- cultural/identity criteria;
- administrative and political criteria;
- functional criteria.

The NSR is not fulfilling the administrative and political criteria, except for the loose definition of the NSR in the 'ESDP' and 'NorVision' documents (these two documents are presented in Part 2 of this paper) and in the Interreg IIIB North Sea Programme. As an example, Norway has a central location and plays a key role in the NSR but it is not an EU member state. Functional relations exist within the NSR but they are generally weak e.g. in comparison with the Baltic Sea Region (BSR). The BSR has got more potentials for developing strong functional relations. Distances across the Baltic Sea are shorter, and following the EU enlargement it is surrounded by EU Member States only except for the Russian Federation.

Thus a particular challenge to the SUTRANET project was to identify the realistic potentials for increased regional interactions in the NSR, and how these interactions can be stimulated by improved and sustainable transport networks. This implied a need for SUTRANET to identify some specific sub-areas within the NSR to be analysed with a view to regional development perspectives, and with a particular focus on transport routes/corridors and port development.

Part 2

This part of the paper provides a short overview of the key documents behind the Interreg IIIB North Sea Programme with a view to the SUTRANET project, i.e. the 'European Spatial Development Perspective' and 'NorVision' documents. This overview is followed by a discussion of the 'functional regions' concept and a presentation of the study areas within the North Sea Region (NSR) that are of particular relevance to SUTRANET.

2.1 The European Spatial Development Perspective (ESDP)

The European Spatial Development Perspective (ESDP) with the sub-title 'Towards Balanced and Sustainable Development of the Territory of the European Union' was agreed in May 1999 by the Informal Council of Ministers responsible for Spatial Planning. The ESDP is not a legally binding document but it constitutes a policy framework for better co-operation on sector policies with significant spatial impact.

The ESDP reflects an agreement among the Member States of the European Union (EU) on common objectives and concepts for the future development of the territory of the EU. It states that the aim of spatial development policies is to work towards a balanced and sustainable development of this territory. The Council of Ministers meeting leading to the ESDP concluded that three fundamental goals are important to be achieved equally in all the regions of the EU:

- economic and social cohesion;
- conservation and management of natural resources and the cultural heritage;
- more balanced competitiveness of the European territory.

The SUTRANET project has addressed the regionally balanced competitiveness goal, whereas the goal of contributing to economic and social cohesion and the goal of conserving and managing the natural resources and cultural heritage is only indirectly related to the SUTRANET research and development activities.

The Informal Council of Ministers meeting also concluded that *"The ESDP is a suitable framework for the sectoral policies of the Community and the Member States that have spatial impacts, as well as for regional and local authorities, aimed as it is at achieving a balanced and sustainable development of the European territory"*. The meeting further added that the ESDP is a suitable reference document for encouraging co-operation on regional development across national boundaries.

The ESDP points out that the growing importance of local and regional communities and their role in spatial development are among the factors influencing long-term spatial development trends in the EU.

With the aim to bring forward the influence of Community policies on the EU territory, the ESDP presents and discusses the most important Treaty headings. These provide the European Commission (EC) with a basis for policy measures aiming at spatial development impact in the EU.

The Trans-European Transport Network

Among the Treaty headings are the Trans-European Networks (TENs) in the areas of transport, telecommunications and energy supply infrastructure. The aim of the TEN measures is to integrate national networks and improve access to the networks, *“particularly by connecting insular, landlocked and peripheral areas to the central areas”*.

It was noted that measures for the Trans-European Transport Network (TEN-T) absorb more than 80% of the total TEN budget been allocated so far. The ESDP flags the need to improve the possibilities for a shift from road traffic to more environmental-friendly transport modes in local transport, and that a multitude of different initiatives are also required in long-distance traffic, in particular by increasing the shift to rail, inland waterways and coastal and maritime transport.

The 14 priority projects of the TEN-T that are presented in the ESDP (i.e. the so-called ‘Essen list’) reflect a particular focus on high-speed railway lines to release sections with a high volume of long-distance road traffic. Among the priority projects affecting the transport systems around the NSR are:

- The Øresund fixed rail/road link between Copenhagen and Malmö in southern Sweden (No. 11).
- The Nordic Triangle Multimodal Corridor (No. 12). The triangle links consist of both a railway and motorway link. Two of the links in the triangle connect the Øresund Region (Copenhagen/Malmö) with Oslo via Gothenburg and with Stockholm, and the third link connects Oslo and Stockholm.
- The West Coast Main Line (No. 14), which consists of a railway line from the Channel Tunnel and London via Birmingham and Manchester to Edinburgh/Forth.
- The Betuwe Line (No. 5), which is a conventional rail/combined transport link connecting Brussels, Rotterdam, Arnhem/Emmerich and Amsterdam.

In 2001, the Commission added a few additional priority projects to the Essen list. Among these are:

- The Fehmarn Belt fixed link between Denmark and Germany (No. 20). This project consists of both a motorway and railway link.

The Øresund fixed link was completed and opened for traffic in July 2000. The other TEN-T projects are ongoing except for the Fehmarn Belt fixed link that is still (mid-2007) in the planning stage.

In 2003/04 the concept of ‘motorways of the sea’ was added to the priority list of projects for the TEN-T.

Transport Policy Options

The ESDP presents a set of spatial development guidelines for the EU territory and a range of related policy options. Among the policy options of relevance for the development of sustainable transport systems in the NSR are:

- *Strengthening secondary transport networks and their links with TENs, including development of efficient regional transport systems.*
- *Promotion of spatially more balanced access to intercontinental transport of the EU by an adequate distribution of seaports and airports (global gateways), an increase of their service level and the improvement of links with their hinterland.*
- *Improvement of transport links of peripheral and ultra-peripheral regions, both within the EU and with neighbouring third countries, taking into account air transport and the further development of corresponding infrastructure facilities.*
- *Improvement of co-operation between transport policies at EU, national and regional level.*
- *Better coordination of spatial development policy and land use planning with transport and telecommunications planning.*
- *Promoting the interconnection of inter-modal junctions for freight transport, in particular for transport in the European corridors, especially regarding shipping and inland navigation.*

Several of the spatial development guidelines presented in the ESDP and particularly the policy options listed above are closely related with the objectives and work packages of the SUTRANET project.

Application of the ESDP Concept and Principles

Among the examples of possible policy options to achieve a sustainable spatial development, the ESDP mentions:

- better accessibility of peripheral regions;
- development of Euro corridors;
- strengthening of the regions at the borders of EU, particularly concerning multimodal infrastructure and intercontinental accessibility.

The ESDP also confirms the intention to “*continue the project-oriented transnational co-operation for spatial development within the framework of the Community initiative INTERREG III and create the appropriate basic conditions for this*”.

The ESDP presents the main structure of the Interreg IIC North Sea Programme, i.e. the programme preceding Interreg IIIB. Compared with the Interreg IIC, the eligible NSR area of the Interreg IIIB North Sea Programme has been widened (see Part 1 of this paper). The Interreg IVB North Sea Programme, which has been launched in 2007, implies an additional extension of the eligible NSR area with Kent in south England and the whole of Norway.

EU Enlargement and Spatial Visions

The EU enlargement has a tremendous influence particularly on the spatial perspectives of the Baltic Sea Region (BSR), and the ESDP presents an example of a 'Vision and Strategies around the Baltic Sea Region 2010'.

The EU enlargement is likely to have less influence on the NSR (see the presentation of the 'NorVision' report below). On the contrary the enlargement has brought the NSR more into the periphery of EU spatial policy focus. Furthermore, Norway is not an EU member state although it is a key national player in the NSR, and this makes policy implementation and regulative harmonisation less straightforward. These preconditions have constituted a challenge to the SUTRANET intentions of stimulating regional interactions across national borders within the NSR.

2.2 The 'NorVision' Document

The report with the title 'NorVision – A spatial Perspective for the North Sea Region' is a follow-up on the ESDP. It was prepared by a consultant for a 'Vision Working Group' consisting of members from the national and local governments of the participating countries. The report was issued in 2000/01 (undated). The aim was to present a spatial vision basis for continuation of the NSR programme projects under Interreg IIIB. The NorVision report is considered a key advisory document only and is no part of the statutory planning system.

The NorVision document was prepared according to the NSR boundaries as defined in the Interreg IIC. As mentioned above, compared with Interreg IIC, the eligible area of the Interreg IIIB North Sea Programme has been widened. It has added northern Belgium (the Flemish Region), the southern part of the Netherlands, more Länders in northern Germany, the whole of eastern Denmark, and parts of southern Sweden. This implies a geographical overlap within the Interreg IIIB programmes between the NSR programme and the BSR Programme, because the whole of Denmark, Norway and Sweden, are included in the eligible area for the BSR programme. There is also a geographical overlap with the North-Western Metropolitan Area (the Interreg IIIB North West Europe Programme) as regards Belgium, the Netherlands and UK/Scotland, and with the Interreg IIIB Northern Periphery Programme as regards parts of Sweden and northern Scotland including the Orkney Islands and Shetland Islands.

Definition of Policy and Visions

The NorVision report defines spatial development policy “...as the generic term for targeted interventions into spatial structures (i.e. into the distribution of activities in space and linkages between them). The purpose of such interventions is to achieve ‘spatial quality’.”

Visions are described as “...the foundations on which to build strategies and, further on, recommended actions... Visions specify the attributes of spatial quality. They provide a qualitative scale along which to assess the needs for, and the progress made through spatial policies.... They describe a set of characteristics which, though maybe never fully achieved, indicate the wanted change in direction.”

Vision Statements

The NorVision report presents ten (10) vision statements. Four of these statements address the NSR as a whole, and three statements are dedicated urban regions and rural areas respectively. The visions are then translated into spatial development strategies that provide the framework for recommended actions.

Vision Statements 1 and 2 for the NSR as a whole are of particular relevance to SUTRANET and presented as follows:

- *A NSR well integrated into the development of the European Space and into the World economy (Vision Statement 1).*
- *A NSR with a balanced spatial structure (Vision Statement 2).*

Two of the main aims related to Vision Statement 1 are particularly focused at the NSR transport systems i.e.:

- *High-quality transport infrastructure and services link the NSR with other regions.*
- *Effective internal transport links with focus on sustainability within the NSR ensure that all parts of the region share the benefits from external integration.*

The following aims of the Vision Statements 1 and 2 relate to the regional development in the NSR in general:

- *Co-operation across regions and countries enhances the effectiveness of spatial development.*
- *Cross-sector coordination at all levels helps to make sector policies instrumental (in addition to sector objectives) for spatial policies.*
- *Large single or multi-sector projects are located and designed so as to support wider spatial development objectives.*

The following aim within Vision statement 4 (*'The NSR, which takes care of its Natural Resources and Ecological Equilibrium and its Cultural Heritage'*) is of relevance to the environmental sustainability aspects of SUTRANET as well:

- *Spatial policy tools contribute to the protection of the North Sea ecology.*

Key Themes for Sustainable Development

The NorVision document suggests nine (9) 'key themes for sustainable development' in order to link the vision statements to potential strategies. Among these the following themes are directly related to the SUTRANET project aim and objectives:

- *Differentiated development of peripheral regions (Key Theme 3).*
- *Promotion of sustainable mobility (Key Theme 4).*
- *Regional transport infrastructure development embedded into regional development promotion (Key Theme 5).*

In relation to Key Theme 3, the NorVision document flags that *"Peripherality situations of various kinds exist in the NSR which do not easily fit into the EU-wide concept.... Development approaches must be differentiated according to specific regional potentials"*.

In the presentation of Key Theme 4, it is pointed out that *"more integration is needed with local and regional spatial development... In spite of the proclaimed intention of national governments and of the EU to promote short-sea shipping as a substitute to other, less environment-friendly, modes of (particular: freight) transport, little progress has been made, and concepts are not clearly defined"*. An integrated approach is required which:

- *brings together representatives from relevant port cities around the NSR in their promotion activities,*
- *develops a coherent view of the required infrastructure improvements in ports as well as in their hinterland,*
- *considers the demands from integrated logistics involving multimodal transport chains, distribution and inter-modal exchange centres,*
- *combines the interests of port cities with those of the private transport sector (sea and land)."*

Key Theme 5 points out that improvements are required *"to link NSR networks with trans-European networks, and to support NSR ports in their role as short-sea shipping hubs"*.

The objectives and spatial development focus of the SUTRANET project are clearly addressing the three Key Themes for sustainable development mentioned above. The approach and activities of SUTRANET are presented in the North Sea Programme project book:

SUTRANET is founded on the co-operation and expertise of specialists and researchers selected from six countries. Working together, they will gather information in four key areas – overall framework conditions and strategies; the motorways of the North Sea; transport and logistics centres; and finally, training programme development. The aim is to create dynamic linkages between organisations so that a range of experiences and skills can be exploited. The initiative's objectives include: initiating a region-wide trade and transport information system; improving ferry services and short-sea shipping; developing the North Sea Motorway concept; designing more efficient and sustainable transport infrastructure; encouraging the development of methods for assessing the environmental impact of vessel traffic; and finally defining a training approach to improve the skills and qualifications of staff directing inter-modal transport. The geographical scope and wide-ranging expertise of the participants is expected to ensure a comprehensive and effective insight into the North Sea transport networks.

It should be noted that the general intention of SUTRANET to improve the knowledge-basis for decision-making within the transport sector is also related with Key Theme 7: *Integrated Management of the North Sea*.

A Challenge to Harmonise the Statistics

The NorVision document mentions with reference to the ESDP document “*a general deficiency as regards harmonised information to identify and to evaluate existing spatial structures, past and even future trends.... This applies particularly to the non-EU area of Norway which is frequently not included in analytical documents or data bases of the EU.*”

It is also a challenge that the NUTS² statistical zoning system of Eurostat (the Statistical Office of the European Communities) is not consistent in comparison between the geographical extensions of the administrative boundaries of the local governments in the different countries around the North Sea. As an example, the territory of Denmark constitutes - as a nation state - one NUTS 0 zone; it is not further divided into NUTS 1 and NUTS 2 zones, and each Danish county constitutes a NUTS 3 zone³. The north-western part of Germany that is included in the NSR eligible area is of a similar geographical extension as Denmark; however, it consists of seven NUTS 1 level zones (each Länder is a NUTS 1 zone) each divided into several NUTS 2 zones. Norway is not included in the Eurostat at all.

² Eurostat operates with a standardised zoning system in the form of a geocode standard, i.e. the ‘NUTS’ zoning, which is a hierarchical classification system. In most cases the NUTS zones are delimited by the existing administrative boundaries applied for each country. The NUTS system is specified for three levels of territorial aggregation (NUTS 1 to NUTS 3) and two levels of local administrative units (traditionally called NUTS 4 and 5). The NUTS 0 level zone is defined as the territory of the nation state.

³ As from January 2007, the new administrative structure in Denmark implies a division into five counties (‘regions’) only, replacing the present 14 counties. This requires a reshuffling of the NUTS zone coverage of Denmark.

Updating of NorVision

The 'NorVision' document has been updated during 2005-06 by studies initiated by the Interreg IIIB North Sea Programme. The stated aim of this updating was not to 'rework' NorVision but to provide input for continued co-operation in the NSR within the framework of 'a new spatial agenda for the North Sea Region'. A more specific purpose of the updating was to provide inputs to the formulation of the Interreg IVB North Sea programme 2007-2013.

The updating of NorVision has been done through five studies focused on a number of selected spatial vision themes. Among these themes are 'Transport and Accessibility'. The study ('Study 2') on this theme was carried out by a consultancy group and has resulted in the final report 'Transport and Accessibility – Towards a New Spatial Agenda for the North Sea Region' (February 2006).

A preliminary report on 'Study 2 – Transport and Accessibility' was presented in June 2005. It suggested a categorisation into three Main Themes:

- A: *A competitive North Sea Region with efficient transport systems responding to changing market conditions.*
- B: *A transport system that respects environmental and other risk concerns.*
- C: *A transport system supporting regional development, integration and equal regional chances.*

Each of these main themes is divided into sub-themes (A.1-2; B.1-4; C.1-4). This categorisation differs from the categorisation that was presented in the original NorVision document. As an example, Sub-theme C.4 ("*Integrate infrastructure with regional development and spatial planning*") is identical to 'Key Theme 5' in the NorVision document. For each of the sub-themes, the preliminary report finally presented a 'long list' of trends and implications/challenges to be considered for the Interreg North Sea programme 2007-2012.

The Final Report on 'Transport and Accessibility' advise the following "*Main fields of actions that should consequently be addressed in a new INTERREG programme*":

- A. *The development of efficient transport systems in view of changing market conditions.*
- B. *Reduction of environmental impacts and other risks related to transport activity.*
- C. *Supporting regional development, integration and equal regional chances via accessibility works and services.*

The report lists 10 activities within the three main fields of actions. Among these the following activities have been addressed by the SUTRANET project to various degrees:

- A.1 *The creation of integrated and lean freight transport systems.*
- B.1 *Modal shifts to more environment-friendly transport modes.*
- B.2 *Reduction of environmental impacts and risks associated with transport.*
- B.3 *Establishment of common level playing field conditions, in order to allocate transport activity to the optimal (combination of) mode(s).*

C.2 Further integration of peripheral regions into overarching transport and geo-economical development schemes.

C.4 An integrated perspective on conceiving Transport & Accessibility infrastructure and services, regional development and spatial planning.

The report advises that hinterland connections are essential for the integration of short sea shipping in the logistical chain, and for the realisation of the land-sea corridors.

The report also recommends that complementarities and synergies should be pursued between the Interreg IVB North Sea Programme and Community programmes and initiatives like Marco Polo, TEN-T and Motorways of the Sea, and considering private sector involvement.

The report finally presents a preliminary list of potential project issues.

2.3 Functional Regions and SUTRANET Study Areas within the North Sea Region

The spatial vision of the SUTRANET project can be described as follows (this is a modification introduced during implementation of the description presented in the SUTRANET Project Application):

The project adheres to the principles formulated in the ESDP and NorVision documents. The scope includes both east-west and north-south transport across the North Sea. The focus of analysis has included: 1) Motorways of the North Sea; 2) the multimodal and intermodal transport corridor between north-western Europe and Norway; 3) the maritime corridor between western Norway and Scotland/UK; and 4) deep-sea container port development.

There has been good reason trying to focus on more specific parts of the NSR eligible area. This was based on the pragmatic view of the location of the SUTRANET partners, on some functional criteria for regional interactions and development, and considering the limited project budget resources.

Functional Regions

A region is 'functional' if there is a significant social and economic interaction between different areas of the region in question. A particular focus in the SUTRANET context has been whether and to which extent functionality exists across national boundaries in the NSR. Indicators of social interaction could be in the form of telecommunication 'traffic', e.g. number of daily telephone calls, SMS and email messages, and postal letters across the boundary. As an example there is much more intense communication traffic between Scania in Southern Sweden and the Stockholm area than there is between Scania and the adjacent metropolitan area of Copenhagen in Denmark. This indicates a significantly higher degree of functionality within Sweden despite of long geographical distances than within the Öresund Region. Closer social and economic functionality could develop over time within the Öresund Region if a common labour market is being established, reflected by increased commuter traffic across the Öresund. However, the development of a common labour market is not a realistic option for potential cross-border regions in the NSR.

Another indicator of economic functionality is the extent of commercial networks between companies and commercial units across the national boundaries within a functional region. A commercial merger between similar companies in two different countries is an example of the development of functional relations and labour division. This could also affect the trade pattern between the two countries, e.g. in the case of the large dairy products company 'ARLA' that was created as a merger between the major dairy company in Denmark and Sweden.

The quantity and value of trade exchange between areas within a cross-border region reflect the degree of economic functionality in terms of commercial networks and labour division. The passenger flows between two areas of the functional region is an indicator that could reflect both social and economic interactions. However, this indicator depends on the type of travel. As an example the number of one-day shopping trips between two countries (e.g. between Sweden and Denmark) due to differences in price levels and tax structure (e.g. VAT), or due to a tax-free shopping opportunity (e.g. between Norway and Denmark), would represent a weak functional indicator only, at least in the shorter term.

If cross-border co-operation is being established between institutions in the public sector, e.g. within education, research, health and environment, this would enhance functionality such as in the case of the Öresund Region. There are potentials for such enhanced co-operation also between the three Scandinavian countries (Norway, Sweden, Denmark) in the Skagerrak and Kattegat 'triangle' area, although in this case daily cross-border commuting is not a realistic option.

Institutional, legislative and regulatory differences between two or more countries could constitute a greater barrier to functionality than physical barriers. Again the Öresund region is an illustrative example: The fixed railway and motorway link across the Öresund has removed a physical barrier and stimulates travel between Copenhagen and Scania/southern Sweden. However, a significant boost of functionality and development within the Öresund Region requires institutional and regulatory harmonisation as well. Similarly the ferry services connecting southern Norway, western Sweden and northern Jutland could contribute to a lesser but still significant degree of cross-border regional integration, particularly if it is supported by institutional and regulatory harmonisation measures.

SUTRANET Study Areas within the NSR

The maritime area in the NSR of particular SUTRANET focus is delimited by the English Channel to the south and the Norwegian Sea to the north. It includes the seas of Skagerrak and Kattegat. The Baltic Sea is linked with the North Sea through the Kiel Canal, and via Kattegat through the Great Belt and Öresund ('the Sound'). Thus the SUTRANET maritime area is not strictly following the boundaries of the NSR eligible area, but it respects the interfaces and links between the maritime systems of the Baltic Sea and the North Sea.

Common for the following SUTRANET study areas or sub-regions (see Figure 2) are that they include significant elements of the overall transport network in the NSR:

- Western Norway and Scotland.
- Jutland, south-western Norway and parts of western Sweden.
- The northern seaboard of the Netherlands and north-western Germany.

The SUTRANET project includes a case description involving a transport corridor encompassing the two latter study areas.



Figure 2: Optional transport study areas in the North Sea Region

In addition to these geographically delimited study areas, the Motorways of the North Sea concept and databases covering unitised goods flows via ports in the whole NSR have been focal topics of the SUTRANET project (see Figure 3).

Through history several cultural and functional links have existed across the North Sea, such as between Scotland and western Norway, and across Skagerrak between Jutland and Southern Norway.

Northern Jutland together with southern Norway fulfils the characteristics of a potential micro-region. Although the two areas have been separated since 1814 by a nation-state border, close socio-economic ties have since been sustained both in the form of trade, cultural links and mutual migration between the two areas depending on the shifting employment opportunities. Southern Norway and Jutland are presently connected by a number of ferry

routes within the Nordic Link transport corridor. This study area has also to consider the links across the Kattegat with western Sweden where the largest seaport in the area, the Port of Gothenburg, is located.

The relations between western Norway and Scotland including the Shetland Islands and Orkney Islands are historically based as well. They are reflected by economic co-operation and trade relations within fisheries and most recently within the offshore oil industry. The two areas are currently served by several ferry and short sea shipping routes.

The northern seaboard or coastal area constituted by the Netherlands and north-western Germany performs a key function in the North Sea area with respect to being the transport and regional interface between the NSR and continental Europe. Furthermore, this area includes several important deep-sea container ports, which serve as links between the NSR and the European continent and provide the NSR with intercontinental connections.

The study areas are linked together by several overland transport routes, including sections of the TEN-T, such as the Nordic Triangle Multimodal Corridor passing through western Sweden and the West Coast Main Line passing through UK (see Section 2.1 of this paper). The 'Nordic Link' transport corridor passes from Hamburg and Schleswig-Holsten through Jutland. However, the Nordic Link is not defined as part of the TEN-T, and the conventional railway services in this corridor are currently weak as regards infrastructure, institutional and commercial organisation.

The improvement of short sea shipping (SSS) routes across the North Sea, including hinterland connections, provides a promising potential for strengthening the internal NSR transport networks and mobility as well as for improving the accessibility to external networks.

Motorways of the North Sea

One important aspect that was dealt with by the SUTRANET project is the development of the Motorways of the North Sea concept. The routing of the Motorways of the North Sea is illustrated in principle only in Figure 3.



Figure 3: Principal routing of the North Sea Motorway

The figure mainly reflects the transit routing. The practical implementation of Motorways of the North Sea will involve a variety of potential routes and ports in the NSR.

The Motorways of the North Sea are to serve transit maritime traffic flows passing through the North Sea as well as intra-NSR maritime traffic. A particular question is how to link this routing with the NSR transport networks and with key ports in the NSR, in order to provide synergies in terms of logistics, environmental concerns and maritime safety.

Conclusive Remark

This paper has been acting as a framework and guidelines for linking the SUTRANET objectives, Work Package activities and performance indicators with the overall aim and strategies as presented in the ESDP and NorVision documents. The case studies carried out within the SUTRANET project refers to the presented study areas.

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