

Synthesis Report

**Towards a New Spatial Agenda for the
North Sea Region**



European Union



The European Regional Development Fund

The Synthesis report and studies on which it is based were commissioned by the North Sea Region (NSR) INTERREG IIIB Programme.

The Report was prepared by:
Christabel Myers *text*
Martijn Smit *graphics*

It is based on studies, and associated consultations, as follows:

Coastal Water Management

Resource Analysis, IMDC, PLANCO, ATKINS, INREGIA

Authors: Elke Claus, Holger Platz, Michael Viehhauser, Jon McCue, Koen Trouw, Barbara De Kezel

Transport and Accessibility

Resource Analysis, TetraPlan, SKM, PLANCO

Author: Bart Kamp

Facilitating Innovation & the Transfer of Knowledge and Technology

Inno, Agderforskning (Agder Research)

Authors: Nils Gabriëlsson, Peter Heydebreck, Olov Domeji

Energy

COWI Group, University of the West of England (UWE)

Authors: Jacob Dybdal Christensen, Henrick Duer, Soren Adamsen (COWI) with contributions from Prof Angela Hull, Dr Stephanie Dühr, Vladimir Pruidze (UWE)

Demographic Change

UWE, COWI Group

Authors: Stephanie Dühr, Vincent Nadin (UWE) with contributions from Jakob Dybdal Christensen, Peter G Madsen, (COWI)

The preparation of the Studies and Synthesis report was guided by the NSR Spatial Agenda Working Group, comprising representatives from countries and regions participating in the INTERREG IIIB NSR Programme. Members of the Working Group are listed in Annex 3, page 33.

Disclaimer

The text of the Synthesis Report summarises the results of studies conducted in 2005 on a future spatial agenda for the North Sea Region. The content of both has been prepared by experts and does not necessarily reflect the opinion of the North Sea Programme or Spatial Agenda Working Group.

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SUMMARY

The Synthesis Report is an advisory document intended to help inform those considering future cooperation activities in the North Sea Region (NSR).

The seven countries around the North Sea are currently working together in the EU funded INTERREG IIIB NSR Programme to solve shared problems related to spatial development. These include protecting the environment, improving transport, encouraging innovation, developing more competitive cities and towns, creating new opportunities for rural areas and dealing with the risks of natural disasters. A new European funded cooperation programme for this area is expected to operate from 2007 to 2013.

Selection of activities to be funded under the INTERREG IIIB NSR Programme was assisted by the NorVision document which provided a policy framework for sustainable development of the Region over twenty years to 2020. Whilst NorVision is still relevant, the seven countries launched a process in 2004 to help compile a more focused spatial agenda of issues which might form the basis of future transnational cooperation projects to 2010, the first few years of the likely new cooperation programme.

Under this spatial agenda process, five topics were chosen as being relevant to achieving key EU competitiveness and sustainable development policies and where urgent transnational, integrated, cross sectoral and sustainable action was needed in the short term. They included: Coastal Water Management; Transport and Accessibility; Facilitating Innovation and the transfer of Knowledge and Technology; Energy; and Demographic Change. Each was the subject of a study

carried out by experts who reviewed literature, held workshops and conducted interviews with stakeholders, including those involved in relevant INTERREG IIIB projects. The Synthesis Report summarises the results of the five studies.

All of the studies identified a number of key spatial challenges for the NSR to 2010. To tackle these challenges transnationally, the studies emphasised the need to engage all interested stakeholders including those located in the NSR at different geographic levels and sectors, currently participating in existing INTERREG IIIB projects, and those located outside the NSR.

Possible themes and studies, and related transnational projects, which might be supported in a future funding programme include:

- Four dedicated themes on coastal waters management, transport, innovation and energy.
- The topics of innovation and demographic change to form two cross cutting dimensions to dedicated themes; and
- Studies on demographic change to support the programme

The results of the spatial agenda process, although not intending to provide a comprehensive picture, give valuable guidance for future transnational cooperation on key spatial challenges. Further development of the spatial agenda for the NSR will be taken forward as part of a separate process to develop the new NSR cooperation programme. When completed the new programme will sit alongside the NorVision to guide future cooperation activities.

SUMMARY

INTRODUCTION

1.1 The North Sea Region IIIB Programme

The seven countries around the North Sea are working together in the EU funded INTERREG IIIB North Sea (NSR) Programme to solve shared problems related to spatial development. Project partnerships use EU money to work with problems such as protecting the environment, improving transport, encouraging innovation, developing more competitive cities and towns, creating new opportunities for rural areas and dealing with the risk of natural disasters.

The NSR Programme strategy is founded on four basic principles: supporting transnational action between local, regional and national actors in different countries working together to solve joint problems; on spatial development issues concerned with where development happens; through cross sectoral action, involving the relevant sectors at different levels (local, regional and national); and pursuing sustainable action aimed at integrating economic, social and environmental concerns.

Funds in the current programme can be distributed until the end of 2006. A new European funded co-operation programme based on a similar geographic area to the IIIB programme is expected to operate from 2007 to 2013.

The area covered by the North Sea region and its position in North West Europe are shown in Maps 1.1 and 1.2. Its current area is slightly larger than that covered by the forerunner to the previous programme and to the area considered by the NorVision described below. The Synthesis Report considers the NSR based on the boundaries of the INTERREG IIIB NSR Programme.

1.2 The NorVision - A Long Term Spatial Vision for the North Sea

Between 1998 and 2000, a spatial vision for the North Sea Region was developed, based on the principles of the European Spatial Development Perspective. NorVision, as it was called, provided a policy framework for sustainable spatial development of the Region over 20 years to 2020. It identified a number of threats and opportunities related to spatial development over the period, and strategies and actions to minimise the threats and make the most of the opportunities.

NorVision also aimed to assist transnational working between countries, regions and local authorities across the Region. At the time of publication it aimed in particular to help the preparation of projects applying for European funding from the INTERREG IIIB NSR Programme. Projects that have been developed under the IIIB NSR Programme have put into action many activities identified in NorVision.

1.3 The Spatial Agenda - Assisting Shorter Term Cooperation

The policy framework for spatial development set out in NorVision continues to be relevant. However, in mid 2004 the Programme Monitoring Committee with responsibility for the operation of the INTERREG IIIB North Sea Programme decided that complementary work should be undertaken.

The aim was to compile a more focused spatial agenda of issues which might form the basis of future co-operation projects to 2010, the first few years of the likely new NSR co-operation programme.



map 1.1: the North Sea Region
Source: Interreg North Sea Region Programme

INTRODUCTION



It was not intended to update the NorVision but to examine issues which have become more urgent or important in recent years or which were not thoroughly addressed in NorVision. The results of this work, which is summarised in the Synthesis Report, will sit alongside and complement the NorVision.

A Working Group (the Spatial Agenda Working Group) consisting of one national and one regional representative per country was set up to oversee the spatial agenda procedure. It selected five topics, each to be the subject of a study.

Each one was chosen on the basis of the following criteria:

- It was relevant to achieving the competitiveness and sustainable development policies set out in the EU Lisbon and Gothenburg agendas;
- There was an urgent need to address the issue in the short term;
- Real progress was only possible through a joint approach within the NSR; and
- The issue would benefit from an integrated, cross sectoral and spatial approach.



map 1.2: the North Sea Region in context
Source: Official European Commission maps of the Interreg III B regions

The five studies chosen are as follows:

- Coastal Water Management
- Transport and Accessibility
- Facilitating innovation and the transfer of knowledge and technology
- Energy
- Demographic change

The relationship between themes identified in the NorVision, those which are the subject of funding under the IIIB North Sea Programme and topics chosen for study in the Update process is shown in Diagram 3.2. This also shows some other topics which were not chosen for study in the Update process but which were highlighted in the NorVision and IIIB programme. These topics are: Urban, Rural and Peripheral areas; Heritage; and Freshwater Management. The working group decided that these should be considered where relevant in the five studies.

The spatial agenda process is shown in Diagram 1.3. Experts conducting each study reviewed literature, including relevant reports conducted by the ESPON EU funded research programme; held workshops and interviews with individual stakeholders across the NSR, including at the North Sea Annual Conference. Contact was also made with relevant NSR IIIB projects. The Energy and Demographic Change studies were smaller than the other three because, due to funding constraints overall, less

priority and funds were accorded them. The Demographic Change study updated some demographic statistics for the NSR.

Each of the Update studies was asked to answer some key questions. Whilst the two smaller studies were subject to the same questions they did not go into the answers in as much depth as in the three larger studies. The key questions, tailored to match the particular nature of the topic, were as follows:

- What are the main future spatial challenges for the NSR to 2010?
- Which Stakeholders should be involved in transnational co-operation to help meet those challenges and are there any constraints to their participation?
- What activities should be undertaken on a transnational basis and in what form should future funding be provided – as a dedicated funding stream or in some other way?

The Final Reports of each study will provide strategic input into the new programming period but it is not intended that these topics will necessarily form the basis of the new NSR programme, which will be prepared under a separate process. Other themes, e.g. climate change, will also be considered in this process.

Section 2 of the Synthesis Report summarises the results of each study. It also considers linkages to other topics referred to above.

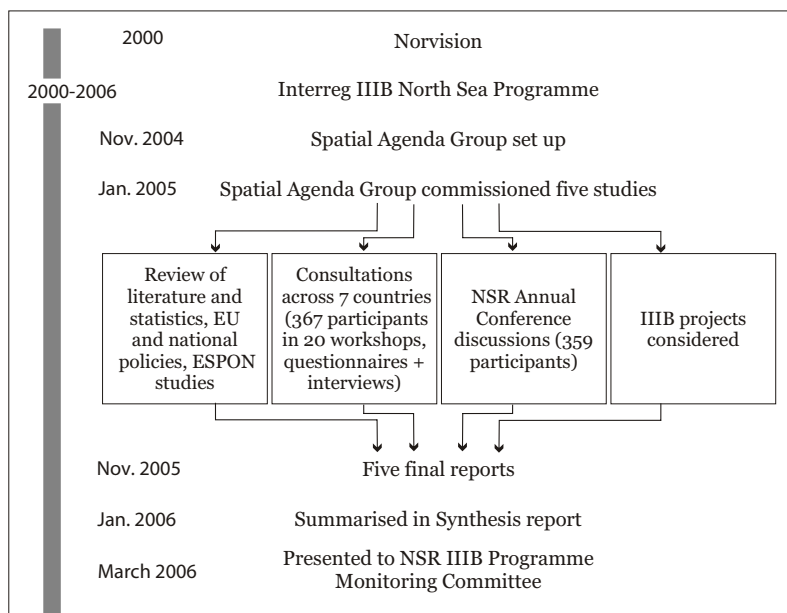


Diagram 1.3: spatial agenda process
Source: Interreg North Sea Region Programme

INTRODUCTION

RESULTS OF THE FIVE UPDATE STUDIES

2.1 Coastal Water Management

NorVision dedicated two of its nine action themes to sea and coastal issues: Integrated Management of the Seas and Integrated Coastal Zone Management (ICZM). The aim of the latter was to achieve sustainable development balancing economic, social and environmental concerns and to address both land and sea use issues in coastal zones. Tackling coastal issues has also received prominence in the INTERREG IIIB NSR programme, under the theme on Management of Rivers and Coasts.

Coastal areas constitute one of the greatest economic, social and environmental assets of the North Sea Region. They generate high levels of economic activity such as trade and tourism and they are densely populated compared to other parts of the North Sea Region. Coastal lagoons, tidal inlets, salt marshes, coastal archipelagos, fjords and estuaries are important for food production and safeguarding biodiversity. They also play a vital role in protecting the hinterland from flooding.

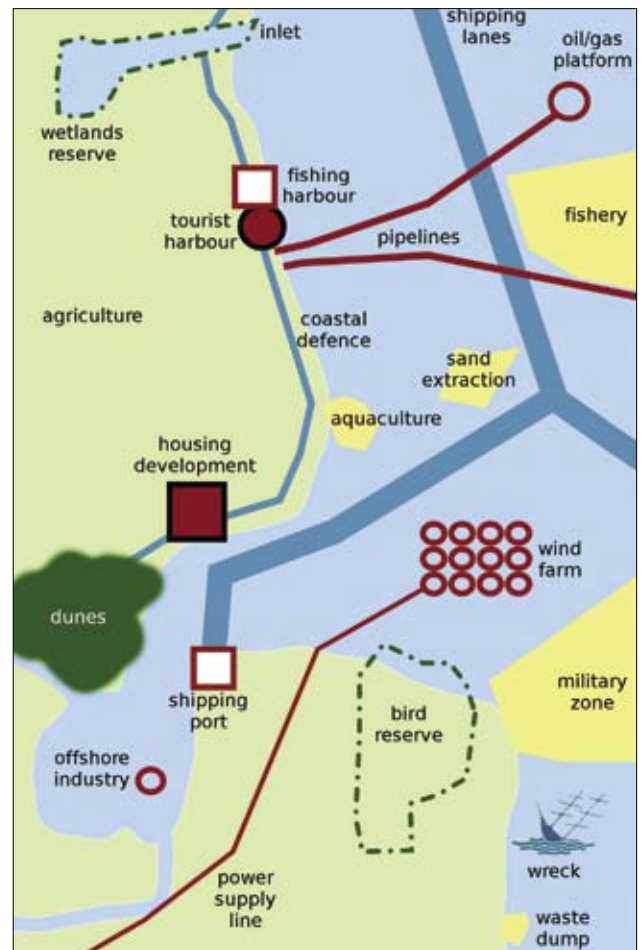
Coastal areas are also the subject of often intense pressure from conflicting uses of land and sea. Diagram 2.1 illustrates this. Human activity puts pressure on them and increases the risk of changing and destroying their habitats and economic and environmental resource base. Whilst policies and activities to address use conflicts have focused largely on the land side of coastal zones, there are often conflicting interests in the use of coastal waters. Such conflicts are more likely to arise in heavily used seas such as the North Sea.

Sea uses can also effect land use. A prime example of this is pollution of coastal land caused by shipping accidents in coastal waters. The EU initiative Highways of the Sea is seeking to encourage higher use of sea transport and with the expansion of the EU and favourable economic conditions, shipping levels in the North Sea are increasing. Several major EU policy statements have been issued to help reduce the risk of pollution from marine accidents.

A further issue affecting coastal areas is the impact of climate change. This issue, which has become much more prominent since the production of NorVision, will alter the physical, biological and chemical characteristics of the oceans and coasts at different timescales and locations. Since the NorVision was prepared, measures to help ICZM have been the subject of agreement between EU countries. However, their application has been slow. This has been because the concept is very broad, statutory

planning and other rules and regulations are patchy, there is lack of harmonisation at the EU level, a lack of recognition of the benefits of ICZM amongst stakeholders, a lack of public awareness and involvement of the private sector, and very few bodies specifically focused on addressing ICZM issues in an area.

In addition, most ICZM players concentrate on the land part of coastal zones rather than the sea. Knowledge of issues arising from coastal waters tends to be compartmentalised between sectors and the issues are not always addressed in an integrated way or at a transnational level. There is a need to look at the coast particularly from a sea side perspective, i.e. coastal waters.



map 2.1: Coastal Zone conflicts
Source: Interreg North Sea Region Programme

Currently there is a lack of comprehensive information on existing and future sea use demands and the “open seas” or “national interests are paramount” attitudes still prevail. It is, therefore, hard to assess the potential environmental, economic and safety impacts of future sea uses. There are insufficient transnational consultation procedures and those that exist are not always followed.

Key spatial challenges to 2010 associated with coastal waters are identified as follows:

- Achieving effective integration of Integrated Coastal Zone Management policies and activities with: statutory spatial planning requirements; balancing economic, social and environmental concerns; broader regional and national development strategies; and sea uses.
- Co-ordinating across countries the future use of coastal waters to manage growing and potentially conflicting offshore uses, and to reflect various EU and national sectoral strategies such as Natura2000 and national renewable energy strategies.
- Managing risks arising from natural and man made causes in coastal zones and in open seas to both reduce the occurrence of disasters and secure effective responses to them.
- Producing and making available better information and data on a cross country basis.

Whilst all sectors of society with an interest in coastal waters should be involved in transnational action there is a particular need to secure the interests of some groups who are likely to be otherwise less involved, as follows: local government, politicians at all levels (EU to local); particular private sector industries eg fishing, ports and harbours, sand and gravel extraction, farming, energy, insurance, and drinking water; local residents; visitors and tourists; and the Media.

It will be important to consult with partners in all of the EU states to address international issues such as sea use co-ordination and integration of EU regulations in national plans. Other international stakeholders include world and European organisations such as the World Bank, OPEC, the UN, international NGOs, the European Environmental Bureau; international groupings of national and/or local authority representatives such as the OSPAR Commission, the CPMR, and the North Sea Commission, and other INTERREG programmes with coastal waters in their areas including the Baltic Sea Region, the Northern

Periphery and programmes covering the Channel Waters; and all those exploiting the North Sea waters.

For the next round of transnational co-operation, stakeholder engagement should be sought in particular as follows:

- the greater involvement of national stakeholders. Without them it will be difficult to make progress on legislative change and secure the investment funds and political commitment needed for some actions.
- the development, through projects, of links between a broader range of stakeholders – including citizens, NGOs, academia – with policy makers and the development of consultation techniques and common terminology to achieve more effective communication, dissemination and implementation.
- transnational contacts between stakeholders in the NSR and other co-operation programmes.

There are many issues across the four spatial agenda challenges identified which would benefit from joint transnational action, including: agreeing common approaches to implementation of EU legislation and strategies in the North Sea; co-ordinated risk reduction and response; setting up common standards on data formats, mapping, and collection procedures to allow data exchange and higher level use.

There is also a wish for further exchange of experience on local solutions, for example on the mitigation of particular sorts of coastal erosion. This could be a valuable form of transnational co-operation if it helps address a knowledge deficit on a key issue which is hindering progress across the NSR.

Future Funding Support

It is, therefore, recommended that in a new NSR programme, a funding theme dedicated to Management of Coastal Waters is set up to support such activities. This could be structured in four parts corresponding with the challenges identified: more integrated ICZM, particularly with sea uses; co-ordinating future uses of coastal waters; managing risks; and producing better information and data. Annex 1 gives examples of potential transnational projects which it might fund.

RESULTS OF THE FIVE UPDATE STUDIES



To maximise future use of the Coastal Waters Management theme, the following actions are recommended:

- A survey is undertaken of opportunities for future use of the sea in the NSR to illustrate the benefits of a positive approach to the management of the coastal zone and sea waters.
- Encourage the use of tools and techniques - such as risk assessment, Strategic Environment Assessment and cost benefit and multi variant analysis - to help stakeholders focus on the right issues and bridge technical and policy making views.
- Support projects on common data and mapping standards, including those which link up with EU databases.
- Support projects which help the better integration, rather than implementation, of different EU sector policies and regulations.

2.2 Transport and Accessibility

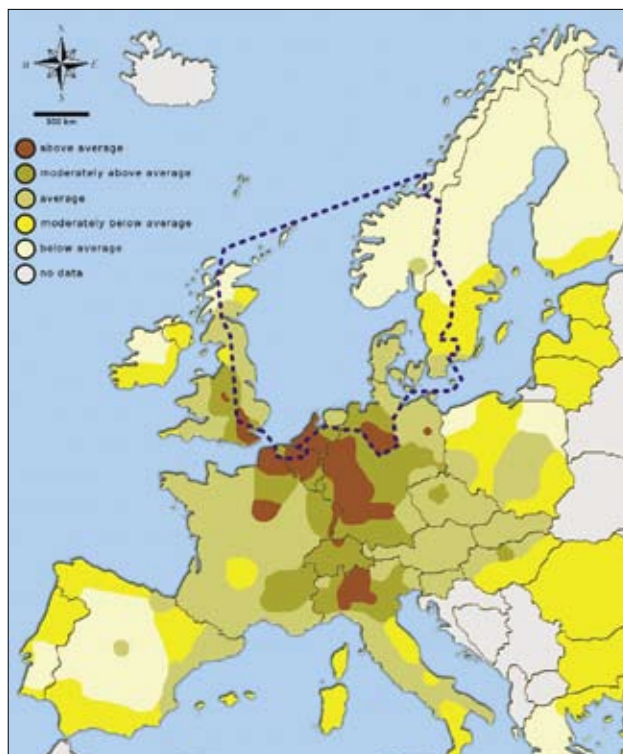
Transport and Accessibility issues feature prominently in NorVision, being the subject of two key action themes: the promotion of sustainable transport and improving transport within the NSR and to other Regions. The Vision notes, in particular, the vital role of short sea shipping and the corresponding role of ports as transport hubs in the NSR. Transport also has a high profile in the INTERREG IIIB NSR programme which has a funding theme dedicated to the topic.

Whilst the NSR is perceived to be relatively peripheral to Europe's core, it has a strong transport system that provides good accessibility to the main economic centres within the region and the rest of the north west of Europe and contributes to the prosperity of the Region. However, accessibility within the NSR varies considerably. Whilst the more southerly parts and larger cities generally have above average accessibility, a few regions such as the far north of Scotland, the north west of Norway and the Varmland in Sweden have relatively poor accessibility (see Map 2.2).

Although the key issues identified in NorVision have not substantially changed, three important factors which have emerged in the last few years call for a somewhat changed focus. Key spatial challenges identified in the transport field to 2010 are as follows:

- i) The need for management of transport growth: this has increased particularly with the enlargement of the European Union. All long term forecasts for transport in the European Union anticipate a very strong growth, in the order of 40%, between 2000 and 2020. This is likely to lead to increased congestion in the high density urbanised areas of the NSR located in or adjacent to the core of Europe (eg Randstad, Flanders, Essex).

In addition, there are a number of emerging economic axes on the perimeters of the NSR to which transport within the NSR needs to be linked in a socially acceptable way. In particular, the growth of countries around the Baltic Sea will generate a substantial demand for freight traffic and enhance their role as a gateway to Russia and Eastern Europe. A large part of the associated traffic growth will go through the NSR, creating opportunities for logistic activities. The introduction of IT techniques has opened up new possibilities of improving transport management. Major shipping routes across the NSR and links to overland trade routes are shown in map 2.3.



map 2.2: general accessibility in Europe
Source: ESPON study 2.4.2 (3rd interim report, 2005)

- ii) Promoting sustainable forms of transport : this has been strengthened by a growing list of treaties and directives including most notably, the Kyoto protocol, the Lisbon and Gothenburg strategies, CO2 emission targets, EU Directives on water and air quality and the International Ship and Port Facility Security Code. There is also growing public concern about environmental health, road saturation and transport accidents, and for control mechanisms to deal with terror attacks and other emergencies. In addition, growing interest in transport cost recovery principles is leading indirectly to increasing support for sustainable transport. This creates the ideal climate to encourage modal shift from road to alternative forms of transport – rail, inland waterways, short sea shipping.
- iii) Fostering geographical cohesion, integration and equality: To underpin economic growth and territorial cohesion and integration along economic axes a stronger transnational transport backbone is required. Currently there are insufficient nodes and missing links in such a structure. In addition, infrastructures in one

country may well be contributing to transport and accessibility needs in another country eg Southeast Norway for the mainland port of Gothenburg. Local port hinterland connections are crucial to maximising the use of sea nodes.

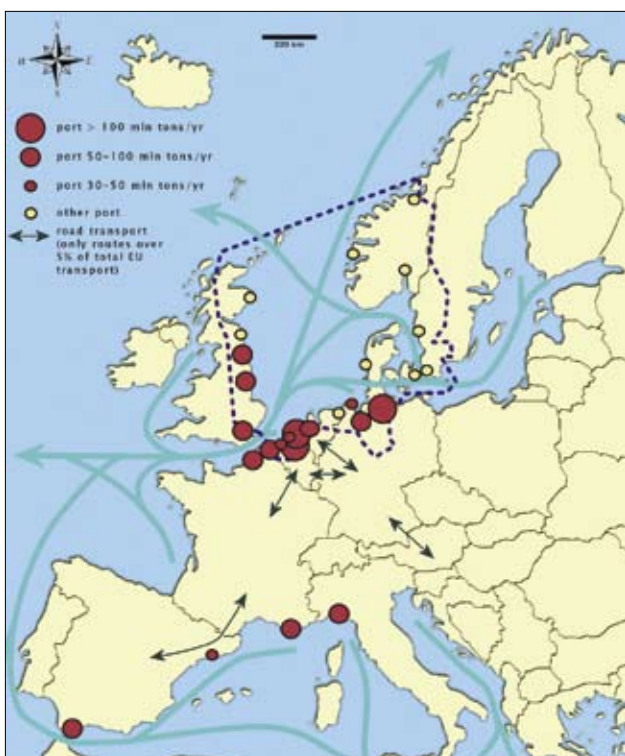
There is also a need to further integrate peripheral parts of the NSR, improve interurban communications, and integrate infrastructure with regional development and spatial planning to foster economic and social growth throughout the Region.

The main players in the INTERREG transnational programme have been regional level local authorities supported by universities and to a certain extent players from the public-private sector (mainly ports). It would be beneficial to involve the national government level more in forthcoming projects.

Fuller involvement of the private sector is problematic given the legal and funding constraints, barring the participation of any profit making, under which EU funded co-operation programmes are generally run. Their involvement can only be secured if there are clear business benefits and little extra work or expenses. It is also increasingly difficult to identify relevant cross country private actors. Non Government Organisations (NGOs) find it difficult to participate due to their generally small size. However, the involvement of both these groups should be sought. The involvement of organisations from the road transport sector is crucial for many projects.

The strong involvement of partners from the BSR is essential to promote the integration of new Member States and respond to associated growing transport volumes. North West Russia and Northern Scandinavia are also important stakeholders in this respect. The involvement of major ports just outside the current NSR boundaries is also important.

stakeholder engagement



map 2.3: shipping in the North Sea Region
 Source: EC presentation on Motorways of the Sea, Eurostat Statistics in focus (10/2005), www.portofrotterdam.com (port turnover data for 2004)

RESULTS OF THE FIVE UPDATE STUDIES



To secure the engagement of key stakeholders the following actions should be taken:

- Apply flexibility to accommodate project partners both in a public-private sense and from outside the NSR.
- Ensure better co-ordination and exchange of information between stakeholders taking part in related projects within the North Sea and other programmes with which parallel projects can be carried out.
- Reduce the administrative burden of taking part in transnational co-operation projects to attract especially national policy organisations, user groups and private actors.

The relevance of international co-operation in the field of transport and accessibility is widely recognised and reflected in planning documents. However, there is still relatively little attention paid to demand management, ways to address potential conflicts between efficiency, environment and equity, the potential side effects of strongly developing regional airports, the functioning of transport services, cost benefit analysis, and improving the environmental performance of what are considered to be more sustainable forms of transport.

Since there is no supra-national authority with binding competence in this area, many of the actions needed can only be achieved through transnational and cross border co-operation. Such co-operation needs to be focused and to involve all the stakeholders involved in particular measures.

Future Funding support

A specific funding theme focused on addressing the spatial challenges identified is recommended for a future co-operation programme. It should reflect the spatial challenges identified: management of transport growth; promoting sustainable forms of transport; and fostering geographical cohesion, integration and equality.

Potential project ideas for the theme are shown in Annex 1. Many of them involve joint action which can only be implemented together transnationally. Others are projects that aim to increase knowledge through exchange of experience and other forms of co-operation.

Some key considerations to make more effective use of the proposed theme include:

- Giving priority to projects dealing with freight, except that for using roads, rather than passenger transport. Freight has generally attracted less attention than passenger transport, particularly in the INTERREG programmes; it is growing faster than passenger transport; it is becoming an increasing threat to the smooth operation of passenger transport; it is causing high external costs for regional development; and it offers many possibilities for transnational action across all of the spatial challenges identified. There is scope for support under a future programme for further High Speed Train links and there is interest in improving air links to more sparsely populated and remote areas in the NSR.
- Seeking multi actor partnerships to secure competitive and integrated chains and networks and practices to relieve hinterland connections around main ports.
- Seeking projects that generate value from a multidisciplinary perspective eg integrating spatial, economic and transport planning.
- Liaising at programme level with other EU funding programmes (eg Marco Polo, TEN-T) to determine mutual complementarity and synergy.

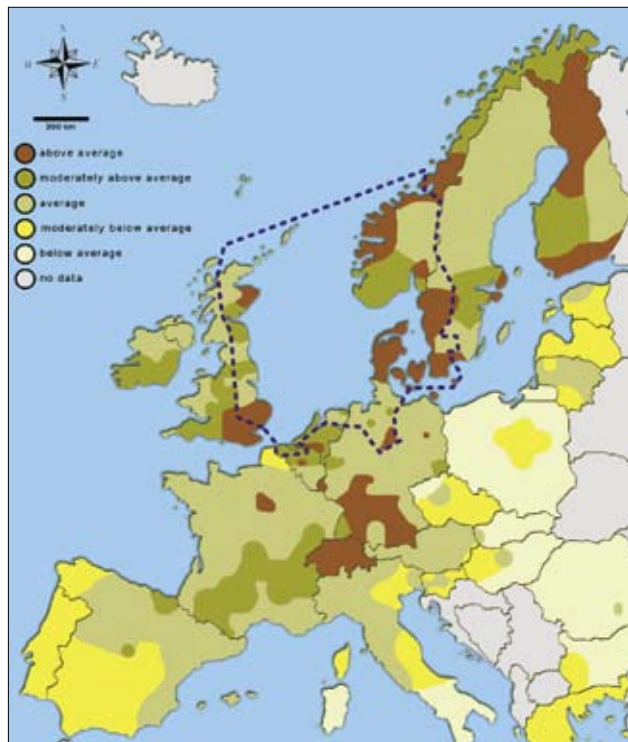
2.3 Facilitating Innovation and the Transfer of Knowledge and Technology

Facilitating innovation and transfer of knowledge is increasingly recognised as a critical factor in the competitiveness of regions. This topic was briefly addressed in the NorVision. The IIIB NSR programme gave it more prominence, supporting improved access to ICT, especially of SMEs and society in general, and improving the application of new technology, especially by public services.

The North Sea Region is a European stronghold overall in relation to other regions when it comes to innovation capacity and performance. Map 2.4 shows that many regions within the NSR have above average innovation capacity compared with other European regions. Within the Region, the more rural and peripheral areas show average innovation capacity.

However, a strong research and knowledge base alone will not secure long term competitiveness. Over the last few years trade has become increasingly global and strong centres of excellence are being established throughout the globe, not just in the Western sector. The focus of policy makers and business strategists has shifted from how to gain

knowledge to how to use it ie how to turn that knowledge into commercial success.



map 2.4: innovation capacity in Europe
 Source: ESPON study 2.4.2 (3rd interim report, 2005, with additional data from BBR, 1/2006)

This can be assisted by some key actions:

- Increasing the motivation to innovate: people rather than companies innovate. It is essential to make sure that all people, whatever their background, educational level and experience are motivated.
- Increasing the competence and capacity to innovate: For individuals and companies this depends on motivation but also the ability to harness external sources and competencies. Key linkages include users and producers, between business and the research community at national and regional levels.
- Providing a support framework. The role of the public sector has changed from acting as a referee in competition between companies to innovate to becoming the coach and providing the necessary frameworks and opportunities for companies and individuals to make the links identified above.

There is a need to pursue these measures in the NSR, focusing particularly on realising strong potential for innovation and addressing areas with weaker potential.

The strengths of the NSR are that it has a strong knowledge and research base in generic areas such as ICT, Biotech and materials as well as in application areas such as renewable energy; automotive, food and creative industries and marine technology. It also has strong business sectors with international links and supporting infrastructures, well known brands (regional as well as corporate) and high national, regional and local awareness/experience of innovation issues with many public sector innovation support networks, especially at the regional level.

Weaknesses in the NSR can be identified as:

- a need to address the requirements of companies;
- constantly changing support frameworks in some regions;
- there is a tendency for regional strategies to take too broad an approach to innovation ;
- unclear innovation processes, eg where to find the most adequate service to match a need, lack of understanding between the supplier and provider as to what should be provided; and
- a lack of critical mass: very few organisations – public and semi public – aiming to support innovation have the capacity to make a difference on their own. They need to be very well co-ordinated to achieve the critical mass to do so. Critical mass is a particular problem in rural areas.

Key Spatial Challenges for the NSR are to:

- Utilise the potentials of closer collaboration between the NSR's strong competence sectors to help strengthen and widen the application of R&D Five business sectors have been identified as being particularly strong in the NSR:
 - Driving technology: eg ICT, Life Sciences, new materials
 - Related to Natural Resources: eg wood, food, water
 - Providing excellence in engineering: eg automotive and aviation
 - Advanced Services, creative industries and tourism
 - Energy: the petrochemical industry and renewable energy

key spatial challenges

RESULTS OF THE FIVE UPDATE STUDIES



Each has a strong business presence and good research base in terms of public research organisations. Some also have important key markets in the North Sea area.

ii) Use the knowledge created in urban centres to boost development in less densely populated areas. Innovation tends to take place where the market meets new ideas, where a particular need meets the supply, where ideas meet capital, where research meets business. So the densely populated areas of the North Sea region have a potentially great advantage over rural areas. Actions to assist rural areas include:

- Strengthen national-regional-local partnerships and stakeholder involvement in them.
- Encourage local research on innovative responses to overcoming the constraints facing rural areas.
- Carry out human resource surveys on a community and regional basis to identify existing skills available for designing, developing and delivering innovative programmes and activities.
- Secure and develop the infrastructure (physical, social, financial, economic and telecommunications).

stakeholder involvement

A big step towards facilitating innovation in Europe would be to tear down the barriers between companies, academic research and public sector organisations. There is a strong interest in assisting innovation within the NSR generally but there are significant regional differences.

Main stakeholders (shown in diagram 2.5) are:

- Companies that are committed to growth
- Knowledge producers such as research institutions, consultancy companies
- Intermediary organisations: regional development agencies
- Investors: banks, business angels, foundations
- Policy makers, regional and national providing framework conditions for innovation

These stakeholders are required to carry out and strengthen the innovation process and they should all be engaged in a future funding programme. To secure their engagement, the attractiveness of participating in an INTERREG type programme should be addressed.

Whilst INTERREG is able to fund long running projects the cost of participation compared to other programmes is relatively high.

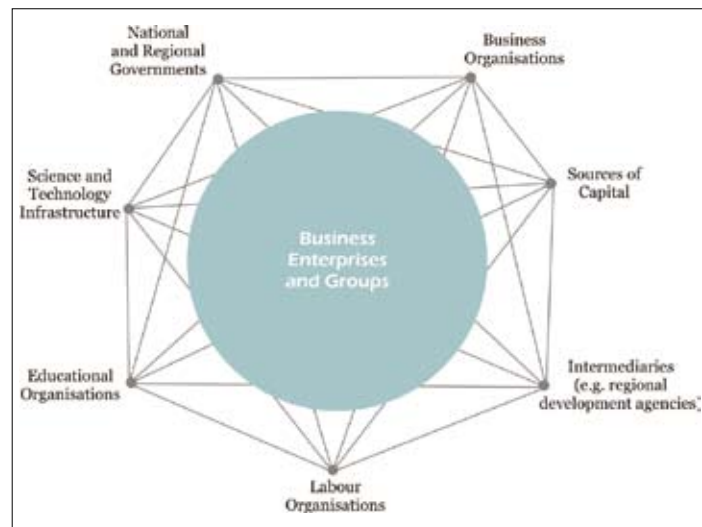


diagram 2.5: innovation stakeholders
Source: Interreg North Sea Region Programme

Co-operation with the Baltic Sea Region, already a leader in innovation projects through the IIIB programme, is particularly recommended.

There is already much public and EU level support for facilitating innovation. However, there are clear benefits from transnational co-operation.

a) Innovation based on business sectors

Geographical proximity can be beneficial when more concrete activities that require intense co-operation need to be carried out. Many joint actions could be built on strong competence sectors within the Region such as those already identified. This will help to build up critical mass.

b) Non sector specific innovation

More general transnational measures are needed to maximise the benefit of the sector based joint action:

- Providing a good contact network for the participants
- Offering benchmarking possibilities
- Providing a platform for experience sharing
- Helping in concrete problem solving
- Providing input to public action

- Giving image and marketing
- Helping to create critical mass

Future Funding Support

Under a new NSR programme funding support for facilitating innovation could be made in two ways:

- 1) As a specific funding theme to facilitate innovation and technology transfer. Activities supported under it should have a clear focus on developing market oriented innovation. The theme could be divided into non sector and sector activities:
 - Sector activities supported should be based on emerging transnational competences common to several regions of the NSR, as illustrated in the list of business sectors identified earlier.
 - The non sector activities could be broadly defined to address the wishes of the stakeholders. However, they should focus on very concrete activities engaging the participants in joint development activities.

Projects to be supported in the specific funding theme for innovation could be identified through a “Foresight” approach. This would involve the setting up of several transnational foresight teams, each one involving about 20 experts and 200 to 300 participants. The starting point for each team would be a strong transnational business sector within the NSR. The aim of each team would be to identify, over 1 to 2 years with perhaps € 100.000 - € 200.000, possible and desirable future scenarios and actions. At the end of this phase, transnational projects would be identified to be implemented over a longer time period, eg 2 to 6 years, with a more substantial budget eg of € 1 to € 2m. The process is illustrated in Diagram 2.6.

- 2) As a cross cutting dimension or element of other themes eg innovation and technology transfer associated with identified spatial challenges in the fields of transport, energy and coastal waters management.

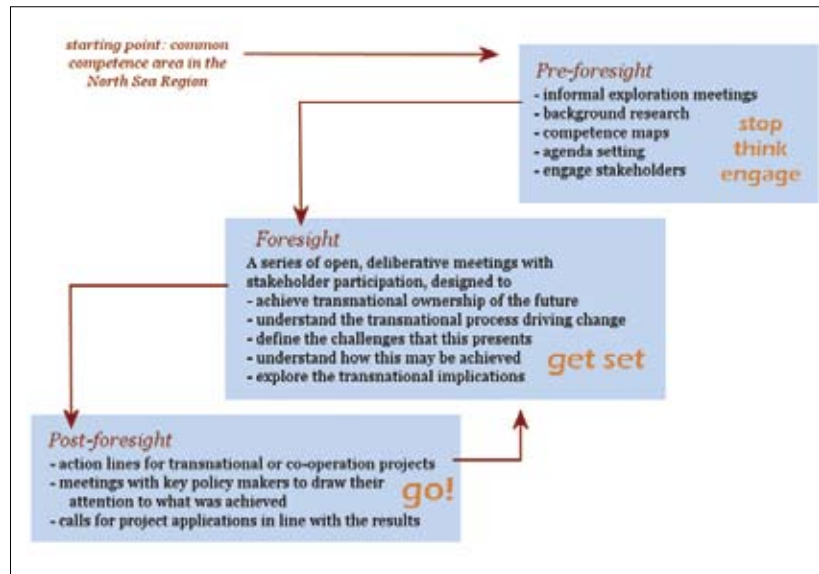


diagram 2.6: the Foresight Process
Source: Innovation spatial agenda study

2.4 Energy

NorVision did not devote a full action theme to energy but it identified the need to use environmentally friendly sources of energy to help take care of natural resources and achieve ecological equilibrium; and to reduce transport emissions in urban areas. Similarly, the INTERREG IIIB NSR programme does not have a dedicated theme on energy but has provided some funding from environmental, coastal management and transport themes to address related energy issues.

The NSR and other EU countries are facing two key energy issues: meeting ever increasing demands for energy to support economic development in particular; and protecting the environment against emissions caused by fossil fuels. Many countries in the EU, including those in the NSR apart from Norway, are or will shortly become net importers of energy. So meeting increased demand could mean paying more for imported energy and relying on unstable external suppliers, with the consequential impact on and risk to maintaining economic competitiveness. The alternative is to maximise the generation and use of sources of energy, particularly renewables, which are internal to EU countries.



In common with general EU policy, expressed in the Lisbon strategy and Gothenburg Council and Energy green papers, countries in the NSR are, therefore, generally aiming to:

- achieve greater security of supply (lessening dependence on external sources and on a single source);
- create an internal energy market within the EU (to exchange energy across EU countries);
- protect the environment against emissions caused by use of fossil fuels through increased use of renewables; and
- achieve energy savings and efficiencies in the use of energy to reduce demand.

These EU policies have been backed by the programme Intelligent Energy Europe (now to run for a further period from 2007-2013) which has supported transnational exchange of experience and pilot actions concerned with both supply and demand.

The North Sea Region is very unusual, in both a European and Global context, in having access to almost all types of known energy sources including fossil, nuclear and renewables and associated expertise in

their exploitation. Map 2.7 shows current sources of renewable energy in the NSR, including the particular potential for wind power which the northern part of the NSR has above many other parts of Europe.

The most predominant sources of energy are those related to the North Sea itself. In the last four decades crude oil and natural gas have been exploited particularly by Norway and the UK, and to a lesser extent Denmark, the Netherlands and Germany. These sources will diminish for all but Norway over the next decade. Nuclear power could be an alternative to fossil fuel sources but, given issues of security and disposal of nuclear waste, there is no consensus across NSR countries on whether or not to increase or renew nuclear power generation.

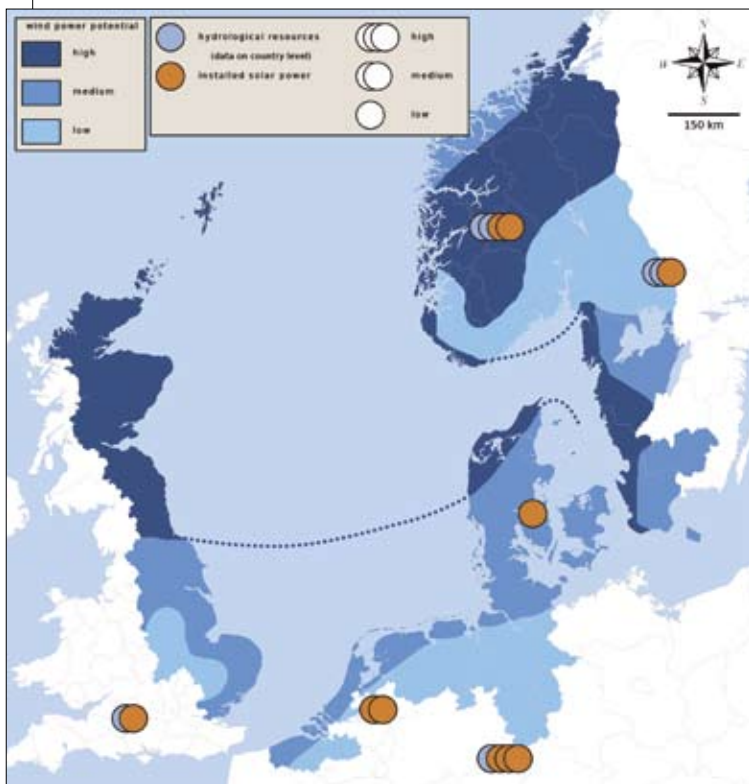
Renewable energy in the form of Hydro electric power has been long exploited especially by Norway where it meets 99% of the country's power needs. In the last two decades NSR countries have been increasing efforts to develop other renewable sources, including wind power; biomass fuel; wave and tidal power; solar energy; and geothermal energy derived from the heat of the earth. The most developed of these sources is wind power but its generation is dependent on weather conditions and it is difficult to store or match demand with supply.

Energy carriers have traditionally been in the form of electricity stored in batteries or less frequently as compressed air. There is considerable interest in hydrogen as a carrier since it has no emissions as a fuel, is CO2 neutral and could improve the interaction between different energy forms, enabling the conversion of surplus electricity generated by eg wind or solar power for transportation and/or storage. The industry expects the hydrogen market to take off by 2015-2025.

Key spatial challenges to 2010 related to energy in the NSR are as follows:

- i) Assisting the exploitation of renewables, including:
 - the construction of wind turbines: the main growth is expected to be off shore and in all the NSR countries although on a much smaller scale in the Netherlands and Flanders. This raises potential conflicts with other users of North Sea waters and the need for consistency in approach in national decisions on where turbines should be allowed. Other associated issues include impact on wildlife and conflicts with the tourist industry.

map 2.7: sources of renewable energy
Source: World Energy Council, *Survey of energy resources* (2001), Risø windatlas (used by permission)



- the production of biomass. Associated issues are loss of farmland for food production and impact on wild life of using coppice.
- ii) Applying technological developments to achieve more efficient production of energy. There are two trends – towards centralisation, using larger and more efficient fossil fuelled plants, and more decentralisation based on micro generation plants at a household or small district level which are able to produce power from renewable sources, eg solar panels, single windmills, biomass fuel. Decentralisation also offers the possibility of generating employment opportunities. The NSR is in a particularly good position to apply new technology in decentralised power production given the potential in the region for renewable energy production.
- iii) Development of the energy carrier infrastructure: particularly using hydrogen, but other infrastructure developments may also be feasible.
- iv) Managing Energy demand: Reducing demand through energy savings and efficiencies is at least as important as security of supply, environmental impact and employment. Both new and older technologies could be used to a much greater extent eg developing and extended use of guidelines and common standards for dealing with energy efficient construction of housing and office buildings.

Energy issues tend to have a strong national interest. Many of the key stakeholders in this area are national authorities who have an interest in strategic planning and large investment decisions. Regional and local government interests appear weaker except in energy efficiency saving programmes. Private actors also have a very large part to play although there is awkwardness in their taking part in publicly funded programmes (as identified in the transport study). They may also lack motivation to take part where energy issues require large investment and the amount of support from a future co-operation programme is likely to be relatively small. Some public authorities are suspicious of private interest in sustainable actions. However, associations of private or mixed private-public associations appear more keen to take part.

There is already cooperation across some of the NSR countries on energy issues. The Nordic Council of Ministers whose geographic area covers some of the NSR countries (Norway, Sweden and Denmark) encourages transnational cooperation particularly to secure sustainable energy supply in sparsely populated areas. Cooperation between

the NSR and the Baltic Sea Region European cooperation area might be beneficial, particularly in the fields of biomass and wind power.

When considering the potential for future transnational action on energy issues there is a need to take into account the following:

- Need to address sensitive national or supra national interests and activities
- That energy issues to do with supply and transportation tend to be on a large scale and demand investments of a similar size.
- Funding available through a future cooperation programme will be relatively small and may not attract private sector participation.

Taking these factors into account there is still scope for transnational action with the following focus:

- i) Regional Focus: investment in decentralisation of energy production and increasing use of renewables using demonstration and pilot actions or larger support if it is available. This would help counter energy dependency and the depletion of fossil fuels and support regional level socio-economic development.
- ii) Transnational focus: supporting new infrastructure, particularly to help deal with power fluctuations between countries. Infrastructure for hydrogen has great potential but is likely to require more investment than new cooperation programme funds would allow. The focus could, therefore, be on projects dealing with other infrastructure related activities such as feasibility studies for establishing further gas pipelines eg from Russia to the NSR; and strengthening the coordination of national mechanisms for planning eg of offshore wind turbines - which might be done, for example, through setting up a “clearing body” for energy related infrastructure.
- iii) Dissemination: Sharing knowledge between regions. This could be done particularly on energy efficiency measures, eg helping municipalities or regions in developing housing and buildings in an energy efficient manner. There are also other areas where good practice could be shared eg in administrative processes.
- iv) Research Activities: related to the specific nature of the use and production of energy in the NSR, eg the petrol industry on Co2 enhanced recovery; wind power in Denmark and Germany; research in emerging areas such as tidal and wave.

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Future Funding Support

The inclusion in a future co-operation programme of a specific funding theme focused on energy is recommended. Some potential project ideas are shown in Annex I although, because of the smaller scale of the study, they are less extensive than those identified in the previous three studies.

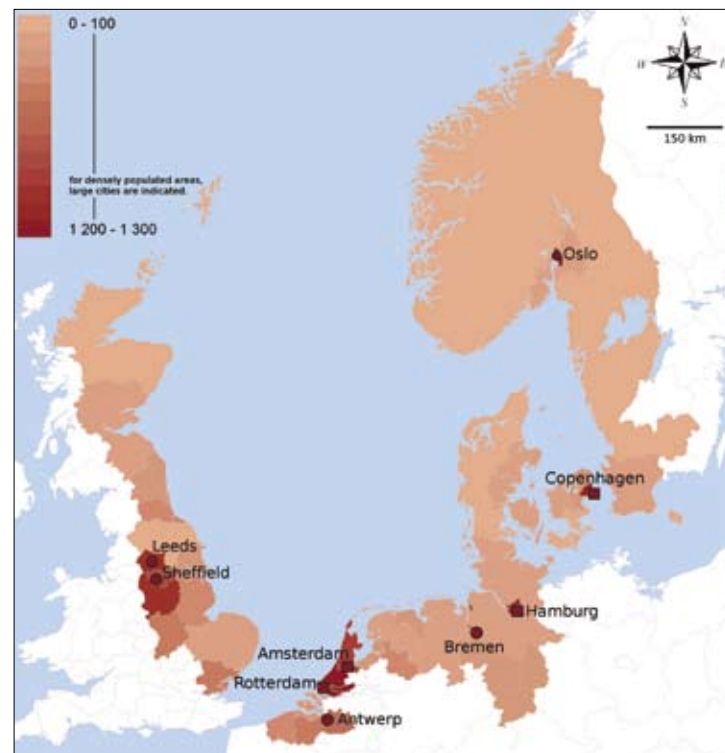
2.5 Demographic Change

NorVision highlighted the need to address demographic change issues including growing internal migration within the NSR and immigration to the Region, increasing social and ethnic segregation in cities, rural-urban migration and challenges arising from a changing population structure (eg ageing population and smaller household sizes). Although it considered associated problems in relation to urban and rural areas, it treated them separately whereas there is a growing tendency to acknowledge that the effects of demographic change on different parts of the territory are interlinked.

The INTERREG IIIB programme made provision for countering the effects of some of the demographic changes identified in NorVision, particularly under the themes on assisting urban, rural and peripheral areas. However, there is limited support for consideration of the underlying causes and comprehensive and integrated strategies to address demographic change.

The NSR has a very diverse and complex demographic pattern with some of the most sparse and densely populated areas in the EU (see Map 2.8). Despite this diversity the regions within the NSR share many of the most pressing challenges arising from general demographic trends: falling and ageing populations; migration to metropolitan areas; and rapidly rising international immigration. These trends are affecting the inherent economic competitiveness of some regions within the NSR and changing the demographic structures of urban and rural communities, resulting in changed demand for land use, travel and access to services and infrastructure.

- i) Falling and ageing populations: Whilst most regions in the NSR still experience growth in population, most of this growth relies on in-migration. In many places, the decline in population is caused by low fertility rates and insufficient immigration to compensate. The effect of population decline on economic productivity is exacerbated by ageing of the population. These two factors reduce the active labour force dramatically – by almost 21 million in the next three decades across the EU. Dependency ratios will increase from 49% in 2005 to 66% in 2030. This poses a fundamental challenge to economic competitiveness objectives.
- ii) Migration to metropolitan areas: many young qualified people move from peripheral, old-industrial and rural areas to metropolitan and larger urban areas. The intellectual capital of the NSR is increasingly concentrated around the big cities. The NSR is also losing some population to large neighbouring cities outside the region. These trends are leaving the less urban and rural areas with a predominantly older and less economically productive age group. In addition, they have lower fertility rates, thus perpetuating the lower economic productivity of these areas in the longer term.



map 2.8: population density in the NSR (data: EU 2003, Norway 2004)
Source: Eurostat (data for 2002-2003) and Norwegian Statistisk sentralbyrå (data for 2004)

- iii) Increased international migration: This is helping to compensate for the decline and ageing of the population in the labour market overall. However, international migrants tend to be concentrated in the metropolitan areas, thus exacerbating the trend towards metropolitan areas being the higher productivity areas in the short and longer term.
- iv) Spatial Impacts: In those areas affected by depopulation maintaining infrastructure, services and cultural activity, and ensuring a balance of men and women becomes a challenge. In the metropolitan areas increasing demand for housing, transport and services has led to shortages in these areas, congestion and deteriorating environment, and pressure to build on greenfield land.

The impact of demographic change and migration is being given increasing attention in EU policy mainly due to the expected negative impacts of ageing and decline of the labour force on economic competitiveness and social policy. National and regional spatial strategies in the countries of the NSR have only recently begun to pay more attention to the spatial implications of demographic change.

Countering the impacts of demographic trends will require better integration into the workforce of younger and older people, women and immigrants and closely related and comprehensive planning policies to provide a high quality of life whether in urban or rural areas. Spatial planning policies have tended to concentrate on the management of growth areas whereas in future they will also have to address the co-ordination of decline and maintenance of service provision, especially in areas subject to depopulation.

main spatial challenges Key spatial challenges to 2010 arising from demographic changes in the NSR are as follows:

- To support working women with young families through the provision of appropriate affordable housing, crèches, day schools and other infrastructure
- To respond to the different requirements of an ageing population including different housing needs, transport and leisure requirements.
- To accommodate the spatial challenges from lifestyle choices, such as increasing numbers of small households.
- To pass on or cascade down to the NSR the magnetic attraction of major global cities such as London to young persons and international

migrants. Labour market policies, as well as spatial development and services, are a major factor in this process.

- To deal with the spatial challenges from retirement migration.
- To support the economic and social integration of international migrants through provision of high quality environments and services in urban areas eg the provision of cultural facilities to attract and retain highly qualified international labour; the provision of rented accommodation or multi occupancy housing for poorer paid international immigrants.

Interest in the impact of NSR demographic trends lie most with regional and local authorities, particularly the departments responsible for planning within them. However, there is also a need in dealing with the cross-cutting issue of demographic change to involve other government departments including those with, for example, responsibilities for employment, housing, immigration and tourism.

Given the sometimes sensitive nature of some demographic issues such as migration and the long term effects of such issues the engagement of political interests would be desirable. There is a need to raise public awareness of demographic issues and the involvement of community representatives in co-operation projects might be a way of assisting this.

It will be necessary to involve other countries and regions in co-operation projects where issues “spill over” into neighbouring areas such as the South East of England or where there are other demographic connections such as with retirement migration to southern Europe.

Most issues arising from demographic change are not specific to the NSR. They are shared with the rest of Europe and beyond. They are not transnational in the sense of requiring co-operation for their resolution although there is agreement about the value of such co-operation for sharing experience and thus contributing to addressing the challenges.

There are many potential benefits from sharing experience including:

- Addressing sectoral policy fragmentation and improving co-ordination of the spatial impacts of demographic change through, for example, explaining trends and their spatial dimension and informing and helping to co-ordinate public service providers

stakeholder engagement

future transnational co-operation

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- helping to explain the spatial development implications of demographic trends for policies and provision of public services;
- addressing the problem of affordable housing;
- developing planning tools for incorporating the long range demographic issues; matching service provision and needs;
- creating adaptation strategies for areas of declining population;
- learning about how to integrate international in-migrants; and
- developing planning approaches to the problems created by second homes and retirement migration.

Demographics are also a crucial component of other substantive issues such as transport to more sparsely populated areas, generating critical mass in innovation, and pressure on coastal zones and the relevant trends should be considered under these headings. Cooperation should be encouraged to build understanding of the spatial development impacts of demographic trends on these issues and to share experiences of tackling them.

Future Funding Support

A future co-operation programme should, therefore, support demographic change issues in the following ways:

- support the investigation of the spatial development implications of demographic trends especially in relation to fertility rates, integration of migrants and the ageing population. A number of subjects suitable for studies of this sort are identified in Annex 1.
- as a cross-cutting dimension in other themes. There should be a requirement to reflect demographic trends, particularly those related to rural-urban imbalances arising from fast urbanisation and declining rural areas and consequential macro economic and social costs, in projects receiving support under particular themes such as transport, other infrastructure services and tourism.

To maximise the value of these two funding activities, the NSR should promote exchange of experience of its regions with other external regions with similar experiences and include regions outside NSR in its projects.

2.6 Linkages

Links between study topics

The linkages between the themes of the five studies are shown in diagram 2.9. Part of the coastal water management and energy challenges are sharing the need for co-ordinated planning for off shore wind farms. In addition, coastal and transport challenges are shared with respect to better management of shipping and port nodes.

The challenges related to demographic change are linked to challenges identified under other studies: eg the changing demographic structure of rural areas is linked to the innovation challenge of spreading innovation from urban to rural areas, and to providing transport to more sparsely populated areas; the growth of urban areas in coastal zones is linked to the challenge of more integrated and balanced ICZM; and decentralisation of energy production could bring employment opportunities to remote areas facing depopulation. Similarly, innovation challenges can be linked to energy, transport and coastal challenges.

Links to other topics

The results of the five studies had some implications for other challenges highlighted in the Norvision and INTERREG IIIB NSR programmes, most notably for urban, rural and peripheral areas. There were relatively few linkages to heritage and freshwater management challenges.

1. Urban, Rural and Peripheral Areas

The need to address issues relating to the different types of area and linkages between urban and rural areas had a high profile in NorVision. These issues were also given prominence in the NSR IIIB programme although linkages between rural and urban areas received less prominence.

Specific references to these issues in the five studies were as follows:

- the demography study highlighted the demographic challenges facing urban and rural areas in the NSR, including the polarisation of age groups and economic activity between rural (older, less productive) and urban (younger, more productive) areas. It recommended carrying out studies to increase knowledge of these processes and particularly the linkages between rural and urban trends.

It also recommended that demographic change should be a key element of all projects in certain areas of activity such as transport and housing.

- the innovation study identified the conditions for innovative thinking as being largely urban based because of the greater degree of exposure and opportunities for interaction between people and bodies of different sorts, than in rural areas, It highlighted the need to extend support infrastructures from urban to rural areas.
- demographic trends, particularly those related to rural-urban imbalances arising from fast urbanisation and declining rural areas and consequential macro economic and social costs, in projects receiving support under particular themes such as transport, other infrastructure services and tourism.
- the transport study identified the need to consider how provision of services to rural areas might be made and how congestion and pollution in urban areas might be reduced as part of a general strategy for managing the expected growth of transport and increasing use of sustainable transport.

2. Heritage including cultural and natural landscapes

This had a dedicated theme in NorVision. It also had a small place in the IIIB programme under various headings resulting in three projects.

- The only mention of heritage in the five studies was in the Coastal Water Management study which highlighted the need to look at the interrelated and competing demands for use of land and sea in coastal zones, including historic landscapes.

3. Freshwater management

NorVision promoted the need for an integrated approach when considering the development and/or management of wetlands, rivers, groundwater and urban development given the interdependencies of flood prevention, navigation, agriculture and urban construction. The IIIB programme has provided a significant portion of its funds to support 8 (fresh) water management projects under the themes of “Management along Rivers and Coasts” and “Using the Environment responsibly”. Since the publication of NorVision and the start of the IIIB programme the need for river basin management has been highlighted by the EU Water Framework Directive.

- Freshwater management was mentioned only in the Coastal Waters management study in relation to integrated management of coastal zones including estuaries.

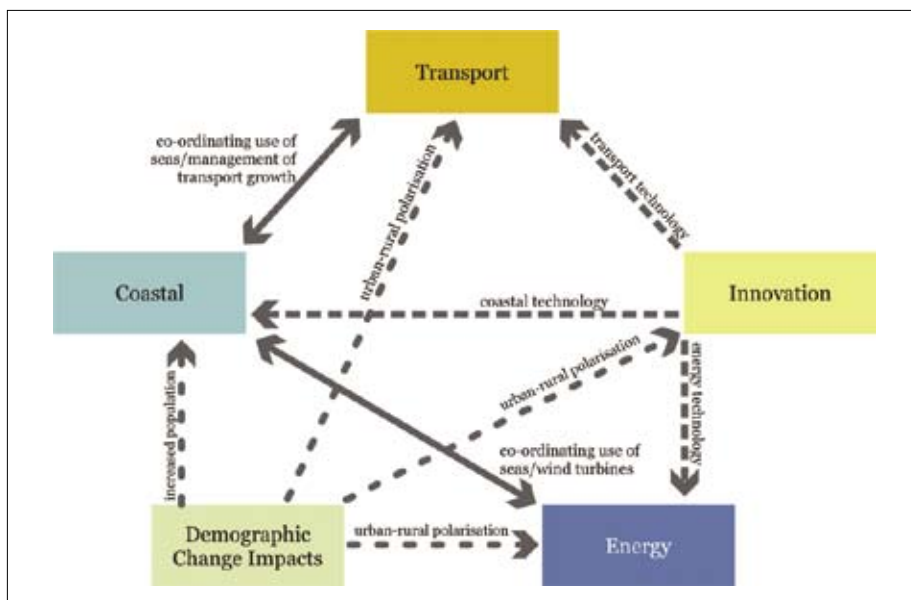


diagram 2.9: linkages between themes
Source: Interreg North Sea Region Programme

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3.1 Key challenges compared to NorVision

Update challenges

These are shown in the box below:

box 3.1: summary of update challenges

Coastal Water management

- Strengthen Integrated Coastal Zone Management and broaden it to encompass sea uses
- Co-ordinate the future use of coastal waters
- Manage risks in coastal waters and open seas
- Produce and make available better cross country information

Transport

- Manage transport growth
- Deliver improved sustainability
- Foster Geographical cohesion, integration and equality

Innovation and the Transfer of Knowledge

- Realize the potential of cross country collaboration between business clusters in the NSR's strong sectors
- Use knowledge created in urban centres to boost development in less densely populated areas.

Energy

- Maximise renewable energy production, particularly through strengthening the capacity of transnational systems for control-

ling the location of off shore wind turbines, and production of biomass

- Apply change in the nature of power plants, particularly decentralisation of production from renewable sources
- Development of new energy carrier infrastructure, for hydrogen and other forms

Demographic Change

(anticipating and responding to effects of falling and ageing populations, migration to metropolitan areas, increased international migration):

- Provide infrastructure to support working women with young families
- Respond to different requirements of the ageing population for homes, infrastructure and public services
- Respond to lifestyle requirements eg for smaller homes
- Cascade down the higher growth rates and attractions of city life to adjoining areas.
- Support the economic and social integration of international migrants.

Comparison with NorVision Challenges

Diagram 3.2 shows the relationship between the themes in the spatial agenda studies compared with those in the NorVision and INTERREG IIIB NSR Programme. Key points of note in the studies compared to NorVision themes are as follows:

- **Coastal waters management:** Integrated coastal zone management (of land and sea) was emphasised in NorVision but not fully explored in INTERREG IIIB. The spatial agenda study picks up the broader approach proposed in the NorVision, shifting the emphasis to the sea side of coastal zones.
- **Transport:** The importance of integration within and to the outside of the NSR through stronger transport links and of sustainable transport features prominently in the NorVision, IIIB Programme and spatial agenda study. The last draws attention to the need for strategic management of the very strong growth in traffic expected following enlargement and the expansion of EU markets, including that going to and from the new Member States and beyond to neighbouring countries in the Baltic Sea region.
- **Innovation and the transfer of Knowledge:** Interest in this topic has grown greatly since NorVision, which did not have a dedicated theme on innovation. The general innovation process was made the subject of a full theme in the IIIB programme. The spatial agenda study highlighted the need to support a more focused market oriented process based on strong business sectors common to the NSR and to boost the spread of innovation capacity from urban to rural areas.
- **Energy:** this did not have a dedicated theme in either the NorVision or the INTERREG IIIB programme. The spatial agenda study highlighted the growth in need to address how demand for energy will be met over the coming years, particularly through the use of renewable sources internal to the EU, harnessing new technology to enable power production at more local levels and managing demand through energy efficiency savings.
- **Demographic Trends:** The need for new policies to address impacts of demographic change was identified in NorVision which devoted two themes to assisting urban-rural relationships and cities, and

urban centres in rural areas. The INTERREG IIIB programme also devoted three funding themes to addressing the social and economic challenges facing rural and peripheral areas and cities but placed less emphasis on considering the dynamics of urban and rural areas and linkages between them. The spatial agenda study on demographic change highlighted the need to consider further the spatial impacts of demographic trends and particularly the link between urban and rural impacts.

Both the Lisbon and Gothenburg Council agendas have raised the profile of competitiveness and sustainability respectively since the NorVision and INTERREG IIIB programmes were compiled and one or the other or both were mentioned in all five spatial agenda studies.

Other key changes since 2000, which were highlighted in the studies, have been the enlargement of the EU and the increased concern about climate change and related need for sustainable policies.

- The effects of enlargement was raised particularly in relation to transport growth, and the increasing flows of traffic between old and new Member States; and related growth in risk of marine accidents and clashes with other uses of coastal waters.
- Climate change is likely to have an impact on the physical shape of coastal land and increase risks of accidents through more violent storms at sea and coastal flooding; mitigating the effects is helping to drive the aim of reducing urban transport congestion and developing sustainable forms of transport; and it underlies the switch away from fossil fuels and to renewable sources of energy.

Links with areas outside the NSR

None of the Update studies considered that the challenges identified stopped at the borders of the NSR.

- The Coastal Waters study identified the common interest of adjacent coastal borders to the north, south, east and west of the NSR coastline.
- The Transport study similarly identified areas adjacent to the NSR borders but in particular, areas to the east adjoining the Baltic Sea and beyond to NW Russia.

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- The Innovations study identified the benefit of working particularly with the BSR given its greater success under the IIIB programme in supporting innovation projects.
- The Energy study identified common interests with the BSR, as having similar characteristics to the NSR.
- The Demographic change study recommended working with adjoining areas such as SE England which had “spill over effects” to the NSR or areas affected by inward or outward migration.

table 3.2: comparison NorVision-NSP-Spatial Agenda
Source: Interreg North Sea Region Programme

NORVISION	VISION UPDATE	IIIB North Sea Programme					% of total
		rural and peripheral areas	risk management along rivers and coasts	improving transport	using the environment responsibly	innovation and knowledge	
rural-urban and city co-operation	impact of demographic change	7				10	29%
rural urban centres							
peripheral areas		innovation				7	12%
sustainable mobility	transport			9			15,5%
regional transport/development links							
North Sea integrated management	energy				2	(1) ^x	4%
integrated coastal zone management	coastal water management		7		2		15,5%
management of fresh-water and flooding			1		7		1
natural and cultural heritage landscapes		2				1	5%
miscellaneous					2		3,5%

x: secondary aim

3.2 Stakeholder Engagement

Stakeholders considered to be essential to future transnational co-operation in the NSR are shown in Diagram 3.3.

Compared with NorVision, there has been a change in priorities in terms of what further stakeholders need to be engaged in the co-operation process. The regional and local levels including government and agencies are still essential but there is an urgency to include certain groups of stakeholders who have not so far been much engaged. These include:

- At the National Level, Government Agencies and where relevant, Ministries. This group was mentioned in relation to transport, energy and coastal water management in particular.
- The private sector. This group was mentioned in all studies except demography. Whilst there is a clear wish to see the private sector more engaged, there are some very high barriers to achieving this to be overcome: lack of motivation, unclear benefits, future programme rules preventing participation as partners, suspicion on the part of public agents for sustainable policies. One way forward might be to engage with associations of private sector interests.
- Politicians, Community representatives and the media: These groups were mentioned as valuable co-operation partners not least because they would help to spread awareness and get commitment.

The support of politicians was essential when tackling sensitive political issues.

- NGOs: This group has little time or resources to actively engage in co-operation and yet their involvement is desirable. Under the new funding round they will not be allowed to act as partners in a co-operation project
- Academia : their engagement is needed particularly in innovation activities.

There was also an emphasis in the spatial agenda studies on the engagement of all stakeholders with interest in a potential project. In the transport field this could mean all those with an interest in a supply chain. In the Demography study it meant involving not just planners but any sector department in government with an interest. In some cases this could involve a large number of players and a need to get them together very early (to work up large projects).

There is also a need to engage existing INTERREG Project stakeholders in helping to shape new projects.

Compared to the NorVision, there is increased emphasis too in co-operating with stakeholders outside the NSR. These include other INTERREG programmes; international organisations/associations + groupings eg the Nordic Council, OSPAR; EU politicians; and other stakeholders in neighbouring regions.

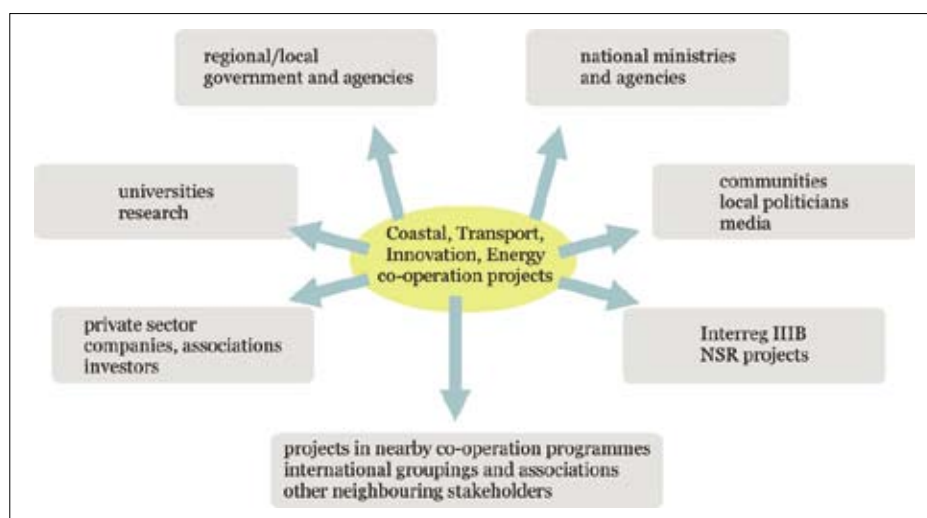


diagram 3.3: stakeholder engagement
Source: Interreg North Sea Region Programme

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3.3 Future Transnational Action

Key recommendations

Possible themes in a future funding programme supporting transnational co-operation are set out in Diagram 3.4. They include:

- Four dedicated themes – on Coastal Waters Management, Transport, Innovation, and Energy
- Cross cutting dimensions to other themes – on Demographic Change and Innovation
- Supporting studies on the spatial impacts of demographic change and policy responses

Joint action or dissemination projects

All the Update studies considered whether the NSR would benefit from transnational working of two sorts: joint action involving outcomes which were long lasting and of practical benefit; and exchanges of experience. Apart from that on Demography, they identified the value of joint action to a greater or lesser degree. However, the Energy study cast some doubt on whether it would be possible to undertake joint

action of the sort it identified, for example on new infrastructure, within a future NSR programme given the large amounts of funds needed for such action.

The five studies also identified many areas which would benefit from exchange of experience, through pilot actions, research, studies and other mechanisms. Transnational funding was felt to be justified if the nature of the knowledge gap was holding up progress in meeting a challenge common to the NSR.

The Need for Focus

All of the spatial agenda studies emphasised the need for a future programme, and funding themes within it, to focus its support to avoid dissipation of effort. There is a need to work with other EU funding programmes and investors to create synergy and avoid duplication.

The coastal waters management and transport studies gave clear guidance on the focus of their respective themes. The Innovations study recommended that more focus should be given to the proposed dedicated funding theme through a “Foresight Process”.

underpinning demographic studies		innovation	demographic impact (rural-urban)
X	coastal : broader, stronger ICZM co-ordinate sea use manage risks improve data	X	X
X	transport manage growth sustainability cohesion, integration, equity	X	X
X	energy large & small scale investments (e.g. infrastructure, decentralised plants) research & dissemination (e.g. energy efficiency)	X	X
X	innovation NSR competence based (through Foresight initiatives) non sector based		X

table 3.4 recommended themes
Source: Interreg North Sea Region Programme

Areas where further guidance on focus would be useful include:

- Energy: particularly given the possible constraints on private sector participation and projects which require large amounts of funding.
- Innovation cross cutting dimension to specific themes: and the relationship with activities developed under the Foresight approach.
- Demographic change studies: and their relationship with a demographic change cross cutting dimension to specific themes. The Innovations study left open the question of focus, to be partly identified by a foresight process. In addition, the energy study did not have time to go into as much detail as the main studies on a possible structure for a future theme.

Further Developing the Spatial Agenda

Whilst not intending to provide a comprehensive picture, the spatial agenda process has resulted in valuable guidance on the key spatial challenges to 2010 in the NSR, key stakeholders needed to address these challenges, and related potential transnational projects which might be supported from a new NSR cooperation programme.

Further development of the spatial agenda for the NSR will be taken forward as part of a separate process to develop the new NSR cooperation programme. When completed, the new programme will sit alongside the NorVision to guide future cooperation activities.



ANNEX 1: Examples of potential transnational projects to meet spatial challenges identified on the Spatial Agenda process

Coastal Water Management

A Strengthen ICZM and broaden it to encompass sea uses

A1 Effective application of ICZM integrated (better co-ordinated) with statutory planning

- Formulate a strategy for the North Sea
- Further develop the HARBASINS project (Harmonised River Basins Strategies for the North Sea)
- Reflect economics in ICZM
- Engaging stakeholders
- ICZM best practice guidelines
- Role of the Directive on Environmental Liability and ICZM

A2 Strengthened consideration of land-sea interdependencies

- Co-operation land-sea management of ecosystems
- Planning co-ordination between landside and sea side
- Improved knowledge of land-sea relationship eg pollution
- Plan boundaries

B Forward-looking use co-ordination in sea areas

B1 Response to growing off shore use demands with increasing cross sector impacts

- Use co-ordination of the North Sea
- Develop methodologies for planning of off shore cross sector development
- Develop transnational mapping and mutual information
- Develop co-ordinated plans for off shore infrastructures.
- Impact assessment of uses across sectors
- Wind energy farms
- Closure of knowledge gaps and information sharing
- Develop methods and concepts to reduce emissions and noise in harbours
- Fishery free zones in the NSR

B2 Growing protection intensity to maintain biodiversity and natural habitats

- Harmonise directives to maintain biodiversity and natural habitats
- Research on marine protected areas
- Mitigating measures eg removal of munitions at sea
- Seabed habitat research
- EIA projects and monitoring of off shore installations

B3 Internationalisation of use planning

- Transnationally co-ordinated strategic spatial planning
- Transnational consultation
- Multiple use planning and management

C Manage risks in coastal waters and open seas

C1 Management of Risks from Human Activities

- Risk Management incorporated into ICZM
 - Co-operative risk management
 - Pollution management
 - Terror attack prevention
 - Quality shipping
- C2 Management of Naturally induced Hazards (climate change and sea level rise)
- Transnational Risk management: harmonisation, promoting public awareness
 - Coastal protection
 - Adapting to climate change

D Produce and make available better cross country information

D1 Data Resources and Mapping

- Develop a coastal classification
- Standardise digital data resources and mapping
- Collate/integrate existing information
- Broader stakeholder involvement and dissemination

Transport

A Manage transport growth

A1 Towards Integrated Freight Transport Systems

- Co-operative transnational development of multi modal transport chains
- Design (transnational) location incentives to establish transport-sensitive business at multimodal locations
- Strengthen selected secondary seaports with potential to relieve major ports as supporters of cross-North Sea maritime transport
- Promote river-sea shipping eg from Ruhr to the UK and to Baltic Sea countries, from UK to Benelux, and to France
- Promote dedicated transnational freight train connections with improved inter-operability and intermodal integration and of new railway services with operators now in a liberalised market
- Set up marketing and other co-operation activities between logistic centres and transport organisations within the NSR and between it and the BSR.
- Promote regular circuits between (existing)multimodal transshipment points (coastal and non coastal)
- Extend the INTERREG IIIB NWE project “Interports Promotion Net” to the North Sea (co-operation among sea and inland ports to enhance waterborne seaport hinterland transport)

A2 High-level passenger mobility with limited potential to enlarge road capacities

- Promote enhanced intercity train connections beyond the established pan-European corridors: and new railway services - intercity and cross border
- Inter-modal integration of airports, through light rail and bus connections particularly to/from smaller airports
- Set up and exchange experiences on alternative travel approaches to home-office and home-school traffic
- Transport surveys for international passengers in all transport nodes

B Deliver improved sustainability

B1 Modal shift to more environmentally friendly transport modes

- Develop North Sea-linked MOS including transport chains from origin to destination in the port hinterland and secondary MOS across the NSR
- Promote dedicated transnational freight railway routes through co-operation among national railway companies and regional authorities

ANNEX 1: Examples of potential transnational projects to meet spatial challenges identified on the Spatial Agenda process



- Promote “secondary” high speed railways for passenger transport services that have lower priority in national plans or in the TEN-Ts
- B2 Reduction of environmental impacts and risks associated with transport
- Develop strategies for risk management (risk reduction, disaster response) with new approaches to cooperation between environmental authorities, ports, transport providers and industry
 - Reduce the risks involved in hazardous goods transport, including on open water
 - Reduce emissions and other external effects of transport activity by all modes by imposing progressive tolerance levels

B3 Establish common level playing field conditions

- Eliminate competition distortion between airports
- Come to similar (progressive) interpretation and implementation of the European Air and Water Quality Framework Directive
- Determine and manage T&A impacts of tourism and leisure activities

C Foster Geographical cohesion, integration and equality

C1 Response and support to further internationalisation within and beyond the NSR

- Develop North Sea linked MOS from port to port hinterland destinations, as previously identified: similarly, develop rail freight links to and from gateways
- Set up marketing and other forms of co-operation between logistic centres and transport organisations within the NSR and between it and the BSR
- Set up long distance travelling services for cargo and passengers (eg by rail Hamburg-Stockholm): and possibly secondary rail links to Channel Tunnel crossings
- Develop cross border urban clusters sharing functions and forming one integrated labour market

C2 Further integration of peripheral regions into social and economic progress

- Promote Transport and Accessibility projects that do not have high priority at national or EU level, demonstrating their regional and transnational benefits
- Develop and implement sustainable interregional mobility measures in areas with low population density

C3 Improved inter-urban communications for dynamic development of cities, city clusters, metropolitan areas and neighbouring agglomerations

- Explore light rail and bus possibilities across borders
- Develop and implement intra and inter city public transport measures.

C4 Integrate infrastructure with regional development and spatial planning

- Develop standardised approaches to prove the transnational impact of infrastructure projects eg the coast-parallel road/rail link Netherlands-N Germany
- Joint regional impact assessments for improved transnational transport links
- Develop local/regional development action plans, transnationally co-ordinated to complement proposed improvements to transnational transport links.

Innovation and the Transfer of Knowledge

Realize the potential of cross country collaboration between business clusters in the NSR's strong sectors

Use knowledge created in urban centres to boost development in less densely populated areas

Examples:

Sector based

- Help the development of NSR clusters through strengthening links between country clusters or sectors.
- Support emerging areas of NSR importance through competence or technology platforms

Non Sector based

- Facilitate access of SMEs to research, courses and facilities: EG develop interfaces (physical and virtual) for smaller contacts with universities and/or research institutes
- Facilitate access of SMEs to investors: EG Develop a quality system for the assessment and presentation of business ideas to investors.
- Facilitate networking between companies; EG set up networks of companies and connect them with collaboration partners and/or customers in other countries.
- Raise the competence of intermediaries EG Regional Development Agencies: design and run (transnational) training programmes for public organisations
- Improve the work of technology transfer institutions: EG run exchange programmes; develop patent and licensing bases

Energy

Assisting the exploitation of renewables: including, the construction of wind turbines and production of biomass;

Exploiting change in the nature of power plants: particularly decentralisation

Development of new energy carrier infrastructures

Examples:

1. Large Scale

- Further development of the power grid
- Development of facilities for the exploitation and transportation of natural gas
- A hydrogen infrastructure for the NSR including production sites, transport facilities, storage capacity, filling stations, technical backup capacity
- Increase yield from off shore oil fields whilst reducing CO2 emissions by infusions of carbon dioxide

2. Small Scale

- demonstration projects realising the potential of locally produced energy from local renewable sources
- Increased use of waste to energy facilities
- Pilot project to combine wind power and hydrogen

3. Research

- To establish the potential for wind turbines in the Region
- To address technologies connected with hydrogen and CO2 infusion
- To identify the most efficient way of constructing the future mix of energy sources

4. Dissemination

- Energy efficiency measures, eg how to insulate buildings more efficiently
- Administrative aspects of energy planning, eg third party financing; planning procedures, especially involving community participation, such as in the siting of wind turbines

ANNEX 1: Examples of potential transnational projects to meet spatial challenges identified on the Spatial Agenda process



Demographic Change

Agenda for Exchange of Experience: anticipating and responding to effects of falling and ageing populations, polarisation of young/old, increased international migration

- Co-ordination of fragmented sectoral policy
- Impact of previous planning policies on demography
- Policies and actions to support working women with young families
- Imbalances in housing supply and demand
- Tackling areas of depopulation
- Match services to changing population characteristics.
- Attracting “returners” to areas losing population
- The integration of migrants
- Retirement migration and second homes
- Data sharing and monitoring
- Raising awareness in politicians and promoting long range planning

ANNEX 2: List of acronyms used in the synthesis report

BSR:	Baltic Sea Region	NorVision	A Spatial Perspective for the North Sea Region
CPMR:	Commission for Peripheral and Maritime Regions	NGO:	Non Government Organisation
EIA:	Environmental Impact Assessment	NSR:	North Sea Region
ESPON:	European Spatial Planning Observation Network	OPEC:	Organisation of Petroleum Exporting Countries
ICT:	Information & Communications Technology	TEN-T:	Trans-European Transport Networks
ICZM:	Integrated Coastal Zone Management	SMEs:	Small & Medium Enterprises
MOS:	Motorways of the Sea		

ANNEX 3: Members of the NSR Spatial agenda working group

Lorraine George

INTERREG IIIIB NSR Programme (Head of Secretariat)

Jens Kurnol

INTERREG IIIIB NSR Programme (Senior Spatial Development Officer)

Malene Wiinblad

Ministry of the Environment (Denmark)

Per Toppenberg

County of North Jutland (Denmark)

Yvo Peeters

Ministerie van de Vlaamse Gemeenschap (Flemish Region)

Wim Stubbe

Provincie West-Vlaanderen (Flemish Region)

Nicole Schäfer

Federal Office for Building and Regional Planning (Germany)

Guido Sempell

Freie Hansestadt Hamburg (Germany)

Mark Overman

Ministry of Housing, Spatial Development and the Environment (Netherlands)

Lidwien Slothouwer-van Schipstal

Contact point INTERREG IIIIB North Sea Region (Netherlands)

Khoji Wesselius

Northern Netherlands Assembly (Netherlands)

Axel Rød

Ministry of Local Government and Regional Development (Norway)

Per Frøyland Pallesen

Rogaland County Council (Norway)

Hans-Olof Sällvin

Ministry of Industry Employment and Communications (Sweden)

Hans-Ake Persson

Contact Point INTERREG IIIIB North Sea Region, Gothenburg (Sweden)

Harry Knottley

Office of the Deputy Prime Minister (United Kingdom)

Nick Evans

Scottish Executive (United Kingdom)

Magne Haugseng

Tees Valley Joint Strategy Unit (United Kingdom)

mwi@sns.dk

pt@nja.dk

yvo.peters@lin.vlaanderen.be

wim.stubbe@west-vlaanderen.be

nicole.schaefer@bbr.bund.de

guido.sempell@bsu.hamburg.de

mark.overman@minvrom.nl

e.lidwien.slothouwer-vanschipstal@minvrom.nl

kh.wesselius@snonline.nl

axel.roed@krd.dep.no

pdf@rfk.rogaland-f.kommune.no

hans-olof.sallvin@industry.ministry.se

hans-ake.person@vgregion.se

harry.knottley@odpm.gsi.gov.uk

nick.evans@scotland.gsi.gov.uk

magne@teesvalley-jsu.gov.uk

ANNEX 3: Members of the NSR Spatial agenda working group



ANNEX 4: List of Maps and Diagrams

- 1.1 North Sea Region Area
- 1.2 The North Sea Region in Context
- 1.3 Spatial Agenda Process
- 2.1 Coastal Zone conflicts
- 2.2 General Accessibility in Europe
- 2.3 Shipping in the North Sea Region
- 2.4 Innovation Capacity in Europe
- 2.5 Innovation Stakeholders
- 2.6 The Foresight Process
- 2.7 Sources of Renewable Energy
- 2.8 Population Density in the North Sea Region
- 2.9 Linkages between Themes
- 3.1 Summary of Spatial Challenges
- 3.2 Comparison: Themes in NorVision, North Sea Programme, Spatial Agenda
- 3.3 Stakeholder engagement
- 3.4 Themes recommended for support in a new North Sea Programme

ANNEX 4: List of Maps and Diagrams

Further information is available from:

INTERREG IIIB North Sea Region

Programme Secretariat

Jernbanegade 22

DK-8800 Viborg

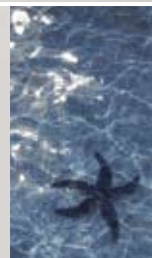
tel.: +45 8727 1999

email: info@interregnorthsea.org

website: www.interregnorthsea.org



Interreg IIIB North Sea



Interreg North Sea Region