Integrated Management Plan for the North Sea 2015

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Colofon

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Management Summary

Fishing, sand extraction, wind farms, shipping and nature – the North Sea has many functions and is the object of a wide range of interests. For a proper management of all these functions guidance through spatial planning is required. That guiding policy is there now, in the form of a 'North Sea paragraph' in the *Spatial Planning Policy Document*. The North Sea paragraph takes relevant international agreements and obligations and national policy frameworks into account. The next step is to organize the implementation, enforcement and other management tasks in such a way that the North Sea manager is able to implement the policy effectively, efficiently and in accordance with existing policy frameworks. The Integrated Management Plan for the North Sea 2015 sets out how the North Sea will be managed in the coming ten years.

Framework and goal

From 1 kilometre offshore the North Sea does not belong to any municipality or province, which is why central government is responsible for policy and management. The Minister of Transport, Public Works and Water Management coordinates North Sea policy and is publishing the Integrated Management Plan for the North Sea 2015 with the approval of the Minister of Housing, Spatial Planning and the Environment (VROM), the Minister of Economic Affairs (EZ) and the Minister of Agriculture, Nature and Food Quality (LNV).

In this plan, management is defined as follows: care and responsibility for the North Sea through implementation of policy. The primary management tasks are: implementation, enforcement, knowledge and information management, and reporting and evaluation. The focus is on implementation, which includes regulating the use of the North Sea. A permit system is an important instrument in regulating this use. *IMPNS 2015* has the status of a policy rule and obliges the central government to act in accordance with the plan.

The *Spatial Planning Policy Document* contains the following integral primary objective: "To enhance the economic importance of the North Sea and maintain and develop the international ecological and landscape features by developing and harmonising sustainable spatial-economic activities in the North Sea, taking into account the ecological and landscape features of the North Sea."

North Sea policy is strongly based on international agreements. Important agreements are made within the framework of the UN (IMO, UNCLOS), EU and OSPAR. Further policy development and harmonisation takes place within these international bodies as well, including important developments like the European Marine Strategy currently in preparation and a new initiative of the European Commission for a Green Paper on Maritime Policy. The integral primary objective of the national policy provides a kind of umbrella under which the various sectoral and thematic goals are united. These goals are set out in numerous policy documents and international conventions, which each have their own angle of approach but also share a lot of common ground. The key now is to achieve integration as the policy is translated into a management strategy so that the entire spectrum of North Sea policy can be fully realised in the most effective and efficient way possible. This is, in fact, the essence and the primary objective of *IMPNS 2015*.

Spatial developments: how busy can we expect the North Sea to become?

So-called opportunity maps have been drawn up for the functions that are expected to show the strongest growth and are also bound to a fixed location – wind farms, extraction of surface minerals and conservation. The maps show the locations that have the most potential within the established parameters of policy. The overview map combines the opportunity maps and current usage (in so far as it is location-based). The potential sites for wind energy when taken together are two and a half to six times the size of the surface area actually required to achieve the government's objective of 6,000 MW in 2020. This development is expected to be gradual. The surface area required for sand extraction is only a fraction of the area available in the zone indicated on the map.

In general the spatial analysis of current and future use shows that the various location-based functions can be situated next to each other because functions that increase in size generally have their own zone that contains sufficient room for growth. This is the result of both the spatial planning set out in the *Spatial Planning Policy Document* and the greater suitability of some zones and areas for some functions. The area used most intensively is off the coast of the provinces of North and South Holland, and is zoned as follows.

- Between the baseline and the continuous Normal Amsterdam Water Level (NAP) -20 m line: recreation, coastline protection and land reclamation.
- Between the established NAP –20 m depth contour and the 12-mile boundary: sand extraction.
- Beyond the 12-mile boundary: wind farms.

Free passage for shipping is guaranteed by international routing measures and a system of nationally established clearways, within which no fixed objects may be placed. Most ecological areas are situated in the northern part of the Dutch Continental Shelf and are too far from the coast to be eligible for other functions. This means that most of the time conflicts can be avoided. An important point of attention is the decrease in space for fishing because more and more space is being used for functions that are incompatible or difficult to combine with fishing: for example, ships cannot be permitted to sail in wind farms and conditions may well be imposed on fishing activities in ecological areas in future. However, this is a development that may be beneficial for the fish stocks.

IMPNS 2015 describes the policy comprehensively in context and outlines the scope for new initiatives as referred to in the *Spatial Planning Policy Document*. The plan is therefore process-oriented and defines the parameters of policy.

In order to achieve effective, efficient and integrated management, a number of substantive details and adjustments need to be addressed, primarily regarding spatial management and the protection of area-based ecological features. Process-

based improvements are also needed in the areas of cooperation and customer friendliness. *IMPNS 2015* includes an analysis of the existing management instruments and developments that have already been initiated. This analysis was carried out on the basis of the three identified themes – a healthy, safe and profitable sea – which is in keeping with the integral primary objective of *the Spatial Planning Policy Document* and the European Marine Strategy that is currently in development. The integral assessment framework for permits and the specific assessment framework for the protection of areas containing special ecological features provide new management instruments. They also give users more clarity regarding the conditions in which activities are permitted in the North Sea. The management instruments are thus sufficient to guide future developments in the North Sea down the right path. The intentions set out in this management plan will be realised within the existing budgets of the departments involved. The primary details and adjustments relate to the following points.

1 Vision of spatial management: controlled freedom for the market

In the *Spatial Planning Policy Document* the government opted for a spatial policy that prescribes location-based uses at sea wherever necessary, but gives market players the scope to develop their own initiatives and make spatial choices within certain limits. Market players are also explicitly permitted to make agreements among themselves about combining functions. However, there would be a number of risks involved in giving the free market complete freedom to develop activities within these limits. To guarantee the sustainable use of the North Sea, it is necessary to prevent fragmentation and foster efficient use of the space available. Although each of the different functions broadly has its own zone, conflicts cannot be ruled out if market players are given total freedom. There is an area of tension between the freedom allotted to market players and management by the government. Spatial management is a means to promote sustainable use of the North Sea in that area of tension.

2 Integrated assessment framework: spatial management through permitting

Permitting was already and will continue to be an important instrument for regulating activities in the North Sea. However, *IMPNS 2015* introduces an additional element in the form of an integrated assessment framework for the entire North Sea that applies to all activities for which a permit is required, as well as for prolongation and expansion of existing activities. The assessment framework helps managers to manage on the basis of efficient use of space and to take more account of the need to preserve area-based ecological features. In addition, undesirable use can be prevented. The assessment framework does not apply to activities that are mainly regulated internationally and/or are not subject to the requirement to have a permit, such as fishing, shipping and recreation.

The assessment framework has its policy basis in the *Spatial Planning Policy Document* and consists of the following five assessments, the first of which is descriptive in nature.

1. Definition of the spatial claim
2. Precaution
3. Usefulness and necessity
4. Choice of location and use of space
5. Restriction of effects and compensation

The precautionary principle involves preventive measures being taken when there are reasonable grounds to be concerned that an activity could damage the marine environment, human health or other legitimate uses. The precautionary principle applies

to all North Sea activities. The Competent Authority assesses whether the precautionary principle has been applied before granting a permit. For new activities within existing functions, precaution is sufficiently anchored in existing policy or practice. However, new insights into damaging effects may require additional information to be collected or additional preventive measures to be taken. A so-called 'precaution assessment' must be carried out for new activities in new functions that are not yet present in the North Sea. The precaution assessment provides an overview of the impact on the ecosystem, human health and/or other legitimate uses. The competent authority uses this overview to make a decision about whether or not to permit the activity on the North Sea.

The usefulness and necessity assessment is intended to prevent undesirable use. The initiator must clarify why the activity has to take place in the North Sea. In the case of new permit applications for existing functions, applicants can usually be referred to existing policy in which the government sets out clear guidelines about usefulness and necessity. If the situation is unclear, as is usually the case with new permit applications for new functions, the applicant must demonstrate the usefulness and necessity of the activity. Subsequently, the remaining tests in the assessment framework must be completed to determine the conditions for permitting the intended activity.

The assessment of choice of location and use of space is a fixed part of all location-based activities subject to permitting everywhere in the North Sea, regardless of whether the activity is for a new or an existing function. This assessment is intended to prevent fragmentation and inefficient use of space. In principle, it also prevents conflicts arising between functions.

The assessment regarding the reduction of negative effects and compensation also applies to all activities subject to permitting. First and foremost, effects on ecological features must be limited. If there is a significant impact, there must be compensation in the form of restoration of comparable ecological features elsewhere. However, there is a threshold: in the case of activities for which an Environmental Impact Assessment is not obligatory, the Competent Authority assumes that the impact is insignificant. In the case of activities that do require an Environmental Impact Assessment report, the effects on ecological features and the environment will be set out in that report.

A number of additional protective provisions apply for sites where there are special ecological features. The assessment framework of the amended Nature Conservation Act of 1998 (*Natuurbeschermingswet 1998*) applies in the areas designated within the

Management to foster a safe sea

The North Sea is one of the busiest bodies of water in the world. Safeguarding the smooth and safe flow of shipping traffic is therefore one of the primary objectives of North Sea policy. A range of management instruments is available to support shipping safety. The fact that the North Sea is congested but safe proves that these instruments generally function well in practice. The most important task is to ensure that this remains the case. Coastline preservation and safe bathing water are also important focal points for a safe sea. Across the board, the current management instruments work well in these areas, too. The 'dynamic preservation' coastline policy will be evaluated in 2005. The management of bathing water quality will be made more efficient and causes of pollution will be tackled. Furthermore, the search for and destruction of explosives has been intensified.

framework of the Birds and Habitats Directive (BHD). Activities that are normally free from permitting obligations can be subject to permitting if they impact a BHD area under the terms of the Nature Conservation Act. Activities that are free from permitting obligations can also be regulated in the management plans to be drafted for BHD sites.

3 Boundaries of four areas that contain special ecological features

IMPNS 2015 sets out the boundaries of four areas in the North Sea in which the ecological features are to receive extra protection. The areas are: part of the Kustzee, Friese Front, Klaverbank and Doggersbank. The indicative boundaries of these areas were set out in the *Spatial Planning Policy Document*. Further research within the context of *IMPNS 2015* shows that all these areas meet the criteria of the Birds Directive and/or the Habitats Directive and the OSPAR Convention. Indicative boundaries were also set out for the Centrale Oestergronden in the *Spatial Planning Policy Document*, but this area meets only the OSPAR criteria and not the BHD criteria. For that reason, it was decided not to apply the specific *IMPNS 2015* protection scheme to the Centrale Oestergronden. With respect to the Kustzee, two sites have already been registered with the European Commission: one as a special area of conservation (SAC) under the Habitats Directive and the other as a special protection zone under the Birds Directive. The sites are the Voordelta and the Kustzee north of Petten respectively.[1] In addition to this, *IMPNS 2015* grants the Kustzee between Bergen and Petten protected status and expands the protection of the Kustzee north of Petten to the established NAP -20m depth contour, in compliance with the *Spatial*

Management to foster a healthy sea

Good water quality and preservation of biodiversity are necessary for the health of the sea. Many water quality goals are not yet being met and the ecosystem of the North Sea is under pressure from disruptive activities. Management of the North Sea can help combat illegal dumping and disasters. Permits can also be used to set requirements for use. New possibilities for using management to support the preservation of biodiversity are generated by such measures as the integrated assessment framework presented in chapter 6 of *IMPNS 2015*. However, the fact is that pollution enters the North Sea system mainly from outside (via rivers and neighbouring seas). In a number of cases, threats to biodiversity cannot be directly influenced by North Sea management because some activities are primarily regulated by international bodies. In the years to come, management plans will be drawn up for river basins (under the Water Framework Directive) and for protected ecological areas at sea (under the Birds and/or Habitats Directive). These instruments will make it easier to use North Sea management to improve the health of the North Sea. However, North Sea management still has an important task in using know-how and information to draw attention to problems and put them on the agenda of policymakers and the managers of rivers that run into the sea.

1) The special protection zone already designated under the Birds Directive and the special area of conservation registered under the Habitats Directive are referred to as the 'North Sea coastal zone'. The *Spatial Planning Policy Document* and *IMPNS 2015* describe all areas in the coastal zone as the 'Kustzee' ('coastal sea')

Management to foster a profitable sea

The North Sea has great economic significance. Some economic activities are related to the sea directly (e.g. oil and gas extraction, fishing), and others indirectly (e.g. harbours, industry and recreation). The North Sea is also important for transport activities (shipping, telecommunication, energy distribution) and functions for which there is insufficient space on land (wind energy, sand extraction). The economic objectives are highly sectoral in nature. This also applies to the management instruments that are available, which are generally sufficient. Profits can be found via integrated consideration of the use of space, through spatial monitoring, and by applying the integrated assessment framework. The North Sea Management Network (*Beheerdersnetwerk Noordzee*) deals with the improvement of the public services and streamlining of licensing procedures (and thus reduction of the administrative burden).

Planning Policy Document. For practical reasons, the boundary north of the island of Schiermonnikoog was moved slightly south. The Kustzee south of the Voordelta (including the Vlakte van de Raan), that is the Westerscheldemonding, is protected as an area with special ecological features. The Kustzee between the Voordelta and Bergen falls outside the specific *IMPNS 2015* protection regime. In this way the most valuable areas in the Kustzee are protected. The low baseline forms the landside boundary of the new areas in the Kustzee.

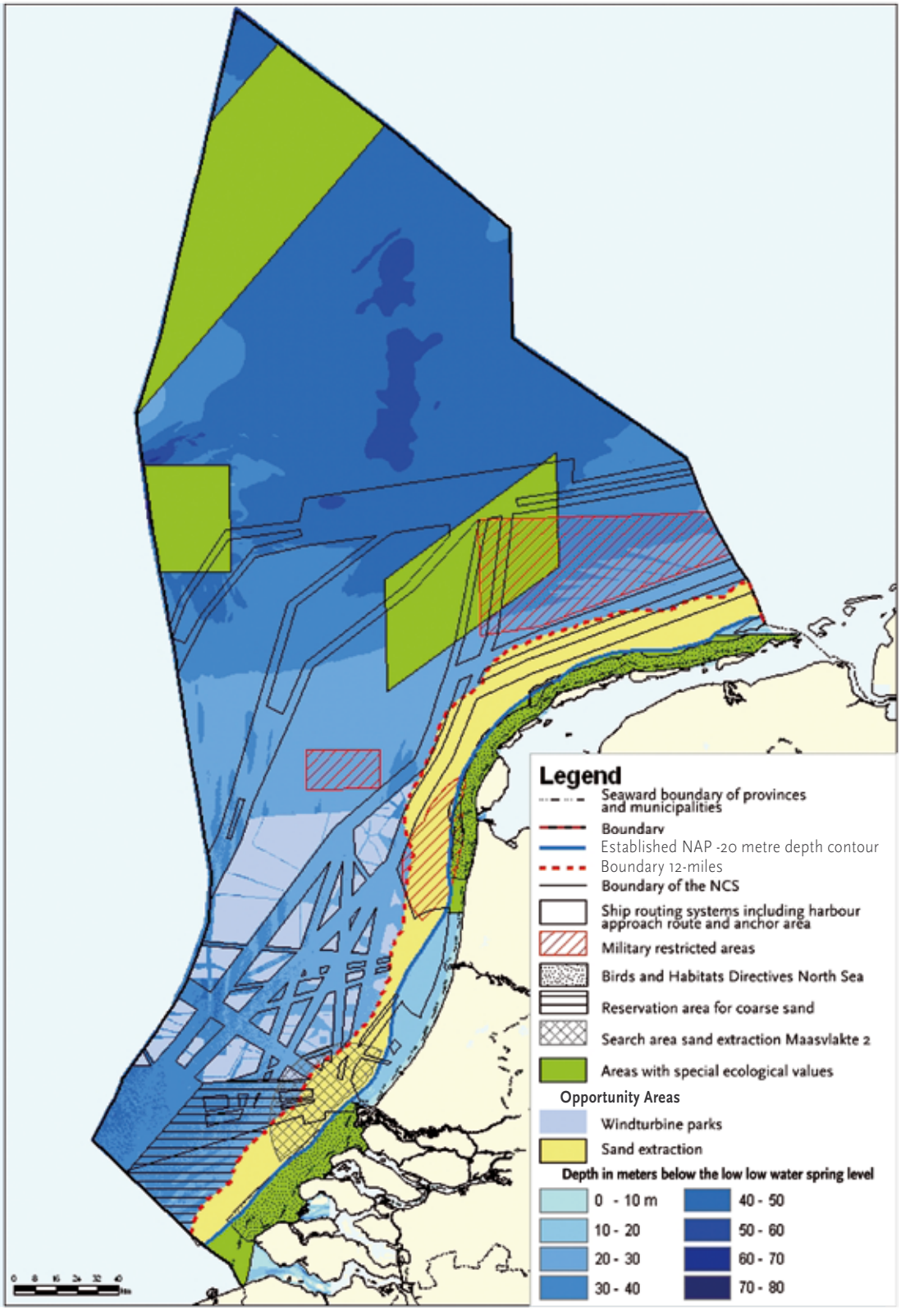
The four new areas are expected to be formally designated as special areas of conservation (Birds Directive and/or Habitats Directive) around 2008 under the 1998 Nature Conservation Act. These areas are also due to be registered as Marine Protected Areas (MPA) within the OSPAR framework. The protection regime under European law in the Birds and Habitats Directives is implemented in the Netherlands by the 1998 Nature Conservation Act. The Nature Conservation Act will come into force in 2005. The required expansion of the application of the Act to include the Exclusive Economic Zone (EEZ) is scheduled for 2006.

In addition to the assessment framework for the entire North Sea, a specific protection regime applies to the four areas. This regime is intended to prevent new activities that could interfere later with the designation of the areas as protected. Consequently, new activities in these areas are permitted only if there is no other realistic alternative and the public interest is great. The protection regime under the Nature Conservation Act will take effect once the areas are formally designated as special areas of conservation under the Birds and/or Habitats Directives. The interim protection regime under *IMPNS 2015* will not affect fishing or other uses that are not subject to permitting, such as shipping. Any measures for these functions will be taken only after the areas have received protected status under the Nature Conservation Act and when the management plan is adopted within three years after designation as special areas of conservation under the Birds and/or Habitats Directives. Management plans are

in preparation for the Voordelta and the North Sea coastal zone north of Petten.

4 Coordinated management focusing on effectiveness, efficiency and better customer service

A number of central government organisations are active in the North Sea. They work together closely in preparing policy, enforcing rules and regulations and providing services. However, when it comes to regulating usage (through, for example, permitting and management plans) cooperation is limited. The North Sea Management Network (*Beheerdersnetwerk Noordzee* - BNN) established for *IMPNS 2015* and coordinated by the North Sea Department of the Directorate-General for Public Works and Water Management (*RWS Noordzee*) will strengthen this cooperation so that individual management tasks can be better coordinated and citizens and users can be better served. The North Sea Management Network's main tasks are enhancing knowledge and information management thus reducing the burden for users. For example, the North Sea Office (*Noordzeeloket*; www.noordzeeloket.nl) will be expanded to include up-to-date information about procedures, permits and permitting conditions. This information will also improve enforcement effectiveness because it will give North Sea enforcement agencies a better idea of what is going on (including in other departments). The administrative burden will be reduced by streamlining and harmonising the permitting process.


Legend
Seaward boundary of provinces and municipalities
Boundary
Established NAP -20 metre depth contour
Boundary 12-miles
Boundary of the NCS
Ship routing systems including harbour approach route and anchor area
Military restricted areas
Birds and Habitats Directives North Sea
Reservation area for coarse sand
Search area sand extraction Maasvlakte 2
Areas with special ecological values
Opportunity Areas
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Readers' Guide

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Chapters 2, 3 and 4 contain an overview of current policy and management. Each of these chapters ends with an analysis and conclusions: is the management suitable for achieving the goals? If not, what can the manager do, given its responsibility, in order to achieve the goals? The current policy and management are described in terms of three themes:

- **Healthy sea** (chapter 2)
  A natural, healthy ecosystem is the central aim of the Healthy Sea theme. This aim is focussed on the sustainable functioning of the North Sea and on guaranteeing the natural features of the ecosystem.
- **Safe sea** (chapter 3)
  The theme of a Safe Sea addresses all topics related to safe use of the North Sea and protection of human beings: coastal defence (how the North Sea coastal foundation functions as a flood defence), safe shipping traffic (regulations, infrastructure, maintenance of shipping lanes) and quality of bathing water. Military use is also addressed in this chapter.
- **Profitable sea** (chapter 4)
  This theme concerns the economic function of the North Sea; the activities that take place there and the management instruments that are available to manage those activities.

Chapter 5 links the descriptive chapters 2, 3 and 4 to chapters 6, 7 and 8, which introduce the new elements. It contains an analysis of the spatial impact of the substantive developments theme by theme and the forward planning for spatial control by means of management. Chapters 6 and 7 follow on logically from chapter 5.

Chapters 6, 7 and 8 contain descriptions of the new management components required to achieve the goals:

- **Integrated assessment framework for permitting.** The main features of this assessment framework are described in the *Spatial Planning Policy Document*; the assessment framework is presented in more detail in chapter 6. As indicated in the *Spatial Planning Policy Document*, this chapter also sets out the cases in which cables and pipes that are no longer in use must be removed.
- **Protection of area-specific natural features**. The *Spatial Planning Policy Document* broadly indicates five areas that require protection due to their special natural features. In chapter 7, the boundaries of those areas are specified and the protection regime described in the *Spatial Planning Policy Document* is presented in more detail.
- **Optimisation of the performance of management tasks**. Chapter 8 describes how the various ministries with North Sea management tasks intend to strengthen their cooperation in order to increase the effectiveness and efficiency of management and serve society better.

IMPNS 2015 contains several annexes. The following general annexes and maps are important for a good understanding of the chapters in *IMPNS 2015*:

- Annex 1 Maritime zones in the North Sea
- Annex 2 Overview and development of policy frameworks for the North Sea
- Annex 3 Competent authority matrix: role of North Sea managers versus usage functions. This overview sets out for each permit which organisation is the primary contact, who is the Competent Authority and/or who is the legal adviser
- Annex 4 Overview and brief description of central government organisations with North Sea management tasks
- Map 1 North Sea administrative boundaries
- Map 2 Key Planning Decision (KPD) map of the North Sea and the Wadden Sea (*Spatial Planning Policy Document*)

1 Introduction

Fishing, sand extraction, wind farms, shipping and nature – the North Sea has many functions and is the object of a wide range of interests. For a proper management of all these functions guidance through spatial planning is required. That guiding policy is there now, in the form of a 'North Sea paragraph' in the *Spatial Planning Policy Document*. The North Sea paragraph takes relevant international agreements and obligations and national policy frameworks into account. The next step is to organize the implementation, enforcement and other management tasks in such a way that the North Sea manager is able to implement the policy effectively, efficiently and in accordance with existing policy frameworks. The Integrated Management Plan for the North Sea 2015 sets out how the North Sea will be managed by central government in the coming ten years. Particular focus will be on improving substantive integration and coordination of tasks between the various managers.

1.1 Reasons underlying *IMPNS 2015* and its status

The *Spatial Planning Policy Document* is our first public policy document on spatial planning to address North Sea spatial policy in a separate paragraph. Today, in 2005, there are good reasons for such an approach because established functions, such as sand extraction and nature, and new functions, such as wind energy, are constantly increasing the pressure on the North Sea. The North Sea paragraph in the *Spatial Planning Policy Document* provides direction by creating room for use as well as for ecological areas. The policy document also shows how Dutch spatial policy for the North Sea responds to international agreements, obligations and envisaged policy.

IMPNS 2015 has been drafted within the contours of existing policy, including the *Spatial Planning Policy Document*. The North Sea is managed in an administrative context in which the responsibilities are allocated to several parties. International influence is very strong in this area. Every plan, every project and every policy document has its own dynamic and its own group of interested parties. *IMPNS 2015* describes them in relation to each other and outlines the room for new initiatives, as referred to in the *Spatial Planning Policy Document*. This makes *IMPNS 2015* a process-related plan that sets the framework for further details. The main objective of *IMPNS 2015* is to bring together all of the policy and management and ensure that the government has sufficient substantive and process-related tools to deal with all the developments that affect the North Sea. Integrated management is an essential element:

- Substantive integration entails first increasing cohesion and coordination between existing management tasks and instruments for the implementation and enforcement of activities in the North Sea among other things. Another important objective, for management purposes, is to develop the detail of new spatial management tasks and instruments that ensue from the *Spatial Planning Policy Document* and from international policy.
- Process-related integration entails the government agencies responsible for management tasks working together as closely as possible when their

tasks overlap. As well as making management more efficient in practice, this also enables those government agencies to serve society better, e.g. in the permitting process and when supplying information.

The *Integrated Management Plan for the North Sea 2015* shows how integrated management of the North Sea by central government bodies will take shape between now and 2015. *IMPNS 2015* has the status of a policy rule and the government is obliged to act in accordance with it. *IMPNS 2015* mainly affects the regulation of use through permitting and is therefore important for permitting authorities and users who apply for a permit.

From 1 kilometre out from the coast the North Sea is no longer subject to municipal or provincial government authority. Central government is therefore responsible for policy and management beyond that boundary. The Minister of Transport, Public Works and Water Management coordinates North Sea policy and is publishing the *IMPNS 2015* with the approval of the Minister of Housing, Spatial Planning and the Environment (VROM), the Minister of Economic Affairs (EZ) and the Minister of Agriculture, Nature and Food Quality (LNV). *IMPNS 2015* has its statutory basis in:

- the Water Management Act (*Wet op de waterhuishouding*), under which a Management Plan for National Waters (*Beheerplan voor de Rijkswateren (BPRW)*) is drafted periodically. *IMPNS 2015* is a further development of BPRW 2005-2008 for the North Sea. *IMPNS 2015* sets out the desired condition of the North Sea, which is one of the water systems managed by central government, as well as measures for achieving that condition (in accordance with Article 5 of the Water Management Act).
- The Spatial Planning Act (*Wet op de ruimtelijke ordening*), as a further development of the *Spatial Planning Policy Document*.

The policy and management set out in *IMPNS 2015* are funded from the budgets of the ministries involved. Funds spent by the Directorate-General for Public Works and Water Management (*Rijkswaterstaat*) are included in the BPRW.

IMPNS 2015 replaces the 'North Sea Management Vision 2010' ('*Beheersvisie Noordzee 2010*'), which is no longer geared to copewith-anticipated developments.

The situation in the North Sea is different from that on land. As stated above, central government has administrative authority on the North Sea (starting from one kilometre out from the coast). In addition, there are no landowners on the North Sea. The interested parties are therefore mainly the users and the special-interest organisations that represent them. The consultation that took place as part of the drafting of *IMPNS 2015* was therefore aimed at these organisations. They are represented on the Consultative Committee for Water Management and

IBV 1993 is a more detailed plan for part of *IMPNS 2015* and, in addition to policy for the sea area, also contains specific policy for beaches and banks. *IMPNS 2015* does not contain any policy on beaches and banks, as referred to in IBV 1993. IBV 1993 is supported by the public authorities represented on the Voordelta Steering Committee (*Stuurgroep Voordelta*). *IMPNS 2015* supplements IBV 1993. Activities and measures in the Voordelta area are permitted if they meet the conditions set out in IBV 1993 and the integral assessment framework of *IMPNS 2015*. Because a very large part of the Voordelta is registered or designated as a special area of conservation under the Birds and Habitats Directive, the assessment framework of the Nature Conservancy Act (*Natuurbeschermingswet*) also applies.

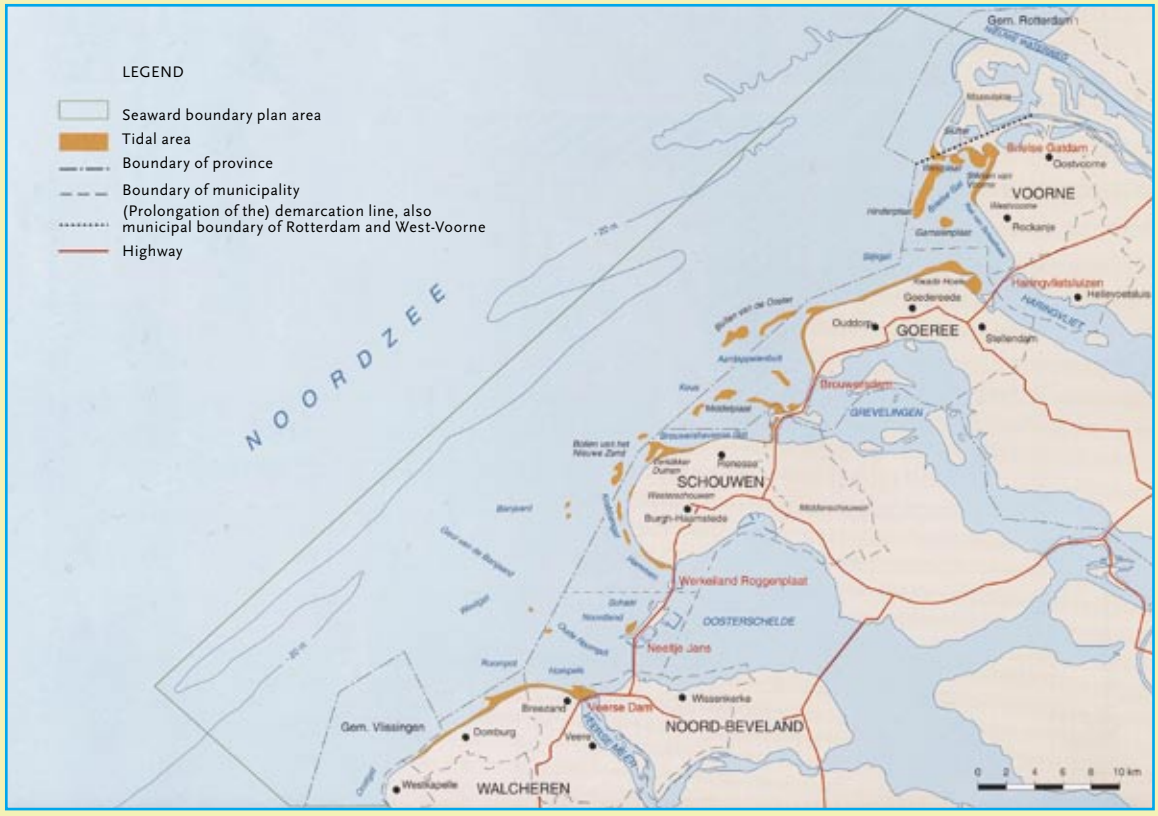


Figure 1.1
Plan area Integral Policy plan Voordelta 1993: Shape in Change

North Sea Affairs (*Overlegorgaan Water en Noordzee* (OWN)), which issued recommendations on the draft text in April 2005.

The draft version of *IMPNS 2015* was also submitted to the Voordelta Executive Committee (*Dagelijks Bestuur Voordelta*) because of the connection with the Voordelta Integrated Policy Plan (*Integraal Beleidsplan Voordelta* (IBV 1993)).

1.2 Primary objective of North Sea policy

North Sea policy is the starting point for *IMPNS 2015*. The *Spatial Planning Policy Document* sets out the following integrated, primary objective for this policy:

"To enhance the economic importance of the North Sea and maintain and develop international ecological and landscape features by developing and

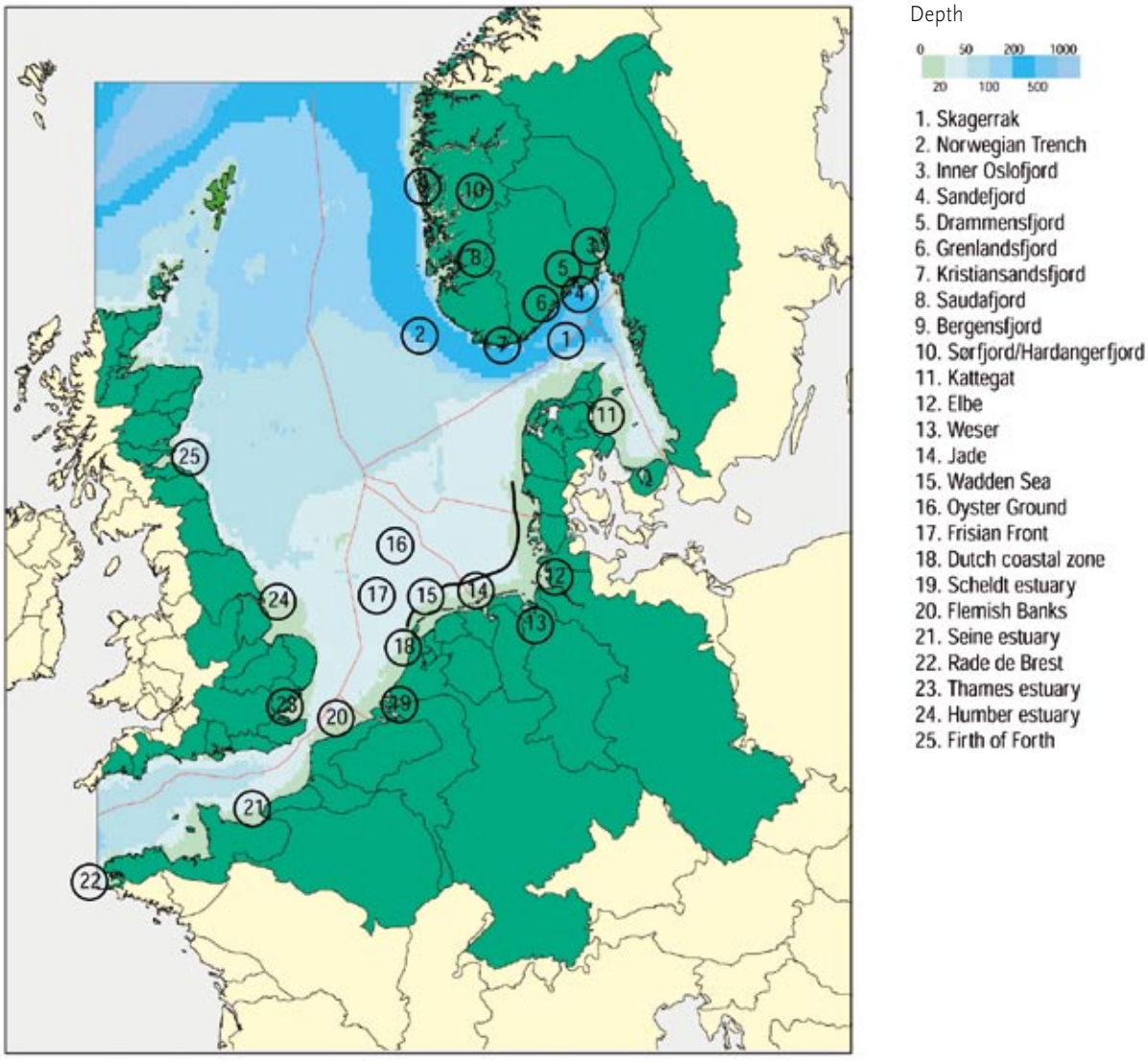


Figure 1.2
The international North Sea and the river basins flowing into the North Sea

harmonising sustainable spatial-economic activities in the North Sea, taking into account the ecological and landscape features present in the North Sea."

The first component of this primary objective is economic. If space is used efficiently there will be room to develop sustainable economic activities. In addition, a degree of direction is required to prevent usage functions from interfering with each other. This applies not only to the traditional North Sea usage functions, such as fishing, shipping and extraction of raw materials, but also to new uses for which there is no more space available on land, such as wind energy, sand extraction and (planned) land reclamation for living, working and recreation. The angle of approach chosen in the *Spatial Planning Policy Document* in respect of the requirement for direction is to set spatial boundaries for certain functions and to define exclusion zones or reserves for other functions. When creating space for use, room for safety is also implicitly included: for example, a system of clearways has been established, in which no stationary objects may be erected.

The primary objective also has an ecological and landscape component. The *Spatial Planning Policy Document* provides a stimulus for protecting ecological features. This is done by delimiting valuable areas and minimising activities in those areas that would damage the features present there. The unique landscape feature of the North Sea – 'tranquillity and space' on a scale that is not found on land – is kept intact by maintaining a clear horizon from the coast and in principle barring any visible permanent projects.

Internationally, the North Sea is also attracting more attention, as similar developments are taking place in other countries bordering the North Sea. The OSPAR Convention[1] in particular has traditionally focused on protection of the marine environment; in recent years the European Commission has also turned its attention to the sea. For example, the scope of the Birds and Habitats Directives has been extended to include the sea so that a contribution to the European network of protected areas ('Natura 2000') is also made at sea. Furthermore, a lot of work is currently being done on a European Marine Strategy (EMS). The EMS has an integrated primary objective that is in line with the primary objective of the *Spatial Planning Policy Document*: "The diversity of the marine environment in oceans and regional seas that are safe, clean, healthy and productive must be maintained for current and future generations."

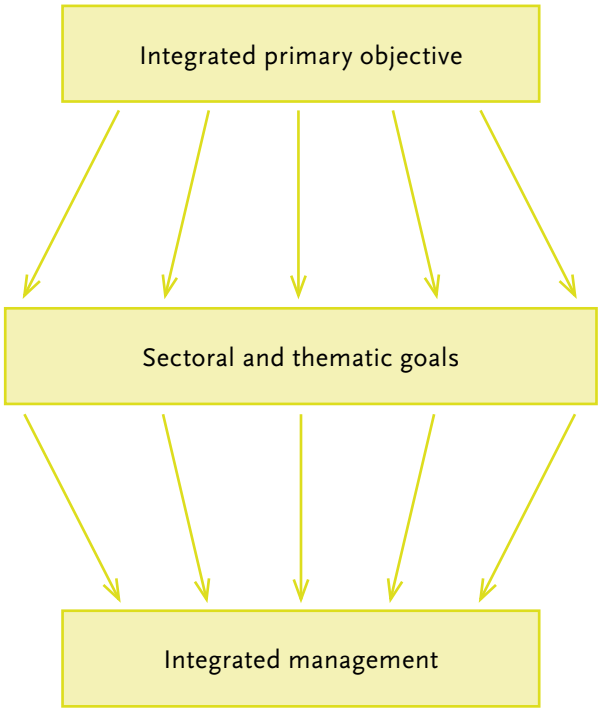


Figure 1.3
From the integrated primary objective to integral management: the double umbrella

1.3 Integrated management: goal and tasks

The integrated primary objective of the policy is a kind of umbrella under which various sectoral and thematic goals are brought together (see Figure 1.3). These more specific sectoral and thematic goals are set out in numerous policy documents and international conventions, each of which has its own angle of approach although there is also common ground. The key is to achieve integration during the process of translation into management so that the entire spectrum of North Sea policy can be fully realised in the most effective and efficient way possible. This is in fact the essence and the primary objective of *IMPNS 2015*.

For the purposes of *IMPNS 2015*, 'management' means responsibility and accountability for the North Sea and for the implementation of North Sea policy. One of the necessary conditions for integrated management is cohesion throughout the entire chain of policy, regulations, implementation, enforcement and organisation. This means that:

- policy, implementation and enforcement should be coordinated. It must be possible to implement, permits must be enforceable, etc. Bottlenecks in

1) The OSPAR Convention focuses on international cooperation to protect the marine environment of the North-East Atlantic Ocean.

implementation need to be detected and escalated to policy level;
- organisations with management tasks should work together where necessary. There are several organisations charged with North Sea management tasks. The activities of these organisations need to be arranged to ensure that those tasks are carried out in a coordinated fashion.

The management tasks aimed at realising the policy goals fall into four categories:

1. Implementation concerns the regulation of use with the aid of permits, drafting and implementation of management plans, incident prevention, maritime emergency assistance, nautical and technical management and coastal defence.
2. Enforcement involves supervision, investigation and prosecution. The goal of enforcement is to maintain or create a specific desired situation as regards the North Sea and its use by influencing behaviour. A particularly important element is the supervision by inspectorates and investigation by each ministry's Special Investigation Officers.

Dolphin

3. Knowledge and information management regarding the ecological situation, safety and profitability of the North Sea feeds policy and contributes to management strategy. Knowledge and information are also made available to users and civil society organisations.
4. Detection and evaluation from the management level entails identifying management practices that can lead to policy adjustments. Practical management experience can also be used to assess the feasibility and enforceability of envisaged policy. Influencing policy for adjoining areas of the sea and rivers can also be considered a management task because the water quality of the North Sea is largely determined by input from outside the management area and pollution by means of atmospheric deposition.

In order to serve users and interested parties optimally, *IMPNS 2015* incorporates the goals of the second Balkenende government as regards improving the quality of public administration. In relation to the North Sea, this entails that managers must:

- be accessible to users and interested parties (i.e. they must work in a public-oriented way);
- be transparent (clear and open so that their example can be followed); and
- promote efficiency (simple regulations and work processes).

1.4 Substantive focus points

The key question in this paragraph is 'Are the management instruments sufficient for carrying out the management tasks and will they enable the objectives to be met?'

This *IMPNS 2015* was obviously preceded by an inventory and an analysis of the current management tasks and instruments, in order to clearly identify where substantive and process-related improvements were needed. The substantive analysis was

divided into three themes: the health, safety and profitability of the sea (see chapters 2, 3 and 4). Generally speaking, North Sea policy and management have a strong international orientation. The tasks that the Dutch managers perform in order to realise the policy objectives differ from theme to theme and are set out in more detail below.

Healthy sea

The policy relating to the health of the North Sea concerns:

- water quality: reducing discharges and emissions in order to ensure clean water;
- biodiversity: maintaining biological diversity and area-specific features.

Research has shown that many water quality targets are not achieved. The water quality of the Dutch part of the North Sea is highly dependent on the quality of the rivers that flow into the sea, on the water quality of neighbouring seas and on atmospheric deposition. Improvement of water quality – certainly desirable in itself – requires national and international efforts. This is an area in which the manager of the North Sea has only limited influence. The manager can exercise direct influence on the small number of instances of discharging that take place in the North Sea by measures such as providing permits. The manager also acts as enforcer to deal with dumping by shipping vessels and has an incident organisation available to limit and prevent damage to the environment when disasters occur. The incident organisation is currently the subject of an improvement programme. With regard to water quality, the North Sea manager has primarily a detection role (knowledge and information, detection and evaluation). The contribution to the river basin management plans for the EU Water Framework Directive has given the manager an important additional instrument for exercising influence with regard to the pollutants that reach the sea via rivers. Taking into consideration the improvements in progress and the new river basin management plans, the management instruments available are generally sufficient.

Biodiversity in the North Sea is also under pressure, from pollution, fishing and other uses. However, the manager has little influence on the use of the sea for fishing because this is largely regulated by the European Commission. Internationally, an ecosystem approach is being pursued; however, the goals are at present too abstract to give direct guidance for management purposes. More concrete ecosystem goals are being developed in the OSPAR context. A pilot project is in progress for the North Sea. The manager is involved in setting the goals of the pilot project and also performs primarily a detection role to assist policymakers.

Area protection is also an element of maintaining biodiversity, which increases the potential for influence from the management level. Policy aimed at protecting area-specific ecological features has grown rapidly in recent years, both internationally (in the context of the EU and OSPAR) and nationally, with the policy set out in the *Spatial Planning Policy Document*. An important function of *IMPNS 2015* is to convert this policy into concrete management instruments. The integrated assessment framework (see chapter 6) makes it possible for the process of providing permits to focus on area-specific ecological features. In addition, *IMPNS 2015* delimits the four areas outlined in the *Spatial Planning Policy Document* that have special ecological features, namely: parts of the coastal waters, the Friese Front, Klaverbank and Doggersbank. These areas are subject to several specific protection provisions (see chapter 7) in addition to the integrated assessment framework for the North Sea as a whole. Regulation of activities that do not require a permit in areas containing special ecological features will receive attention in the drafting of management plans for these areas, once they have been designated in due

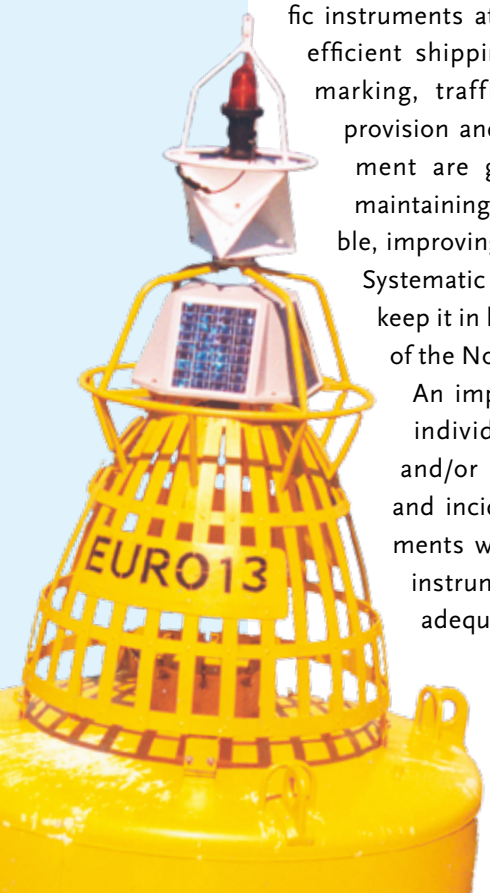
course as special areas of conservation within the framework of the Birds and/or Habitats Directive. However, the cooperation of the European Commission is needed to implement measures for the fishing industry in these areas.

Safe sea

Human safety is central to this theme, and safe (and efficient) shipping is the main focus point. The accident statistics show that the North Sea is a relatively safe sea. No systematic problems in traffic control or safety have arisen in recent years and the number of accidents is still decreasing.

The International Maritime Organisation (IMO) and the EU have an increasing involvement in determining policy on safe shipping. Accidents such as those involving the Prestige and the Erika have had a major impact on policy development. In addition to preventing accidents, the emphasis is on mitigating the effects of accidents on people and the environment.

The nautical managers have a collection of traffic instruments at their disposal to make safe and efficient shipping possible, including waterway marking, traffic services, pilots, information provision and positioning. Policy and management are geared mainly towards at least maintaining the status quo and, where possible, improving the current level of safety at sea. Systematic adjustment of North Sea policy to keep it in line with the other usage functions of the North Sea is essential in this respect. An important option is to optimise the individual instruments for preventing and/or limiting the impact of disasters and incidents to ensure that these instruments work in concert. The management instruments available have proven to be adequate in practice.



Profitable sea

The economic function of the North Sea is central to this theme. The activities that fall under this function include shipping, fishing, extraction of surface minerals, oil and gas extraction, wind energy and recreation. The economic function – with the exception of fishing – is regulated primarily at national level via sectoral policy, which sets out how the sector can best develop within mainly ecological constraints. There is no umbrella policy for a profitable sea, and no system for gathering knowledge and information on the economic development of the North Sea. Recreational use is regulated mainly by provincial and municipal authorities.

In connection with the increasing pressure on the North Sea, the *Spatial Planning Policy Document* presented policy for guiding economic development in terms of spatial planning. The task in *IMPNS 2015* is to work out the details of spatial policy and make sustainable use possible. A spatial analysis (chapter 5) showed that only a few spatial bottlenecks are anticipated in the coming years. The integrated assessment framework and improved management of spatial and economic information provide sufficient tools for managing the use of space.

Conclusion regarding all the themes

The integrated assessment framework for permitting and the specific assessment framework for the protection of areas with special ecological features provide the manager with new instruments for fulfilling management tasks. They also give users greater clarity about the conditions on which activities on the North Sea are permissible. Information management needs to be expanded so that the use of the North Sea can be directed.

1.5 Process-related focus points

Various parts of different ministries share responsibility for managing the North Sea. Several different interdepartemental partnerships have been established in relation to North Sea policy and management:

- The Interdepartmental Directors' Consultative Committee North Sea (*Interdepartementaal Directeurenoverleg Noordzee* (IDON)) addresses strategy development, the formulation of a vision and coordination in policy development.
- Six ministries work together in the Coastguard to carry out several service and enforcement tasks. The Coastguard is managed as follows:
  - Service tasks (nautical management and action in the event of incidents and disasters) are managed by the Minister of Transport, Public Works and Water Management;
  - Enforcement tasks (general enforcement, enforcement of environmental, traffic safety and fishing regulations) are the responsibility of the Permanent Liaison Group for North Sea Enforcement (*Permanente Kontaktgroep Handhaving Noordzee* (PKHN)), in which each of the ministries involved is represented.

A survey of North Sea managers and users carried out within the framework of *IMPNS 2015* revealed that there is still room for a number of process-related improvements.

The coordination between providing permits and enforcement is in need of improvement, as is the coordination between policy and management. There is also a need to strengthen cooperation in the area of management performance, especially with regard to providing permits and information management. If the government improves cooperation in these areas, it will be able to approach the users more clearly and serve them better. The North Sea Management Network will be assigned the task of realising these process-related improvements. This is explained further in chapter 8. The starting point is that the intentions set out in this plan must be realised within the existing ministerial budgets.

Offshore oil production

1.6 Delimitation

Temporal delimitation

The Integrated Management Plan for the North Sea 2015 addresses the developments that are expected to occur in the next ten years. *IMPNS 2015* will be updated in about five years' time. The definitive review period for *IMPNS 2015* will be determined later as it is partly dependent on the way in which the plan structure and the related review periods are arranged in the new Integrated Water Act (*Integrale Waterwet*).

Spatial delimitation

For the purposes of this plan, the North Sea is defined as the Dutch territorial waters (also referred to as the 12-mile zone) and the Exclusive Economic Zone (EEZ) of the Netherlands. These two areas are subdivided into several maritime zones (see Annex 1 Maritime zones in the North Sea, and Map 1 North Sea administrative boundaries). However, some of the factors that affect the North Sea are not limited by administrative boundaries. The most prominent

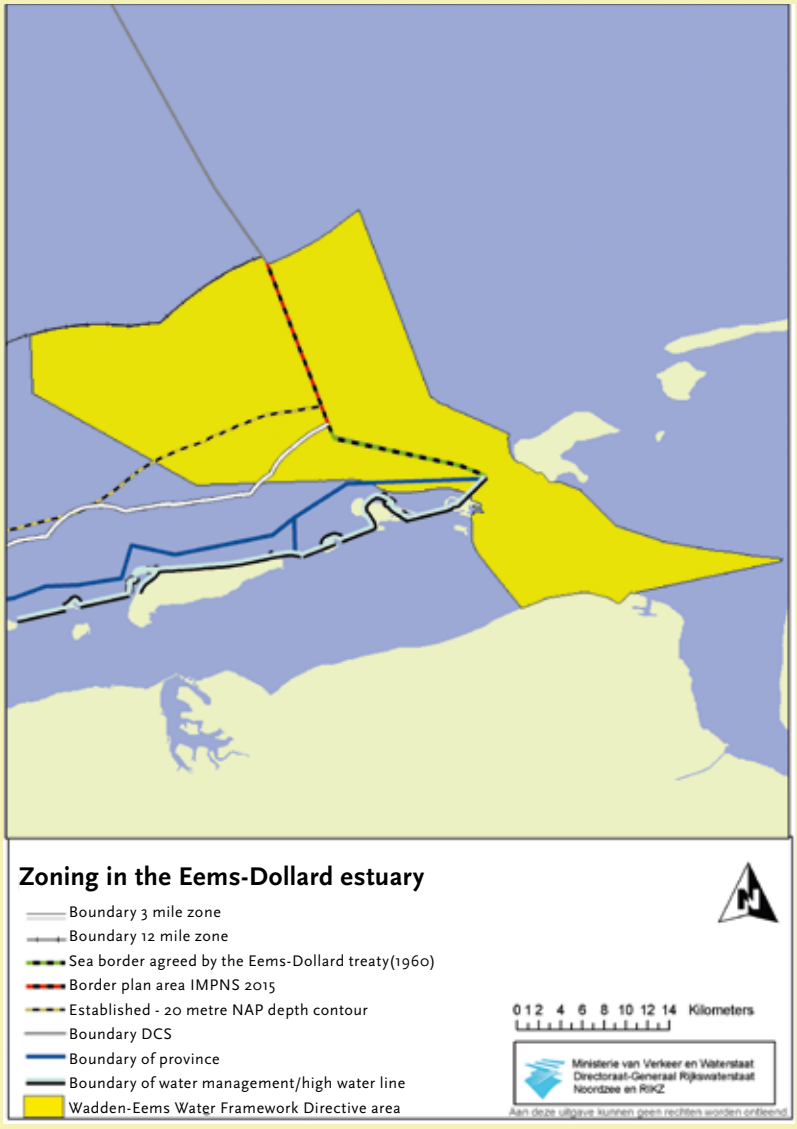


Figure 1.4: Zoning in the Eems-Dollard estuary for the European Water Framework Directive as reported by The Netherlands to the EU. The map illustrates in which area mutual planning with Germany takes place.

German border

This report takes the Netherlands' sea borders with its neighbours into account. However, the sea border with Germany is incomplete. The border agreed by both countries within the 3-mile zone is indicated on *IMPNS 2015* maps as the border. This line is laid down in the Eems-Dollard Treaty (1960). No border has yet been established from the 3-mile zone to the 12-mile zone. This is why for the purposes of *IMPNS 2015* the line was chosen that links the northernmost point of the existing border of the territorial waters with the southernmost point of the agreed border on the continental shelf. This line is marked on the maps as "border *IMPNS 2015* planning area". It is necessary for practical reasons, even though, as has already been stated, there is no agreed border. The practical working agreements between the Netherlands and Germany entail plans and projects in this area being developed in joint consultation between the two countries. The Netherlands is responsible for licensing to the west of the line marking the "border *IMPNS 2015* planning area" and Germany issues licences for activities east of the line. The area for which practical working agreements apply is shown in Figure 1.4.

of these is the input of pollutants and eutrophication substances by means of atmospheric deposition via neighbouring waters and from rivers flowing into the sea. The latter problem is dealt with upstream as far as possible in river basin management plans, as prescribed in the EU Water Framework Directive. Other relevant cases will be addressed in subsequent chapters.

Additional specifications apply to the geographical boundaries of the seabed, water column and air column:

- The boundary for seabed management (no water quality aspects) is the same as the provincial or municipal border. In practice this corresponds to the 1 kilometre line, with minor deviations in the Zeeuwse Delta and at the Wadden Islands. The provincial or municipal boundary is the basis. This is a static management boundary.
- The water management boundary (includes water quality aspects) is the same as the high-water line. This corresponds to the boundary set out in the Pollution of Surface Waters Act (*Wet verontreiniging oppervlaktewateren* (WVO)) and the Marine Pollution Act (*Wet verontreiniging zeewater* (WVZ)). This is a dynamic management boundary.
- The air column is part of the North Sea with respect to flight paths of birds, approach paths of aircraft in military exercise zones, and the air quality as a result of emissions reduction measures for shipping. Commercial aviation and helicopter flights to offshore platforms are not explicitly taken into account. The air column is also important for the height of visible permanent projects, which are prohibited within the 12-mile zone in order to keep the horizon clear.

Legal framework

It is important for management tasks and instruments to be embedded in law. As human use expanded in the EEZ, the scope of statutory instruments needed to be extended accordingly from the territorial waters to the EEZ. Figure 1.5 *Legal frameworks* lists the legislation that applies to the North Sea and identifies the legislation that needs to be

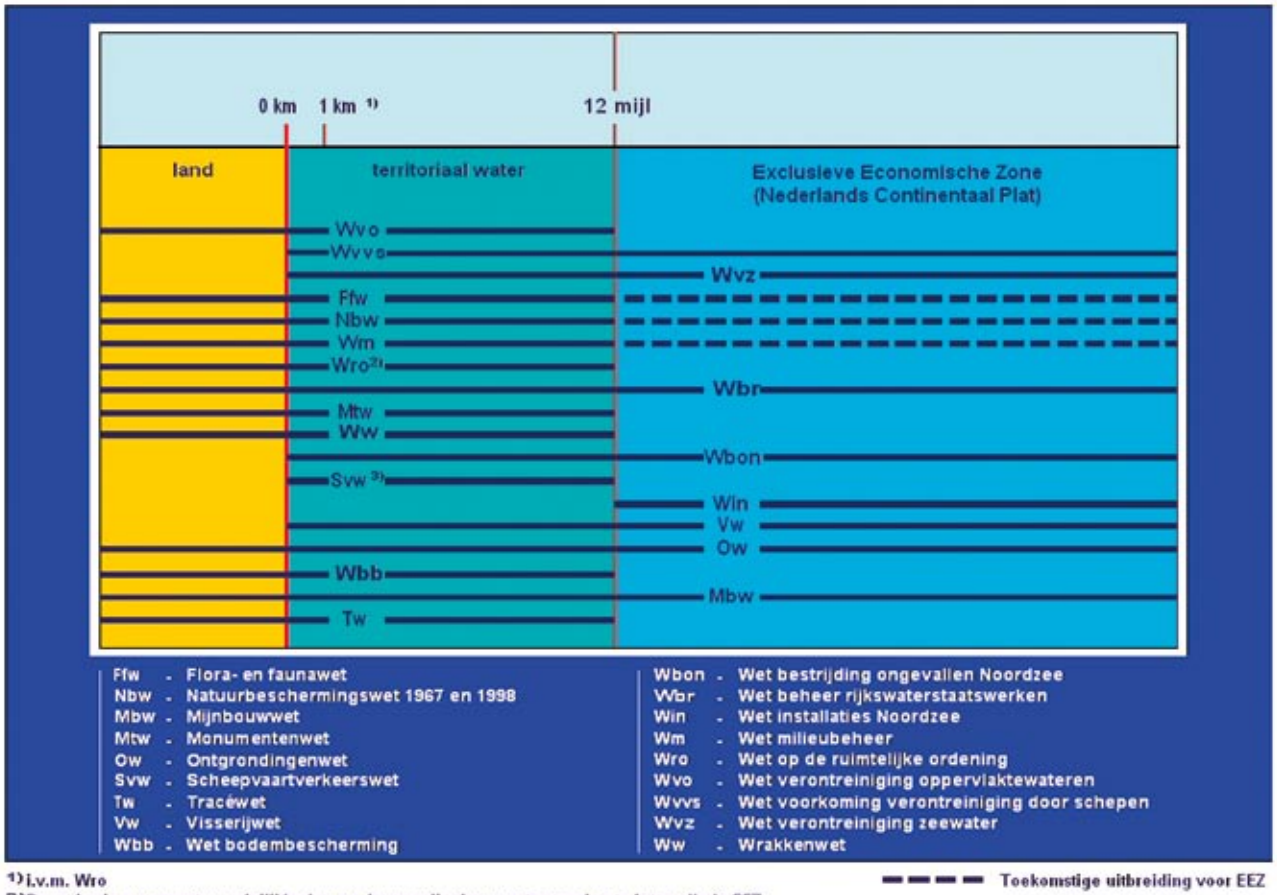


Figure 1.5
Legal frameworks*

**) for translation see Annex 2: Overview and developments in North Sea policy frameworks*

extended to include the EEZ. This extension of the scope of these laws is a development that is running parallel to the *IMPNS 2015*.

2 Healthy sea

Good water quality and biodiversity are factors that determine the health of our oceans. North Sea management can contribute to the health of the sea by curbing illegal discharges and dealing with and preventing disasters. The integrated assessment framework presented in chapter 6 of *IMPNS 2015* gives the manager a new instrument for supporting biodiversity. However, it is a fact that pollutants enter the North Sea system mainly from outside, via rivers and neighbouring seas, and many threats to biodiversity fall outside the North Sea manager's direct sphere of influence. In the years to come, the role of management plans for river basins and protected ecological areas will grow in importance, which will also increase the impact of North Sea management. In anticipation of this development, an important element of the management task is to use knowledge and information to identify problems and put them on the policy agenda.

2.1 Policy objectives

Water quality

The goal of water-quality policy is to prevent and reduce the negative impact that polluting substances and excessive nutrients have on water quality. This can only be achieved by halting or gradually ending dumping and discharges of harmful substances. Ultimately, this should lead to concentrations of naturally occurring substances in the marine environment that are close the background values and the virtual absence of manmade synthetic substances. Standards for providing permits have been established to achieve this policy objective. However, most pollutants reach the North Sea via the rivers, neighbouring waters and the air, which means that North Sea management can have only limited direct impact on water quality.

Biodiversity

One of the primary objectives of international and domestic North Sea policy is to preserve biodiversity in the North Sea. An ecosystem approach is needed to achieve this goal. This approach entails adapting use of the North Sea to what the ecosystem can support. A certain degree of disruption by human use is acceptable. Disruption is defined here as loss of fauna; noise, light and visual disturbances;

Scaup

opacification and changes in sediment. Two routes are being pursued in the ecosystem approach:

- formulation of ecological quality targets (Bergen Declaration, 2002) – quantitative if possible – for the general quality of the North Sea, and basing use on those targets;
- protection of species and area-specific features.

The 'precautionary principle' and the 'standstill principle' remain important elements for achieving the objectives for water quality and biodiversity. On the one hand, this can mean no (new) activities on the North Sea if nothing or too little is known about the potential negative effects of an activity. On the other hand, concentrations of harmful substances must not increase in the North Sea.

Policy frameworks

The ecological quality of the North Sea system is under pressure from intensive fishing and other activities and from the input of pollutants and eutrophication substances from rivers. International cooperation is needed to solve these problems. The North Sea Ministers Conference (NSMC), in which the European Commission is represented, provides political guidance for international North Sea policy. The OSPAR convention is also an important international framework for the development of policy and regulations for the North Sea because OSPAR gives a concrete form to the agreements reached during the NSMC. Annex 2 contains an exhaustive list of all the relevant international and national policy frameworks. In addition to the ones mentioned above, the following frameworks are of particular importance to North Sea management:

- EU Directives:
  - Water Framework Directive (WFD);
  - Birds and Habitats Directives (BHD);
  - Port Reception Facilities Directive (PRF);
- Conventions of the International Maritime Organisation (IMO);
- Fourth Policy Document on Water Management (NW4);
- Progress Report on Shipping and the Environment (SVM);
- Nature for People, People for Nature (*Natuur voor mensen, mensen voor natuur* (NMMN)).

2.2 Management tasks and instruments

The North Sea managers share responsibility for achieving the objectives ensuing from national and international agreements with other parties, such as river managers. The Ministry of Transport, Public Works and Water Management is primarily responsible for water quality and the Ministry of Agriculture, Nature and Food Quality is primarily responsible for the ecological objectives. The managers are charged with tasks in the following areas:

- implementation;
- enforcement;
- knowledge and information management;
- detection and evaluation.

Although the management tasks required to ensure biodiversity and good water quality are inextricably related, the emphasis is different. The instruments for water quality management are therefore described first, followed by the instruments aimed specifically at biodiversity.

2.2.1 Water quality

Regulating use: providing permits, exemptions and covenants

Providing permits is an important instrument for regulating use. Managers' issue permits to sectors and/or companies that discharge directly into the sea. The effects of agreements such as those made within the OSPAR framework are usually incorporated in the permits. Managers also give exemptions

Archaeological features

Licensing carries an obligation to preserve archaeological features and information about such features in accordance with the Treaty of Valletta (Malta). This treaty is currently being incorporated into Dutch law with the amendment of the 1988 Monuments and Historic Buildings Act (*Monumentenwet 1988*). Archaeological aspects are receiving attention in the environmental impact studies that are part of the licensing process. In addition, the 1988 Monuments and Historic Buildings Act currently states that items found during work that it is reasonable to assume are of cultural-historical value must be reported to the National Service for Archaeological Heritage (*Rijksdienst voor het Oudheidkundig Bodemonderzoek* (ROB)). Specific provisions apply to the removal of wrecks (see chapter 3). RWS and ROB have a cooperation agreement for performing their own work[2]. The chances of archaeological finds are greater in some areas of the North Sea – particularly the Voordelta and the adjacent banks – than in others.

Figure 2.1 Archeological values in bottom of the North Sea (source: North Sea Atlas)

for the disposal of dredgings in the sea if the dredgings are clean enough. Dredgings that do not meet the quality requirements must be taken to a disposal site on land.

Use can also be regulated by means of covenants, i.e. agreements between the government and the business sector within the framework of what is referred to as "target group policy". The Ministers of Economic Affairs; Transport, Public Works and

2) The cooperation agreement is entitled "Samenwerkingsovereenkomst RWS-ROB inzake archeologisch onderzoek en vondsten bij de uitvoering van werken 1987" ["Cooperation agreement between RWS and ROB concerning archaeological research and finds made during work 1987"]. This agreement is currently being reviewed in connection with the ongoing amendments to the 1988 Monuments and Historic Buildings Act. The agreement implies that RWS will carry out or contract someone else to carry out a preliminary investigation as early as possible in its own (infrastructure) projects to determine whether archaeological features are present.

Water Management; and Housing, Spatial Planning and the Environment are parties to the Oil and Gas Covenant, which came about in part because the government felt it was desirable for the oil and gas industry to accept responsibility for reducing the environmental impact of its activities. Under the covenant, companies are expected to take the initiative to reduce the environmental impact of drilling activities and the necessary structures and systems.

River basin management plans

One of the objectives of the EU Water Framework Directive is to help protect territorial and marine waters. This Directive has given RWS North Sea an important legal instrument for controlling and curbing the spread of chemical pollution through rivers. As a result of this Directive, binding chemical quality targets for priority harmful substances will apply from 2009 with respect to our territorial waters. These objectives must be incorporated into the policy for providing permits for discharging within the framework of the Pollution of Surface Waters Act (*Wet verontreiniging oppervlaktewateren* (WVO)). Ecological environmental quality objectives specifically for coastal waters (water and seabed within the one-mile zone) will come into force and must be incorporated in the policies for providing permits based on the Pollution of Surface Waters Act and the Public Works (Management) Act (*Wet beheer rijkswaterstaatswerken* (Wbr)).

In compliance with the obligations ensuing from the EU Water Framework Directive, river basin management plans are currently being developed and are expected to be completed in 2009. The North Sea managers are working closely with other water managers (water boards and provincial and municipal authorities) on these plans. A river basin management plan includes a description of the condition of the water system and a monitoring programme. It will also contain a list of measures for meeting the objectives of the Directive up to 2015. All the measures must be implemented that a manager can reasonably be expected to take in respect of the sources under the manager's management.

Map 3 shows the catchment areas of the rivers that flow into the Dutch part of the North Sea. Map 4 shows the bodies of water within the Netherlands and the territorial waters.

Incident organisation

The incident organisation is available twenty-four hours a day. Its tasks include preventing incidental spills into the sea of substances that can harm the environment. The elements of the process chain are detection, assessment, action and aftercare. 2005 will see the adoption of a new so-called Capacity Policy Document describing how environmental disasters are dealt with on the North Sea. Risks and ecologically or economically vulnerable areas are important factors for determining the prevention capacity required. The OCTOPUS multi-year programme is intended to make the incident organisation efficient and effective, and to ensure that it acts in line with the disaster organisations of the coastal services of the Directorate-General for Public Works and Water Management.

Oil spill removal exercise

Enforcement

Enforcement tasks include supervision, investigation and prosecution of companies, installations at sea and ships. Companies and installations are monitored for compliance with dumping or discharging requirements imposed by their permits in accordance with the Pollution of Surface Waters Act and the Mining Act (*Mijnbouwwet*).

Ships are monitored within the framework of the Pollution Prevention (Shipping) Act (*Wet voorkoming verontreiniging door schepen*, Wvvs). The Shipping Division of the Transport, Public Works and Water Management Inspectorate (*Inspectie Verkeer en Waterstaat*, *Divisie Scheepvaart*) is responsible for enforcement in the ports. RWS North Sea carries out aerial surveillance in cooperation with the Coastguard. Ships and offshore installations are inspected from the air to determine whether they are illegally discharging oil or other pollutants. The manager ensures that the polluter cleans up the pollution and, to the extent possible, is held liable for the costs incurred. The Public Prosecution Service prosecutes those who commit criminal acts.

Coastguard ship "de Waker"

Inspection by coastguard plane

Knowledge and information management

Information about the following topics is gathered to ensure that the management of the North Sea is well balanced:

- the ecological system, including its dynamic;
- changes in this system caused by human activity (pollution, eutrophication and disturbance);
- expected developments;
- effects of management measures.

It is necessary to gather this information about the area under management, have it available and keep it up to date. Physical information is obtained from a fixed monitoring network; chemical and biological information is obtained from a mobile monitoring network (ships) or from aerial inspections (aircraft). Alongside the managers, various sectors of industry are also involved in monitoring. For example, the offshore mining sector regularly measures emissions from installations. The resulting data is used for management plans and integrated reporting on the changes in the condition of the sea. In concrete terms, this means for example that the pollution or eutrophication situation is assessed against the prevailing water quality standards.

The analysis of management instruments revealed that there are gaps in the monitoring of substances and nutrients, among other things. Nationwide, a lot of work is being done to bring the existing monitoring programmes into line with the requirements of the Water Framework Directive because ready knowledge of the ecological condition of the sea is essential for detecting problems. In addition to the

Measurement equipment

Water Framework Directive, the OSPAR obligations give a good indication of what needs to be done in terms of monitoring.

Information and knowledge transfer

RWS North Sea supports information and educational projects, such as the 'Polluted Fish' (*Vuilvis*) and 'Beach Litter' projects, both of which are carried out by private parties. Both projects aim to encourage society to deal with waste more sensibly and in so doing to reduce the volume of litter. The ProSea foundation provides various sectors with information about marine ecosystems. The website **www.noordzeeloket.nl** includes information for civil-society sectors, the business sector and private citizens about policy and regulations regarding activities on the North Sea.

Detecting new problematic substances

In addition to regular measurements, incidental pollution measurements or surveys are taken. For example, studies are conducted into possible new problematic substances. These activities have revealed the presence in the North Sea of substances such as flame-retardants and softening agents – both known for their potential hormone-disrupting effects – of which the source is very likely land-based. There are no legal value limits for these substances. However, with a view to the standstill principle, it is necessary to monitor the development of these substances in the North Sea and, where possible, take preventive measures. In addition to 'known' substances, a large number of unknown substances also reach the North Sea. Combating these problems falls largely outside the scope of North Sea management. From the perspective of North Sea management, the impact on the marine environment will be charted in order to determine whether it is desirable and necessary to take measures.

Detection and evaluation

Information about the condition of the North Sea and the impact of use is reported at national and international level and used in policy development. The North Sea managers are actively involved in the preparation of measures for improving water quality. The EU Water Framework Directive, the OSPAR Convention and the IMO Convention are important forums.

A specific focus point for the North Sea manager is the coordination between OSPAR and the Water Framework Directive in the coastal zone, which has a knock-on effect on the river basin management plans that are to be drafted. Although both frameworks aim to improve the water system, the specific objectives and yardsticks regarding pollution and ecology are not yet well matched. Furthermore, the scope of the Water Framework Directive is limited. Whereas OSPAR covers the entire North Sea, the chemical objective of the Water Framework Directive applies only up to the 12-mile zone and the ecological objectives apply only up to the one-mile zone. The approach of the Water Framework Directive makes it extremely suitable for tackling the river input into the North Sea (river basin strategy); by contrast, OSPAR is better suited to regulating pollution from neighbouring marine areas and sea-

related activities. Good coordination between these two frameworks is important for effective management in the interests of a healthy sea.

2.2.2 Biodiversity

Regulating use

The aim of subjecting the development of economic activities at sea into permits is to minimise the impact on the ecosystem. Depending on the scope of an activity it may be subject to an Environmental Impact Assessment, of which research into the effects on the ecosystem is an important part. If necessary, limiting measures can be taken on the basis of the impact assessment. Environmentally friendly techniques are also mandatory for activities that are not subject to an Environmental Impact Assessment. However, the integrated assessment framework for permitting gives the manager new possibilities for protecting ecological features. Any negative effects of an activity must first be limited (mitigated) by appropriate measures. Significant effects on ecological features must be compensated for (see chapter 6).

Management plans for SACs

Specific management plans must be drafted for the special areas of conservation (SAC) under the Birds and Habitats Directives and for the Marine Protected Areas (MPA) to be designated under OSPAR. These plans will describe conservation objectives and the measures necessary to achieve them. In any event, the management plans must include a description of the anticipated results regarding the conservation and recovery of natural habitats and species, an overview of necessary measures and an overview of the financial-economic consequences. Management plans need to come into force within three years after the area has been granted SAC status. For OSPAR, 2010 is the target year for achieving a functioning network of MPAs. A single plan might suffice for all areas within the EEZ.

To the extent necessary, these management plans will also contain measures for activities that do not require a permit. The manager requires the cooperation of the European Commission to take fishing measures. Management plans will be completed in 2008 for the already designated areas (the Voordelta and the coastal waters north of Petten). The plans for the areas in the EEZ are expected to be ready in 2011. A marine reserve is to be created in the Voordelta as impact compensation for the Tweede Maasvlakte.

The management plans system for the SACs differs from that of the EU Water Framework Directive. It is important for managers to ensure that these management plans are harmonised and feasible in practice.

Incident organisation

The improvement programme referred to in section 2.2.1 for the incident organisation OCTOPUS includes mapping ecologically vulnerable areas, so that the organisation can be prepared to deal with any incidents there. Maps of vulnerable ecological areas of the sea and the coastal zone will be available in 2005 (project SENSMAPS).

Knowledge and information management

The monitoring activities are described above in section 2.2.1. By order of the Directorate-General for Public Works and Water Management (*Rijkswaterstaat*) and the Ministry of Agriculture, Nature and Food Quality, several institutes are systematically gathering data on every group of species (birds, fish, seabed fauna and marine mammals) inhabiting the North Sea. The data have been used in the research being conducted to further demarcate areas containing special ecological features. This has produced a clear picture of the area-specific

features of the North Sea for management purposes. Various institutes and managers are also gathering specific ecological information in particular for projects such as the Tweede Maasvlakte (extension of the Maasvlakte).
The requirement to monitor SACs will be set down in detail in the coming years.

Detection and evaluation

The various North Sea managers also use their knowledge of the sea's condition and management practices to actively assist in the development of biodiversity policy at the national and international level. The main framework for biodiversity is OSPAR, but policy is increasingly being made within the EU context.

2.3 Developments

At this time, several developments are occurring at national and international level that affect management of the North Sea or that could require management action.

European Marine Strategy (EMS)

In 2002 the European Commission took the initiative to develop a Thematic Strategy for the protection and conservation of the European Marine Environment. At European environment councils in 2003 and 2004 member states expressed their support for the EMS. In 2004, specific support was expressed for the findings of the second European Marine Strategy Stakeholders Conference, which was held in Rotterdam during the Dutch presidency of the EU.

The EU Environment Council asked the European Commission to create an umbrella strategy, in addition to the existing regional marine conventions, e.g. OSPAR, that would guarantee the sustainable use, management and protection of all European seas in the future. The Commission was also asked as part of this strategy to produce a flexible instrument to take growth and developments into account. The aim is to preserve for current and future generations the vast diversity of the marine environment in oceans and regional seas that are at the same time safe, healthy, clean and productive. These conclusions of the EU Environment Council represent an important step on the path to an effective European Marine Strategy. The strategy is expected to be presented to the member states for a decision in mid-2005. The European Commission will then explain the status and possible additional regulations in this area.

Protection of ecological areas

The EU Environment Council decided in 2004 that the special conservation areas for the marine environment (under the Birds and Habitats Directives) should be designated in 2008. The European Commission is expected to present more detailed guidelines for applying the Habitats Directive to the marine environment in mid-2005.

The registration of the new Dutch areas is planned for 2006 (see chapter 7). The preparation of management plans for these areas will begin in the next few years. The scope of the Nature Conservation Act (*Natuurbeschermingswet*) and the Flora and Fauna Act (*Flora- en faunawet*) will be expanded to include the entire EEZ for the purpose of regulating use of the future SACs.

Linking usage functions to ecological goals

The international Ecological Quality Objectives (EcoQOs) have been developed as operational instruments in the ecosystem approach (Bergen Declaration, 2002). EcoQOs are based on indicators that show a link between the impact of major usage functions and the ecological quality objectives to be realised. EcoQOs are intended to show whether (additional) measures are needed to regulate use.

The pilot project will be presented to the OSPAR Commission for a decision in mid-2005.

EcoQOs can be viewed partly as an elaboration of the national ecosystem objectives, which should now be based on the EcoQOs. The policy document "Nature for People, People for Nature" ("*Natuur voor mensen, mensen voor natuur*") published in 2000 formulates the ecosystem objectives for the North Sea (see annex 5). Together with the EcoQOs, these ecosystem objectives form a general framework for the entire North Sea, including the areas where there are special ecological features.

Shipping

Due to the efforts of the Netherlands, global regulations for the bulk transport of noxious liquid substances other than mineral oil were tightened by the International Maritime Organisation (IMO). This led to the revision of Annex II of the MARPOL 73/78 Convention (MARPOL stands for "marine pollution"). Within the revised regulations, the qualitative and quantitative standards for discharge of all liquid noxious substances were tightened to take into account advances in technology and science. The amended regulations will come into force all over the world on 1 January 2007. In addition, several technical annexes to the convention have been or are currently being tightened up, including by reducing the permitted volumes for discharging. Furthermore, new instruments have now been developed that will come into force during the period covered by the plan: regulations for (treating) ballast water and a ban on paint systems containing biocides.

Ship discharging ballast water

Air quality

Annex VI of the IMO MARPOL Convention on the prevention of pollution from ships sets out emissions standards for the ocean shipping industry. This Annex regulates emissions of SO2, NOx, VOCs, (H) CFCs and halons, as well as regulating marine fuel quality (including the sulphur content and the monitoring thereof). These regulations are implemented in the Netherlands in a new decree under the Prevention of Pollution from Ships Act (*Wet voorkoming verontreiniging door schepen* (Wvvs)). The current amendment of the so-called Marine Fuel Sulphur Directive will introduce more stringent standards for emissions from ships.

Clean Ship

The clean-ship concept for marine shipping is being worked out in detail in preparation for the North Sea Ministers Conference in 2006. The aim is to achieve ocean shipping that has virtually no impact on the marine ecosystem. The concept takes the entire lifecycle of a ship into account. Several topics are currently being addressed in detail:

- reduction of rules and severe reduction of the administrative burden;
- development of initiatives and creation of financial structures (e.g. funds);

- raising environmental awareness throughout the sector.

Port reception facilities

Under the Prevention of Pollution from Ships Act (*Wet voorkoming verontreiniging door schepen* (Wvvs)), all ships are required to deliver their ship-generated waste before leaving port (Port Reception Facilities Directive). In addition, a fee must be paid whether or not they actually do deliver their waste. Currently, captains are required to pay an additional amount if they actually deliver some or all of their waste. The Minister of Transport, Public Works and Water Management aims to have a system in operation within five years in which:

- captains can deliver all ship-generated waste for the compulsory fee;
- a surcharge must be paid for excessive waste, i.e. volumes of waste that could not have been generated by normal operations.

Illegal dumping or discharging of oil and chemicals

The 2005 North Sea Enforcement Policy Plan (*Beleidsplan Handhaving Noordzee 2005*) sets out measures for investigating ways to prevent ships from illegally dumping or discharging oil and chemicals. The aim is to increase the chance of catching out illegal dumpers by increasing compliance and thus reducing illegal dumping. The measures involve linking databases with control data maintained by Coastguard partners, Rotterdam Municipal Port Management, the Shipping Inspectorate and Customs. The resulting information can be used to construct profiles of offenders that make it possible to increase the effectiveness of inspections. Furthermore, third parties and Coastguard partners can exchange reports and new technologies can be deployed.

Sanction directive

An EU directive is being developed to allow criminal and administrative sanctions to be imposed on people responsible for illegal dumping at sea. Not only will ships' crews be subject to sanctions, but other perpetrators throughout the chain can be held accountable as well. The latter measure is necessary in the event that – for example – a ship in trouble is refused assistance or access to a port, which results in (further) environmental pollution.

2.4 Conclusions

The central question in this section is whether the management instruments described above and the developments in progress will adequately equip the manager for the tasks involved. The general conclusion is that policies and management instruments are available or in development that will limit the impact of all usage functions on water quality and biodiversity. There is an increasing international dimension to tackling pollution at the source. OSPAR and the EU play key roles in that international dimension. This policy, which in many cases was introduced many years ago, has already led to significant improvements in the quality of the North Sea ecosystem.

However, there is still a long way to go to fully achieve the objectives for a healthy sea, according to the OSPAR Quality Status Report 2000 (OSPAR, 2000) and the report 'Signals from the North Sea' ('*Signalen uit de Noordzee*') (2003). Commercial fishing and other uses disturb life on the seabed, which is at odds with the development of a healthy sea. Noise, light and other traces of human activity can also disturb and harm the natural environment – in particular the fauna.

Spawning stocks of several commercial fish species have come under pressure in recent decades. Large quantities of nutrients and pollutants are still entering the North Sea from rivers, neighbouring waters and the air (see figures 2.3, 2.4 and 2.5).

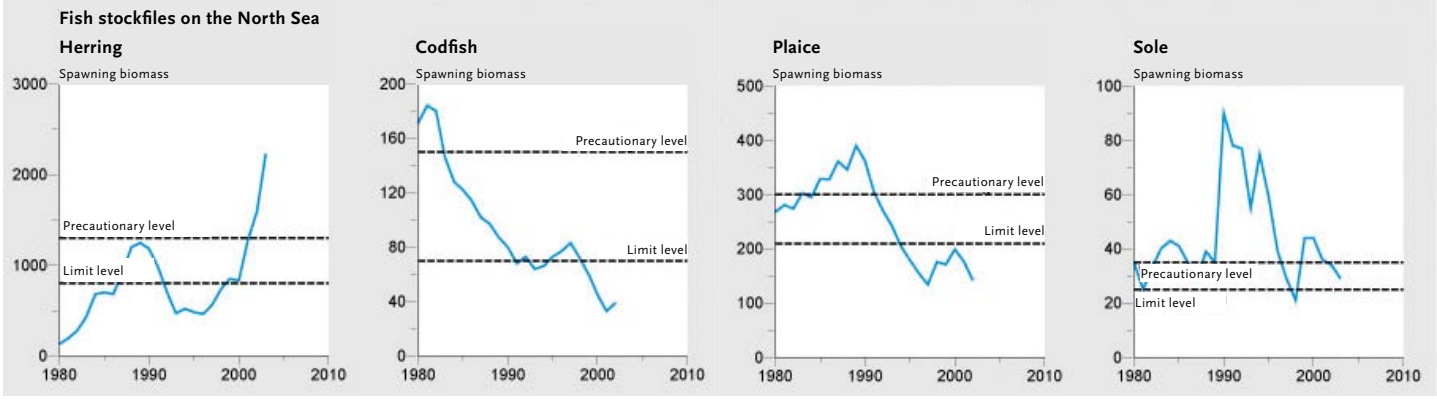


Figure 2.2
Fish stockfiles on the North Sea (Source: ICES, 2003)

Unlike the emission reduction objective for phosphate, the objective for nitrogen has not yet been realised. Concentrations of pollutants in the North Sea fell dramatically in the 1980s and 1990s, but it seems that the decline has stagnated. In fact, increases have been observed for some substances, such as polycyclic aromatic hydrocarbons and fire retardants. These developments impel the North Sea manager to stay alert to potential risks to the health of the sea.

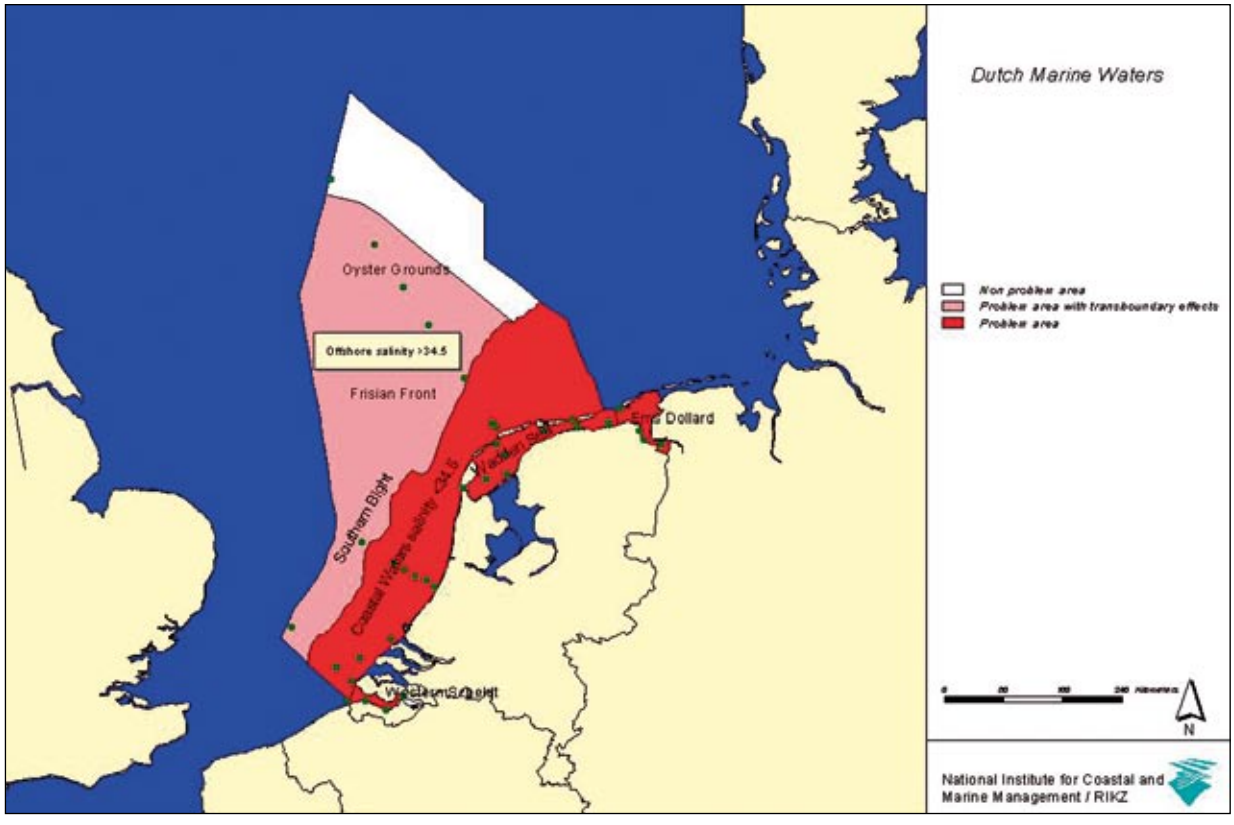


Figure 2.3
North Sea problem areas for eutrophication based on the Comprehensive Procedure of OSPAR (OSPAR, EUC, 2002)

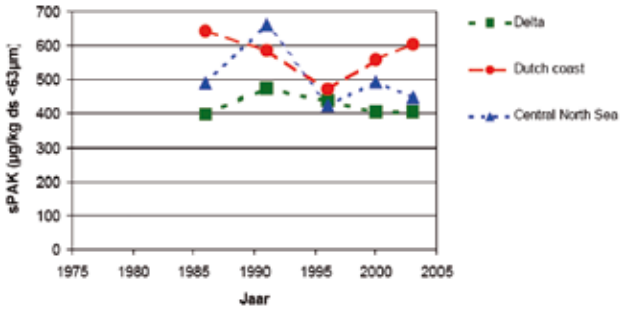


Figure 2.4 Trends of PAHs concentrations in the North Sea sediment (Hegeman and Laane, 2004)

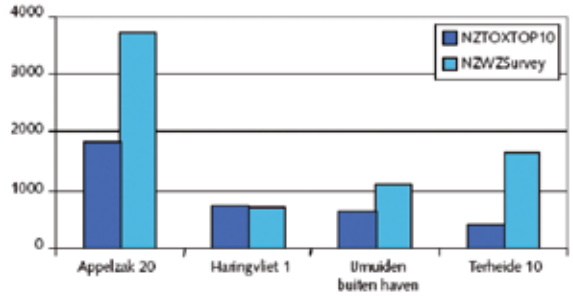


Figure 2.5 Concentration of polybrominated diphenyl ethers 209 (BDE209) in sediment of the North Sea coastal zone in 2000 (NZTOXTOP10) and 2003 (NZWZSurvey) (µg/kg OC), (Åkerman, et al, 2004).

The problems set out above are also acknowledged within the European Union and are explicitly addressed in the European Marine Strategy (EMS). In the years to come, much attention needs to be focused on the development of management plans for both the Water Framework Directive and the Birds and Habitats Directives in order to create valuable new legal instruments for North Sea management.

Water quality

The threats to water quality can be directly addressed only in part within the framework of North Sea management. With respect to water quality, the manager's role is therefore primarily to detect problems: monitoring, reporting, investigating new problematic substances and putting the problems on the agenda of policymakers and upstream river managers are extremely important activities. By means of the river basin management plans for the Water Framework Directive, the North Sea manager can work with upstream river managers to curb emissions in the North Sea. However, meeting the obligations ensuing from the Water Framework Directive currently requires such an intense effort from all the parties involved that the attention on investigating new problematic substances and the application of the 'standstill principle' are under particular pressure.

In addition, enforcement and incident organisation (for which major improvements are being prepared) are still very important in the fight against illegal dumping and disasters.

Biodiversity

The protection of areas containing special ecological features and the protection of endangered species and their habitats are important paths towards preserving the biodiversity of the North Sea system. The integrated assessment framework presented in chapter 6 of this *IMPNS 2015* enables the manager to protect area-specific ecological features because significant effects on the entire North Sea system must be limited and, if necessary, compensated for. Furthermore, a stricter protection regime will come into force for areas containing special ecological features, which are defined in chapter 7. The management plans for the special areas of conservation under the Birds and Habitats Directives are additional instruments for the manager.

The availability of national ecosystem objectives has given the ecosystem approach a significant impulse. However, these ecosystem objectives need to be made more concrete and implemented to provide direction for management and policy. This can be partly achieved by the EcoQO pilot. If the results of the EcoQO pilot give the OSPAR ministers cause to apply these quality objectives in policy as well, an important instrument for detection and influencing policy will become available to the manager.

Fishing

The approach to dealing with the impact of fishing must be achieved mainly by implementing the Common Fisheries Policy as revised in 2003. With

the intended ecosystem approach and the Ecological Quality Objectives as the starting point, measures are needed to reduce fishing intensity, using selective fishing techniques for beam trawling (pulse trawl) and gill net fishing (pinger on nets), and closing off areas (areas adjacent to plaice nursery grounds). The manager has only indirect influence on these issues. The European Commission's cooperation in the formulation of the management plans for special areas of conservation (SAC) under the Birds and Habitats Directives will be very important in the coming years.

3 Safe sea

The North Sea is one of the busiest seas in the world. Safeguarding the smooth and safe flow of shipping traffic is therefore one of the primary objectives of North Sea policy. A range of management instruments is available to promote shipping safety. These instruments generally function well in practice. The most important task is to ensure that this remains so, and to tackle the few specific problems that remain. Coastline conservation and safe bathing water are also important focus points for a safe sea. The current management instruments work well across the board in these areas too. The 'dynamic conservation' coastal policy is being evaluated in 2005. Furthermore, bathing water quality will be managed more efficiently and the causes of pollution will be dealt with.

3.1 Objectives of the policy

The policy areas resorting under 'safe sea' are shipping, coastline conservation and safe bathing water. The most important policy frameworks for these areas are (see annex 2 for a comprehensive list):

- Policy Document on North Sea Shipping Traffic and the Progress Report on Shipping Traffic in the North Sea;
- Third Coastal Policy Document;
- European Bathing Water Directive.

Shipping

The primary objectives of shipping policy are:

- to create the conditions necessary to foster the smooth and safe flow of shipping to and from Dutch ports;
- to take responsibility for careful balancing of shipping interests with the other North Sea usages;
- to create conditions for safe shipping traffic along the Dutch coast.

These primary objectives are reflected in more detail in the following operational targets:

- the number of significant shipping accidents in 2010 and 2020 should be reduced to under 25 per year by introducing permanent improvements;
- the maintenance of shipping routes should lead to a shipping route profile that complies with the requirements almost permanently (98% of the time).

Coastline conservation

The main goal of coastline conservation is to guarantee the safety of primary dikes in the coastal area. This goal will be considered attained when the coastline is protected and the standards set out in the Flood Defences Act (*Wet op de waterkering*) are met. The latter objective, however, is not part of *IMPNS 2015*.

Beach nourishment

What is important for *IMPNS 2015* is the more operational goal of maintaining the basic coastline and the sand balance in the coastal system: the coastal system as a whole should not suffer any systematic loss of sand. Consequently, no sand may be extracted inside the established NAP -20 m depth contour (NAP is a standard water level). This line is embedded in the *Spatial Planning Policy Document* and the *Second Regional Extraction Plan of the North Sea (RON 2)* as the seaward boundary of the coastal foundation. The established NAP -20 m depth contour + 2 km is the boundary for deep sand extraction.

Use of space by the military

The North Sea is important to the military. The objective of spatial policy as regards military exercises is to ensure the military has sufficient territory in the Netherlands, including the North Sea. The military's spatial requirements are laid down in a separate key planning decision: the Second Structure Plan for Military Areas (*Tweede Structuurschema Militaire Terreinen*). That plan indicates the firing and exercise areas on and above the North Sea and the Wadden Sea. When not being used for military exercises, these areas are used for other activities if possible. There are also a number of dumping grounds for munitions in the North Sea, where primarily old stocks are deposited. There has been a ban on munitions dumping in effect for a long time now. Military use of these areas is not part of *IMPNS 2015*. During firing exercises from shore, munitions land in the sea. A licence under the Pollution of Surface Waters Act is needed for such exercises (see also chapter 6).

Safe bathing water

Ensuring the safety of the bathing waters near the coast is the main goal. To this end, the quality of bathing water is monitored and assessed against legal standards.

3.2 Management tasks and instruments

Central government's management tasks within the context of a safe sea fall into four categories:

- nautical management (3.2.1): creating conditions for smooth, safe and environmentally friendly traffic on the Dutch Continental Shelf and the access routes to and from the ports;
- Technical management (3.2.2): maintaining the infrastructure;
- Coastline conservation (3.2.3): preserving the sandy coastal system;
- Safe bathing water (3.2.4): monitoring the water quality and providing permits for direct discharges into the sea (on the basis of the Pollution of Surface Waters Act).

The Coastguard services carry out enforcement tasks on the North Sea. Every year, the Interdepartemental Permanent Liaison Group for Enforcement in the North Sea (*Interdepartementale Permanente Kontaktgroep Handhaving Noordzee* (PKHN)) incorporates the relevant enforcement objectives in the Enforcement Policy Plan for the North Sea (*Beleidsplan Handhaving Noordzee*). These objectives cover the following areas:

- General enforcement: customs, border control, general policing;
- Traffic and safety: enforcement, legislation, shipping traffic and equipment on ships;
- Enforcement of environment and fisheries laws.

Ports

In the ports, the enforcement tasks aimed at maritime shipping are carried out primarily by the Transport, Public Works and Water Management Inspectorate[3] (e.g. within the framework of Port State Control) and the Netherlands Police Agency (*Koninklijke Landelijke Politie Dienst* (KLPD)). In addition to general enforcement tasks, quality, equipment and the requirements for crews of ocean-going ships are the main focus points.

3.2.1 Nautical management

The Shipping Traffic Act (*Scheepvaartsverkeerswet*) prescribes which competent authorities (so called National Harbour Masters (*Rijkshavenmeesters*)) are responsible for the nautical management of the national shipping routes. In the approach areas to the seaports, the competent authorities are the Directors (*Hoofd ingenieur-directeur*) of RWS North Netherlands and RWS Zeeland, the Commander of the Royal Netherlands Navy, the director of the Municipal Port Authorities of Amsterdam and the director of the Port Authority of Rotterdam. The director of the Coastguard is responsible for nautical management outside the approach areas on the North Sea.

Traffic on the North Sea is very busy. Figure 3.1 shows the shipping traffic density. A range of instruments is available to the managers for facilitating the smooth and safe passage of all this shipping traffic on the North Sea (nautical management). These instruments are described below.

Traffic regulations

The (desired) traffic behaviour ensues primarily from compliance with the traffic and conduct regulations, as laid down in the International Regulations for Preventing Collisions at Sea. These rules are supplemented with the regulations laid down in the Shipping Regulations for Territorial Waters.

Routing, clearways and safe areas

Internationally adopted routing systems for shipping play an extremely important role on the North Sea, not only for planning shipping traffic, but also in coordinating shipping with other usages. The internationally adopted traffic separation schemes for passing shipping traffic and in the approach areas to the larger sea ports provide an important basis for keeping traffic flows separate. The traffic separation schemes are not obligatory outside territorial waters. However, since mid-1997, it has been made obligatory for larger (cargo-carrying) oil, chemical and gas tankers to use the deep-water route situated further out from the coast. As a result, shipping traffic on the route near the Wadden islands has decreased and the deep-water routes have become a lot busier. This has had a positive impact on the vulnerable Wadden area.

Partly because of the new mining legislation, all routing measures for the North Sea have now been incorporated into a system of clearways. It is not permitted to build, place or erect artificial islands, installations, constructions, etc. in a clearway. The 500-metre safety zones around mining activities are also applied around wind farms. Shipping traffic, including for fishing and recreational purposes, is not permitted inside these safety zones.

Positioning systems

Satellite positioning and satellite navigation are quickly replacing terrestrial radio positioning systems and waterway marking at sea. The worldwide Global Positioning System (GPS) is now widely

3) The Port Management Authorities also carry out enforcement tasks

Positioning a buoy

used for general navigation purposes. A differential system that offers high positional accuracy (differential GPS) is used for precision navigation, in particular of deep-hulled ships in the approach channels. In the EU context, decisions have now been made regarding a European satellite navigation system called Galileo, which is expected to be operational in 2008.

Waterway marking

Waterway marking (buoys and beacons) is still used above all to indicate the boundaries of navigation channels and routes and, for instance, to mark the location of potentially harmful wrecks and shallow waters. The marking system on the North Sea has been gradually modernised following a complete review of that system. This modernisation process has seen the disappearance of the light ships and an increase in the use of so-called RACON beacons. The system is evaluated periodically, primarily for functionality.

Information services for shipping

As a coastal state, the Netherlands is obliged to provide (nautical) information to support navigation on board ships. The information supplied is a combination of static information (such as charts and nautical publications) and dynamic information (such as weather reports, water levels and dangerous traffic situations). Static information is provided primarily by the Hydrographic Service. The Coastguard Centre plays a central role in the supply of dynamic, up-to-date, information.

Pilots

Traffic management on the Dutch Continental Shelf relies on the services of (registered) pilots in the approach areas to the seaports in particular. With a few exceptions, pilots are only compulsory for ships approaching or departing a Dutch seaport. The National Harbour Master is authorised to waive the pilot obligation for ships that meet certain requirements. Within the context of recent decisions pilotage of sea-going vessels, the obligation will be further relaxed in due course, but only as far as safety will allow. The government's policy also includes more systematic use of "remote pilotage". On the North Sea, voluntary deep-sea pilot services are also provided by so-called 'Certified Pilots' (North Sea pilots). The government's role is limited to monitoring quality and certification.

Traffic control

Vessel Traffic Services (VTS) provides traffic services mainly in the seaport approach areas, the waterways to seaports and in the seaports themselves. Every approach and access area to the larger seaports in the Netherlands now has VTS systems in place. They mainly comprise manned traffic posts from which vessel traffic is supervised continuously. Traffic services primarily entails (interactive) issuing of up-to-date traffic information to vessels, but it also involves organising (planning) and actively regulating shipping traffic. For various reasons, there is no systematic VTS for passing vessels; however, traffic is managed on the North Sea in incidental cases, for example due to mining or accidents.

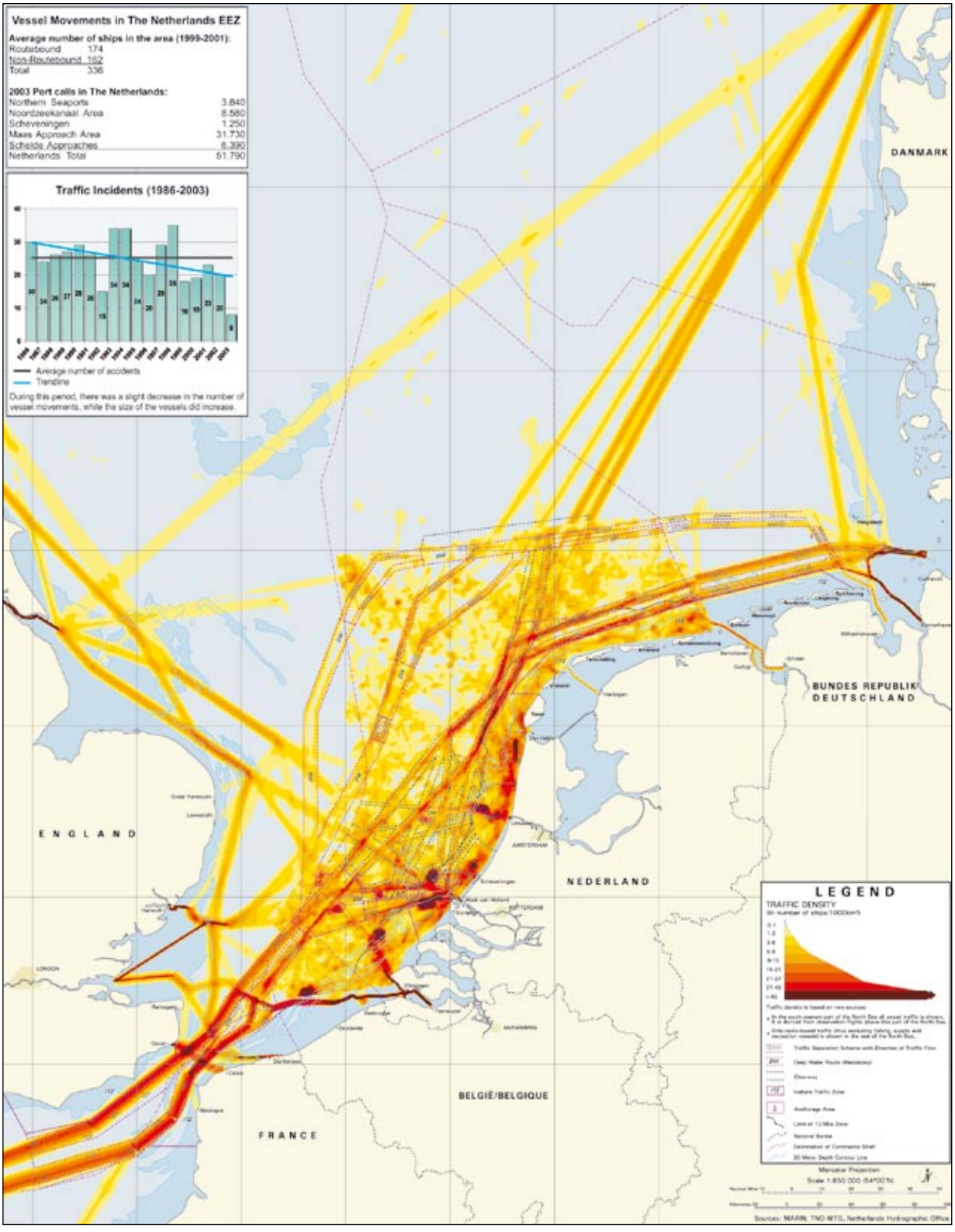


Figure 3.1
Vessel traffic on the North Sea

Buoys

Monitoring system

There is a need for information about vessel traffic along the Dutch coast, particularly regarding the transport of harmful or polluting goods. A monitoring system that supplies this information makes it possible to keep overall track of the transport of such substances across the North Sea. Part of this system is the requirement for ships to report the transport of harmful and polluting substances in European waters. Because cargo data are exchanged electronically between ports and coastguard centres, and among European coastguard centres, it is possible to obtain the relevant cargo data quickly when an incident or disaster occurs.

This monitoring system received further support with the worldwide introduction of an automatic identification system (AIS) aboard sea-going vessels in mid-2004. A network of land-based AIS receivers set up for the North Sea now provides the Coastguard Centre with a system that determines a ship's data, identity, position, the cargo's IMO class and the destination with the estimated time of arrival. Ships some thirty kilometres from the coast can be tracked. Work is currently in progress to extend the coverage of the AIS land stations. This AIS system is being used for the North Sea as part of a European network that is being introduced under European Directive 2002/59.

Maritime emergency assistance

It is the task of central government to effectively implement measures ensuing from international treaties to save human lives at sea and to limit damage to the marine environment and the coast. The following terms are used in relation to government action in this area: emergency, urgent and safety communication, search and rescue (SAR), and disaster and incident prevention. See also chapter 2.

In many cases, search and rescue is the first phase of disaster and incident prevention, which is specifically aimed at saving human lives at sea. The director of the Coastguard is officially responsible for the performance of the Search and Rescue service, the coordination of search and rescue activities and establishing operational procedures.

National regulations for shipping are based largely on international treaties and recommendations. This is logical, in view of the global nature of maritime shipping. The international standards apply directly to all vessels of the countries that are party to these treaties. In principle, Dutch standards apply only to ships flying the Dutch flag.
Dutch regulations cover four areas: the vessel, the cargo, the crew and traffic. The basic principle underlying the regulations is that when a safety-threatening situation arises:

- the resources on board should be sufficient to remedy the situation; if not,
- the people on board must have the means, knowledge and time to leave the ship safely and survive.

The Coastguard Centre functions as a rescue coordination centre (RCC) for both maritime and aeronautical assistance. The actual search and rescue activities are carried out by several services, such as the Netherlands Royal Navy (KM) and the Royal Dutch Rescue Association (KNRM). The Coastguard aircraft is also used for SAR work.

Maritime emergency assistance also includes the facilities for towing, assistance and salvage on the North Sea. Alongside and in addition to commercial services in this area, the Coastguard director makes the ocean tug "Waker" continuously available, for which central government has a long-term contract with the salvage industry. Offering vessels a place of refuge in an emergency also falls under maritime emergency assistance. Further agreements on this matter have now been made within the context of the IMO and the EU. These agreements are aimed at balancing the interests of the ship and the coastal state involved.

Other management in relation to shipping traffic

Permits for special activities

When permits are issued for special activities or events (e.g. sailing regattas, special transports) conditions are set not only to ensure safe, smooth and environmentally friendly shipping traffic, but also to protect the infrastructure and maintain bathing water quality.

Sea traffic assessment

Periodically, the nature, scale, density and conduct of shipping traffic on the North Sea is measured systematically, mainly for the benefit of policy analysis and evaluation. On the basis of the traffic densities, the SAMSON model (Safety Assessment Model for Shipping and Offshore North Sea) can be used to calculate the likelihood of collisions occurring and the size of the ensuing oil spill. The same applies to the expected distribution of operational discharges from ships. This information is relevant for the organisation of incident prevention.

Salvage of a sailing ship

Wreckage removal

It may be necessary to remove wreckage (ships, cargo, stores and bunkers) from the North Sea for reasons of nautical or technical management. Whether wreckage is removed depends partly on the degree to which it threatens or obstructs the marine environment, other interests of the coastal nation or shipping traffic. The Monuments and Historic Buildings Act of 1988 requires the archaeological value of wreckage more than 50 years to be considered before removal. The National Service for Archaeological Heritage (ROB) advises the Competent Authority on such matters. In order to prevent environmental pollution, bunkers are nearly always removed from wrecks immediately. The removal of wrecks within the territorial waters is regulated in the Shipwrecks Act (*Wrakkenwet*) and the owner can be required to have the wreck salvaged. Within the context of the IMO, the Netherlands advocates uniform and compulsory regulations for the removal of wreckage outside territorial waters. At present, it is frequently impossible for the Dutch authorities to hold owners liable for the high costs of removing wreckage outside the territorial waters. There are still several wrecks and anchors that should be removed for nautical reasons.

Explosives

Recovering explosives and probable components of explosive devices puts fishing boat crews and others in the vicinity at risk. The services of experts are absolutely necessary to reduce that risk. Inexpert handling of an explosive device fished out of the sea can cause fatalities. An assistance and grant scheme was established to minimise the risks associated with recovering explosives in the Dutch fishing zone. The explosives chart is a tool for recognising explosives. Extra attention has been paid to these problems following incidents at sea in the spring of 2005. As a result of the increase in the number of reports, the navy has stepped up its efforts to detect and destroy explosives.

Lifting a wrecked ship

Enforcement

In 2003 the Interdepartmental Permanent Liaison Group for Enforcement in the North Sea introduced a new instrument for policy-based steering of the Coastguard's enforcement activities (the '7 Step Model')[4] An initial crime and threat model and a first substantive survey of the risks for the topic of water pollution were completed in 2003. During a meeting of experts in 2004 the risks were analysed further and later that year they were prioritised by the members of the Liaison Group. At the same time, eight threats were identified. In 2005 various working groups are developing detailed plans on the basis of these threats. These plans must contain elements related to insight, strategy and execution and clearly show what the Coastguard's role is in these three stages. This will make it possible to deploy the Coastguard more flexible, i.e. to deal with dangerous infractions of the rules (execution stage) or to assist in obtaining information and determining strategy.

4) Situation analysis; setting of priorities; effects; key performance indicators; target values; products; evaluation and adjustment

3.2.2 Technical management (dredging)

Maintenance dredging is necessary to keep the access channels to and from the ports of Rotterdam and Amsterdam at the desired depth. The Dredging Expertise Centre (*Expertisecentrum Baggeren*) of RWS North Sea manages the major depth maintenance contracts for the Euro-Meuse channel, the IJ channel and the outer harbour of IJmuiden. The Centre also evaluates excavation plans, determines dumping sites for dredged material and surveys and clears anchoring areas.

Sand excavated from the channels is used for supplements and embankments. Dredging channels is a maintenance measure and is not subject to permitting. If it meets the requirements, the dredged material is deposited back into the sea at designated sites. RWS North Sea regularly carries out soundings to monitor the depth of the channels and determine when maintenance is necessary.

3.2.3 Coastline conservation

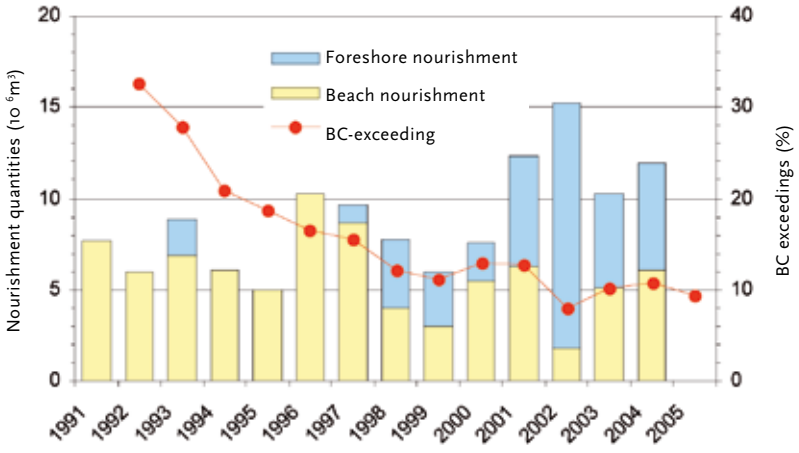
Since 1990 the coastline conservation objective has been to maintain the coastline as it was then, i.e. the so-called 'Basic Coastline'. In maintaining the coastline, there is scope for dynamic processes. In 2000 (Third Coastal Policy Document) the aim of preventing the coastal system as a whole from systematically losing sand was added to this objective. Since then (2001) both the basic coastline and the sand balance of the coastal system as a whole have been important measures for the 'dynamic conservation' policy on a larger scale.

The regional services of the Directorate-General for Public Works and Water Management (RWS) that manage part of the Dutch coast are responsible for the measures that are needed to protect the coastline. At their request, RWS North Sea organises monitoring and the implementation of coastal supplements. Since 2001 the annual supplementation volume has nearly doubled, particularly due to more and more frequent supplementation underwater (see figure 3.2). In addition to preventing systematic erosion of the coastline, this is done to compensate for shortages in the sand balance. Supplements are added more often underwater than on the beach; this causes less disruption of recreation and is expected to be more cost-effective in the long term.

In its Enforcement Policy Plan for the North Sea, the Interdepartmental Permanent Liaison Group for Enforcement in the North Sea set the following priority areas of attention for 2005.

1. Use of containers, for example, for transporting illegal waste, arms, munitions and drugs
2. Discharge of chemicals and oil by shipping vessels
3. Fraud and forgery related to cargo documents, import duties, excise duties, subsidies (including incorrect notification)
4. Infringement of traffic separation systems, tanker routing, safety zones, coastal traffic zone and infringements of priority rules
5. Failure to report a border crossing, approaching the Dutch coast, sick people on board (SARS), forged documents and stowaways
6. Crews that do not meet the requirements, ships that are shorthanded, do not meet health, safety and welfare (ARBO) requirements and are uncertified
7. Illegal fishing equipment
8. Hostage taking or attacks in ports, on ferries, cruise ships, tankers and platforms and hazardous cargo.

Figure 3.2 Nourishment quantities and exceeding of the Base Coastline (BC)



For the extraction of sand for coastal supplementation (outside the navigation channels) a permit is necessary. For actual coastal supplementation, carried out under the Flood Defences Act, a permit is not necessary.

3.2.4 Safe bathing water

The ministers of Transport, Public Works and Water Management and of Housing, Spatial Planning and the Environment are responsible for ensuring that bathing waters meet the quality standards. Provincial authorities have a supervisory role. RWS monitors the North Sea.

Monitoring bathing water quality

In the management plan for national waters, the coastal area of the North Sea is designated as a national water body with a bathing function. At the designated swimming areas (measuring points), the water must meet the statutory standards, which are laid down in the EU Bathing Water Directive. That is why the quality must be monitored. During the bathing season each year (May-September), RWS North Sea carries out a bathing water sampling programme and issues the data it obtains to provinces, municipalities and special interest organisations. In the case of poor results, the provincial authorities can discourage bathing or even close a bathing area to the public. Incidental problems can arise as a result of excessive precipitation and insufficient sewage and purification capacity. Overflows can then cause a temporary decline in water quality. In addition, the authorities are trying to reduce emissions from faecal bacteria by providing permits (WVO permits for discharging in the North Sea).

Algae

Samples are taken periodically to determine the presence of toxic algae and algae plagues. Samples are also taken when algae fields are spotted from aircraft. Some algae can cause health problems for swimmers and harm shellfish farming and fishing and mussel consumers. Toxic algae and algae plagues are regularly observed in the autumn. On the basis of the sampling results, provincial authorities can impose a temporary ban on swimming in serious cases and the Marketing Board for Fish and Fish Products (*Productschap Vis*) can decide to close mussel farming areas in consultation with the ministries of Agriculture, Nature and Food Quality and of Health, Welfare and Sport.

3.3 Developments

Safe shipping traffic

Maintenance and, wherever possible, improvement of current safety levels depends on systematic coordination of policy on the other usage functions of the North Sea. An important method of achieving this entails optimising the individual instruments in relation to each other that are used to prevent and/or limit the impact of disasters and incidents. In the coming period, this primarily involves further developing the SAMSON model (Safety Assessment Model for Shipping and Offshore on the North Sea), the realisation of a EU monitoring and information system for shipping traffic, including the required (AIS) land infrastructure, and optimising the minimum required facilities for emergency, urgent and

Foam from algae bloom on the beach

safety communication (GMDSS – Global Maritime Distress and Safety System), search and rescue (SAR) and disaster and incident prevention.

As indicated above, more and more of shipping traffic safety policy is determined by the IMO and the European Union. The European Commission is currently preparing a package of new measures (3rd Maritime Safety Package). One of the intended measures entails changing the monitoring directive (2002/59), which has consequences for North Sea management. Likewise, the drafting of the sanction directive will have various effects on management, especially with respect to preventing (potential) oil incidents. Management will also be affected by the establishment of a European Maritime Safety Agency (EMSA). This agency's objective is to ensure a uniform, efficient and high level of safety at sea and prevent pollution by ships.

Other concrete developments are as follows:

- Evaluation of the introduction of traffic separation marking to replace lateral marking above the Wadden Islands;
- Investigation of the possibilities of AIS for enforcement and services at sea.

Safe bathing water

In terms of science and management, the current Bathing Water Directive is out of date. A new, amended directive is planned for the end of 2005. The new directive will prescribe a pro-active policy and set out a new bathing water quality classification system. Information supply will also be improved. RWS is studying the possibility of working with municipal and provincial authorities to use modern means to supply bathers with up-to-date and better information about the quality and temperature of bathing waters, activities on the coast, weather forecasts and other relevant information. To this end 'Bathers' Information Panels' can be used. In addition, models will be developed to predict when problems are likely, making it possible to issue warnings or bans more quickly than is possible with sampling and laboratory analysis. In addition, further research is being done into the decontamination of the overflows at Beverwijk and Bergen, which flow directly into the sea.

Bathing in the North Sea

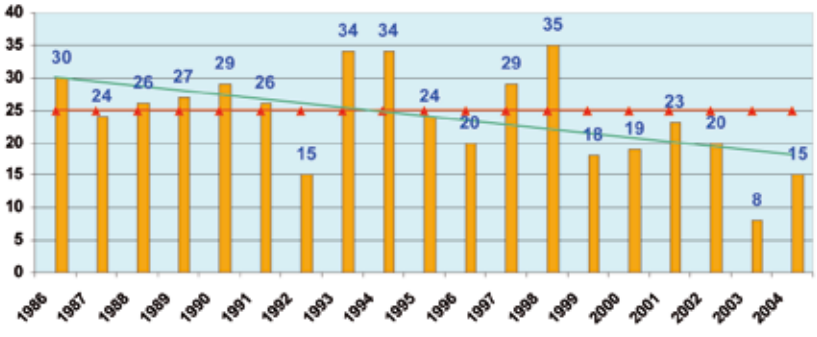
3.4 Conclusions

In general, the current set of management instruments functions well. The North Sea can therefore be considered a safe sea. To maintain this status it is essential to ensure that the instruments available continue to function properly and that the managers continue to carry out their tasks properly for the coming years. Nevertheless, there is room for improvement in certain areas. As a result of the increase in the number of reports, the detection and destruction of explosives is being intensified. Further improvements to the set of instruments are described below.

Shipping traffic

The objective of nautical management (section 3.2.1) is to ensure smooth and safe shipping traffic.

Figure 3.3 Accidents in the North Sea



The annual statistics for significant accidents and other data show that in practice nautical management does help make the North Sea a relatively safe transport route. The reference value is a maximum of 25 accidents a year. As figure 3.3 shows, there is a slight drop in the number of accidents year on year and this trend can be observed worldwide.

The number of significant accidents on the North Sea each year is one of the criteria, i.e. performance indicators, against which policy is assessed.

There have been no systematic problems in traffic flow or safety in recent years. However, the figures show that fishing vessels are involved in accidents relatively frequently. The increasing amount of space taken up by fixed objects at sea is a safety issue. No problems are anticipated in this regard (see also chapter 5). The SAMSON model is used to evaluate (in advance) the effects of spatial developments, developments in shipping traffic and other activities in relation to traffic safety and the environment.

Despite the relatively good safety record of the North Sea, there is constant attention focussed on further improvement. The lack of resources for clearing away old wreckage is a problem.

Coastline conservation

Since 1998 the coastline has stabilised. Since then, the Basic Coastline has been exceeded in approximately ten percent of cases. These exceedances are inherent in the policy pursued. No action is taken immediately in incidental cases to allow for dynamic processes within certain limits. In addition, since 2001 supplementation volumes have nearly doubled in order to compensate for shortages in the sand balance.

The sand balance of the coastal system as a whole has been an important measure of the 'dynamic conservation' policy on a larger scale since 2001. It

is expected that the policy objectives can be met through supplementation and the ban on sand extraction inside the established NAP -20 m depth contour. The underwater supplementation method is relatively new. Monitoring and evaluation are therefore as important as ever. In 2005 the 'dynamic conservation' policy will be evaluated.

Safe bathing water

The decontamination of the overflows is being investigated further. The new directive and the plans for improving monitoring and information supply will most likely make the problems identified above a thing of the past.

4 Profitable Sea

The North Sea has major economic significance. Some economic activities are related to the sea directly (e.g. oil and gas extraction, fishing) and others indirectly (e.g. ports, industry and recreation). The North Sea is also important for transport activities (shipping traffic, telecommunications, energy supply) and usage functions for which there is too little space on land (wind energy, sand extraction). The economic objectives are strongly sector-based. This also applies to the set of available management instruments, which are generally sufficient. There are advantages to be gained by improving public services, streamlining procedures for permits (and thus reducing the administrative burden) and making an integrated assessment of the use of space.

4.1 Policy objectives

Economic use of the North Sea comprises activities in the territorial waters and the Exclusive Economic Zone (EEZ). In accordance with international maritime law[5], the Netherlands has the exclusive usufruct and the obligation to protect the marine environment in the EEZ. A number of matters, such as the right of free passage, free over flight and free routing for cables and pipes, are excluded from the exclusive right of use; in other words, the Netherlands is required to allow other countries to use the EEZ under certain conditions.

The policy on the economic function of the North Sea is prescribed by sector or usage function. In accordance with the *Spatial Planning Policy Document*, the primary objective is to realise maximum sustainable revenues. Below is a brief sector-based description of the economic characteristics followed by a description of the policy.

Energy

Oil and natural gas exploration and extraction is carried out for the benefit of the Dutch economy, security of supply and the transition to sustainable energy management.

Dutch gas production currently generates approximately five billion euros of revenue for the Netherlands per year. Gas extraction and everything that is related to it provides jobs for some 11,000 people, primarily in the north of the country. In 2003, Dutch natural gas fields produced 68.4 billion m^3 gross, 23.14 billion m^3 of which came from the Dutch Continental Shelf (DCS). In 2003 a total of 2.72 million m^3 of oil was extracted, 2.31 million m^3 of which came from the DCS. The number of producing fields will decline considerably in the decades to come (figure 4.1), leaving the infrastructure

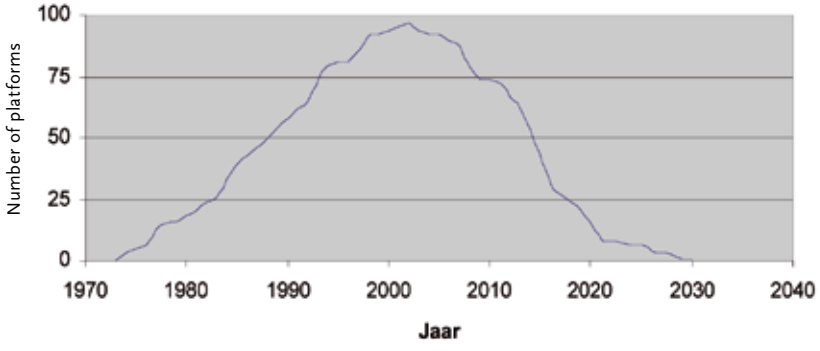
5) The United Nations Convention on the Law of the Sea (UNCLOS) gives the coastal state the right to exploration and exploitation of natural resources in the sea and the seabed, as well as to economic exploitation and exploration of the area in the broader sense, such as by generating energy. The obligations under this Convention relate to the conservation and management of those natural resources and the protection and conservation of the marine environment.

Drilling platform

of platforms and pipelines disused. To operate profitably, the small fields in the North Sea (< 3 billion m^3) are particularly reliant on existing infrastructure. Incidentally, new drilling sites are expected in the North Sea, but they are not expected to take up a considerable amount of space.

In accordance with the *Spatial Planning Policy Document*, oil and gas extraction is carried out for reasons of overriding public interest. The Government's policy is aimed at extracting as much oil and natural gas from the small Dutch fields as possible in order to use the full potential of the reserves.[6]

Figure 4.1
Number of producing fields; many in the final phase of production



The Government also pursues active policy aimed at promoting sustainable energy, including wind energy, to limit the country's dependence on finite fuels and curb carbon dioxide (CO_2) emissions. The objective is to produce 6000 MW of wind energy on the North Sea by 2020. This is laid down in the *Spatial Planning Policy Document*. Establishing wind farms to produce up to 6000 MW is of overriding public interest. The approximately 100 MW demonstration wind farm at Egmond aan Zee will provide practical experience with wind energy on the open sea. In addition, a permit has been issued for a 120 MW farm outside the 12-mile zone, called Q7. Following a moratorium of approximately three years, the Policy Rules regarding the application of the Public Works Management Act (*Wet beheer rijkswaterstaatswerken*) to installations in the exclusive economic zone came into force at the end of 2004 and it is now possible to submit new applications for permits on that basis. So many applications were submitted at the beginning of 2005 that it is necessary to study how the procedures for permits and subsidy for wind energy can be coordinated with each other most effectively in the short and long term. In accordance with the *Spatial Planning Policy Document*, an exclusion policy applies to the construction of wind farms (see chapter 5).

Shipping and ports

The part of shipping policy that is aimed at the smooth and safe flow of shipping traffic is described in chapter 3. This chapter addresses the economic significance of shipping, particularly in relation to the Dutch seaports.

6) See also the letter from the Minister of Economic Affairs to the President of the Lower House of the States General, dated 12 October 2004, regarding the security of supply and delivery of energy (the so-called 'gas letter'), in which the Minister explains the importance of the small fields policy. The comprehensive considerations set out in this 'gas letter' are briefly summarised above.

Dutch seaports are hubs of international goods flows and home to many industries and services. They fulfil a key function in the Dutch economy. As goods pass through them to and from the main economic centres in Western Europe, the Dutch seaports provide economies of scale and scope for the Dutch transport sector (inland shipping, rail and road transport). The seaport areas have a major indirect economic significance for the suppliers of the companies established there in the form of added value and employment opportunities. These suppliers provide business and financial services and perform a broad spectrum of other activities in industry and services.

The direct added value generated by the Dutch seaport areas in 2002 was 12.8 billion euros, or 3.3% of the gross domestic product. In that year, approximately 144,000 people worked in the seaport areas. That is nearly 2% of the working population in the Dutch economy. The indirect added value was 9.3 billion euros.

The relevant policy is laid down in the Seaports Policy Document: Anchors of the Economy/National Seaport Policy 2005-2010 (*Zeehavens; ankers van de economie/Nationaal Zeehavenbeleid 2005 – 2010*). For *IMPNS 2015*, the capacity objective is of primary importance: maintaining and improving the accessibility of the seaports and realising physical space for growth. In economic terms, this entails having and maintaining enough navigable waterways, approach areas and access ports (Euro/Meuse channel and the IJ channel to the Dutch ports from Rotterdam, Amsterdam, etc.) with adequate draught.

Fisheries

Up scaling and increasing productivity have led to over fishing in a number of cases. As a result of the EU's Common Fisheries Policy (CFP), the permitted Dutch catch of commercially important species fell by 50% between 1997 and 2002, while demand increased. This resulted in a price rise, which increased profits for the sector. A large part of the Dutch catch is exported to generate higher profits, while the Netherlands imports cheaper species. However, price increases cannot continue indefinitely and as a result the cutter sector incurred a net loss in 2002 and 2003. Since 2002 the number of cutters on the Dutch Continental Shelf has been falling. The number of beam trawlers (> 2,000 hp) has continued to decrease in accordance with policy (by 24% in 2003). The economic outlook is unclear.

International fisheries policy

- The objective of the EU Common Fisheries Policy reads as follows: "The general objectives of common fisheries policy for commercial fishing are to conserve the living marine aquatic stocks, and to ensure that commercial fishing of those stocks is rational, responsible and sustainable and takes place under economic and social conditions that are appropriate to the sector, taking into account the consequences for the marine ecosystem and, in particular, the needs of producers and consumers." The CFP is based on three methods of

Fishing boat

management: fleet management where the size of the fleet is controlled;
- stock management, whereby the available stocks are divided into quotas (shrimp and shellfish fishing are not subject to a Total Allowable Catch (TAC));
- specific management in the form of management and recovery plans specifically for protecting the more vulnerable stocks or stocks that have fallen below the safe biological minimum.

Marine fishing ships with motors larger than 300 hp are permitted to fish the entire North Sea, in principle, with the exception of the coastal waters within the 12-mile zone and the plaice nursery grounds (to protect young plaice).

The CFP was comprehensively changed with effect from 1 January 2003. Before that date, many fish stocks were biologically at risk. They had either been excessively fished or the numbers of reproductively mature fish in the stocks were too low, or both problems occurred simultaneously. With the new CFP the European Commission wants to promote more selective fishing equipment, long-term management plans[7] exploratory sampling with effort management[8] and discard bans. The Commission also aims to improve supervision, inspection and law enforcement in the new CFP. Subsidies for building new boats – which the Netherlands does not use – will be gradually eliminated. The funds that are freed up as a result will be invested in retraining programmes, for example.

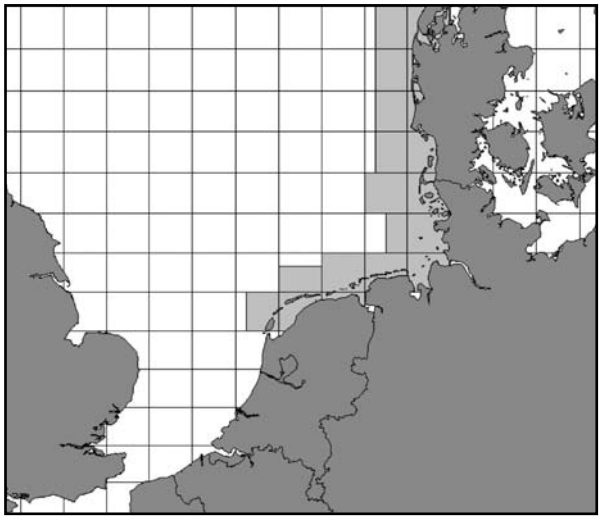


Figure 4.2
The international plaicebox area

The European Commission sets the Total Allowable Catches (TACs) for most species. The long-term plans offer the possibility to introduce measures for fishing equipment, exclusion areas/periods, minimum landing size and measures for non-target species (such as exit windows). In addition, member states may take ecosystem conservation measures within their 12-mile zones that also apply to ships from other member states.

The European Commission wants more research to be done to determine how ecosystems function and how these systems respond to different levels of fishing pressure and fishing strategies. Innovative research is needed in such fields as selective and environmentally friendly fishing equipment, genetics, methods of improving fish stock evaluation, sampling programmes and systems for sustainable aquaculture.

National fisheries policy

There are two types of coastal fishing: (i) fishing in common fishing grounds and (ii) fishing in demarcated fishing areas. The former applies to shrimping and fishing by Euro cutters with less than 300 hp motors. The latter involves cockle fishing

7) In the case of a long-term management plan, TACs are set for a period of several years.

8) Effort management means that a fishing vessel is allocated a particular number of days at sea or fishing days for which all the fish caught, both the species for which the vessel has a quota and the other species (as long as they are not protected), may be brought ashore.

and mussel farming. Shrimp and shellfish are not covered by a TAC. National policy on coastal fishing aims to promote responsible and balanced commercial fishing, a healthy balance between fishing and conservation and redistributing the responsibilities between the government and the private sector. This includes the application of so-called Biesheuvel Groups, whereby a group of at least 15 fishermen and women transfer control of their individual quotas to the group, under specific conditions. They may decide for themselves how they catch their quotas, as long as they do not exceed them and stay within the depletion limits set by the group's board. The Netherlands is the only EU member state that applies this rule.

Fishing vessels from neighbouring North Sea countries are permitted to fish Dutch coastal waters: Belgium is allowed to operate within the 3-mile zone and Germany, France, Great Britain and Denmark between the 3 mile and 12 mile boundaries. Permits are issued nationally.

The Netherlands' national fisheries policy is set out in three policy documents: one on shellfish policy (*Ruimte voor een zilte oogst: naar een omslag in de Nederlandse schelpdiercultuur: Beleidsbesluit Schelpdiervisserij 2005-2020, Beleidslijn Verplaatsing Schelpdieren*, 1997), one document on balanced fishing in the open sea and in coastal waters (*Vissen naar evenwicht: Structuurnota Zee- en kustvisserij*, 1993) and one on stationary fishing equipment (*Vast en zeker!: Beleidsbesluit vaste vistuigen*, 2002).

Extraction of surface minerals

In the Dutch part of the North Sea, approximately 35 million m^3 of sand are extracted every year (2002 figures). Some of the sand is taken from the navigation channels to Rotterdam and IJmuiden. Sea sand is used largely as filler on land (approx. 20 million m^3/y). Over 14 million m^3/y is extracted for coastal supplementation. It may also be possible to extract coarse concreting and building sand on a limited scale in the future. However, this type of sand is found in an area of ecological value (the Klaverbank) or at great depths, so extraction is currently impossible or uneconomical. Large quantities of coarse sand are therefore imported from other European countries.

The *Spatial Planning Policy Document* states that extraction of surface minerals in the North Sea is in the national interest. Deep extraction is permitted, in principle. The policy is set out in detail in the

Left: Plaice in a case

Right: Sand extraction by Hopperdredger

Shell extraction

Second Regional extraction plan of the North Sea (*Tweede Regionaal Ontgrondingenplan Noordzee*). The basic principles are as follows: efficient and high-quality use, good coordination with other usage functions and sustainable functioning of the water system.

The established NAP -20 m depth contour serves as the landward boundary for surface mineral extraction, with a few exceptions. For example, the depth of navigation channels may be maintained by means of sand extraction. The established NAP -20 m depth contour + 2 km is the landward boundary for deep sand extraction.

Shells may be extracted in areas deeper than NAP -5 metres up to 50 km from the coast. Annual maximum volumes apply to shell extraction in certain areas. Shell extraction policy is set out in the Dutch policy document on shell extraction (*Landelijke Beleidsnota Schelpenwinning*) and in the two partially amended versions of that document.

Cables and pipelines

Since oil and gas extraction began in the North Sea, an extensive network of cables and pipelines has developed. Given the outlook for oil and gas extraction in the North Sea and the existing network of pipelines, development of the network is expected to stabilise in the future. However, new international gas pipelines must be taken into account.

The first cables on the seabed were the transatlantic telecommunication cables between Europe and North America laid decades ago. Since then, the number of telecom cables has grown steadily, but this growth has now stabilised. With the opening up of the European power market, the demand for international power connections (interconnectors) has increased. The Netherlands currently has no sub sea interconnectors, but two projects are in preparation: one between the Netherlands and Norway (NorNed) and one between the Netherlands and Great Britain (BritNed). It does not look as though the market can support more international connections. As wind farms are established at sea, demand for power cables between the farms and the Dutch coast will increase.

The central policy objective in economic terms is to facilitate infrastructure that meets the anticipated demand for communication connections and for gas, oil and power transport. The focus of the Government's policy is on efficient use of space. The goal is to develop corridors along which cables and pipelines are concentrated. The *Spatial Planning Policy Document* also introduces a clean-up requirement for cables and pipelines that are no longer in use. An exception is made for individual cases in which it can be demonstrated that the benefit to society of leaving the cables or pipelines in place outweighs the cost to society (see chapter 6 for more details).

The Pipeline Structure Plan (*Structuurschema Buisleidingen*) sets out future corridors. The Second Power Supply Structure Plan 1994 (*Tweede Structuurschema Elektriciteitsvoorziening*, (1994) (SEV)) is the spatial and environmental assessment framework for planning electrical work. New power cables are required to fit in the corridors laid out in the SEV.

Tourism and recreation

Thanks to its 250 kilometres of beaches, a myriad of seaside resorts and the dunes, the coast is a first-class tourist attraction, accounting for approximately 7 million overnight stays, or one-quarter of all overnight stays by tourists in the Netherlands. Tourism provides an estimated 80,000 jobs directly and some 30,000 jobs indirectly. It is unknown what share of employment is generated by coastal tourism.

In the last decade the Dutch coast as a whole has been visibly losing its international competitive position. However, its popularity as a venue for water sports has grown; there is demand for new marinas and coastal touring and transport from and to Great Britain are increasing.

The North Sea and the coastal zone are also important for angling. According to the Dutch Association of Angling Federations (*Vereniging van Sportvisserfederaties*), the Netherlands has over 500,000 deep-sea anglers, who together represent an economic value of 125 million euros.

Along with their economic importance, tourism and recreation also serve an important function in society in the form of rest and relaxation. Tourism and recreation therefore have a positive effect on public health.

In the Revised Tourist Agenda (*Vernieuwde Toeristische Agenda*), the government emphasises the further development of coastal tourism, primarily through improvements in the quality of Dutch seaside resorts. The provincial and municipal authorities bear most of the responsibility for recreation policy and its implementation.

Recreation

The tourism industry is in part space-intensive and is often situated in or near conservation areas. This means that when economic development occurs a good balance must be found between economic interests and the interests of conservation and the environment as well as of coastal safety.

Civil engineering and earth-moving

The ‘hydraulic’ civil engineering and earth-moving sector is a typically Dutch sector of industry, which developed because of the Netherlands’ geographical location on the North Sea. This sector of industry carries out projects using specialised equipment all over the world: coastal defence, land reclamation and poldering, dredging navigable waterways and rivers, dike building and all kinds of other types of infrastructure work. In the Netherlands, there are some 80 hydraulic engineering contractors and over 160 firms providing nautical services.

Sea sailing

4.2 Management tasks and instruments

4.2.1 Regulating use

In an area that is used as intensively as the North Sea it is to be expected that parameters are set for its use. Use can be regulated nationally or internationally by setting general rules, banning certain uses in certain areas, reserving areas for particular uses, but also by other means, such as tax measures. Issuing permits in accordance with specific conditions is an important management instrument for regulating use. Annex 3 lists the competent authorities for activities that are subject to providing permits.

Shipping and ports

Many management measures are aimed at fostering a smooth and safe flow of shipping traffic at sea and from and to ports. These measures are described in chapter 3. Shipping is not addressed in this section.

Fisheries

Commercial fishing is largely regulated internationally. National management mainly entails converting EU policy into measures for individual fishermen by allocating quotas and days at sea.

Permits are required for fishing within the 12-mile zone. For certain areas in the Voordelta, permits under both public and private law are required, because those areas are owned by the State Property Service (*Dienst Domeinen*)[9]. There are separate permits for trawling, fishing with stationary equipment (e.g. eel pots), shrimping, gill-net fishing and fishing for other shellfish species (spisula and ensis). Sustainable fishing within the 12-mile zone can be achieved by fixing the number of permits that may be issued and their duration, by imposing requirements on permit applicants including requirements in relation to nets/pots and engine power, and by indicating the areas where fishing is permitted and where it is banned. In addition, the parts of the coastal waters where beam trawling is not permitted, or fishing is limited or banned, have been indicated. These areas are known as 'priority ecological areas' and are in the Voordelta (see Map 14).
Annex 1 shows the maritime zones in the North Sea that are applicable to fishing rights, primarily within the 12-mile zone.

Other sectors

Use is regulated primarily by means of providing permits. The Mining Act (including the Mining Decree (*Mijnbouwbesluit*) and the Mining Regulations (*Mijnbouwregeling*)) form the framework for providing permits for oil and gas extraction. The pipelines necessary for oil and gas extraction also fall under the Mining Act. The Public Works Management Act (Wbr) also applies to these activities if they take

9) The Ministry of Finance's State Property Service represents the State in matters that involve ownership issues regarding an item of state property

place within the 12-mile zone. The procedures for providing permits under the Mining Act (Ministry of Economic Affairs) and the Wbr (Ministry of Transport, Public Works and Water Management) are coordinated with each other.

The development of wind energy at sea is regulated in the policy guidelines on the application of the Wbr to installations in the EEZ. The guidelines state that individual wind farms may not cover more than 50 km^2. After coordination between the various types, permits are issued for the installations, the layout of the farms and the cabling.

On the basis of the Sediment extraction act (*Ontgrondingenwet*) and in accordance with the general and specific conditions of RON 2, the permit sets out the requirements that the sediment extraction activity (extraction of filling sand, building and concreting sand, gravel, shells) must meet in terms of depth, scale and location; it also states whether or not an environmental impact report or an environmental study must be carried out in advance. A Wbr licence is required for laying and using telecommunication and power cables (see also the list of permits by type of cable/pipeline in section 6.5).

Recreational use is regulated primarily by regional and local authorities. The Coastguard director issues permits for water-based events (e.g. regattas)[10] Permits are not required for deep-sea angling.

4.2.2 Enforcement

Commercial fishing

The General Inspectorate (*Algemene Inspectiedienst* (AID)) is responsible for supervision and enforces fisheries legislation. In the case of sea inspections, the Inspectorate works with the Coastguard. Approximately 8,000 inspections are performed. Cutters and quick-freeze trawlers are inspected on average once every 30 fishing days in an inspection at sea (including inspection for illegal net equipment). In addition, 10% of catches by Dutch cutters and 12% of catches by foreign cutters are inspected (e.g. the quantity of fish caught relative to the log, catch statement and sales). In the case of pelagic fishing, 20% of catches are checked physically and 20% administratively. In addition each year one ship-owning company is subjected to a full administrative audit. Other inspections are carried out in connection with transport, trade, coastal fishing and inland fishing. Cooperation is lent to international sea and catch inspections.

Angling

Angling at sea is not subject to national or EU rules or restrictions. The only exception to this is that fish caught by anglers may not be bought or sold. This rule was recently amended and made more explicit. The Regulations for Marine and Inshore Fisheries (*Reglement voor de Zee- en Kustvisserij*), article 4 on catch restrictions now contain a provision stating that caught fish may be traded only if in possession of a registered fishing vessel. The AID inspects sources of supply and checks whether trade is going on from angling vessels when they enter port.

Oil and gas extraction

The National Mines Inspectorate (*Staatstoezicht op de Mijnen* (SodM)) has an important role in preparing permits under the Mining Act. SodM is responsible for enforcement and inspection of the conditions described in the permits, which, besides aspects relating to safety, health and efficiency,

10) Under the Territorial Waters Shipping Regulations (Scheepvaart Reglement Territoriale Zee - STZ) the Director of the Coastguard is the competent authority and as such is responsible for the day-to-day maintenance of safe and smooth shipping traffic, including as regards the application of administrative jurisdiction.

Angling

primarily cover environmental and working conditions. The Inspectorate also supervises the removal of platforms after the activity is terminated.

Wind farms

The requirements for the two permits already issued contain conditions with which the operator or manager of the farm must comply. RWS North Sea is responsible for monitoring technical, environmental and safety aspects during construction and use. When the permit expires (after twenty years, in general), RWS North Sea will oversee the dismantling of the turbines.

Sediment extraction

Permits are enforced by RWS North Sea, by taking depth soundings before and after sediment extractions. During sediment extractions, the remover uses an automatic system (black box) to keep track of excavation volumes. Settlement is then arranged with the State Property Service.

Cables and pipelines

Under the Wbr, the owner of a pipeline is obliged to inspect the position and report to the authority issuing the permits, RWS North Sea, on an annual basis. RWS North Sea uses these reports, sometimes supplemented by field inspections, to determine whether the pipeline is sufficiently covered and supported. The position of cables is fixed during the laying phase. Afterwards, there is no obligatory inspection. The position of cables is included in the annual pipeline inspection only if the cable crosses a pipeline. The Mining Act contains similar obligations, which also apply to clean disused pipelines. Chapter 6 explains when it is necessary to remove cables and pipelines that are no longer in use.

4.2.3 Knowledge and information

Statistics are compiled by sector for presentation in, for example, annual reports. General estimates show that 2.5 to 3% of Dutch national revenues are in some way related to the state's location on the North Sea (source: Dutch Maritime Network Foundation). Data on how the North Sea contributes to national revenues are not gathered systematically. Information is also lacking about what share of activities such as recreation and port activities should be attributed to the North Sea.

4.2.4 Detection and evaluation

Management experiences provide input for policy making and performance assessments. In addition, management and performance interests are addressed in various international consultative bodies, such as the EU, OSPAR and the UN.

4.3 Developments

Because economic use continuously develops and adapts to international market developments, it is important to ensure that regulation is appropriate for current and future use.
The creation of the Tweede Maasvlakte is aimed at maintaining the attractive competitive position of the Port of Rotterdam for international goods traffic. In addition, the seaports policy document referred to above (*Nota Zeehavens: Ankers van de economie, nationaal zeehavenbeleid 2005-2010*) contains an extensive action plan of concrete activities for the coming five years.

The Third Power Supply Structure Plan (*Derde Structuurschema Elektriciteitsvoorziening*) is in preparation. It includes space reserved for new developments such as the aforementioned high-voltage power connections from the Netherlands to Great Britain and Norway. A study to determine the best method of connecting the power generated by wind farms to the power supply network will be completed in 2005.

Mariculture is expected to increase. On the basis of research and pilot projects conducted by the Aquaculture Innovation Platform (*Innovatieplatform Aquacultuur*), policy will be developed detailing options and preconditions for mariculture projects at sea.

Within the framework of the Water Innovation Project (*Water-innovatieproject* (WINN)), research is being conducted into the use of innovative instruments to regulate and stimulate use of space at sea. The study will also examine successes with such instruments on land.

Wind turbines at sea in Western Europe

Other countries have also begun generating wind energy at sea. By the end of 2004, two farms were in operation near Denmark (combined installed power capacity of 318 MW), two near Great Britain (combined installed power capacity of 120 MW), and one near Ireland (installed power capacity of 25 MW). Various countries have set targets for the coming 10 to 20 years in the order of several thousand to several tens of thousands of MW of installed power capacity.

4.4 Conclusions

In contrast to the themes of a healthy and safe sea, no quantitative economic targets have usually been set for a profitable sea. Targets for use of the North Sea are intended on the one hand to create conditions for maximum economic yield or meet demand in the Dutch market, and on the other hand to set preconditions for sustainable use. A quantitative target has been set for wind energy, namely an output power of 6000 MW by 2020. With respect to fishing, there are major, primarily policy-related challenges involved in generating sustainable economic revenues.

For most sectors there are no major substantive problem areas that could be resolved by means of better management. Nevertheless, improvements are needed in the following areas:

Integrated weighing of interests

Directing the use of space can be improved with the policy set out in the *Spatial Planning Policy Document* and with the integrated assessment framework in chapter 6. In addition, more insights

have been obtained, in part through this document (see chapter 5), into the potential pressure on space exerted by all the functions in the North Sea. This basis can be used to avoid most conflicts between usage functions and to promote efficient use of space in order to achieve sustainability in the use of the North Sea. There is an assessment framework for new functions, too, which enables the government to decide more quickly and better than in the past whether these functions are allowable and, if so, on what conditions.

Serving users

It is not always clear to users which government agency they need to approach and how authority is divided among the various agencies. Users and managers have indicated that the procedure for providing permits needs to be improved in terms of simplicity, uniformity and transparency. An added advantage of such improvements would be a reduction in the administrative burden. As use of the North Sea increases, there will be a growing need for an overview of activities (and areas) for which a procedure for providing an permit is ongoing as well as activities that have already been already permitted. Users have also identified a need to expand the current government North Sea Office (*Noordzeeloket*). The North Sea Management Network has been charged with the task of dealing seriously with these wishes and producing a concrete proposal - including for streamlining procedures for providing permits - before 1 January 2006. See chapter 8.

Monitoring and information

The North Sea is of great economic importance to the Netherlands. As the intensity of use increases, it has become necessary to weigh the interests of the different usage functions. A great deal of knowledge about ecological aspects has been developed in recent years. In order to weigh the interests in a balanced fashion, it is desirable to obtain more insight into all the concrete economic aspects involved in the use of the North Sea. At present, there is no up-to-date overview of these aspects. The economic indicators that branch organisations and ministries have about certain sectors are largely inconsistent and often not differentiated by land and sea. Better statistics are needed in terms of economic indicators (production value, added value, employment, underlying unit volumes), the pressure on space related to the activities (potential, opportunities) and the options for multiple uses of space at sea.

In brief, the instruments can be perfected if the integrated assessment framework is applied, spatial and economic monitoring is improved and procedures for providing permits are streamlined.

5 Spatial management

The aim of the *Spatial Planning Policy Document* is to prevent fragmentation and promote the efficient use of space, while giving market parties the scope to develop their own initiatives in the North Sea. This requires balanced direction that prevents conflicts from arising. Within the framework of *IMPNS 2015*, an extensive inventory and analysis of current and future use has been made. It showed that it is broadly possible for different usage functions to co-exist because functions that increase in size generally have their own zone in which there is sufficient room for growth. In order to guide developments in the North Sea in the right direction, the existing set of management instruments needs to be supplemented with new instruments introduced in *IMPNS 2015*.

5.1 Vision for spatial management

As set out in the *Spatial Planning Policy Document*, the government has opted for a spatial policy in which usage zones are defined wherever necessary, but which gives market parties the latitude to develop initiatives within certain constraints.

Defined usage zones are:
- shipping routes;
- military exercise zones;
- areas where there are special ecological features, which are subdivided into:
  - two special areas of conservation within the framework of the Birds and Habitats Directives;
  - five roughly defined areas of special ecological features from the *Spatial Planning Policy Document*, four of which are worked out in detail and demarcated in *IMPNS 2015* (see chapter 7).

In addition, an exclusion policy applies for:
- visible permanent projects within the 12-mile zone;
- sand extraction inside the established NAP -20 m depth contour;
- safety zones around fixed objects (wind turbines, platforms) and maintenance zones around cables.

Finally, the *Spatial Planning Policy Document* sets aside an area for extracting concreting and building sand. In this area any activities that would make it impossible to extract concreting and building sand in the future are prohibited.

There would be risks involved in leaving developments in the aforementioned contexts entirely to the free market – without further government direction. To ensure sustainable use of the North Sea fragmentation must be prevented and space must be used efficiently. In addition, it is advisable to avoid conflicts between usage functions as far as possible. In the area of tension between market freedom and government steering, spatial management is a means of fostering sustainable use of the North Sea and at the same time allowing as much scope as possible for private sector initiatives.

5.2 Instruments for spatial management

Spatial management is based first of all on permits. In order to foster sustainable use through management, the Competent Authority (the authority that provides the permit) has several tools that (a) provide clear insight into spatial developments and potential problems, and (b) facilitate steering of the use of space if necessary.

Opportunity maps

Spatial analysis of current and, in particular, future use shows where problems could arise. An opportunity map shows where the function is permitted to develop within the current legislative and regulatory framework and where users believe it is most likely to develop. This is shown for two growth functions (surface mineral extraction and wind turbines). The spatial analysis is set out in section 5.3 and the conclusions can be found in section 5.4.

Spatial monitoring and the permit tracking system

In order to form an up-to-date picture of the use and anticipated use of space, spatial developments must be monitored. A permit tracking system for all activities that are subject to a permit can help. A tracking system can show which (national) managers have issued which permits, how long each permit is valid, and also for what areas permit applications are being processed.

Integrated assessment framework for issuing permits

Chapter 6 sets out an integrated assessment framework that includes a spatial assessment. This makes it possible to steer more forcefully and explicitly than in the past on the basis of spatial aspects such as choice of location, and efficient and multipurpose use of space.

Exploratory spatial studies for a specific function

When functions develop more quickly than anticipated, causing potential spatial problems (in the form of conflicts with other uses or fragmentation of space), it may be necessary to conduct a more detailed exploratory study, which could result in adjustments in the management of one or more functions. The Spatial Planning Act (*Wet op de ruimtelijke ordening* (WRO)) contains a basis for applying the specific instruments and powers of the Wro to the EEZ, if necessary, by means of an order in council.

Disadvantage compensation

If a user believes that it is being harmed by another legal use, the user can claim damages from the Competent Authority. This arrangement applies only to damage incurred by individual users who cannot reasonably be expected to bear it themselves and where the damage falls outside the scope of normal civil-society risk. If RWS is the authority that provides permits, the user can file a claim under its Disadvantage Compensation Scheme (*Regeling nadeelcompensatie Verkeer en Waterstaat 1999*).

Joint initiatives

The government invites market parties and civil society organisations to present initiatives that combine usage functions in order to facilitate multiple use of space. The opportunity maps and the overview of permits can be used for such initiatives.

5.3 Spatial analysis

In order to form a picture of potential problem areas, an analysis was made of current use of space in the North Sea and of the developments surrounding existing and new activities. This produced a picture of the future pressure on space in the North Sea and potential conflicts.

5.3.1 Current usage functions

Map 5 provides an overview of current use for location-based activities, showing the traffic separation scheme, the clearways and the anchorage areas for shipping, the military areas and the oil and gas platforms. These functions make use of the water and the seabed in particular; the military mainly uses the airspace above the sea (for flying and firing exercises). Below is an overview of the most important current usage functions and their future developments.

Map 5 Overview of current use

Shipping

The North Sea is one of the busiest waterways in the world. Approximately 260,000 ship movements take place a year in the Dutch part of the North Sea (the territorial waters and the Exclusive Economic Zone). The traffic separation schemes ensure that this routed traffic proceeds in an orderly fashion. The main routes lie just outside the 12-mile zone, and further out to sea at the Friese Front. In addition, there are special approach routes to the main seaports and anchorage areas adjacent to these approach routes. The entire route system covers approximately 3,600 km², or 6% of the entire surface area of the Dutch part of the North Sea. Clearways have also been defined. These are obstacle-free zones that are intended, in part, to connect the internationally established traffic separation schemes.

At present slightly more than half of all maritime traffic is routed. This traffic consists of cargo shipping under load (50%), tankers (25%), bulk carriers (15%) and container carriers (10%). Non-routed maritime traffic concerns mainly fishing (60%), offshore industry traffic (20%) and recreational traffic (20%).

Measurements (Vessel Traffic on the North Sea, 2004, see also figure 3.1 in chapter 3) show that the average number of ships on the North Sea at any given moment is decreasing slightly. This is thought to be due to upscaling. Although certain routes are used less intensively, deep-water routes have become considerably busier. The traffic separation schemes will remain unchanged.

Military areas

Over 7% of the Dutch part of the North Sea (4,200 km²) is used for military purposes. There are areas for firing exercises, flying exercises and mine training. There are also several munitions dumping sites. Use of these dumping sites has been prohibited for a long time but they still contain old stocks. Where possible, some military areas are used by fishing vessels and non-routed maritime traffic when exercises are not in progress.

The use of military areas on the Dutch Continental Shelf is expected to remain largely unchanged in the coming years. The Ministry of Defence does plan to close two firing ranges where the military currently shoots out to sea, but this will have virtually no effect on the size of the 'unsafe' areas at sea. Due to the increasing pressure on space in the North Sea, combined use of exercise areas may indeed receive increasing attention, which could lead to a military area being opened up temporarily for sand extraction, for example.

Oil and gas extraction

There are approximately 130 production sites in use, the majority of which are used for gas extraction. Oil is extracted at ten sites; one platform drills for both oil and gas. Several platforms are located in the coastal waters, but the majority are situated in the central part of the Dutch Continental Shelf. The southwest corner of the Friese Front has a relatively high concentration of platforms. The gas and oil are transported ashore through pipelines. Safety zones

Extraction of shells

of 500 metres surround the platforms. Shipping is prohibited within these zones.

The number of platforms on the Dutch Continental Shelf will decrease over the next ten years due to the gradual depletion of reserves that have been used for production since the 1970s and 80s. This decline will not be very substantial in the coming five years because platforms will be erected to develop about fifteen new reserves in that period. However, it is uncertain whether any of the remaining 55 reserves will ever be used, so the decline could increase between 2010 and 2015. This depends in part on the investment climate for mining companies and the structural price of gas, which is linked to the price of oil.

Extraction of surface minerals

Sand, gravel and shells may be extracted from the North Sea. At present no gravel is extracted. Shell extraction takes place primarily in the outer deltas and inlets of the Wadden Sea and in the North Sea (where no restrictions apply) as well as in the Voordelta, where a maximum of 40,000 m³ a year may be extracted.

Sand extraction is permitted seaward from the established NAP -20 m depth contour and in the navigation channels (Euro Meuse channel and the IJ channel). Deep sand extraction is permitted 2 km seaward from the established NAP -20 m depth contour. Since 1974, approximately 250 million m³ of sand has been extracted on the Dutch Continental Shelf, of which 76 million m³ has been taken from the navigation channels. Based on the current extraction depth of two metres, the remaining 174 million m³ is equal to a surface area of 87 km². At present, approximately 35 million m³ of sand is extracted a year, of which 20 million m³ is used as filler and over 14 million m³ for coastal defence (foreshore or beach supplementation).

In order to respond to fluctuating demand for sand of a certain quality and to limit administrative costs, businesses often request permits for a larger area than they actually use. For example, in 2004 there were valid permits for a total area of 443 km², but sand was extracted from only 8% of that area. The percentage of actual extraction relative to permitted areas corresponds approximately to that of the commercially exploited areas in the Danish or British parts of the North Sea. Incidentally, sand extraction permits are issued for three years, so the permits offer opportunities for responding to new developments or other uses.

Scenario assessments in the Second Regional extraction plan of the North Sea (RON 2) show that until 2020 an average of 29 million m³ of sand must be extracted a year for use as filler, and approximately 12 million m³ a year for supplementation. At a permitted extraction depth of two metres, this means a combined surface area requirement of

approximately 20 km² a year. An area of 5,134 km² is available between the established NAP -20 m depth contour and the 12-mile zone (because extraction near the coast is preferable); this is more than enough for the planning period covered by *IMPNS 2015*. This does not exclude this zone from uses other than surface mineral extraction.

Extraction at sea of concreting and building sand is not anticipated in the near future. This type of sand is found at deeper levels in the seabed and can be extracted profitably only in combination with the sand layers above, if they are suitable for use as filler or supplementation sand.

If the plans for the Tweede Maasvlakte go ahead, another 300 million m³ of extra sand will be needed as filler in the coming years. Assuming deep extraction from depths between 20 and 40 metres, an area of 15 km² will be needed. The search area for this purpose covers a semicircle with a radius of 30 km from Hoek van Holland, whereby the part outside the established NAP -20 m depth contour is available for sand extraction. This area covers approximately 700 km².

A minor shift in shell extraction from the Wadden Sea and the Voordelta to the North Sea is expected.

Map 6 Opportunity map for surface minerals and dredged material dumping

Coastline conservation

Sand is supplemented to preserve the basic coastline of the provinces of Noord-Holland and Zuid-Holland and the Wadden Sea. The sand required to maintain the dynamic coastal system is extracted from outside the established NAP -20 m depth contour. The sand is supplemented on the beach or in the foreshore (underwater supplementation). The basic coastline has stabilised since 1998. The development of the sand balance in the coastal system will be evaluated in 2005. No major changes in supplementation volumes are expected.

It was recently observed that several dune and dyke sections on the Dutch coast do not meet safety standards. Spatial quality is also at risk at eight of these weak spots. Planning studies are being conducted to determine ways of improving safety and spatial quality.

Disposal of dredged material

Dredged material from Dutch ports and navigation channels that passes the Chemical Toxicity Test (CTT) is dumped at several locations off the coast (North-West, Verdiepte Loswal near Rotterdam and north of the pier at IJmuiden, see map 4). The Dutch seaports supply approximately 10 million tonnes of dry material a year.

The current dump sites are deemed large enough to meet demand for the coming years.

Commercial fishing

The Dutch Continental Shelf is fished intensively, mainly by beam trawlers (which catch primarily flatfish species) and by quick-freeze trawlers (which catch mainly pelagic species). The intensities of commercial fishing in the North Sea differ by area and season, but the Dutch fishing fleet is mainly active in the southern and eastern sections of the North Sea.

Only vessels with an engine capacity of less than 300 hp are permitted to operate within the 12-mile zone and the so-called 'plaice nursery grounds' north of the Wadden Islands and in the Heligoland Bight (see figure 4.2 in chapter 4). These 'Euro cutters' fish the coastal waters mainly for sole, plaice and shrimp. Shellfish vessels operate primarily in the Voordelta.

Since 2002 the number of cutters has declined. The number of large beam trawlers in particular (> 2,000 hp) is continuing to decrease (by 24% in 2003). Quotas on the Dutch Continental Shelf have decreased by some 40% since 1995.

Maps 7 and 8 Overview of current intensities of Dutch beam trawling vessels on the Dutch part of the North Sea

Recreation

Each form of recreation has its own spatial characteristics. Bathers use the zone around the baseline. Relatively new water sports such as windsurfing, kite surfing and hang gliding are growing in popularity and use the zone just off the coast. Angling takes place from the beach, sea dykes and from ships.

Sailing and motorboating are concentrated in the coastal waters, but some crossings are also made to Great Britain.

Map 9, based on estimates from the relevant sectors (ANWB, KNWV and Toerzeiler), shows that the coastal zone (5 to 10 miles from shore) is the most important. Recreational ships and larger charter vessels both use this area intensively. A limited number of recreational boaters go out further from the coast.[11] The routes used between Dutch and foreign harbours are shown on map 9. The thickness of the lines that connect the coastal towns reflect the intensity with which the routes are used by pleasure craft. There are many more harbours along the Dutch coast for recreational vessels (which are not all shown on the map) than for routed commercial shipping vessels.

Map 9 Existing use by recreational vessels on the North Sea

Stay tourism on the coast is declining, in part due to competition from the Belgian North Sea coast and the German Baltic Sea coast. Fewer tourists (particularly foreign tourists) are visiting the Dutch coast and those who come stay for shorter periods. Nevertheless, this has had little impact on beach use and angling. The water sport sector is indeed growing, both in the form of recreational boating along the coast and recreational traffic to and from Great Britain. Sales of yachts have increased through the years and there is a demand for more yachting harbours along the Dutch coast. Initiatives in towns like Katwijk, Hoek van Holland and Petten are responding to this demand. There is also a need for more launch ramps on the coast for small fishing ships. Deep-sea anglers say that the zones around offshore wind farms offer good fishing opportunities because of the seabed structure and therefore that these zones should be accessible for angling from ships. However, shipping (including recreational boating) is prohibited in these zones for several reasons.

Cables and pipelines

There are approximately 2,500 km of pipelines and 4,000 km of cables on the Dutch Continental Shelf, primarily located in the southern section. Approximately 2,100 km of the cables are no longer in use. In many cases, there is a 500-metre maintenance zone on either side of the cables (represented by half a millimetre on Map 10).

11) This is confirmed in the 2002 report "Het scheepvaartverkeer op de Noordzee 1999-2001 gezien vanuit de lucht" ["Shipping traffic on the North Sea from 1999 to 2001 seen from the air"].

Map 10: Overview of current use of cables and pipelines

A few years ago, the rise of the Internet was expected to lead to a strong increase in the number of telecommunications cables, especially between the Netherlands and Great Britain and the United States. This expectation has since been adjusted, primarily due to the use of new technologies. Expansion will most likely be limited.

Two projects are being prepared for international power connections: one between the Netherlands and Norway (NorNed) and one between the Netherlands and Great Britain (BritNed). It appears that the market can support more such international connections. In addition, there are plans for an ethylene pipeline and for a gas pipeline between Balgzand and Bacton (England). A permit has already been issued for the gas pipeline. A large number of power cables are expected to be laid to connect wind farms with the coast (see section on 'Wind farms' below). Furthermore, a few smaller pipelines will be laid between oil and gas platforms.

5.3.2 New usage functions

In addition to the established usage functions referred to in the previous section, several new usage functions, particularly wind farms, land reclamation and mariculture, require space. Space is also required for nature: in a sense the North Sea's oldest function, but now for the first time spatially demarcated in the form of areas of special ecological features.

Wind farms

At present, there are no wind farms in the Dutch part of the North Sea. However, permits have been issued for two plans: the Near Shore Wind Farm (NSW, 8 miles from the coast near Egmond) and the Q7 farm outside the 12-mile zone. These farms have generating capacities of 100 and 120 MW respectively, and surface areas of 26.8 and 16.6 km² respectively, including the 500-metre safety zone.

After the moratorium lapsed, RWS North Sea received dozens of permit requests in the first half of 2005. With the current technology, between 400 and 1,000 km², i.e. no more than approximately 2% of the Dutch Continental Shelf, will be required to generate 6,000 MW (by 2020). This development is expected to proceed gradually. With the exception of the NSW, the farms will have to be built outside the 12-mile zone. Other excluded areas are the safety zones surrounding cables and pipelines, shipping routes, the area south of and including the Euro-Meuse Channel (building and concreting sand might be extracted from this area in the future) and defence restriction zones.

The remaining alternatives can be found on the opportunity map (Map 11), which shows the most likely sites. These areas cover a total of nearly 2,500 km². Only a limited portion (between 400 and 1,000 km²) will be needed in due course to generate 6,000 MW. The water depth, the location of cables and pipelines, the distance from ports and the required length of cable to the landing points at Beverwijk

Constructing cables or pipelines

Artist impressionof the Second Maasvlakte

and Maasvlakte, which are connected to the national power network, have been taken into account. Surface areas of less than 7.5 km² have been omitted. Taking all these factors into account, the most attractive sites lie immediately outside the 12-mile zone off the coast of the provinces of Noord Holland and Zuid Holland. The 1,000 km² required for wind farms can be established within a radius of 60 km from the landing points at Beverwijk or Maasvlakte, spread over a few dozen areas.

Map 11 Wind farm opportunity map

The development of wind farms is expected to require several dozen-transmission cables to at least these two landing points. The current practice of creating a maintenance zone of at least 500 metres between cables would take up an undesirable amount of space and cause conflicts about the landing points. To minimise this, a narrower maintenance zone will be demarcated where necessary. Cables can also be combined physically or spatially, or one or more joint transmission cables can be used. In 2005, the government will determine which alternatives are preferable.

Shipping traffic is not permitted in wind farms for two reasons: to protect the installations and for the safety of the ships. Allowing vessels to enter wind farms would increase the chance of collisions and thus accidents and damage. Furthermore, emergency assistance and rescuing people would be extremely difficult in an offshore wind farm because of the problems and dangers involved in getting emergency and rescue equipment on site, especially in poor weather conditions. Allowing recreational vessels might lead to an increase in

other undesirable shipping traffic, such as anglers and the like, which would increase the chance of a collision even more.

Land reclamation

The expansion of the Maasvlakte is expected to begin within a few years. By way of impact compensation, a 20,000-hectare marine reserve will be established in the Voordelta before then.
New land reclamation projects may well be necessary from time to time. Exploratory research is currently being done into the possibility of extending the coast between Hoek van Holland and Scheveningen.

Mussel farming

Mariculture

Farming shellfish at sea is a new and as yet uncertain development. Because the permitting policy for tradition farming areas (the Wadden Sea and Eastern Scheldt in particular) has been tightened, shellfish catches are expected to increase in the North Sea. The recently established Aquaculture Innovation Platform is responding to this possibility by gathering information, fostering cooperation and promoting model projects in the area of fish farming, shellfish farming and cultivation of sea crops (mussel farming, cockle farming, oyster farming, etc.). A potential innovation is the realisation of marine culture parks, where mariculture and nature recreation can be combined.

At present there is concrete interest only in mussel seed capture and mussel farming. The shallow coastal waters (depths to 8-10 metres) are particularly suitable for mussel farming. In addition, it appears that mussel farming can be combined with fixed objects, such as wind turbines. This is currently being studied. However, if floating mussel beds are successful in the North Sea, this could lead to strong growth in this part of the sector. Once the results of this research are known, the government will decide whether or not space in the North Sea can be allocated for this purpose and on what conditions.

Fish farming in the North Sea seems unlikely in the coming years. The impact of open systems on the environment is too great and closed systems at sea are too expensive and are more promising on land. Nevertheless, the Innofisk Project[12] is studying the possibilities of closed systems.

Protected nature

Nature is a function in development. The Voordelta and the coastal waters north of Petten have already been designated as special areas of conservation under the Birds and Habitats Directive. The protection regime in the Habitats Directive, which is embedded in the Nature Conservation Act, applies. *IMPNS 2015*, which adds more detail to the relevant provisions of the *Spatial Planning Policy Document*, adds the following areas of special ecological features: Doggersbank, Klaverbank, Friese Front and

12) Innofisk is an initiative of the Green Spaces and Agrocluster Innovation Network (Innovatie Netwerk Groene Ruimte en Agrocluster) to run fish farms on a fixed-location closed system (a stationary ship or a floating container).

several sections of the coastal waters. These areas are described in detail in chapter 7.

These areas may be designated as special areas of conservation under the Wild Birds or Habitats Directive in a few years' time. Research also shows that several other areas are eligible for protection. In addition, there are plans to establish a marine reserve to compensate for the expansion of the Maasvlakte (the marine reserve in the Voordelta). Map 12, which belongs to chapter 7, provides an overview of all areas with (potential) special ecological features: those that have already been demarcated and those that might be demarcated in the future.

5.4 Conclusions and focus points

The inventory and analysis from section 5.3 show that pressure on the North Sea is increasing on balance. In the coming years, the main growth functions will be (in no particular order): surface mineral extraction, water sport recreation, wind farms, nature and possibly mariculture. The other usage functions will remain more or less at the current level.

General zoning

At the same time, it is clear that the tension that arises between location-based usage functions will be limited. This is due in part to the *Spatial Planning Policy Document*, which broadly gives each growth function its own zone (see figure 5.1):

- shallow coastal waters: mainly for water recreation and possibly mariculture;
- from the established NAP -20 m depth contour to approx. the 12-mile line: surface mineral extraction;
- from the 12-mile line seaward: wind farms, possibly combined with mariculture.

Sand extraction outside the 12-mile zone has been rare to date. However, should a company need to extract sand outside 12-mile zone in an area that is suitable for wind farms, wind farms will have priority if there is a conflict. This is because there is plenty of room for sand extraction elsewhere. The search area for sand extraction for the Tweede Maasvlakte is large enough to meet the need for sand, even if wind farms are permitted there.

Tension is anticipated between wind farms on the one hand and water sport recreation and fishing on the other hand, mainly because vessels are banned from wind farms. However, the effects of restricting use of areas by non-routed traffic (including recreational traffic) by erecting new obstacles in those areas are expected to be minimal because such vessels may continue using the areas outside the reserved navigation routes[13]. Furthermore, most recreational boating takes place in the coastal zone, where no wind farms can be built. The number of collisions can be higher near a wind farm. This will be addressed in the detailed safety study for each wind farm. If necessary, safety measures will be taken.

The favoured locations for wind farms are in areas that are currently relatively heavily fished. Closing areas to shipping traffic and fishing can benefit fish stocks (refuge function). Nevertheless, damage cannot be entirely ruled out in advance. Compensation is available, but only for damage incurred by users who cannot reasonably be expected to bear the damage themselves and only if the damage falls outside the scope of normal civil-society risk. If RWS is the permitting authority, individual fishermen can file a claim under its Disadvantage Compensation Scheme (*Regeling nadeelcompensatie Verkeer en Waterstaat 1999*).

13) See also the report published at the end of 2001 entitled "Effecten van ruimteclaims in de Noordzee op de scheepvaart" ["Effects of spatial claims in the North Sea on shipping traffic"].

'Finger on the pulse'

The combination of the already available management instruments and the new ones, such as the permit tracking system, opportunity maps and the integrated assessment framework (chapter 6), makes it possible to keep your finger on the pulse in many cases. An alert 'finger-on-the-pulse approach' is particularly suitable for the reasons listed below:

- Because no real problems are anticipated for the growth functions, more detailed direction in the form of (sectoral) spatial planning appears unnecessary in the short term. The power cables running to the wind farms may well be an exception, but research into this problem (including solutions) has now begun and will be completed in the course of 2005.
- The effects of restricting use of areas by non-routed traffic (including recreational traffic) by erecting new obstacles in those areas are expected to be minimal because such vessels may continue using the areas outside the reserved navigation routes.
- A few dozen wind farms are likely to be needed to generate 6,000 MW of power. This is not considered a problem at present. After all, the development of wind farms is still at an early stage. If there is reason to do so, an assessment will be made to determine whether more detailed spatial planning is necessary.

Focus points

The increasing amount of space taken up by protected areas of special ecological features may cause problems in the future for current usage. Research shows that fishing in particular and, to a lesser extent, shipping could have a negative impact on the ecological features of the delimited areas of special ecological features. By contrast, few problems related to other future use are expected to arise in the protected areas outside the 12-mile zone. For most functions these areas are too far from land to be economically attractive. Management plans will indicate what the consequences of human use are for the areas in the coastal waters.

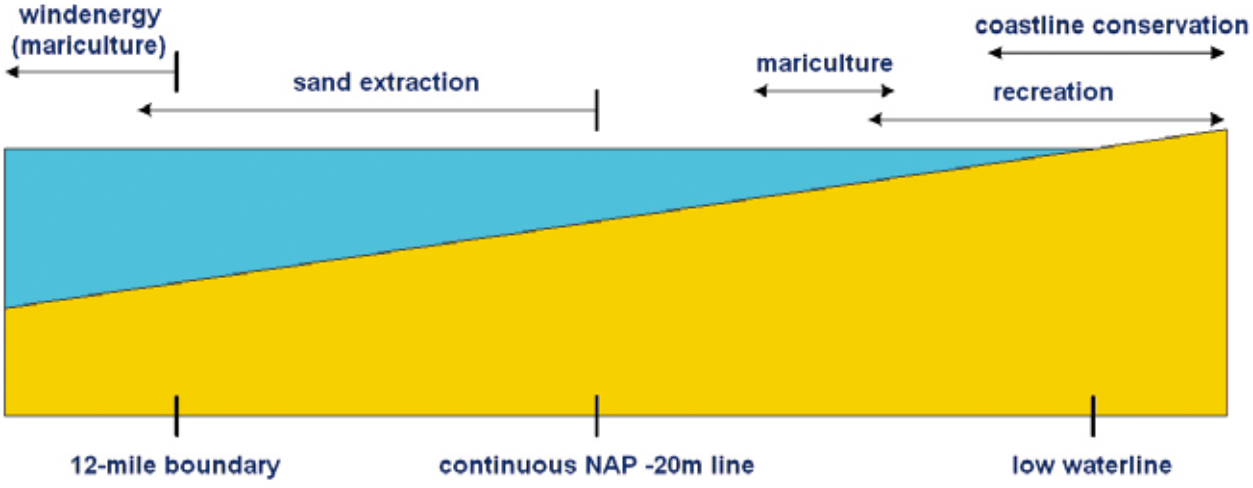


Figure 5.1
An example of rough zones for use of the North Sea near Scheveningen

6 Integrated assessment framework for permitting

Providing permits has been and remains an important instrument for regulating activity in the North Sea. However, *IMPNS 2015* supplements this instrument with its integrated assessment framework for permitting. A standard element of that framework is the requirement, from now on, to perform an assessment of the choice of location and efficiency in the use of space for each location-based activity that is subject to permitting anywhere in the North Sea. For the rest, the integrated assessment framework is as far as possible in keeping with the legislation and regulations already in effect, which includes the environmental impact report and the obligations ensuing from the Birds and Habitats Directives. An important advantage of the assessment framework is that it also offers the possibility, from now on, to perform systematic evaluations during the process of providing permits for entirely new usage functions that are not addressed in the current legislation and regulations.

6.1 Objective of the integrated assessment framework

This chapter describes the integrated assessment framework for permitting. The *Spatial Planning Policy Document* serves as the policy basis. With the help of the integrated assessment framework, it is possible to consider the admissibility of the economic activity concerned for each permit application, on the basis of spatial aspects, ecological and environmental consequences and the conditions and constraints to be attached to a permit. With a view to sustainable use of space, the main concern is that the use is efficient. The usefulness and necessity of new activities in the North Sea must also be demonstrated, in order to prevent activities for which there is no longer room on land being relocated to the North Sea without proper consideration. For use to be sustainable the impact on the environment must also be limited. This means that the effects of measures must be charted in advance (precautionary action) and, if necessary, restricted and/or compensated for.

The integrated assessment framework contains five assessments, which are referred to in the *Spatial Planning Policy Document*:

1. defining the spatial claim;
2. precaution;
3. usefulness and necessity;
4. choice of location and evaluation of use of space;
5. mitigation and impact compensation.

Defining the spatial claim is, in fact, not a true assessment, but a description of the activity. Section 6.5 states what the consequences of the assessment framework are for activities for known functions, which are covered by existing policy. The figure above gives the goal of each assessment and the consequences on the one hand for activities for known functions covered by existing policy and on the other hand for activities for new functions.

Assessment	Goal	Consequences for activities for already known functions	Consequences for activities for new functions (for which there is no policy yet)
Precaution	Prevent and limit environmental impact	Is current policy or current practice	Carry out precautionary assessment
Usefulness and necessity	Prevent undesirable use	Reference to current policy or current practice	Demonstrate usefulness and necessity; perform Social Cost-Benefit Analysis in case of doubt
Choice of location and evaluation of use of space	Careful use of space	Applicable to location-based functions	Applicable to location-based functions
Ecological mitigation and compensation	Protection of ecological features	Applicable to significant effects	Applicable to significant effects

Figure 6.1
Goal of the assessments and consequences for existing and new functions

The section below refers to an Environmental Impact Report. An Environmental Impact Report is a public document that describes the effects on the environment of a proposed activity and gives reasonable alternatives.

6.2 Scope

In this context, 'integrated' means that the assessment framework applies to all activities that need a permit, both for new activities that have not yet occurred and for extensions or expansions of existing activities. The framework applies only to activities that need a permit. Activities that do not need a permit, such as shipping traffic, recreation, coastal defence activities such as sand extraction and spraying activities, and full or partial military use fall, in principle, outside the scope of the assessment framework. The assessment framework is relevant to these activities only when policy is reviewed or new policy is developed. The framework applies the same threshold values as those to which the Environmental Impact Report Decree (*Besluit milieueffectrapportage*) (see annex 6) applies. If, under this decree, a project might have a significant impact and is therefore required to undergo an Environmental Impact Assessment (EIA), the assessment framework must also be applied. If the EIA shows that there are no significant effects or if a project does not fall under the Environmental Impact Report Decree due to its size, there is no need to go through the entire assessment framework. In that case, location-based activities will, however, be subjected to the assessment of efficient use of space (assessment 4 in the assessment framework). This is because the EIA says nothing about significant spatial impact in principle. Furthermore, it can also be desirable to direct the choice of location for small-scale activities, e.g. to prevent fragmentation or interference from other uses or to protect specific ecological features on site.

The assessment framework does not apply to fishing because most fishing is not subject to permitting and because foreign fishermen also make use of the Dutch part of the North Sea. The Dutch government has no direct influence. Any measures necessary for fishing will be taken within the framework of the management plans to be drafted for the special areas of conservation. This will require coordination at EU level between the Common Fisheries Policy and the (implementation of the) Birds and Habitats Directives.

The assessment framework applies to the entire North Sea, including the Special Areas of Conservation (SACs) under the Birds and Habitats Directives and areas of special ecological features. For the latter, the assessment framework contains several specific considerations, particularly when identifying reasons of overriding public interest and for impact compensation. Wherever such supplementary assessments apply, they are specifically mentioned in the description of the integrated assessment framework in 6.3.

Supplementary considerations also apply for SACs (Birds and Habitats Directives) when identifying reasons of overriding public interest and for impact compensation. These considerations are in some respects comparable to those that apply for areas of special ecological features. An assessment framework for SACs (Birds and Habitats Directives) is provided for in Article 6 of the Habitats Directive. That framework has since been implemented in the 1998 Nature Conservation Act and it is summarised briefly in section 6.4. Activities that do not require a permit in principle can be subject to permitting under the Nature Conservation Act if they have a negative impact on a SAC (Birds and Habitats Directives) (see section 6.4). The scope of the Nature Conservation Act is to be expanded to include the Exclusive Economic Zone (EEZ). Decisions still have to be taken regarding registration of SACs (Birds and Habitats Directives) in the EEZ (see chapter 7).

6.3 The five assessments of the integrated assessment framework for the North Sea

The assessment framework consists of five assessments.

Assessment 1: Defining the spatial claim

The initiator must describe the intended activity, including the potential effects and the amount of space needed. This is not a genuine assessment, but rather a description that is at present already part of the procedure for issuing a permit. However, this description does contain basic information that is needed to apply the assessments set out below.

Assessment 2: Precaution

The precautionary principle, as it has evolved through the years in international and national policy (OSPAR, 4th Water Management Policy Document (*4e Nota Waterhuishouding*) and the Green Space Structure Plan (*Structuurschema Groene Ruimte*)), is an essential point of departure for planning and designing activities at sea. It requires preventive measures to be taken when there are reasonable grounds for concern that an activity will damage the marine environment, human health and/or other legal uses, even if there is insufficient evidence of a causal relationship between the activity and the effects. This means that measures are taken in advance to prevent long-term, irreversible and undesirable effects of activities, and if the activity in question is deemed acceptable, to mitigate such effects. Damage to the marine environment is not caused only by emissions of undesirable substances. The ecosystem can also be disrupted, e.g. by covering or removing sediment, noise and lack of visibility or destruction of seabed fauna. Instruments used in this context include environmental impact reports, clean technologies,

inspection systems and management of the flow of waste and other substances.

The precautionary assessment is primarily intended to prevent serious damage. Assessments 4 and 5 are primarily meant to ensure that activities that are acceptable in principle in the North Sea are incorporated into the existing situation in the best possible way. The way in which the precautionary assessment is carried out in practice depends on whether the activity is a usage function that is already represented in the North Sea and that is covered by existing policy and regulations or an entirely new activity that has never been carried out in the North Sea before.

New activities for existing functions (including expansion or extension of permits)

The Environmental Impact Report provides insight into the effects of activities for existing functions, and makes it possible to do the precautionary assessment. In the case of activities that are not subject to an Environmental Impact Assessment, the Competent Authority will apply the precautionary principle on the basis of existing policy, regulations and common practice. Should new insights into ecological effects, effects on human health or effects on other legal uses so require, the Competent Authority will request the permit applicant to provide further relevant information and, if necessary, to take preventive measures. If it turns out that there is no new information about possible harmful effects, the precautionary principle will have been properly applied.

New activities carried out for the first time in the North Sea

Initiators of new activities are required to submit information for the precautionary assessment (to be performed by the authority that issues the permits) that describes ecological effects, effects on human health and effects on other legal uses. The following information must be provided:

- description of the action;
- description of the ecological features of the area and situation regarding the intended use;
- description of the effects that the action could have;
- evaluation of these potential effects on the basis of the best available knowledge.

For activities subject to an Environmental Impact Assessment, the information required can be found in the Environmental Impact Report.

Lack of (full) knowledge of the effects of an activity may not be used as an argument for allowing an activity to proceed and can have consequences that include the following:

- the activity not being allowed to proceed;
- if the activity is being allowed to proceed, the effects of it haveto be mitigated and/or compensated for ;
- further research (e.g. monitoring) being required;
- other restrictions being imposed.

If the evaluation of the permit application (with or without the Environmental Impact Report) produces sufficient certainty that there will be no significant effects, there is no need to go through the remainder of the assessment framework, with the exception of the location choice assessment.

Assessment 3: Usefulness and necessity

If an activity has significant spatial and/or ecological effects, its usefulness and necessity must be demonstrated. However, usefulness and necessity do not have to be substantiated for activities that are explicitly permitted or encouraged in national policy. This applies, for example, to wind turbines (up to 6,000 MW) and oil, gas and surface mineral extraction (sand, shells). However, the other assessments in the assessment framework have to be carried out for these activities.
For any other activity, this assessment requires the initiator to substantiate why it should take place

in or on the North Sea and why it cannot reasonably be carried out on land. If there is doubt about the usefulness and necessity of a new activity, the Competent Authority can ask the initiator to perform a social cost-benefit analysis , which the Competent Authority will then use to make an assessment. If the activity is permitted, it will be subjected to the remaining assessments in the assessment framework.

Areas with special ecological features

No new activities with significant effects are permitted in or near areas with special ecological features, unless there is no realistic alternative and there is an overriding public interest. If both these conditions are met, the Competent Authority can weigh public interest against environmental interest and permit the activity, provided that the initiator takes mitigation and compensation measures. It is not necessary to provide evidence proving the overriding public interest of intended activities that are described explicitly as being of overriding public interest in national government policy (e.g. oil and gas extraction, wind turbines (up to 6,000 MW) and surface mineral extraction). Such evidence must be provided for all other activities.

Assessment 4: Choice of location and evaluation of use of space

The aim of this assessment is to promote maximum efficiency in the use of space. During the preliminary consultation preceding the assessment of a permit application, the Competent Authority will state the minimum conditions against which it will assess the application and the conditions on which a permit will be granted. The following elements are addressed:

- *Efficient use of space*. For each permit, the Competent Authority will assess whether the initiator's spatial claim is realistic or whether the space could be used more efficiently.
- *Multiple use of space wherever possible*. This means that an initiator will not receive an exclusive right. Others may use the same location in consultation, as long as that use does not cause the primary initiator any damage or nuisance. Any damage can be settled between the parties. The second initiator can thus weigh the compensation costs against the additional costs of using a different location. The government can determine to what extent present or future shared use by another party must be accepted. In some cases, the government might find it necessary to require the first user to accept another use. If the first user incurs disproportionate damage as a result, it can claim compensation under the General Administrative Law Act (*Algemene wet bestuursrecht*) or the Ministry of Transport, Public Works and Water Management's 1999 Disadvantage Compensation Scheme (*Regeling Nadeelcompensatie Verkeer en Waterstaat 1999*).
- *Impact on non-location based use*. The Competent Authority can ask the initiator to describe the effects of the activity on other non-location bound uses or uses that do not require a permit (such as fishing) and the potential for shared use by other parties.
- *Alternative locations*. The Competent Authority can ask the initiator to study a second location for ecological or spatial reasons.
- *Term of the permit*. Valid permits – and the space they represent – must not be allowed to go unused. Permits must therefore always be granted for a limited period. The Competent Authority can also try to combine activities in terms of time when granting permits.
- *Removal of objects*. A basic principle is that objects are removed after the permit expires. In the case of cables and pipelines, the Competent Authority can allow them to remain in place after the permit expires (see section 6.5).
- *12-mile zone*. Permits are granted for the construction of permanent projects within the

12-mile zone outside the areas that fall under the regime of the Birds and Habitats Directives that are visible from the coast only for reasons of overriding public interest, on the basis of the Public Works (Management) Act (Wbr) and the Environmental Management Act. No permanent projects that are visible from the coast are permitted in the SACs (Birds and Habitats Directives) within the 12-mile zone, unless there are no realistic alternatives and the reasons of overriding public interest are substantiated. Permanent projects are projects that stand, float or last longer than six months.

Assessment 5: Mitigation and compensation for ecological impact

If an activity has negative effects, measures must first be taken to mitigate them. Damage that cannot be prevented must be compensated for to the extent possible. The Competent Authority will assess whether the mitigating or compensating measures proposed by the initiator are sufficient.

The North Sea is part of the Dutch National Ecological Network (*Ecologische Hoofdstructuur* (EHS)), but is subject to a more flexible compensation obligation: in the EHS, compensation is an obligation to achieve a result, while the North Sea is subject to a best-efforts obligation. The basic principles are summarised below:

- In line with the above, effects must first be mitigated as far as possible by appropriate measures; only then does compensation take place.
- Compensation is only required for significant effects.
- Measures to mitigate or compensate for effects must be determined at the same time the decision about the permit is made. If the monitoring of effects is not complete by that time, the permit must state the form of any compensation.
- Compensation must be provided in kind wherever possible, in or directly adjacent to the North Sea. If this is impossible, financial compensation must be provided, e.g. through the National Green Fund (*Nationaal Groenfonds*).
- The initiator drafts a compensation plan for approval by the Competent Authority.

Areas with special ecological features

In **addition** to the compensation provisions in the integrated assessment framework for the North Sea, compensation is an obligation to achieve a result with respect to areas with special ecological features.

6.4 Integrated assessment framework and the Birds and Habitats Directives

The integrated assessment framework applies to the entire North Sea. For each activity that is potentially harmful to an SAC (Birds and Habitats Directives), the assessment framework provided in the 1998 Nature Conservation Act must be applied as well. This can result in activities in the EEZ that are not subject to issuing a permit in principle nevertheless being subject to permits under the 1998 Nature Conservation Act. Activities that are not subject to permits can also be regulated in the management plans to be drafted for the SACs (Birds and Habitats Directives).

The text below summarises how the assessment framework in the 1998 Nature Conservation Act works (see figure 6.2). For a detailed explanation, please refer to the full text of the 1998 Nature Conservation Act. This assessment framework consists of the following elements:

1: Basic protection/precautionary principle

A permit is required to carry out projects or other activities that, from the perspective of the stand-still principle, could diminish the quality of habitats and the habitats of species or have a disruptive impact

on the local species for which the area was designated. In any event, this concerns projects or activities that could harm the natural characteristics of the area. If it is not possible to demonstrate on the grounds of objective data that an activity will have no significant effects on an SAC (Birds and Habitats Directives), the initiator must make an appropriate evaluation.

2: Alternative solutions

If an activity could have significant effects, alternative solutions must be sought first.

3: Reasons of overriding public interest

For SACs (Birds and Habitats Directives), a "plan or project that impacts the natural characteristics of the area may nevertheless be allowed to proceed if there are no alternative solutions and it involves 'reasons of overriding public interest', including reasons of a social or economic nature", provided that compensatory measures are taken. If a priority natural habitat or species is present in an area, a permit may be granted only for reasons of human health, public safety or fundamentally favourable environmental effects or upon the recommendation of the European Commission. If the natural characteristics of an area would be affected and there are no alternative solutions, the existence of 'reasons of overriding public interest' will have to be substantiated. Only then can the Competent Authority compare the public interest and the interests of the environment, and possibly allow the activity.

4: Compensation

If ecological features in the area would be affected, the initiator is under a result obligation to compensate for the activity in advance. The aim of compensation is the sustained maintenance of species, habitats and the related functions that will be affected by the activity. This can be achieved by, for example, expanding the protected area or improving its quality. A new SAC (Birds and Habitats Directives) may be designated only if this contributes towards the European Natura 2000 network as a whole; fragmentation of protected areas must be avoided. Financial compensation and compensation with other ecological features are not permitted. This compensation regime is aimed at the features of the area that are specifically mentioned in the EU Birds and Habitats Directives. However, on the basis of the integrated assessment framework for the entire North Sea, the initiator is also subject to a best-efforts obligation to mitigate or compensate

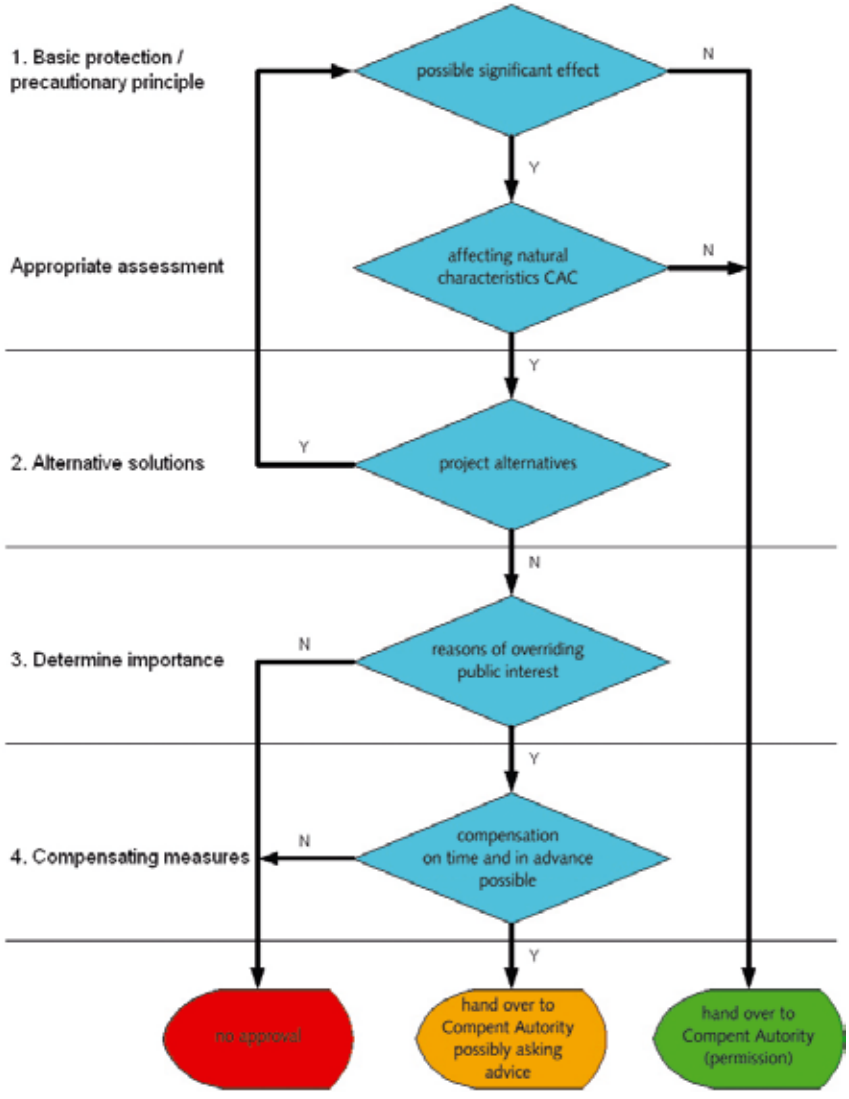


Figure 6.2 Assessment framework of the revised Nature conservation act 1998 for a plan or project in a SAC area

for significant effects on other features (see section 6.3).

6.5 Applying the assessment framework to new activities for existing functions

This section sets out how the integrated assessment framework is applied in the permitting process for existing functions, including cases of expansion or extension of permits. Existing functions are usage functions that currently occur in or on the North Sea and that are based on existing practice or legislation and regulations. Depending on where the activity takes place, the specific provisions for areas with special ecological features may apply in addition to the integrated assessment framework for the whole North Sea. The type of area in which each function occurs or is expected to occur in the future is therefore set out below.

Disposal of dredged material

The current disposal sites for saline dredged material are located outside the SACs (Birds and Habitats Directives) and areas with special ecological features. Permits for the disposal of dredging waste are issued under the Wvz and the Wvo. Before a permit is granted, a land alternative is sought. If none is found, it is determined whether dumping at sea will damage the marine environment. Account is taken of the effects of substances on organisms and of the effects of burying organisms under the dredging material.

The quality of the waste to be dumped is subjected to a Chemical Toxicity Test (CTT) in advance. This all means that under the current system of permits the usefulness and necessity of the disposal of dredged material is demonstrated and the effects are mitigated. The integrated assessment framework therefore has no further consequences for current disposal practice.

An Environmental Impact Assessment must be carried out before any new disposal sites are set up. The integrated assessment framework must be applied if the Environmental Impact Report shows that the site could have a significant impact. Depending on the location of the site, the assessment framework of the Nature Conservation Act or the specific provisions for areas with special ecological features may apply.

Discharging

At present, Wvo permits are issued for both discharging and firing exercises along the coast. A few such activities take place in SACs (Birds and Habitats Directives). Discharging is not subject to an obligatory Environmental Impact Assessment. Because the extension of current discharging permits is not expected to have significant effects, the integrated assessment framework is not expected to have any further consequences for the current discharging activities. In SACs (Birds and Habitats Directives), the assessment framework of the Nature Conservation Act may apply to extensions of existing permits.

Cables and pipelines

Cables and pipelines may be laid throughout the North Sea, including areas of special ecological features and SACs (Birds and Habitats Directives). Such work is subject to a prior Environmental Impact Assessment or evaluation,[14] depending on the scope and specifications (see figure 6.2). The evaluation obligation means that the Competent Authority determines whether an environmental impact report must be drawn up for an activity

14) Amendment of the Environmental Impact Assessment Decree (Wijziging besluit m.e.r.), Netherlands Bulletin of Acts, Orders and Decrees (Staatsblad), 2005/7.

Type of cable/pipeline	Permits	Obligatory Environmental Impact Assessment
Telecom cables	Wbr	No
Power cables, including cables for wind turbines	Wbr	No, obligatory evaluation
Oil and gas pipelines	Mining Act	Yes
Umbilicals (control cables off-shore)	Mining Act	No
Discharge pipes	Wbr	Yes
Transit cables	Wbr	No, obligatory evaluation
Transit pipelines	Wbr	Yes

Figure 6.3
Kind of permit and EIA obligation per type of cable/pipe

because of the special circumstances under which the activity is carried out.

Existing environmental impact reports show that cables and pipelines generally do not cause significant effects. Precautionary measures in the form of mitigation are applied by including in the permit the requirement to use the most environmentally friendly cable/pipe laying technologies. The usefulness and necessity of laying a cable or pipeline must be substantiated if it is not laid down in policy. With a view to efficient use of space, the safety and maintenance zones will be reduced wherever possible and the best route will be sought in consultation with the initiator. It may be necessary to combine power cables (see chapter 5). If the environmental impact report predicts significant impact, the mitigation and compensation assessment will be required.

Depending on the location, the specific provisions for areas with special ecological features and/or the assessment framework of the Nature Conservation Act could apply. permits issued for the laying and commercial exploitation of a cable or pipeline that fall under the Wbr contain a standard requirement to remove the cable or pipeline when it is no longer in use. Exemptions from this requirement are granted only if the benefits to society outweigh the social costs of leaving it in place. This assessment is made by the Competent Authority based on information provided by the party that wants a permit and using a checklist to determine the temporary and permanent effects of leaving the cable or pipeline in place. This checklist can be found in Annex 7. The removal requirement applies only to permits for laying new cables and pipelines.

A similar requirement applies to pipelines that fall under the Mining Act. Such pipelines are usually left in place after oil or gas extraction ends. The owner cleans the pipeline and is required to carry out regular inspections according to the conditions of the permit.

A security deposit will be required for all cables that fall under the Wbr regime, with the exception of (a) cables in a Wbr permit that are used to connect

individual wind farms to the power supply network and (b) cables owned wholly or partly by the state. No security deposit will be required for offshore oil and gas pipelines that fall under the Mining Act or the Wbr regime. The introduction of this security deposit was prompted by the need to improve compliance with the notification requirement contained in the Wbr permit in relation to discontinuation of use or transfer of ownership.

Land reclamation

Reclamation of an area larger than a certain size must be preceded by an Environmental Impact Assessment. Depending on the size and location, new land reclamation projects will be subject to the integrated assessment framework (and, if applicable, the specific provisions for areas of special ecological features) and possibly also the assessment framework from the Nature Conservation Act. Because each project is different, no certainty can be given in advance about the consequences of applying the integrated assessment framework.

Mariculture

Mariculture is mainly expected in the coastal waters, where SACs (Birds and Habitats Directives) and areas of special ecological features are situated. An assessment under the Birds and Habitats Directives was carried out in connection with a permit application for a mussel and mussel seed farm situated in the Voordelta. It showed that no significant ecological effects were to be expected. For new initiatives, the Environmental Impact Assessment obligation will largely cover the assessment framework. If an Environmental Impact Assessment is not required prior to an activity, it may be assumed that the effects will be limited, and the assessment framework will apply only if substances are used in the production process (and a Wm (Environmental Management Act) permit is therefore required) or if clustering of (small) mariculture installations occurs.

It will be probably be possible to demonstrate the usefulness and necessity of mariculture in the North Sea in most cases; the ministries are in agreement that mariculture is a marine activity and that it is advisable to relieve the burden on the Eastern Scheldt and the Western Scheldt. The choice of location and use of space need to be assessed, in part to prevent fragmentation. The assessment framework of the Nature Conservation Act or the specific provisions for areas of special ecological features may apply, depending on the location.

Offshore mining

In principle, offshore mining activities are permitted throughout the North Sea, including in areas of special ecological features and SACs (Birds and Habitats Directives). Exploration for and extraction of oil and natural gas are subject to an Environmental Impact Assessment under the 1994 Environmental Impact Assessment Decree. The Environmental Impact Assessment requirement for exploration applies to sensitive areas, including SACs (Birds and Habitats Directives), up to three nautical miles from the coast and is connected to the Mining Act environmental permit; the Environmental Impact Assessment requirement for extraction applies to all of the territorial waters and is connected to the environmental permit.

If the environmental impact report shows that the activity will affect the natural characteristics of the area, the integrated assessment framework must be applied for the drilling platform concerned. In principle, the usefulness and necessity of these activities in the North Sea, in the areas of special ecological features and in the SACs (Birds and Habitats Directives) do not have to be substantiated case by case. After all, as stated in the *Spatial Planning Policy Document*, oil and gas extraction is carried out for reasons of overriding public interest and it is assessed as such in the assessment framework (see section 4.1 for the reasons). If it is

determined that the natural characteristics of the area will be affected and there is no alternative solution, the reasons of overriding public interest must be weighed against the importance of the natural characteristics of the area.

Oil and gas projects are not expected to harm the ecological features of the North Sea. The measures taken in the past have greatly reduced the harmful environmental impact of oil and gas platforms. Furthermore, the RIKZ/Alterra[15] research into the ecological effects of use of the North Sea shows that the impact of oil and gas projects can be considered limited to marginal. However, migrating birds can be negatively impacted (they are disoriented by platform lighting). Measures must be taken to mitigate this effect.

Permanent projects that are visible from the coast are not permitted in the SACs (Birds and Habitats Directives) within the 12-mile zone unless there are no realistic alternatives and the reasons of overriding public interest can be demonstrated. Throughout the rest of the coastal waters, permits are issued for visible permanent projects only if there are reasons of overriding public interest. Because oil and gas extraction is dependent on the presence of oil and gas in the substrate, alternatives are usually extremely expensive.

Impact mitigation is to a certain extent laid down in the Oil and Gas Environmental Covenant (*Milieuconvenant Olie en Gas*), which contains agreements concerning, for example, phased replacement of harmful auxiliary substances used in mining. Whether or not compensatory measures in the North Sea are needed in addition to mitigation is determined by the extent to which significant effects occur.

Surface mineral extraction

Sand extraction is permitted only outside the established NAP -20 m depth contour. Consequently, it does not take place in principle in areas of special ecological features in the coastal waters and in the SACs (Birds and Habitats Directives). According to the *Spatial Planning Policy Document*, national policy is to encourage sand extraction. Therefore, there is no need to demonstrate its usefulness and necessity in the North Sea. Standard sand extraction permits (for extraction down to depths of 2 metres) are issued on the basis of a generic environmental impact report dating from 1993. This environmental impact report shows that the activity causes no significant effects. Nevertheless, environmentally friendly extraction technologies are required (trailing suction dredger, extraction from a joined-up area). Following a decision of the Council of State (2005), the substantiation of permit applications will be improved by redrafting one or more environment impact reports.

It is necessary to assess all the facets of sediment extraction, including choice of location and use of space. As most normal permits are valid for three years, no problems are anticipated. However, the area just outside the 12-mile zone, where both wind farms and sand extraction activities can be situated, needs to be carefully monitored. If there is an overlap, wind farms will be given priority because there is sufficient space elsewhere for sand extraction.

Sand extraction is not expected to occur in areas with special ecological features in the EEZ, but in the event of initiatives in these areas it must be demonstrated that there is no realistic alternative. However, usefulness and necessity do not have to be substantiated. Whether or not compensation in the North Sea is necessary will be decided on the basis of the

15) Gebieden met bijzondere ecologische waarden op het NCP" ["Areas of special ecological features on the Dutch Continental Shelf"] (RIKZ/Alterra, 2005)

extent to which significant effects are caused. A specific environmental impact report must be compiled for each site in the case of non-regular (i.e. large-scale and/or deep) sand extraction.

Shell extraction is permitted in the areas where the water is deeper than NAP -5 metres up to 50 km from the coast. At present, the locations where shells are extracted include in and west of the Voordelta, the Wadden Sea, the coastal waters north of the Wadden Islands and therefore partially in areas that are designated or registered as SACs (Birds and Habitats Directives). Expansion or extension of shell extraction permits may be subject to the assessment framework of the 1998 Nature Conservation Act or the specific provisions for areas of special ecological features, in addition to the general assessment framework for the entire North Sea.

Wind farms

Because wind farms are explicitly encouraged in national policy, it is not necessary to substantiate their usefulness and necessity in the North Sea or in the areas of special ecological features, up to a total output power of 6,000 MW. If significant effects are anticipated, the activity may, in principle, be permitted to proceed following an assessment of the public interest and the environmental interest, taking into account mitigation and compensation. With the exception of the Near Shore wind farm, wind farms must be established outside the 12-mile zone. No wind farms are expected in areas of special ecological features in the EEZ. However, if an initiative is taken in such an area, the specific provisions for areas of special ecological features will apply and the absence of realistic alternatives must be demonstrated. Whether compensation in the North Sea is required will be determined according to the extent to which significant effects occur. Assessment of efficient use of space and choice of location is required. The procedure of Wbr-permits will take into account the possibility of temporal phasing of the ambition level for the development of wind farms at sea, as laid down in energy policy.

Figure 6.4 sets out the consequences of each assessment for new activities for existing functions in general terms.

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Activity	Choice of location/ Efficient use of space	Application of precautionary principle	Demonstration/substantiation of usefulness & necessity	Compensation
Disposal of dredged material	-	Yes, on the basis of existing policy	-	-
Setting up deepened disposal site for dredged material	Yes	Yes, on the basis of an Environmental Impact Assessment	Depends on significant effects identified in Environmental Impact Assessment	Depends on significant effects identified in Environmental Impact Assessment
Discharging (incl. military use)	-	Yes, on the basis of existing policy	-	-
Current scale of mariculture	Yes	Yes, on the basis of precautionary assessment	-	-
Small-scale sand and shell extraction - current situation	Yes	Yes, on the basis of existing policy	-	-
Deep/large-scale sand extraction	Yes	Yes, on the basis of an Environmental Impact Assessment	Reference to Spatial Planning Policy Document is sufficient	Depends on significant effects identified in Environmental Impact Assessment
Wind farms	Yes	Yes, on the basis of an Environmental Impact Assessment	Reference to Spatial Planning Policy Document is sufficient	Depends on significant effects identified in Environmental Impact Assessment
Cables and pipelines	Yes	Yes, on the basis of current practice, or on the basis of an environmental impact assessment	Depends on significant effects identified in Environmental Impact Assessment	Depends on significant effects identified in Environmental Impact Report
Offshore mining	Yes	Yes	Reference to Spatial Planning Policy Document is sufficient	Depends on significant effects identified in Environmental Impact Report

Figure 6.4
A review of the consequences of each assessment for new activities for existing functions

7 Delimitation of areas of special ecological features

As the elaboration of the *Spatial Planning Policy Document*, *IMPNS 2015* establishes the boundaries of four areas of the North Sea that will be designated as protected ecological areas: part of the coastal waters, the Friese Front, the Klaverbank and the Doggersbank. Issuing permits for activities in these areas is subject to supplementary protection provisions in addition to the integrated assessment framework described in chapter 6. This is intended to stop any action being taken, under international commitments between now and the time of designation, which would interfere with or prevent these areas being designated as protected. The designation of the four areas in question as Special Areas of Conservation under the EU Birds and Habitats Directives, or as Marine Protected Areas under the rules of the OSPAR convention is expected to come into effect in 2008. The protection regime in the Birds and Habitats Directives, which is embedded in the Dutch Nature Conservation Act, will then apply. The Centrale Oestergronden (central oyster grounds) and the coastal waters of the provinces of Noord-Holland and Zuid-Holland between Bergen and the Voordelta will not be granted protected status based on the findings of the research conducted for *IMPNS 2015*.

7.1 Protection of areas under international frameworks

The EU Birds and Habitats Directives and the OSPAR convention provide that areas at sea with special ecological features must be protected. Both frameworks also contain rules for allocating protected status. In the long term, protecting distinct separate areas will lead to a cohesive network of protected areas at sea. Areas protected under the EU Birds and Habitats Directives are designated as 'Special Areas of Conservation' (SACs). Areas protected under the OSPAR convention are called 'Marine Protected Areas' (MPAs). Of course it is possible for an area to be protected under both frameworks at the same time and therefore be designated as both an SAC and an MPA.

The *Spatial Planning Policy Document* describes five areas of the North Sea that qualify for protection due to their special ecological features: the coastal waters, the Friese Front, the Centrale Oestergronden, the Klaverbank and the Doggersbank. These areas are shown on Map 2, which is taken from the *Spatial Planning Policy Document*.

The *Spatial Planning Policy Document* states that *IMPNS 2015* sets out the boundaries of these areas and the details of the protection regime. For that purpose, the first step was to conduct research to produce the data necessary for a final selection of the areas that qualify for protected status (section 7.2). Based on that research, four areas were selected for protection and their precise boundaries were determined and laid down (section 7.3). Delimitating the boundaries has provided clarity for planning purposes. The formal designation of the

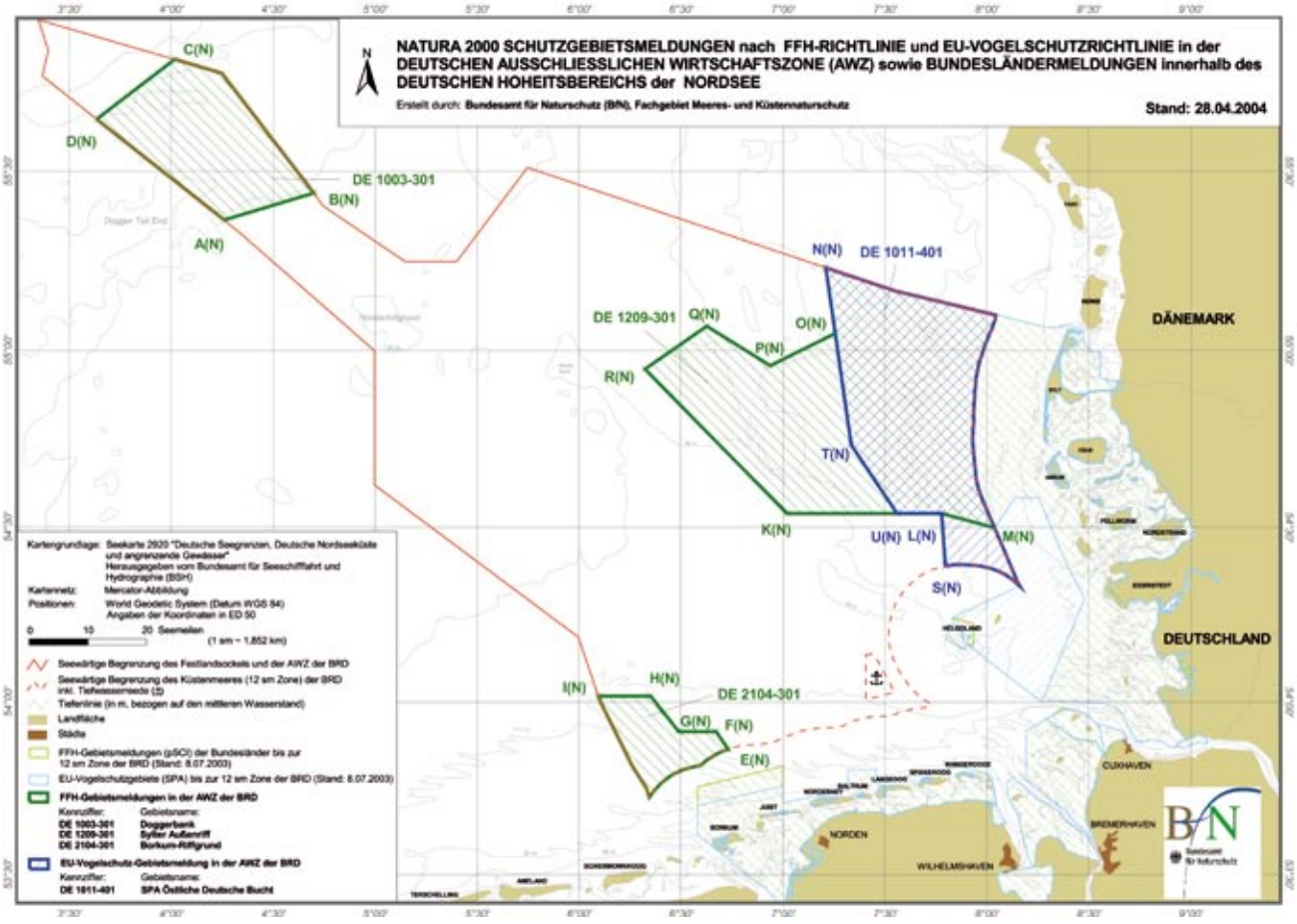


Figure 7.1 Designated protected ecological areas (EU Birds and Habitats Directive) in the German EEZ

four areas as SACs under the Birds and Habitats Directives or as Marine Protected Areas under the OSPAR convention within the framework of the 1998 Nature Conservation Act is expected to be completed in 2008 (section 7.4).

The details of the protection regime for these areas have already been presented in chapter 6. This regime will stop any action being taken between now and the time of designation that will interfere with or prevent the designation of these areas as protected under the Birds and Habitats Directives and OSPAR.

7.2 Research for the final selection and delimitation

For the purposes of making the final selection and delimiting the precise boundaries of the areas, the RIKZ and Alterra research institutes, RIVO (Netherlands Institute for Fisheries Research) and NIOZ (Netherlands Institute for Sea Research) conducted exploratory research for the Ministry of Transport, Public Works and Water Management and the Ministry of Agriculture, Nature and Food Quality. The findings were presented in the report on areas of special ecological features on the Dutch continental shelf ('*Gebieden met bijzondere ecologische waarden op het NCP*').

That report collates data on the different groups of species (birds, fish, marine mammals and seabed

fauna) from several research institutes. It also sets out the abiotic data. The report proposes to use straight boundary lines with a view to enforcement. The most recent information about selection criteria from the Birds and Habitats Directives and OSPAR was used to determine which areas are the most valuable and how to delimit them. The report also describes the usage functions on the Dutch Continental Shelf and the impact they have on the ecological features to be protected.

Common scoter

In addition to the five areas set out in the *Spatial Planning Policy Document*, four new areas have been proposed that might be eligible for protection under OSPAR and/or the Birds and Habitats Directives in due course. Decisions in this regard are outside the scope of *IMPNS 2015*.

There are some differences in the criteria for the selection of areas under the Birds and Habitats Directives and OSPAR. In principle, this could lead to three types of protected areas in the North Sea: special areas of conservation under the Birds Directive, special areas of conservation under the Habitats Directive and MPAs under OSPAR. Research shows that there is a very high degree of overlap between the Birds Directive, the Habitats Directive and OSPAR as regards the areas referred to in the *Spatial Planning Policy Document*. The Central Oyster Grounds are the exception: according to the criteria this area is eligible only for MPA status under OSPAR.

Two subareas in the coastal waters have already been designated/registered as SACs under the Birds Directive and the Habitats Directive, respectively: the Voordelta and the coastal waters north of Petten[16] Both areas are situated within the territorial waters. Activities in or near these areas are subject to the assessment framework of the Birds and Habitats Directives. This assessment framework has since been implemented in the Netherlands in the 1998 Nature Conservation Act and is described briefly in section 6.4.

The research also examined the state of affairs regarding the designation of areas of special ecological features in neighbouring countries. At present, only Germany has registered SACs (Birds and Habitats Directives) in the EEZ with the European Commission. The German part of the Doggersbank and an area that links up with the Borkumse Stenen border on the Netherlands (see figure 7.1).

7.3 Characteristics of the four areas delimited in *IMPNS 2015*

Within the framework of *IMPNS 2015*, it was decided to delimit and protect only those areas that meet both the criteria for MPAs under the OSPAR convention and the criteria for SACs under the Birds and Habitats Directives. The Central Oyster Grounds were therefore excluded from the protection regime

16) The special protection zone already designated under the Birds Directive and the special area of conservation registered under the Habitats Directive are referred to as the 'North Sea coastal zone'. The Spatial Planning Policy Document and IMPNS 2015 describe all areas in the coastal zone as the 'Kustzee' ('coastal sea').

and the provisional protection regime in the *Spatial Planning Policy Document*. Consequently, the only types of protected areas are SACs (Birds and Habitats Directives).

Map 12 All areas of special ecological features, showing the areas delimited and protected in *IMPNS 2015*

Below is a description of the four areas included in *IMPNS 2015*:

Coastal waters

Parts of the coastal waters are rich in species of seabed fauna. The coastal waters are also very important to birds, fish and marine mammals. As stated above, two subareas of the coastal waters have now been designated/registered as SACs under the Birds Directive and the Habitats Directive respectively. *IMPNS 2015* extends the protection of the coastal waters north of Petten to the established NAP -20 m depth contour line from the *Spatial Planning Policy Document*, whereby the boundary north of the island of Schiermonnikoog has been moved southward slightly for practical reasons. In addition, two new subareas will be given protected status:

- The coastal waters between Bergen and Petten. This area qualifies under both the Birds Directive and the Habitats Directive. The landward boundary is the low baseline.
- The coastal waters south of the Voordelta (including the Raan Flat (*Vlakte van de Raan*)), i.e. the mouth of the Western Scheldt. This area will be registered as an SAC under the Habitats Directive in connection with the development plans for the Schelde estuary, which is a cooperative project to be carried out jointly by the Netherlands and Flanders (Belgium). Until the formal designation, the area will fall under the protection regime of *IMPNS 2015*.

The seaward boundary of these new areas is the established NAP -20 m depth contour. The seaward boundary of the established SAC Voordelta will be brought into line with the seaward boundary of the rest of the coastal waters (i.e. the established NAP -20 m depth contour) as soon as possible.

Due to the expansions and adaptations described above, protected status has been obtained for the most valuable areas in the coastal waters. The area between Bergen and the Voordelta is not defined more specifically in *IMPNS 2015* and therefore falls outside the protection regime for areas of special ecological features.

Map 13 shows the situation for the coastal waters north of Bergen and Map 14 illustrates the situation for the coastal waters in the Delta area. The map for the Delta area also sets out the search area for the marine reserve (see section 2.2.2) and the priority ecological areas in the Voordelta, where fishing is subject to restrictions (see 4.2.1.).

Left: The "Dead man's fingers" is a characteristic species

Right: The Friese Front is an important area for guillemots

The Friese Front

The Friese Front is a unique area with a high biomass and is rich in species of seabed fauna. Specific species of birds and fish occur here in large numbers, some only periodically. For example, in the autumn more than 1% of North-West Europe's population of great skua congregate in this area. It is also the summer habitat for more than twenty thousand guillemot. The area therefore meets the criteria of the Birds Directive .

Klaverbank

The Klaverbank has a special seabed of gravel, area-specific vegetation and special seabed fauna. It is also a valuable bird habitat. It is a unique area on the Dutch continental shelf and meets the criteria of the Habitats Directive. The channel in-between (Botney Cut) has been included within the boundary of the area because of its valuable seabed fauna and for purposes of enforcement.

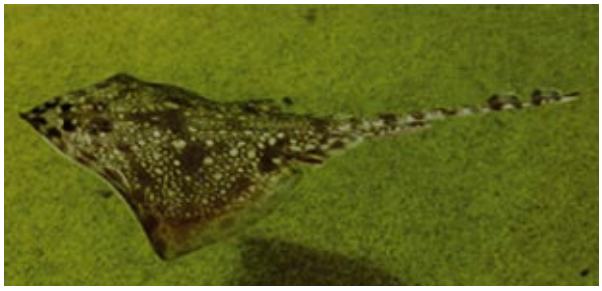
Doggersbank

The Doggersbank is distinctive mainly because of the high degree of biodiversity in its seabed fauna, but it is also important for birds and fish. The slopes between the –30 and –40 m lines are especially valuable. The Doggersbank, as delimited, forms one joined-up area with the area registered by Germany under the Habitats Directive and generally follows the indicative boundary in the *Spatial Planning Policy Document*.

7.4 Follow-up procedures

Consequences for use during the interim period

In the protected areas, the current usage can continue, insofar as it is regulated internationally or not subject to permits under current legislation. This applies to various activities including fishing, shipping and beach nourishment. In order to prevent



40% of the thornback population lives on the Doggersbank

an action making it impossible to designate an area as protected, activities subject to permits must be assessed in accordance with the specific integrated assessment framework for areas with special ecological features (chapter 6). This protection regime applies until the assessment framework from the 1998 Nature Conservation Act comes into force for these areas, once they are designated as SACs under the EU Birds and Habitats Directives and/or as MPAs under the OSPAR convention.

Decision-making under the Birds and Habitats Directives and OSPAR

The Council of Ministers anticipates completing its decision-making process early in 2006 with regard to the draft list of areas to be registered as SACs under the Habitats Directive, designated as SACs under the Birds Directive and registered as MPAs under the OSPAR convention. This process will be followed by a public consultation period before the final list of Habitats Directive areas and OSPAR areas is registered with the European Commission and the OSPAR secretariat respectively in mid-2006. Once the European Commission and the OSPAR secretariat have approved the list of areas, the formal designation procedure set out in the 1998 Nature Conservation Act will begin. The designation of Birds Directive areas will be included in that procedure.

Legislation

The final designation as SACs under the EU Birds and Habitats Directives will be carried out in accordance

with the Nature Conservation Act. This law is expected to come into effect at the end of 2005, but will not yet apply to the Exclusive Economic Zone (EEZ). The Phased Plan for Statutory Protection of the EEZ (*Stappenplan wettelijke bescherming EEZ*), which the State Secretary for Transport, Public Works and Water Management presented to the Lower House of the Dutch Parliament in March 2003, states that the Nature Conservation Act and the Flora and Fauna Act (*Flora- en faunawet*) will be declared applicable in the EEZ, too. The Ministry of Agriculture, Nature and Food Quality will begin preparing a proposal in 2005 to expand the scope of the Nature Conservation Act and the Flora and Fauna Act to the EEZ.

Management plans

After areas have been designated under the Nature Conservation Act (anticipated for around 2008), separate management plans or a common management plan will need to be drafted. Management plans for SACs must be completed within three years of designation. For OSPAR, 2010 is the target year for a functioning network of MPAs. Management plans must be completed in 2008 for areas that have already been registered or designated (the Voordelta and the coastal waters north of Petten).

8 Optimising the organisation of management tasks

The previous chapters focused on the substance of the management instruments and tasks. However, the operational performance of the management tasks also requires attention and improvement. The analysis carried out for *IMPNS 2015* revealed that the coordination between the agencies and services responsible for management is an important area in need of improvement. Currently, this is especially so as regards the process of issuing permits. Better coordination is necessary not only to improve the effectiveness and efficiency of management, but also to better serve the users of the North Sea and the public. A new interdepartmental North Sea Management Network will be established to implement the required improvements.

8.1 Existing partnerships among central government bodies

Because the area of the North Sea from 1 kilometre out from the coast does not fall under the authority of any municipality or province, central government is responsible for policy and management. Annex 4 contains a brief description of the government organisations charged with North Sea management tasks. Various central government bodies have formed partnerships in connection with North Sea policy and management.

Interdepartmental Directors' Consultative Committee North Sea (IDON)

The ministries that participate in the Interdepartmental Directors' Consultative Committee North Sea (IDON)[17] are Transport, Public Works and Water Management; Housing, Spatial Planning and the Environment; Agriculture, Nature and Food Quality; Economic Affairs; Defence; Foreign Affairs; and Finance. The Ministry of Transport, Public Works and Water Management chairs. The IDON is responsible for the following tasks:

- strategy development and formation of a vision to support North Sea policymaking;
- interdepartmental coordination of national policy and the Dutch contribution to international bodies;
- steering group for joint implementation of interdepartmental projects.

Coordination of communication and information about the North Sea

By order of IDON, various instruments are used for the joint supply of information and education to interested parties regarding developments and current legislation concerning the North Sea. The primary

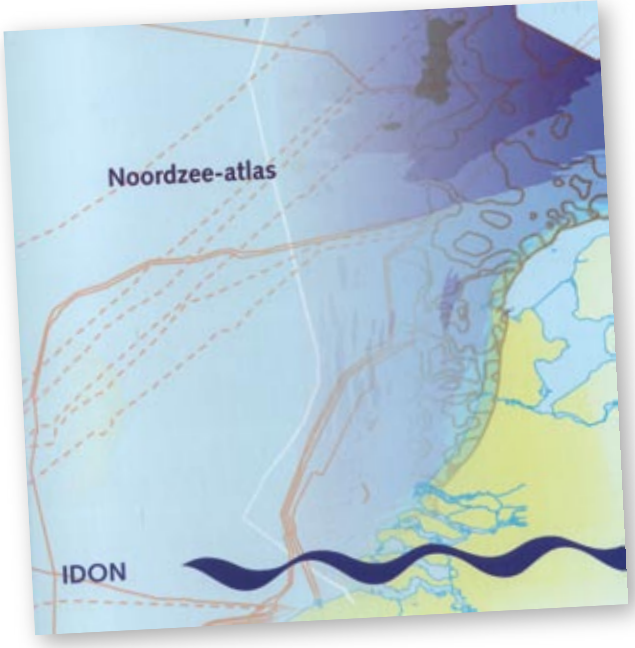
17) Decree establishing IDON, 22 March 1999: IDON has the task of ensuring interministerial coordination and execution of policy on North Sea matters to the extent that this is not already provided for in another framework.

instruments are the North Sea Office (*Noordzeeloket*, www.noordzeeloket.nl), the North Sea Information Line (*Noordzeetelefoon*), the newsletter and the annual working conference on a topical theme. An evaluation carried out in 2003 showed that these instruments comply well with the general need for information. However, the website should be providing more specific and topical information.

IDON also commissioned a North Sea Atlas, which was published at the end of 2004 both in book form and on the website through the North Sea Office. The North Sea Atlas contains maps with data on the water system, use, policy and management of the North Sea.

Coastguard

Six ministries work together to provide coastguard services and enforcement: Transport, Public Works and Water Management; Defence; Justice; Finance; Agriculture, Nature and Food Quality; and the Ministry of the Interior and Kingdom Relations.



North Sea Atlas

The Coastguard is managed by:

- the Minister of Transport, Public Works and Water Management as regards the service tasks (nautical management and incident and disaster management);
- the Interdepartmental Permanent Liaison Group for Enforcement in the North Sea (PKHN), which represents the six ministries, as regards enforcement tasks (general enforcement, enforcement of environmental law, traffic safety and fishing regulations).

The Royal Netherlands Navy is in charge of operations at the Coastguard Centre.

8.2 Overview of management tasks and areas in need of improvement

Chapters 2, 3 and 4 describe the management tasks to be carried out in order to meet the policy objectives. Within the context of *IMPNS 2015*, managers and users of the North Sea were surveyed to determine the areas that require attention with a view to improving management in practice. These areas in need of improvement are summarised briefly below for each management task.

8.2.1 Implementation

- Regulating use of the North Sea
  - The managers serve as the Competent Authorities for the regulation of use. The regulatory task comprises setting guidelines for Environmental Impact Assessments and permitting conditions, and issuing permits and exemptions and entering into agreements in the form of covenants.
  - Other management tasks are drafting area-based management plans for SACs (Birds and Habitats Directives) and contributing to

the river basin management plans for the EU Water Framework Directive.

- Incident prevention
  - In order to meet the management objectives it is necessary to protect the ecosystem from dangerous substances that are released when a disaster occurs. For that purpose a specialised incident organisation has been set up to act quickly and adequately.
- Maritime emergency assistance
  - Search and rescue operations at sea are coordinated in the event of an emergency or disaster.
- Nautical management
  - This involves day-to-day facilitation of the safe and smooth flow of shipping traffic.
- Technical management
  - The managers are responsible for maintaining the depth of navigable waterways and channels to the ports.
- Coastline conservation
  - The basic coastline of the sandy coast and the sand balance of the coastal system are maintained by means of sand supplementations (on the beach or in the foreshore).

Annex 3 shows which government authority is the/a Competent Authority or the statutory advisor for each usage function.

The main areas in need of improvement are:

- There should be more uniformity in the processing of permit applications. The information to be submitted and the duration of the procedure differs for each permit.
- There should be a single point of contact for each usage function where all the required permits can be arranged because some activities require more than one permit. Currently, each authority has its own work area, based on its own responsibilities.
- There needs to be more cohesion in the policy, regulation, implementation, enforcement and organisation chain. When new policy is made, feasibility sometimes receives too little attention. In permitting, too little account is taken of whether the permitting conditions are enforceable.

8.2.2 Enforcement

Enforcement involves supervision, investigation and prosecution. The goal is to influence behaviour in order to maintain or bring about a specific desired situation as regards the North Sea and the use thereof. Ministries responsible for policy have their own services (General Inspectorate (AID), National Mines Inspectorate (SodM), Customs, RWS North Sea) for administrative enforcement. Their tasks include supervising compliance with a permit and exemption conditions, applying administrative coercion, imposing orders for periodic penalty payments and withdrawing permits and exemptions. The enforcement officials involved have investigative authority that applies to a single law or policy area or a limited number of laws and policy areas.

The Dutch Civil Code (*Burgerlijk Wetboek*) allows the ministries responsible for policy to take civil action. They are permitted to recover the costs of, for example, cleaning up pollution or removing obstacles from the party responsible for the damage.

The Public Prosecution Service (OM) and the Netherlands Police Agency (KLPD) have primary authority as regards the government's *action in criminal proceedings*. As an implementing organisation, the KLPD has general investigative powers with respect to all laws and regulations. The investigative authority of a civil servant from a ministry responsible for policy is applied when criminal acts are alleged to have been committed. In such cases, the civil servant involved acts under the responsibility of the Public Prosecutor.

Areas in need of improvement:

- Enforcement bodies would like to be able to report offences that are committed outside their area of legal authority. To do so, they need to have the right information (see also 8.2.3).
- Enforcement bodies are concerned about the declining visibility of the Competent Authority at sea resulting from the decrease in the number of days that government managers spend at sea.

Cooperation within the Coastguard

Reports by Deloitte & Touche (2003) and the Netherlands Court of Audit (2005) concerning the Coastguard's functioning clearly show that it needs to make improvements in the areas of cooperation and organisation. The problems observed generally concern:

- the lack of policy-based management;
- the voluntary nature of the deployment of people and resources by the Coastguard partners;
- insufficient exchange of information.

Research is currently being done to determine how the efficiency and effectiveness of the Coastguard can be improved. This could affect how the management of the North Sea is organised.

8.2.3 Knowledge and information management

Policy and management are based in part on knowledge and information about the ecological condition, safety and profitability of the North Sea. This knowledge and information is also made available to users and civil-society organisations through channels like the North Sea Office (*Noordzeeloket*).

Areas in need of improvement are:

- Greater orientation towards the public: the users have expressed a need for a single contact point for information about (pending) procedures and clear information about lots of aspects of the North Sea.
- Information exchange between managers: the exchange of information between the permitting authorities and with enforcement agencies needs to be improved so that the permitting authorities provide each other with better information about what is going on and enforcement agencies have more information about the conditions that apply to the different permits.

8.2.4 Identification and evaluation

Management in practice indicates areas where policy adjustments need to be made. Practical experience can also be used to assess the feasibility and enforceability of envisaged policy. Identifying problem areas and influencing policy for neighbouring sea areas and rivers can also be considered a management task in a sense because the water quality of the North Sea is largely determined by water flowing in from outside the North Sea management area.

Area in need of improvement:
Information from operational practice should be used more effectively to prepare policy, for example by carrying out feasibility and enforceability assessments.

8.3 The new North Sea Management Network (NSMN)

It has been decided to set up a North Sea Management Network (NSMN) to improve coordination in the performance of management tasks and achieve other required improvements. The NSMN is chaired by the coordinating manager, which is the North Sea Department of the Directorate-General for Public Works and Water Management, and comprises the relevant parts of the Ministries of Transport, Public Works and Water Management; Economic

Affairs; Agriculture, Nature and Food Quality; and Housing, Spatial Planning and the Environment. The Coastguard Centre is also represented.
The NSMN will be assigned the following tasks:

- to provide better service to clients (users, civil-society organisations, umbrella organisations and citizens);
- to coordinate management tasks, especially in the areas of permitting and information management;
- to coordinate management and enforcement activities;
- to coordinate management and policy.

The North Sea Office (*Noordzeeloket*) will be expanded further to provide more up-to-date information about procedures, permits and permit conditions (permit tracking system). Expansion has already been in progress since early 2005 in connection with the permit application procedure for wind farms in the North Sea. This information will make enforcement more effective because it will give North Sea enforcement agencies a better overview of the issues (including those addressed by other ministries). Furthermore, information on the applicable legislation and regulations will be kept up to date. The North Sea Office will also be used to present developments in the opportunity maps for usage functions.

By streamlining and coordinating permits and providing permitting services electronically, the NSMN will help reduce the administrative burdens associated with the procedure of issuing the permit. The aim is to have a single contact point for each usage function to simplify the procedure for obtaining all the different permits that are required. For purposes of enforcement of the permits issued, information will be shared with the partners in the Interdepartemental Permanent Liaison Group for Enforcement in the North Sea. The enforcement spearheads will also be coordinated with the group members.

The North Sea Office

Upon request, the NSMN will assess the feasibility of policy and regulations and pass on common observations from management practice to the policymaking level. New policy will thus be implemented jointly (i.e. it will be coordinated). The NSMN will identify the indicators that accurately describe the state of the North Sea's health, safety and profitability and it will record and identify developments in these areas.

In 2005 the NSMN will set out a concrete agenda for the coming years. It will measure the results by means of three periodic tests:

- testing customer satisfaction;
- testing progress in achieving efficiency;
- testing improvement of cooperation.

Annexes

Annex 1 Maritime zones in the North Sea

Maritime zones	Description
1. Dutch territorial waters	Area between the baseline and the 12-mile boundary.
a. Municipal/provincial boundary	Used for administrative purposes. The authority of coastal provinces and municipalities ends 1 kilometre out from the coast, with minor exceptions in the Zeeland Delta and around the Wadden Islands. The central government acts as manager outside this boundary.
b. 3 nautical miles zone	This is the former outer boundary of the territorial waters, which was maintained for the purposes of mining legislation when the territorial waters were extended to 12 nautical miles in 1985. Since the recent amendment of the mining legislation, this zone has lost most of its significance. However, it is still important for fishing: along with the Dutch, the Belgians are also permitted to fish within the 3-mile zone (under the Benelux Treaty); the British, Belgians, French, Danes and Germans have historical rights between the 3 and 12-mile boundaries.
c. established NAP -20 m depth contour	This depth line marks the boundary of the coastal foundation and is particularly relevant for regulations concerning sediment extraction, which is not permitted landwards of this boundary.
2. Exclusive Economic Zone	Extends beyond the Dutch territorial waters. Because of the proximity of other North Sea coastal states, the EEZ does not extend to the maximum 200 nautical mile line permitted under the Law of the Sea Convention. The outer boundary of the EEZ is the boundary of the Dutch part of the continental shelf (Dutch continental shelf) (see 2a).
a. Dutch part of the continental shelf (seabed and substrate)	This comprises the part of the North Sea seabed and substrate that lies outside Dutch territorial waters. The outer boundary is laid down in boundary conventions with Belgium, Germany and the United Kingdom.
b. The Dutch fishing zone	This zone extends between the 12-mile zone and the outer boundary of the Dutch continental shelf. Ships that sail under the flag of an EU member state and are registered within the territory of the European Union have, in principle, equal access to this fishing zone. Although the establishment of the EEZ has deprived this zone of its significance with respect to exclusive fishing rights, it is still important in connection with historical rights and references in prevailing regulations and new international regulations, as zones set out by the different member states can vary.

c. Connecting zone	This zone connects with the territorial waters and extends out to a maximum of 24 nautical miles from the coast. In this zone, the authorities can monitor compliance with the rules regarding customs, taxation, immigration and public health that apply within the territory of the Netherlands or in its territorial waters. In addition, certain powers can be exercised in connection with archaeological and historical objects. The Netherlands has not yet established this zone, but is currently preparing to do so.
d. Accident prevention in the North Sea	Strictly speaking, no geographical boundaries apply to interventions on the high seas in respect of ships involved in accidents within the meaning of the North Sea Accident Control Act (*Wet bestrijding ongevallen Noordzee*) and the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (the Intervention Convention). One criterion is whether the accident puts vital Dutch interests at risk, regardless of where the accident took place. However, in order to define an operationally workable area, a specified part of the southern North Sea was chosen for the purposes of application of the North Sea Accident Control Act. This area, which comprises the Dutch Exclusive Economic Zone and large parts of the neighbouring waters, extends between the 56th parallel and the English Channel.

Annex 2 Overview and developments in North Sea policy frameworks

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
International policy (treaties, directives) – current				
United Nations Convention on the Law of the Sea (UNCLOS)	Health, Safety, Profitability	To regulate use of territorial waters and Exclusive Economic Zone (EEZ, e.g. in relation to shipping traffic) and protect and conserve the marine environment	Worked out in detail in other conventions, such as OSPAR, SOLAS and MARPOL	Ministry of Foreign Affairs (BUZA)
Convention on Biological Diversity (Rio de Janeiro, 1992) (UN)	Health	To set up networks of protected areas all over the world by 2012	For the North Sea through OSPAR	Ministry of Agriculture, Nature and Food Quality – Nature Department (LNV-Natuurbeheer)
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (UN)	Health	To protect migratory species (populations and habitats)	List of priority species. Implementation through ASCOBANS and AEWA agreements	LNV Nature Department
Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)	Health	To prevent and halt pollution and degradation of biodiversity. To reduce emissions of pollutants and set guidelines for establishing and managing protected areas	International: through International Conference on the Protection of the North Sea. National: through national policy and legislation (e.g. Marine Pollution Act, Environmental Management Act, Flora and Fauna Act, 1998 Nature Conservation Act, Mining Act)	Ministry of Transport, Public Works and Water Management - Directorate-General for Water Affairs (V&W-DGW)
Conclusions and agreements of periodic International Ministers Conferences on the Protection of the North Sea	Health, Safety, Profitability	Efficient implementation of international legislation related to the marine environment, focusing on the performance of existing international conventions, such as OSPAR and the IMO International Convention for the Prevention of Pollution from Ships	Political agreements with consequences for species and habitats, nutrients, dumping or discharging of harmful substances, pollution from ships, offshore activities, dumping dredging waste at sea, fishing, etc.	Ministry of Transport, Public Works and Water Management (V&W)

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Nitrate Directive (91/676/EEC) (EU)	Health	Protection of water against pollution by nitrates from agricultural sources	Designation of nutrient-sensitive areas; establishment of emissions reduction measures	Ministry of Agriculture, Nature and Food Quality (LNV)
Birds Directive (79/409/EC) (EU) Habitats Directive (92/43/EC)(EU) (referred to jointly in this document as the Birds and Habitats Directives (BHD))	Health	Conservation of all wild bird species and their habitats in Europe. Protection of plants and animals and their habitats Europe.	Protective measures for 175 bird species. List of protected species and habitats. Two areas on the Dutch coast are designated under the Birds and Habitats Directive: the Voordelta and the coastal zone north of Petten to Rottumeroog. Implementation in 12-mile zone in Flora and Fauna Act and 1998 Nature Conservation Act, direct effect in EEZ.	LNV Nature Department
Water Framework Directive (2000/60/EC) (EU)	Health	Protection of inland surface water, transitional waters, coastal waters and groundwater (reduction of pollution and degradation of water sources and aquatic ecosystems)	Environmental objectives for surface waters and groundwater. Ecological and chemical quality objectives (2015-2027).	V&W-DGW
Bathing Water Directive (76/160/EEC) Directive updated mid-2005 (EU)	Health, Safety	Protection and improvement of bathing water quality	Setting standards for water quality	V&W-DGW
International Convention for the Prevention of Pollution from Ships (MARPOL) (UN/IMO)	Health, Safety	To limit and prevent pollution from ships (dumping, discharging and emissions into the water and the air)	Through national policy and legislation (e.g. Pollution Prevention (Shipping) Act and underlying decrees). Environmental policy plan for shipping; Progress report on shipping and the environment. Work is proceeding on ratification and implementation of the rules for various emissions into the air	Ministry of Transport, Public Works and Water Management - Directorate-General for Civil Aviation and Freight Transport (V&W-DGTL)

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
London Convention (UN/IMO)	Health	To reduce waste disposal at sea	Through national policy and legislation (e.g. the Marine Pollution Act (Wvz))	V&W-DGW
Bonn Agreement (oil pollution)	Health	To increase cooperation among the North Sea coastal states in detecting, reporting and combating pollution of the North Sea by oil and other harmful substances	Applies when marine pollution by oil or other harmful substances endangers the coast or related interests of one or more of the parties to the agreement. Under the agreement, monitoring is a means to detect and combat pollution of this kind and to prevent infringement of environmental rules	V&W-DGTL/ V&W-RWS
Port Reception Facilities Directive (2000/59) (EU)	Health	EU directive on port reception facilities (delivery requirement, notification requirement, funding)	Especially the Pollution Prevention (Shipping) Act (Wvvs)	V&W-DGTL
Monitoring Directive (2002/59) (EU)	Health, Safety	EU directive on reporting, tracking and informing ships; places of refuge	Shipping Traffic Act Actual facilities (NEREUS, Safeseanet); Disaster Plan for the North Sea (*Rampenplan voor de Noordzee*)	V&W-DGTL
Intervention Convention (in effect since 18 December 1975) (UN/IMO)	Health, Safety	To enable coastal states to take the necessary measures to prevent or mitigate serious or threatened risk of pollution from accidents at sea beyond the 12-mile zone (in the EEZ)	Via North Sea Accident Control Act and the Disaster Plan for the North Sea	V&W-DGTL
International Convention for the Safety of Life at Sea (SOLAS) (UN/IMO)	Safety	International standards for the construction, design and equipping of ocean-going vessels; coastal states' obligations regarding the safety of shipping traffic; obligations regarding emergency, urgent and safety communication	Ships Act (*Schepenwet*) and Shipping Traffic Act; actual facilities for safe navigation and emergency, urgent and safety communication	V&W-DGTL

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Convention on the International Regulations for Preventing Collisions at Sea (COLREG) (UN/IMO)	Safety	International code of conduct for shipping traffic at sea (collision avoidance guidelines, lights, signals, daymark unlighted beacons; conduct guidelines for traffic separation schemes)	Shipping Traffic Act North Sea routing systems	V&W-DGTL
International Convention on Maritime Search and Rescue (SAR) (UN/IMO)	Safety	International agreements on search and rescue obligations, organisation of SAR services	National guidelines for SAR services; actual SAR facilities	V&W-DGTL
CFP: Common Fisheries Policy (EU)	Profitability	Prevention of over-fishing and conservation of fish stocks	Area-specific restrictions on catches (quotas) and fishing gear	LNV Fisheries
Control Regulation (2847/95) (EU)	Profitability	Control regulation for common fisheries policy		LNV Fisheries
Directive on the quality required of shellfish waters (79/923/EEC) (EU)	Profitability	To ensure high-quality shellfish waters in the EU in order to guarantee the quality of shellfish products for human consumption	The Directive aims to achieve this objective by setting standards for the quality of the designated waters (water quality standards)	V&W-DGW
Valetta Convention (Malta)		On-site preservation of archaeological features; if this is impossible, information must not be lost	Belvedere Policy Document (1999), Culture Policy Document, Monuments and Historic Buildings Act	Ministry of Education, Culture and Science (OC&W)
International policy (conventions, directives) – developments				
Protocol of 1997 to the MARPOL Convention (Annex VI Air Pollution)	Health	To prevent air pollution from ships	Ratification and implementation of the convention is in progress. Comes into effect internationally on 19 May 2005; will enter into effect in the Netherlands after ratification	V&W-DGTL
International Convention on the Control of Harmful Anti-fouling Systems on Ships (UN/IMO)	Health	To reduce and eliminate effects of biocides in paint systems for ships	Ratification and implementation of the convention is in progress	V&W-DGTL

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Ballast Water Convention (UN/IMO)	Health	To prevent the introduction of foreign organisms via ballast water on board ships	Ratification and implementation of the convention is in progress	V&W-DGTL
European Marine Strategy (EU)	Health, Safety, Profitability	To preserve for the current and future generations the diversity of life in oceans and regional seas, and ensure at the same time that they are safe, clean, healthy and productive	The objectives are under discussion. They concern conservation of the ecosystem, eliminating pollutants, sustainable use of marine resources and good governance	V&W
Directive 2005/..../EC on ship-source pollution and the introduction of sanctions for infringements (EU)	Health	To impose sanctions on persons who are responsible for ship-source pollution	Directive is being prepared	V&W-DGTL
Development of EcoQOs (Ecological Quality Objectives) within OSPAR framework	Health	To develop a cohesive and complete system of EcoQOs (trial)	Decision in 2005 as to whether to proceed and if so, how	V&W-DGW
National policy (policy documents, legislation and regulations) - existing				
Fourth Water Management Policy Document (NW4)	Health	To maintain/strengthen healthy, resilient water systems to guarantee sustainable use. Water quality objective: water (seabed) quality is such that ecological development and sustainable use are possible	Concrete implementation in sub-objectives and indicators: a. no biological effects b. nutrient concentrations comply with OSPAR (2010) c. unobstructed view from the coast d. no negative impact on water quality caused by physical action	V&W-DGW

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Nature for People, People for Nature (NMMN)	Health	To preserve the North Sea as an ecosystem functioning as naturally as possible and characterised by its special biodiversity and landscape	Concrete implementation in 12 sub-objectives within objectives concerning: • cohesion and dynamic • biodiversity • amenity value	LNV Nature Department
Spatial Planning Policy Document	Health, Safety, Profitability	To enhance the economic significance of the North Sea and preserve and develop international ecological and landscape features by developing and coordinating sustainable spatial-economic activities in the North Sea, taking its ecological and landscape features into account		Ministry of Housing, Spatial Planning and the Environment (VROM)
Wvo: Pollution of Surface Waters Act	Health	To prevent introduction of waste, pollutants and harmful substances into surface waters	Ban on the introduction of substances without a permit. Permits are issued by the Minister of V&W. Act also serves to implement the Bathing Water Directive (water quality target values)	V&W-DGW
Wvz: Marine Pollution Act	Health	To prevent oceanic pollution by the introduction of waste, pollutants and harmful substances (result of OSPAR and London Convention)	Possible exemption under permit from Minister of V&W in consultation with Minister of VROM	V&W-DGW

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Wvvs: Pollution Prevention (Shipping) Act	Health	Implementation of MARPOL 73/78 convention and, inter alia, Directive 2000/59.	Applies to foreign ships in the Dutch EEZ and all ships (everywhere) that fly the Dutch flag. Regulations (prohibitions/orders/restrictions) governing dumping, discharging and emissions by ocean-going ships. Includes the dumping or discharging of oil, liquid bulk cargo, packaged harmful substances, domestic waste, sanitary waste and various emissions into the air. Ratification and implementation of the regulations on various emissions into the air are in progress.	V&W-DGTL
Wm: Environmental Management Act	Health	Offers possibilities for imposing quality requirements regarding elements of the environment	Implementation through the 1994 Environmental Impact Assessment Decree (*Besluit milieu-effectrapportage 1994*) (Competent Authority: Minister of VROM), which sets rules for studying environmental impact	VROM
Mining Act/Mining Decree	Health, Safety, Profitability	Framework for responsible and effective mining, rules on exploration and extraction of mineral resources and geothermal heat	Permitting by the Minister of Economic Affairs (EZ)	EZ
TAC (Total Allowable Catch) and quota scheme	Health, Profitability	To maintain and secure (commercial) fish stocks	National quotas	LNV Fisheries

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Policy document on North Sea shipping traffic (*"Op Koers"*) and progress report on North Sea shipping traffic ("*Recht zo die gaat*")	Safety	To formulate primary objectives for the smooth and safe flow of traffic and coordination of shipping with other usage functions; elaboration of these objectives in concrete policy guidelines and actions.	Policy framework for safe and smooth flow of shipping traffic in the North Sea; framework to direct nautical management and various Coastguard tasks	V&W-DGTL
Third Coastal Policy Document (*Derde Kustnota*)	Safety	To establish national policy regarding maintenance of the sandy coastline	Preservation of basic coastline by means of sand supplementation	V&W-DGW
Structure plan for military terrain	Safety	Objectives of spatial defence policy and applicable directives	Designation of firing ranges and exercise areas in the North Sea and the Wadden Sea	Ministry of Defence
Wbr: Public Works (Management) Act	Safety, Profitability	To regulate use, management, erection and maintenance of public water works in national waters	Permitting by the Minister of V&W, except for mining activities and sediment extraction (Mining Act and Sediment extraction act, respectively)	V&W-DGW
Win: North Sea Installations Act (*Wet installaties Noordzee*)	Safety	To protect the legal interests of installations outside the territorial waters on the Dutch continental shelf	Makes Dutch criminal code applicable to criminal acts involving installations	Ministry of Justice
North Sea Accident Control Act	Safety	To offer options for controlling accidents in the North Sea off the Dutch coast	Implementation of the Intervention Convention. Elaboration in the Disaster Plan for the North Sea	V&W-DGTL
Shipping Traffic Act (Svw) and Regulations for Shipping in Territorial Waters (Stz)	Safety, Profitability	To regulate shipping traffic on inland waterways and in territorial waters (Svw) and provide the details of supplementary provisions for the North Sea (Stz)	The Svw provides the statutory framework for applying the instruments aimed at facilitating a safe, smooth flow of shipping traffic. The Stz contains several special provisions, which supplement the International Regulations for Preventing Collisions at Sea (COLREG) and are specific to the territorial waters	V&W-DGTL

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
Wrecks Act	Safety	To make rules governing the removal of vessels and other objects that have sunk or are stranded in the territorial waters		V&W-DGTL
Port State Control Act (*Wet Havenstaatcontrole*)	Health, Safety	Allows inspection of foreign ships in Dutch ports, regarding compliance with safety requirements, prevention of environmental pollution from ships, and living and working conditions on board.	Framework for the inspection of foreign ships in Dutch ports	V&W-DGTL
Working Conditions Act (*Arbeidsomstandighedenwet*)	Safety	To apply and enforce working conditions legislation on board Dutch ocean-going ships and offshore (mining) installations	Implementation based on evaluation of occupational safety on ships	Ministry of Social Affairs and Employment (SZW)
Working Hours Act (*Arbeidstijdenwet*)	Safety	To protect employees against excessive working hours	Regulation, registration and control of working hours and rest hours on board	SZW
Power Planning Report (*Energienota*)	Profitability	To make full use of natural gas reserves	Small fields policy: to extract as much natural gas as possible from the small Dutch fields	EZ
Structure Document on Marine and Inshore Fisheries (*Structuurnota Zee- en Kustvisserij*)	Profitability	To promote responsible fishing and balanced use of commercial fish stocks	A different division of responsibilities between government and the fishing industry, and the goal of striking a balance between fishing and ecological features	LNV Fisheries
RON2: Second regional sediment extraction plan of the North Sea	Profitability	To meet increasing demand for surface minerals from the North Sea	Most efficient and highest possible quality of use of mineral resources; coordination with other usage functions; guarantee of sustainable functioning of the North Sea water system	V&W-DGW
Sediment extraction act	Profitability	Ground for Surface Minerals Structure Plan and extraction rules	Permitting by Minister of V&W	V&W-DGW

Policy instruments	IMPNS 2015 theme	Policy objectives	Concrete implementation in management objectives	Primary responsibility for policy
National policy (policy documents, legislation and regulations): developments				
Flora and Fauna Act and 1998 Nature Conservation Act	Health	To protect species, the natural environment and habitats	Elaboration of ecological criteria in EEZ	LNV Nature Department
SEV III: Third Power Supply Structure Plan	Profitability	To designate sites for large-scale power production	Realisation of 6,000 MW total output power in wind farms in the Dutch EEZ by 2020	EZ

Annex 3 Competent Authority matrix: role of North Sea managers versus usage functions

Usage function	Law	Office	Competent Authority			
			V&W	EZ	LNV	VROM
Dumping/discharges	Wvo/Wwh	DNZ	X			
	Wvz	DNZ [5]	X			X*
	Wvvs	DGTL	X			
Installation of wind turbines at sea (> 12 nautical miles) Arrangement/ Choice of location	Wbr Environmental Impact Report (EIA report) [3]	DNZ DNZ	X X			
Other installations at sea (< 12 nautical miles) Arrangement/ Choice of location	Wbr Wm EIAreport Nbw [4] FFw [4]	DNZ DNZ DNZ LNV/N LNV/N	X X X		o X X	X* o
Oil and natural gas extraction	Mining Act Mining Decree and Regulations Wm [3] Wbr [1] EIA report [3] Nbw [4] FFw [4]	EZ/DGE DNZ LNV/N LNV/N	 o X[1] X	X X X	 o X X	 X o
Cables/pipelines	Wbr EIA report [3] Nbw [4] FFw [4]	DNZ DNZ LNV/N LNV/N	X X	X [2]	 o X X	 o
Extraction of surface mineral resources	Sediment extraction act EIA report [3] Nbw [4] FFw [4]	 DNZ DNZ LNV/N LNV/N	 X X		 o X X	 o
Seabed	Wvz Wm [3] Seabed Protection Act (*Wet bodem bescherming* (Wbb))	DNZ DNZ	X X X [1]			X* X*
Fishery	Fisheries Act Nbw [4]	LNV/V LNV/N			X X	

Usage function	Law	Office	Competent Authority			
			V&W	EZ	LNV	VROM
Mariculture	Fisheries Act Wbr EIA report [3)]	LNV/V DNZ DNZ	 X X		X o	 o
Military activities	Wvo	DNZ	X			X*
Nature	Nbw [4)] FFw [4)]	LNV/N LNV/N			X X	
Land reclamation	Concession	DGW	X			
Coast safety	Flood Defences Act	Water Board				
Shipping inside 12 naut. miles in approach areas outside 12 naut. miles Disaster and incident prevention	 Svw, Stz Svw, Stz UNCLOS and SOLAS North Sea Accident Control Act [7)]		X[6] DKW RHM DKW			

Explanatory notes

The table shows which minister has primary political responsibility under the applicable law and regulations with respect to permitting for each usage function. The Government is also collectively responsible for each ministerial decision, such as a decision to grant a permit.

1) Competent Authority < 12 miles
2) For pipelines related to offshore activities
3) Environmental Management Act (Wm) and the Environmental Impact Assessment Decree are (not) yet applicable outside the 12-mile zone; an Environmental Impact Assessment Report (EIA report) is linked to an application for a permit
4) The Nature Conservation Act (Nbw) and the Flora and Fauna Act (FFw) are not yet applicable outside the 12-mile zone
5) Inspectorate for Transport, Public Works and Water Management (IVW) in case of permitting of own department
6) Authority is vested in the nautical managers
7) North Sea Accident Control Act: includes the description of the powers of the Interdepartmental Policy Team for North Sea Disasters (*Interdepartementaal Beleidsteam Noordzeerampen* (IBTN)) and the Coastguard Centre

X: Competent Authority
X*: In agreement with (joint competent authority)
o: statutory advisor (Inspector from the State Inspectorate for the Environment of the Ministry of Housing, Spatial Planning and the

	Environment or the Director, or the Director of the Nature Department of the Ministry of Agriculture, Nature and Food Quality)
DGTL =	V&W Directorate-General for Civil Aviation and Freight Transport
DGW =	V&W Directorate-General for Water Affairs
DNZ =	Directorate-General for Public Works and Water Management, North Sea (RWS North Sea)
EZ/DGE =	Ministry of Economic Affairs (EZ), Directorate-General for Energy
LNV/N =	Ministry of Agriculture, Nature and Food Quality/Nature
LNV/V =	Ministry of Agriculture, Nature and Food Quality/Fisheries
DKW =	Coastguard Director
RHM =	National Harbour Master
Concession =	Land Reclamation and Dykes Act (Act of 1904)
FFw =	Flora and Fauna Act
EIA report =	Environmental Impact Assessment Report 1994
Nbw =	Revised 1998 Nature Conservation Act
SOLAS =	Safety of life at sea
Stz =	Regulations for shipping in the territorial waters
Svw =	Shipping Traffic Act
UNCLOS =	United Nations Convention on Law of the Sea
Wbr =	Public Works (Management) Act
Wm =	Environmental Management Act
Wvo =	Pollution of Surface Waters Act
Wvvs =	Pollution Prevention (Shipping) Act
Wvz =	Marine Pollution Act
Wwh =	Water Management Act

Annex 4 Overview of central government organisations with management tasks

Ministry of Transport, Public Works and Water Management/RWS North Sea

RWS North Sea, which is a department of the Ministry of Transport, Public Works and Water Management (V&W), is responsible for a dynamic North Sea, navigable waterways and safe shipping traffic. RWS North Sea is the coordinating manager of the North Sea. As such, it coordinates the performance of the management tasks with the other North Sea managers. Its North Sea Office (*Noordzeeloket*) acts as a contact point on North Sea matters (regardless of the division of responsibilities among the ministries) for citizens, businesses and administrators.

Its mission with regard to the core task of water management is "to ensure a safe and dynamic North Sea, whereby sustainable use is guaranteed." RWS North Sea's water management tasks are divided into three clusters:

- regulating the use of the North Sea by means of legislation, covenants, management plans, Key Planning Decisions (KPDs), structure plans, EU directives and international agreements;
- implementing permits and exemptions;
- ensuring efficient handling of incidents; on the basis of permanent readiness, the RWS North Sea incident organisation has the task of working with the Coastguard for optimum resolution of incidents at sea and on the coast.

RWS North Sea is developing and presenting itself as a marking expert for other government agencies. This involves maintaining waterway markings, providing specific expertise and providing directions.

With respect to the core task of dredging, RWS North Sea is responsible for the technical management of navigation channels to the navigable waterway area at the deltas of the Rhine and IJ rivers (*Rijn- en Ijmond*). This function is divided into three areas:

- maintaining the features of the navigation channel in the vertical sense, including the related access regulations for the Euro/Meuse Channel and the IJ Channel and survey work;
- preparing, contracting and supervising dredging and salvage work;
- advising on dredging and related environmental issues.

RWS North Sea aims to maintain and use high-quality information about its management area. This information is used internally for the purposes of integrated water management for the North Sea and for the use of the seabed and navigation waters and maintenance of the navigable waterways in those waters. It is also intended for North Sea users and interested parties. The tasks involved are to collating, processing, extracting measurement and other data and converting the data into user-friendly information for generic and specific applications. Onboard measuring units and a fixed monitoring network are available to collect the required data. Information is divided into the following three categories:

- information on the seabed and the water;
- spatial Information and GIS;
- hydrometeorological information.

This is the basic information that is required to determine the condition of the sea and to reliably perform the primary processes for all management tasks. It can also be used effectively in reporting to the policymaking level and in evaluating management performance, which is essential to adequately anticipate and respond to developments.

Ministry of Transport, Public Works and Water Management/IVW/Water Inspectorate Netherlands

The Water Inspectorate Netherlands, which is a division of the Inspectorate for Transport, Public Works

and Water Management (IVW) of the Ministry of Transport, Public Works and Water Management (V&W), began operating officially on 1 January 2003. The Water Inspectorate is a new player on the field of water management in the Netherlands. Improving water management is its primary task, which comprises the following specific elements: auditing permitting and enforcement, steering permitting under environment law in consultation with the Directorate-General for Water Affairs, responsibility for enforcement of environmental law, responsibility for permitting of work carried out by RWS and for enforcing the related permits, improving quality and professionalism of permitting and enforcement of water-related environmental legislation. In addition, as a division of the Ministry, the Water Inspectorate also has the following tasks: contributing to policy development and issuing public reports.

The IVW performs periodic audits to assess whether water-related legislation and regulations are being applied properly. This auditing process also provides the IVW with insight into quality of performance. Another of the IVW's main tasks is to improve the quality and professionalism of permitting and enforcement.

Ministry of Transport, Public Works and Water Management/IVW/Netherlands Shipping Inspectorate

The Netherlands Shipping Inspectorate is a division of the Inspectorate for Transport, Public Works and Water Management (IVW), which is part of the Ministry of Transport, Public Works and Water Management (V&W). The Shipping Inspectorate fosters and safeguards safe, environmentally friendly shipping by identifying safety and environment risks and actively monitoring public opinion in this regard. In addition, it encourages the shipping industry to take its own share of the responsibility, makes appropriate management choices and continuously monitors developments in order to minimise the risks that accompany shipping traffic.

From land, the Shipping Inspectorate monitors maritime shipping activity for compliance with the relevant international and national legislation and regulations. Part of that task involves monitoring the quality and quantity of ships' crews and supervising certified organisations, such as classification societies and training institutes. The Shipping Inspectorate is also responsible for identifying and registering the nationality of ships sailing under the Dutch flag.

With regard to accidents and incidents, the Shipping Inspectorate carries out investigations, provides expertise and assesses the seaworthiness of ships. It intervenes under administrative law and makes agreements with the Public Prosecutors Office for Maritime Affairs regarding the application of criminal law. Furthermore, it works with other oversight and investigative bodies as much as possible to reduce the pressure on inspection capacity.

Ministry of Economic Affairs/Directorate-General for Energy (EZ/DG E)

The Directorate General for Energy of the Ministry of Economic Affairs creates and regulates energy markets and promotes energy efficiency and the use of energy from renewable resources in order to help maximise sustainable economic growth. The key words are dynamism, competitive business climate and innovation. The 2005 budget includes the following operational objectives for energy policy:

- optimal regulation and operation of energy markets;
- using energy from renewable resources;
- ensuring the reliability of supplies in the long and short term.

The Directorate-General issues permits for oil and gas extraction and is involved in the large-scale

development of wind energy in the North Sea, including the Near Shore Wind Farm.

Ministry of Economic Affairs/National Mines Inspectorate

The mission of the National Mines Inspectorate (SodM) is: 'to ensure that the exploration for and the extraction of minerals in the Netherlands occurs in a socially acceptable way'. SodM aims to help achieve the objectives of the relevant legislation and regulations. The enforcement tools it uses are preventive oversight in all its facets, support of administrative (and occasionally civil-law) enforcement, and collection, analysis and distribution of information for the purposes of enforcement under criminal law. In performing its activities SodM takes into account developing standards in society with regard to safety, health, environment and targeted extraction of mineral resources.

In order to achieve this mission, SodM performs two core tasks: enforcing and advising. Enforcement involves 'monitoring', 'investigating offences' and 'administrative execution'. Investigation entails investigating criminal acts under the responsibility of the Public Prosecution Service, while issuing administrative decisions and advising on administrative decisions issued by other state agencies are the main elements of 'administrative execution'.

SodM has a number of statutory advisory tasks that it performs for the Minister of Economic Affairs and other officials specified in legislation and Orders in Council. In addition, it follows developments at other public authorities and in other industries, adapting its policy where necessary and proposing policy changes to the Ministries of Economic Affairs (EZ); Housing, Spatial Planning and the Environment (VROM); and Social Affairs and Employment (SZW).

Ministry of Agriculture, Nature and Food Quality/Nature

The objective of the Nature Department of the Ministry of Agriculture, Nature and Food Quality (LNV) is to achieve the international biodiversity target of guaranteeing sustainable conditions by 2020 for the survival of all species and populations that inhabited the Netherlands in the reference year of 1982. With respect to the North Sea, this department focuses specifically on implementing the Birds and Habitats Directives and having the 1998 Nature Conservation Act applied in the EEZ. The Nature Conservation Act is the framework for designating Special Areas of Conservation in the EEZ under the Birds and Habitats Directives and designating Marine Protected Areas under the OSPAR convention. The allocation of permitting powers for designated SACs (Birds and Habitats Directive) will be laid down in an Order in Council. The enforcement tasks for which LNV is responsible are carried out by its General Inspectorate.

Ministry of Agriculture, Nature and Food Quality/Fisheries

The objective of the Fisheries Department (DVIS) of the Ministry of Agriculture, Nature and Food Quality (LNV) is to promote responsible fishing, sustainable commercial exploitation of fish stocks and balance between fishing and ecological features. DVIS provides direction in relation to general issues such as delegating tasks to other parties, improving the embedding of fisheries policy in broader policy themes such as spatial policy and international water policy, strengthening cooperation inside and outside DVIS, maintaining a broader network and improving utilisation of the fisheries chain. The department's work area covers policy development in:

- production, sales, pricing, quality and product processing;
- development and implementation of the Common Fisheries Policy within the European Union;

- the development and cooperation fund for fisheries (e.g. for redundancy payments);
- management of fish stocks in the North Sea, the Wadden Sea and large bodies of state waters such as the IJsselmeer and the Delta area;
- aquaculture;
- the transition from the fisheries chain to a sustainable system;
- international policy and agreements (such as OSPAR-BDC) on environmental conservation at sea and fishing, and new developments such as the European Marine Strategy and the Maritime Strategy.

DVIS's activities comprise:

- issuing fishing permits and allocating annual fish quotas;
- developing pulse trawling as an alternative for beam trawling;
- helping to draft management plans for future protected marine areas.

Ministry of Agriculture, Nature and Food Quality/General Inspectorate

The General Inspectorate (AID) is a professional and reliable enforcement service within the Ministry of Agriculture, Nature and Food Quality (LNV). The AID is managed by the Executive Board of the Ministry. Its investigation priorities are determined in part by the Public Prosecution Service.

The AID has great expertise in enforcement by means of auditing, verification, investigation and communication concerning enforcement. With these activities, it helps to encourage certain types of behaviour and discourage other types in LNV's sphere of activity. In this way, the AID contributes towards the achievement of the intended objectives, which include prosperity, human and animal health and biodiversity.

The AID has extensive knowledge of LNV policy and the target groups for its enforcement activities. It knows how the rules affect those target groups, has insight into the impact of enforcement and uses that knowledge to advise those responsible for LNV policy. At an early stage in the policy process, the AID advises on enforcement issues, including the roles that other enforcement partners could play. The AID actively seeks cooperation with enforcement partners and invests in knowledge transfer. It works continually to maintain the level of expertise required and to develop new enforcement methods.

The AID is responsible for enforcing fisheries law at sea. Its concrete enforcement goals are to ensure that:

- parties without fishing rights are prevented from fishing;
- parties with fishing rights do not exceed them;
- fishermen fish only in those areas to which they have the right of access;
- fishermen declare their catches and fishing areas accurately and in a timely fashion;
- fishermen comply with the technical measures intended to protect fish stocks (net sizes, net combinations, conditions of use of net combinations, minimum fish sizes, throw-back requirements, ratios of target species to by-catch species, standards for engine power, vessel capacity and fishing equipment, etc.);
- EU, national, group and individual catch closures are adhered to;
- the level of effort for the specific area, vessel and vessel group are not exceeded;
- catch transfers are recorded faithfully in the catch register and are only performed in the designated areas by authorised fishermen.

Each quarter, an evaluation report is drawn up and discussed with the policy department. Observations and trends are communicated constantly to the department and incorporated in the operational objectives.

The Coastguard and the Coastguard Centre

The Coastguard is a partnership of six ministries set up to carry out operational Coastguard tasks. The Ministry of Transport, Public Works and Water Management and the Interdepartemental Permanent Liaison Group for Enforcement in the North Sea (PKHN) are jointly responsible for Coastguard policy.

The 13 tasks of the Coastguard are emergency, urgent and safety communication; search and rescue (SAR); disaster and incident prevention; traffic services, waterway marking and maritime traffic research, which together comprise the nautical management task; general policing services; enforcement of legislation concerning the environment, fishing, shipping traffic and vessel equipment; customs control; and border control.

The Coastguard performs its tasks under the operational management of the Commander-in-Chief of the Fleet, who delegates the management of daily operations to the Director of the Coastguard. The Coastguard participants give the Director a mandate providing him or her with the relevant powers.

The Coastguard maintains a Coastguard Centre in Den Helder. It functions as an operational command centre, central dispatch and information centre; national maritime and aeronautical rescue coordination centre (or Joint Rescue Coordination Centre (JRCC)); and a national nautical information centre. The Director of the Coastguard is in charge of the Coastguard Centre.

Public Prosecution Service

The Public Prosecution Service (OM) is responsible for the enforcement of law and order under criminal law and for other tasks imposed on it by law (Article 124 of the Judiciary (Organisation) Act, WRO). The Coastguard assists in enforcement of the law on the North Sea. The Interdepartmental Permanent Liaison Group for Enforcement in the North Sea (PKHN) was established for this purpose. Its task is to set policy for the Coastguard with regard to enforcement of statutory rules in the North Sea. This concerns the result areas of general enforcement, environment, traffic and fishing and all activities required to develop, set and evaluate maritime enforcement policy in those areas. In accordance with the government decision of 14 October 1994, the PKHN was succeeded in its work by the Public Prosecution Service. The group is chaired by the Deputy Chief Public Prosecutor, who heads up the Functional Public Prosecutor's Office (*Functioneel Parket*), which is a new unit currently being set up by the Public Prosecution Service.

The Functional Public Prosecutor's Office will handle the cases ensuing from criminal-law enforcement at sea of the legislation on the environment, traffic and fishing result areas. The related tasks will be carried out by the office of the Public Prosecutor for Maritime Cases, under the responsibility of the Chief Prosecutor of the Functional Public Prosecutor's Office. The Functional Public Prosecutor's Office will coordinate policy on matters related to all the result areas, within the context of the PKHN.

The National Public Prosecutors' Office (*Landelijk Parket*) handles cases ensuing from criminal-law enforcement at sea of the legislation pertaining to the result area of general enforcement, provided no other Public Prosecutor's Office has jurisdiction due to other ongoing investigations. It is also responsible for the substance of policymaking in relation to the general enforcement result area.

With respect to the criminal-law enforcement of law and order, the Public Prosecutor for Maritime Cases is responsible for deploying investigative agencies and support services at sea, even if deployment is required outside the work area of the Coastguard.

Netherlands Police Agency/North Sea

The Netherlands Police Agency (KLPD) and the 25 regional police forces form the Dutch policy service. The Minister for the Interior and Kingdom Relations is responsible for the service as a whole. The KLPD works within the Dutch police at national and international level and has independent, supportive and coordinating tasks. In specific situations, the KLPD supports the regional forces and coordinates joint activities. The Water Police (*Dienst Waterpolitie*) carries out the standard police tasks on the main national navigable waterways, the major surface waterways and the North Sea. For example, it ensures the proper operation of commercial and recreational shipping traffic. Other important tasks include enforcing environmental laws, combating crime and providing nautical support. The Water Police monitors compliance with navigation regulations and safety rules. It also regulates and supervises shipping traffic and inspects vessels to determine whether they are carrying particular substances (harmful or otherwise). The Water Police are primarily active in the area of commercial shipping and on the through waterways and major bodies of water, but they also lend support to the Special Riot Police for operations that take place on or from water.

Annex 5 Ecosystem targets for the North Sea and EcoQOs from Annex 3 of the Bergen Declaration

Ecosystem targets for the North Sea ('Nature for people, people for nature', 2000)

Cohesion and dynamic

1. To maintain the natural dynamic processes as essential preconditions for the ecology of the sea and coastal waters, e.g. the large-scale sand and sediment transports to the Wadden Sea and supply of sand and salt to the dry coastal waters.
2. To maintain and, if necessary, restore established food chains and the related natural productivity of the sea.
3. To enhance the estuarine character (natural transition from salty – brackish – fresh, tidal and intertidal zones) of the coastal waters, in particular the Delta area.

Biodiversity

4. To maintain and, if necessary, restore characteristic communities and the related habitats in the sea, coastal waters and Delta area.
5. To prevent algal bloom, but only on an incidental basis, and to maintain and, if necessary,restore the natural diversity of plankton species.
6. To maintain and, if necessary, restore the diversity of the seabed fauna, including populations of long-lived and slowly reproducing species.
7. To stimulate the diversity of fish by maintaining and if necessary, restoring:
   - spawning grounds and nurseries;
   - a more balanced population growth;
   - natural fish stocks;
   - populations of long-lived species with a slow rate of reproduction.
8. To maintain and, if necessary, restore the living conditions for populations of moulting, over wintering, migratory and breeding sea and coastal birds, including food stocks, space and breeding sites.
9. To maintain and, if necessary, restore the living conditions for populations of marine mammals.

Amenity value

10. To maintain opportunities for experiencing the dynamic of the natural elements of wind, water, sand and salt in the transition zone from open water to dry coastal water.
11. To maintain the openness, splendour, tranquillity and darkness; this applies to the entire coastline running north to south (from the Dollard area to Zeeuws Vlaanderen) and extending out at a 90° angle from the beach to the horizon ('clear horizon').
12. To maintain and, where necessary, foster opportunities to experience the presence of animal life, such as birds, fish and marine mammals.

OSPAR Ecological Quality Objectives (EcoQOs) for the North Sea

a. The following indicators show that there are no biological effects resulting from pollution:
- Concentrations of pollutants are below the target value (1% of the Maximum Allowable Risk Level (reference date: 2000)
- Effects of tributyltin. Pilot EcoQO: % imposex in female murexes is low (< 2 on the Vas Deference Sequence Index).
- Victims of oil pollution. Pilot EcoQO: proportion of oil-covered guillemots in the total population of guillemots encountered is less than 10% in all areas of the North Sea.

b. Nutrient concentrations and the related effects do not exceed the levels established in OSPAR (Comprehensive Procedure regarding nutrients and eutrophication phenomena, OSPAR 2002 and OSPAR EUC 2001). An integrated set of EcoQOs has been established with regard to eutrophication (EUC 2005):
- Winter nutrient concentrations (DIN, DIP) must stay below the elevated levels defined as concentrations > 50% above the saline content of related and/or area-specific natural background concentrations.
- Phytoplankton chlorophyl a: maximum and average chlorophyl a concentration during the growing season must remain below the elevated levels defined as concentrations > 50% above the spatial (open sea) and/or historical background values.
- Phytoplankton indicator species: area-specific indicator species (plague algae and toxic algae) must remain below the elevated levels (and prolonged duration), whereby toxicity and/or nuisance (foaming) occurs.
- Anoxia: oxygen concentrations, reduced as a result of nutrient enrichment, must be above area-specific threshold values, which vary between 4 and 6 mg O2/l.
- Seabed flora and fauna: no mortality of seabed dwellers as a result of nutrient enrichment (eutrophication), from anoxia and/or toxic algae.

c. Pilot EcoQOs for ecosystem
- Spawning stocks (by weight) of commercial fish species exceed reference levels on the basis of the precautionary approach, as determined by the responsible bodies.
- No decrease in size of common seal population in the North Sea. Production of young must remain above 10% for a period of 10 years.
- Porpoise: reduce annual by-catch of porpoise to less than 1.7% of the most reliable population estimates.

Annex 6 Indicative overview of activities and decisions resulting from the Environmental Impact Assessment Decree[18] that are relevant to IMPNS 2015

Activity or decision	Case	Environmental Impact Assessment (EIA) required? Or EIA requirement to be assessed?
Establishing a waterway	For ships with a cargo capacity of at least 1350 tonnes	Environmental Impact Assessment required
Enlargement or deepening of a main navigable waterway	1°. An enlargement of the surface area of a main navigable waterway by at least 20%, or 2°. A structural deepening of the main navigable waterway whereby at least 5 million m³ of earth is removed	Environmental Impact Assessment required
Construction of: a. a marine port b. a port for civil use for inland shipping b. a commercial seaport, or d. a fishing port e. a pier (not for ferries) outside a port	1°. A port that is navigable for ships with a cargo capacity of at least 1,350 tonnes, or 2°. A pier that can receive ships with a cargo capacity of at least 1,350 tonnes If the port is navigable for ships with a cargo capacity of at least 900 tonnes or has a surface area of at least 100 ha	Environmental Impact Assessment required EIA requirement to be assessed
The construction of installations or structures in, on or above the seabed or in the substrate, with the exception of installations or structures for oil and gas exploration and extraction	Surface area of at least1 ha or height of at least NAP +100 metres, or installations for generating electricity by means of wind energy with a combined capacity of at least15 MW (electric), or 10 turbines Surface area of at least 0.5 ha, or height of at least NAP +25 metres	Environmental Impact Assessment required EIA requirement to be assessed

18) The purpose of this table is to indicate when an environmental impact assessment (EIA) is required or when a possible EIA requirement must be assessed. No rights may be derived from this table. For full details of the requirements, see the 1994 Environmental Impact Assessment Decree and the amendments to that Decree dated 23 December 2004.

Activity or decision	Case	Environmental Impact Assessment (EIA) required? Or EIA requirement to be assessed?
Raising the seabed, including creating an island	Surface area of at least 500 ha Surface area of at least 250 ha (or expansion/alteration)	Environmental Impact Assessment required EIA requirement to be assessed
Use of seabed for an activity other than wind, oil or gas structures	Surface area of at least 1 ha. Surface area of at least 0.5 ha	Environmental Impact Assessment required EIA requirement to be assessed
Extraction of surface minerals, or change or expansion of extraction of surface minerals[19]	1°. An extraction site of at least 100 ha, or 2°. Several extraction sites that cover at least100 ha in total and are close together	Environmental Impact Assessment required
Extraction of surface minerals or change or expansion of extraction of surface minerals on the continental shelf	1. An extraction site of at least 500 ha or where at least 10,000,000 m3 is extracted, 2. Several extraction sites close together that cover at least 500 ha in total or where at least 10,000,000 m3 is extracted	Environmental Impact Assessment required
A new military exercise area	Surface area of at least 100 ha.	Environmental Impact Assessment required
Alteration or expansion of a military exercise area	In cases in which the activity will take up an actual surface area of at least 100 hectares	EIA requirement to be assessed
Laying a pipeline for the transport of gas, oil or chemicals	Pipeline with a diameter of > 80 centimetres and a length of > 40 kilometres	Environmental Impact Assessment required

19) These values will shortly be brought into line with those for the Dutch Continental Shelf.

Activity or decision	Case	Environmental Impact Assessment (EIA) required? Or EIA requirement to be assessed?
Laying, altering or expanding a pipeline for the transport of gas, oil or chemicals, excluding pipelines for natural gas transport.	Pipeline laid over a length of at least 1 km or projected in a sensitive area* up to 3 nautical miles from the coastline	EIA requirement to be assessed
Laying, altering or expanding a pipeline for the transport of natural gas	Pipeline of at least 5 km laid or projected in a sensitive area* up to 3 nautical miles from the coastline	EIA requirement to be assessed
Building a recreational or tourist attraction	1°. Draws at least 500,000 visitors a year, 2°. covers a surface area of at least 50 ha, or 3°. covers a surface area of at least 20 ha in a sensitive area*	Environmental Impact Assessment required
Building a recreational or tourist attraction	1°. Draws at least 250,000 visitors a year, 2°. covers a surface area of at least 25 ha, or 3°. covers a surface area of at least 10 ha in a sensitive area*	EIA requirement to be assessed
Building a marina	1°. at least 500 berths, or 2°. at least 250 berths in a sensitive area*	Environmental Impact Assessment required
Building, altering or expanding a marina	at least 100 berths	EIA requirement to be assessed
Work as referred to in Article 1 (I) or (IIc), of the Delta Act (*Deltawet*)	1°. An alteration or expansion of at least 5 km, and 2°. an alternation of the cross section by at least 250 m²	Environmental Impact Assessment required
Building, alteration or expansion of coastal works to prevent erosion, of maritime works that can alter the coast, and of other coastal defences, with the exception of maintenance or restoration of such works.		EIA requirement to be assessed

Activity or decision	Case	Environmental Impact Assessment (EIA) required? Or EIA requirement to be assessed?
Reclaiming, draining or dyking of land.	Surface area of at least 200 ha.	Environmental Impact Assessment required
Alteration or expansion of a land reclamation, drainage or dyking project.	Surface area of at least 100 ha.	EIA requirement to be assessed
Oil and natural gas exploration	In a sensitive area* up to 3 nautical miles from the coast.	Environmental Impact Assessment required
Alteration or expansion of oil or natural gas extraction	For already existing installations, in a sensitive area* up to 3 nautical miles from the coast and: 1°. an expansion of the surface area by at least 5 ha, or 2° the addition or alteration of a nitrogen separation or a desulphurisation installation.	EIA requirement to be assessed
Extraction of oil or natural gas	Extracted amounts of: 1°. > 500 tonnes of oil per day 2°. > 500,000 m³ of natural gas per day.	Environmental Impact Assessment required
Deep drilling holes, or alteration or expansion of deep drilling holes, except in relation to: a. investigation of ground stability, b. archaeological research, or c. exploration or extraction of oil and natural gas.		EIA requirement to be assessed
Establishing, altering or expanding a fish farm	Annual production capacity of at least 1000 tonnes of fish	EIA requirement to be assessed
Building, alteration or expansion of a plant intended for the construction, maintenance, repair or surface treatment of metal ships.	Production surface area of at least 50,000 m²	EIA requirement to be assessed

* Sensitive area: an area that has been designated under the Nature Conservation Act, or that falls under the Birds and Habitats Directives or the Ramsar Convention on Wetlands, or that belongs to the Dutch National Ecological Network.

Annex 7 Removal requirement checklist for cables and pipelines that fall under the Wbr

Criterion	Checklist
Space	- space taken up, including work and safety zones - fragmentation of free space - barrier effect - nuisance for other (current and future) usage functions
Environmental consequences	- disturbance of the seabed ecosystem - consequences for water quality - release of substances not natural to the area - disturbance of fish life - disturbance of birds and marine mammals - net energy consumption - recycling and reuse options
Safety	If removed: - risks to equipment and personnel during removal If left in place: - risks of disengagement, breakage, etc. - risks to fishing - risks to ships
Costs	If removed: - balance of removal and processing costs and any revenue If left in place: - cleaning costs - inspection costs - liability costs

Annex 8 North Sea sections of the Spatial Planning Policy Document

Lower House of the Dutch Parliament, 2004-2005, 29 435, no. 154

4.7 North Sea

4.7.1 Introduction

For the purposes of this policy document, the North Sea is defined as the Dutch territorial waters (12-mile zone) and the Dutch Exclusive Economic Zone (EEZ), as indicated on Map 8. The seabed of this area if also referred to as the Dutch continental shelf.

The North Sea is of great economic importance for shipping, fishing, extraction of mineral resources and generation of wind energy, is important for the military and contains important ecological and landscape features. The North Sea is a core area of the National Ecological Network (*Ecologische Hoofdstructuur* (EHS)). Wind, water and sand are virtually unencumbered in the North Sea. While biodiversity and landscape features are better protected in the North Sea than on land, biodiversity in particular is under pressure from deterioration of water quality and disturbance of the natural environment. The sea is used for sand, gravel, shell, natural gas and oil extraction and for fishing, shipping, recreation and military activities. The air space above the North Sea contains bird migration routes and aviation flight paths. Cables and pipelines are laid on the seabed. Commercial fishing takes place throughout the North Sea. Use is particularly intensive within the 12-mile zone. The space taken up by mobile activities – use of the water – is currently expected to remain constant. In other words, the number of ship movements is not expected to change significantly. However, the shipping industry is undergoing scale enlargement. According to current forecasts, immobile activities – use of the seabed – are expected to increase significantly. At present, a considerable portion of Dutch sand extraction (especially embankment (filler) sand) takes place in the North Sea. In the near future, demand for sand from the North Sea will increase. Finally, there is a trend towards using the North Sea for new immobile activities such as wind farms and land reclamation. The openness of the North Sea gives its coastal area an important landscape feature, namely the clear horizon. Permanent and long-term work within the 12-mile zone are major sources of interference with the unencumbered view from the coast.

From about one kilometre out from the coast, the Dutch continental shelf does not belong to any municipality or province. The policy and management frameworks used for the North Sea do not include a spatial policy framework. The *Spatial Planning Policy Document* provides that framework. New legislation and regulations now make it possible to pursue North Sea spatial policy: with the establishment of the Exclusive Economic Zone (EEZ) on 28 April 2000 the Netherlands acquired sovereign rights to explore, commercialise, maintain and manage the living and non-living natural resources. The EEZ also gives the Netherlands jurisdiction regarding the construction and use of artificial islands, installations and plants and the protection and conservation of the marine environment. The proposed new Spatial Planning Act (Wro) provides for deeper embedding of this jurisdiction. The current opinion is that the Public Works (Management) Act, in combination with the current legislation on mining and sediment extraction and the envisaged expansion of the scope of the Nature Conservation Act and the Flora and Fauna Act, provides a sufficient legal framework for activities within the EEZ.

The government will publish the Integrated Management Plan for the North Sea 2015 at the

end of 2004. The management plan will contain the details of the integrated assessment framework for usage functions in the North Sea for the benefit of permitting and other management. The assessment framework will be based on the policy framework set out in this policy document. The Netherlands will consult with the other North Sea countries, e.g. in the context of OSPAR (Oslo-Paris Convention) and the EU, to coordinate the spatial policy for the territorial waters and the Dutch Exclusive Economic Zone.

4.7.2 Objective and tasks

The primary objective for the North Sea is to strengthen its economic importance and maintain and develop international ecological and landscape features by means of sustainable development and coordination of spatial and economic activities in the North Sea, taking into account the ecological and landscape features present in the North Sea. One key feature is the clear view from the coast.[1]

The basic principles are sustainable use and management of the North Sea water system and efficient use in terms of space and time. International agreements strongly influence national policy. Where it is impossible to combine functions and new activities would cause unacceptable harm to current functions, compensation (in kind or financial) will have to be offered for current functions if necessary. The following tasks are central to Dutch national spatial policy for the North Sea:

- coordination of economic functions in terms of place and time;
- incorporation of economic functions into the ecological system and the open landscape;
- preservation of the clear view of the horizon from the coast;
- protection and development of the natural ecosystem on the basis of an ecosystem strategy;
- enforcement and improvement of safety at sea.

To avoid repetition, applicable statements made in other parts of this policy document have not been reiterated here.

4.7.3 Development perspective

Map 10 shows the Dutch Exclusive Economic Zone and thus the area within which the Netherlands has limited sovereign rights of commercialisation, exploration, conservation and management. It also marks the boundaries of the 12-mile zone (territorial waters). It is a policy objective to keep the view of the horizon from the coast clear in this zone. Within the 12-mile zone lies the seaward boundary of the coastal foundation, which must be protected for the purposes of coastal defence (the established NAP -20 m depth contour, see section 4.3).

Clearways, shipping routes, traffic separation schemes and anchorage areas will protect proper and safe access to ports and the right-of-way for shipping traffic. The number of power cables and, to a lesser extent, the number of telecommunication cables and pipelines in the North Sea are expected to grow. The aim is to intensify the current use of

1) In the Spatial Planning Document, parts of the text are marked as key planning decisions (KPDs). These parts of the text are in principle marked with a grey colour. Some decisions are so important for the direction of spatial policy that the KPD procedure must be performed if they are changed. These decisions, which are 'of material importance' within the meaning of Article 3(2) of the 1985 Spatial Planning Decree (Besluit op de ruimtelijke ordening 1985), are marked with a yellow colour.

space rather than to expand the amount of space in use. The space taken up by cables and pipelines, including the safety zones surrounding them, is limited by bundling cables and pipelines together wherever possible. In principle, cables and pipelines that are no longer in use should be removed.

Areas of special ecological features require extra protection. In addition to those already designated for protection, other areas are eligible for protected status, such as the coastal waters, the Friese Front, the Central Oyster Grounds, the Klaverbank and the Doggersbank. Any new activities in these areas must be carefully assessed.

4.7.4 Specific policy choices

4.7.4.1 Assessment framework for new activities

The government has decided to implement a spatial assessment policy for the North Sea, to establish the usefulness and necessity of new ocean-based activities that will have significant spatial and/or ecological consequences, unless the activities are explicitly permitted in this policy document or encouraged in current national policy. The competent authority uses a step-by-step procedure to assess information provided by the initiator in order to determine whether the new activity is acceptable. The step-by-step procedure, which will be set out in detail in the Integrated Management Plan for the North Sea 2015, will comprise the following assessments:

Definition of the spatial claim

The space claimed for the envisaged activity is defined and any possibilities for combining the activity with other functions in terms of space and time will be utilised. The aim is to use space more efficiently rather than to expand the amount of space in use. The claim must state whether the activity concerns the seabed, the water column and/or the air column. In addition, potential effects of the envisaged activity will also be identified.

Precautionary principle

On the basis of information about the spatial claim and the effects of the envisaged activity, it will be determined whether it could negatively impact the basic qualities of the North Sea. The precautionary principle, as defined in the 1993 OSPAR Convention (Convention for the Protection of the Marine Environment of the North-East Atlantic), is elaborated in the policy as set out in the Fourth Water Management Policy Document. In accordance with this principle, preventive measures must be taken if there are reasonable grounds for concern that any disturbance or substance introduced directly or indirectly into the marine environment could harm human health, damage biological resources and marine ecosystems, impede recreational opportunities or interfere with any other legitimate use of the sea; even if there is no conclusive evidence of a causal link between the introduction of substances or energy and the effects thereof. The best available information is used to assess the situation.

Usefulness and necessity

If there are significant effects, the initiator of the new activity must provide reasons to substantiate why the activity should be located in the North Sea and why it would be unreasonable to situate it on land.

Choice of location

Instruments such as the Environmental Impact Assessment (EIA) may be used to determine suitable locations. The assessment must include an investigation of the options for multiple use

of space. The choice of location is based on the relevant national and international policy, the national and international legislation and regulations and the related assessment frameworks.

Mitigation of and compensation for effects
The parties involved are obliged to make their best efforts to mitigate the effects of the activity or compensate for them. The effects of actions and activities are to be minimised, using the best technologies available. Compensation will be provided in kind in the North Sea or in an area immediately adjacent, unless this is actually impossible. In that case, financial compensation will be provided.

4.7.4.2 Shipping routes

The state regulates the right-of-way for shipping traffic. Activities that interfere with shipping traffic are excluded from shipping routes (clearways), approach zones and other areas, as set out in the Mining Regulation (Official Gazette, 19 December 2002, no. 245). To preserve the right-of-way, shipping routes, traffic separation schemes and anchorage areas are laid down in national policy. In addition, the policy of encouraging short-sea shipping will continue in order to improve the modal split of goods transport.

4.7.4.3 Military activities

See section 4.8.2.

4.7.4.4 Extraction of oil and natural gas

Oil and natural gas exploration and extraction are matters of overriding public interest and will be considered as such in individual assessments within the framework of spatial conservation in areas of special ecological features.

The Netherlands attaches great importance to extracting as much natural gas as possible from its small fields in the North Sea, in order to utilise the full potential of its natural gas reserves in the North Sea. Natural gas and oil exploration and extraction are very important for the Dutch economy, the security of supply and the transition to energy from renewable resources.

4.7.4.5 Commercial fishing

EU Common Fisheries Policy (CFP) imposes area-specific restrictions on catches and fishing equipment. Although commercial fishing has taken place throughout the entire North Sea since time immemorial, most catches are concentrated in clearly identifiable fishing grounds. In 2002 a provision was added to the CFP allowing the use of supplementary area-specific policy on the basis of biological fishing conditions as well as ecological conditions. This supplementary policy requires European agreement. In this way, the CFP offers only limited scope for unilateral action in the fisheries context outside the 12-mile zone.

4.7.4.6 Extraction of raw materials used in construction

See section 4.8.1.

4.7.4.7 Cables and pipelines

In order to prevent major cable and pipeline routing problems in the future, central government has the right to include a requirement in the permit that an initiative covering a large area must reserve space for future cable and pipeline routes. This can be decided on the basis of anticipated developments in activities using cables and pipelines, based on current policy, or on the basis of forecasts using knowledge of the market.

Within the 12-mile zone, disused cables and pipelines must, in principle, be removed. On the basis of the Mining Act, the Minister of Economic Affairs is at liberty to order the removal of disused cables or pipelines in the EEZ. Such a decision will consider the costs and benefits for society. If a pipeline

or cable manager wishes to leave it in place, the manager must demonstrate that the benefits for society of doing so outweigh the costs for society. The same assessment criterion will apply in future to new pipelines and cables in the EEZ for which permits are granted under the Public Works (Management) Act (this concerns non-mining pipelines). permits already granted under the Public Works (Management) Act may be subject to other conditions, depending on the wording of the permit. The Integrated Management Plan for the North Sea 2015 will elaborate on this strategy and set out the criteria and principles that will apply to the assessment of the costs and benefits for society.

4.7.4.8 Wind energy

See section 4.8.3.

4.7.4.9 Areas of special ecological features

Special Areas of Conservation designated under the Birds and Habitats Directives

Small parts of the North Sea have been either designated or registered as Special Areas of Conservation under the Birds and Habitats Directives respectively. The areas concerned are the Voordelta and the coastal zone north of Petten. Both lie within the territorial waters. The European-law assessment framework of the Wild Birds and Habitats Directives is applicable to the evaluation of plans, projects and actions within these areas and the external effects of activities outside these areas.

Other areas of special ecological features

The Netherlands participates in the (international) development of policy on protecting area-specific ecological features, within the context of the OSPAR Convention and the EU (European Marine Strategy and the Birds and Habitats Directives). The aim is to create a cohesive network of protected marine areas. The Dutch areas that have been designated areas of special ecological features are the coastal waters, the Friese Front, the Central Oyster Grounds, the Klaverbank and the Doggersbank. The general location of these areas is shown on Map 10.

The conservation and protection regime for area-specific features in the North Sea will be further elaborated on the basis of policy agreements yet to made within the framework of the OSPAR Convention and the EU. This will take into account the possibility as regards fisheries that areas may be designated under the Common Fisheries Policy.

In anticipation of the implementation of agreements to be made within the OSPAR and EU frameworks, the following points are taken into consideration in the state's assessments of proposed projects in or near the other areas of special ecological features mentioned above. In principle, current use may continue. The following assessment framework has been introduced to prevent new actions taking place that could make designation as a protected area impossible at a later stage: new plans, projects or actions in and around these areas of ecological value that could have a significant impact on the characteristic and ecological features to be preserved in these areas are prohibited, unless there is no other realistic alternative and there are reasons of overriding public interest. The state will base its decision to grant or withhold approval on its assessment of the interest of protection and conservation against the interest of the plan or project. If a plan, project or action is permitted after the interests have been weighed, a decision must be made about compensatory measures before the plan or project is carried out.

The policy line set out above, including the further delimitation of the other areas of special ecological features, will be set out in more detail in the Integrated Management Plan for the North Sea 2015 and perhaps, after the Nature Conservation Act is declared applicable in the EEZ, also in the designation decisions made in accordance with that Act.

4.7.4.10 Clear horizon

Permits under the Public Works (Management) Act and the Environmental Management Act will be granted for construction within the 12-mile zone, outside the SACs (Birds and Habitats Directives), of permanent works that are visible from the coast only if there are reasons of overriding public interest.

Permanent works are works that stand, float or last for more than six months. If a permit is granted, the design must take into account impairment of the clear horizon.

Below are the excerpts on the North Sea from the section on themes.

4.8 Themes

4.8.1 Supply of raw materials for construction

4.8.1.1 Introductory remarks and objectives

Road and housing construction in the Netherlands requires approximately 150 million tonnes of primary and secondary raw materials every year. Efficient and high-quality use is one of the basic principles. Another is the maximum utilisation of alternative materials (secondary or renewable raw materials for construction, such as wood). The central government and other public authorities should set the example. Despite this policy objective, the demand for surface minerals remains considerable and continuous, and it is accompanied by a demand for space. Extracting surface minerals in the Netherlands limits the extent to which spatial problems are shifted to neighbouring countries and to other environmental themes, such as transport nuisance and extra energy consumption, which ensue when supplies come from faraway sources. The demand for space used to be managed by means of the structure plan for surface minerals. This method for coordinating supply and demand will be phased out, as announced in letter 28–600XII no. 114 to the Lower House of the Dutch Parliament, dated 23 May 2003, from the State Secretary for Transport, Public Works and Water Management. The extraction of raw materials for construction will be left to the market. If necessary and possible, the government will introduce measures to remove superfluous market barriers in policy and regulations in a plan setting out the preconditions for the optimum functioning of the market, which is to be drafted by the Ministry of Transport, Public Works and Water Management and the Ministry of Economic Affairs, in consultation with the relevant parties. To ensure a smooth transition to market forces, projects for extracting concreting and building sand that are already in preparation should be carried out as soon as possible. It is particularly important that the province of Gelderland's projects "Geertjesgolf" and "Over de Maas" proceed as planned.

As stated in the aforementioned letter, part 3 of the Second Surface Minerals Structure Plan will not be published. During the transition period, the agreements for 1999–2008 regarding concreting and building sand, as referred to in part 1 of the Second Surface Minerals Structure Plan, will be carried out. To ensure a smooth transition to market forces, projects for extracting concreting and building sand that are already in preparation should be carried out as

soon as possible. It is particularly important that the province of Gelderland's projects "Geertjesgolf" and "Over de Maas" proceed as planned and under the conditions agreed with the state.

Objective

The objective of the policy on the supply of raw materials for construction is to promote extraction in a socially acceptable manner in the Netherlands.

4.8.1.2 Specific policy choices

...

Extraction from the North Sea of filler sand is in the national interest. Deep extraction of concreting and building sand and filler sand is permitted in principle. Extraction of raw materials for construction may, in principle, take place on the seaward side of the established NAP -20 m depth contour, but not on the landward side. Exceptions in principle are extraction from navigation channels, extraction to create transhipment sites, extraction in which the removal of surface minerals from the site benefits the coastal defences and extraction that restores former seabed dumping sites to their original state. Shell extraction is permitted seaward of the NAP-5 metre depth line. Deep extraction of concreting and building sand is permitted in principle in the IJsselmeer area and the river forelands, as far as possible within the limitations imposed by the Birds and Habitats Directives and the National Ecological Network. In the forelands it is preferable to link such activity with other river-oriented projects (river broadening and ecological development).

Further conditions for the extraction of raw materials for construction in the North Sea will be set out in the Second Regional sediment extraction plan of the North Sea.

...

4.8.2 Military areas

4.8.2.1 Introductory remarks and objectives

The government considers military exercises a national interest that should not be assessed by subnational authorities. Military areas include military training grounds, firing ranges, air bases, fleet bases, barracks and logistical objects. In the Second Structure Plan for Military Areas (SMT2), military areas are those owned or leased by the Ministry of Defence and areas in which the military usage (shooting practice, munitions storage, etc.) result in limitations on usage functions adjacent to the area concerned (indirect use of space). SMT2 also refers to low-flying routes and areas.

Objective

The objective of spatial policy for military training grounds is to make sufficient space available in the Netherlands, including the North Sea, to enable the military to prepare thoroughly to perform its tasks.

4.8.3 Energy supply

4.8.3.1 Power supply

Introductory remarks and objectives

The supply of electricity in the Netherlands is currently undergoing privatisation and liberalisation, partly on the basis of European Union legislation. Only the management of networks, including high-voltage networks, is excluded from this process. The role of central government in spatial policy for national power supply is to provide sufficient space for adequate infrastructure in the form of sites for large-scale power generation and high-voltage networks. To secure continuity of supply, to make room

for electricity generated by sustainable means and to ensure the economic efficiency of energy supply, it is also important to expand and, if necessary, adapt the national grid so that it is possible to exchange electricity with foreign countries and the wind farms in the North Sea.

Given the objective of meeting 10% of the Netherlands' electricity needs through renewable means by 2020, central government has a responsibility to introduce specific incentives in order to stimulate the generation of renewable energy and give it a chance to develop within the liberalised market. The government is creating a good climate for investment in wind energy to stimulate the placement of wind turbines in order to have the capacity to generate 7,500 MW of energy by 2020. In the Coalition Agreement, the government stated that the Borssele nuclear power plant would be closed when the technical design life ends (end of 2013).

Objective

The objective of the national spatial policy for power supply is to make enough space available to generate and distribute electricity and to stimulate the generation of wind energy. The policy supports the development of the national grid of high-voltage networks to ensure that it remains possible to meet the distribution requirements.

Envisaged policy choices and objectives

The space required for the supply of electricity is set out in a separate policy document, namely the Third Power Supply Structure Plan (SEV III). This key policy decision sets out the sites for large-scale energy production, as well as the current and new connections in the national high-voltage network of 220 kilovolts (kV) and above. The government will indicate in SEV III whether there are high-voltage lines with a voltage of less than 220 kV that belong to the national grid and, if so, identify them. SEV III will also address the safeguarding policy for nuclear power plants. If necessary, SEV III can incorporate sites for wind farms with a capacity of 50 MW and above. In addition, SEV III will discuss the potential spatial impact of the electromagnetic fields of high-voltage networks.

In addition to the existing agreement concerning 1,500 MW in the areas under the authority of the provinces in the Netherlands, it is the aim to create wind farms in the North Sea in the Dutch Exclusive Economic Zone (EEZ) with the capacity to generate 6,000 MW in total by 2020. The realisation of these wind farms with a total generating capacity of 6,000 MW in the EEZ is of overriding public interest. In the EEZ, the construction of wind farms is permitted in principle outside the following specific exclusion zones: the shipping routes and clearways set out in the mining regulations, the approach and anchorage areas, the restricted defence areas and the areas reserved for extraction of concreting and building sand.

In and around the five areas of ecological value, new plans, projects or actions that could have a significant impact on the characteristic and ecological features to be preserved in these areas are prohibited, unless there is no other realistic alternative and there are reasons of overriding public interest. The state will base its decision to grant or withhold approval on its assessment of the interest of protection and conservation against the interest of the plan or project.

In the EEZ, permits for wind farms are issued on the basis of the Public Works (Management) Act (Wbr) and the Policy Rules in effect since 31 December 2004 on the implementation of the Wbr in relation to installations in the Exclusive Economic Zone. Within the 12-mile zone, wind farms are allowed – providing they do not infringe on the safety of shipping traffic – at the near-shore wind farm site (near Egmond) for the duration of the agreed pilot project and in the municipal sections immediately in front of the port and industry areas of the IJmond and Maasvlakte near the landfall points where the

power supply connects to the high-voltage network on land.

...

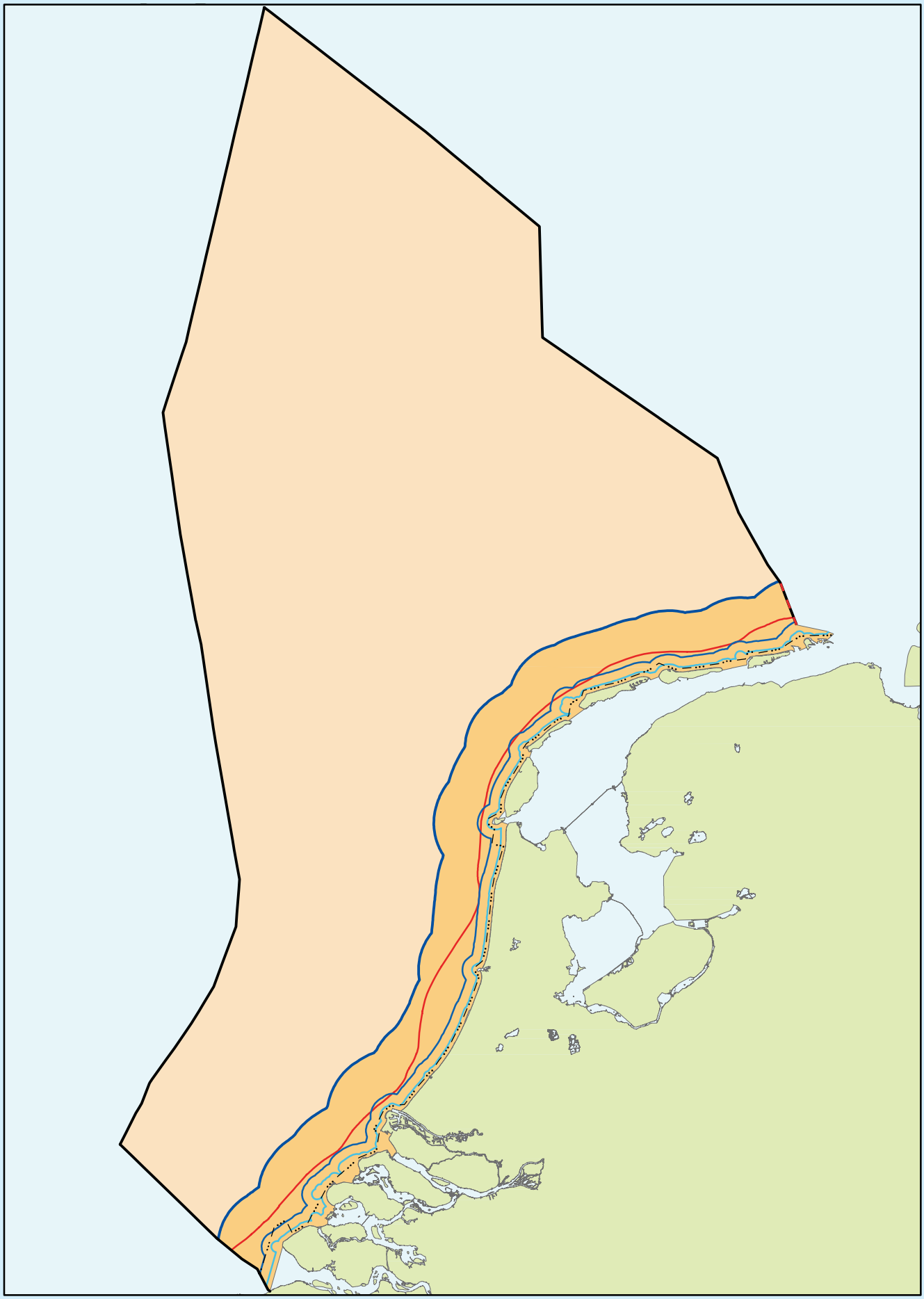
4.8.3.2 Extraction and storage of natural gas

Extraction, storage and exploration of natural gas are activities of overriding public interest and will be regarded as such in the case-by-case evaluations within the framework of the spatial protection of SACs (Birds and Habitats Directives) and the National Ecological Network. The government will set out the policy it intends to pursue in the Wadden Sea in the related Key Planning Decision, namely the Third Wadden Sea Policy Document.

The Netherlands believes it is essential to extract as much natural gas from its small fields as possible, in order to make full use of the potential of its natural gas reserves. Exploration, storage and extraction of natural gas are very important to the Dutch economy, for ensuring security of supply and for the transition towards renewable energy sources.

Maps

Map 1 Administrative borders North Sea



Legend

Boundaries
- Boundary of the NCS
- Bordeline of provinces
- Boundary 12-miles
- Boundary 3- miles
- Boundary 1-mjiles

- Established NAP -20m depth contour
- Border plan area IMPNS 2015

Topography
- Land

- Territorial zone
- Exclusive Economic Zone (EEZ)

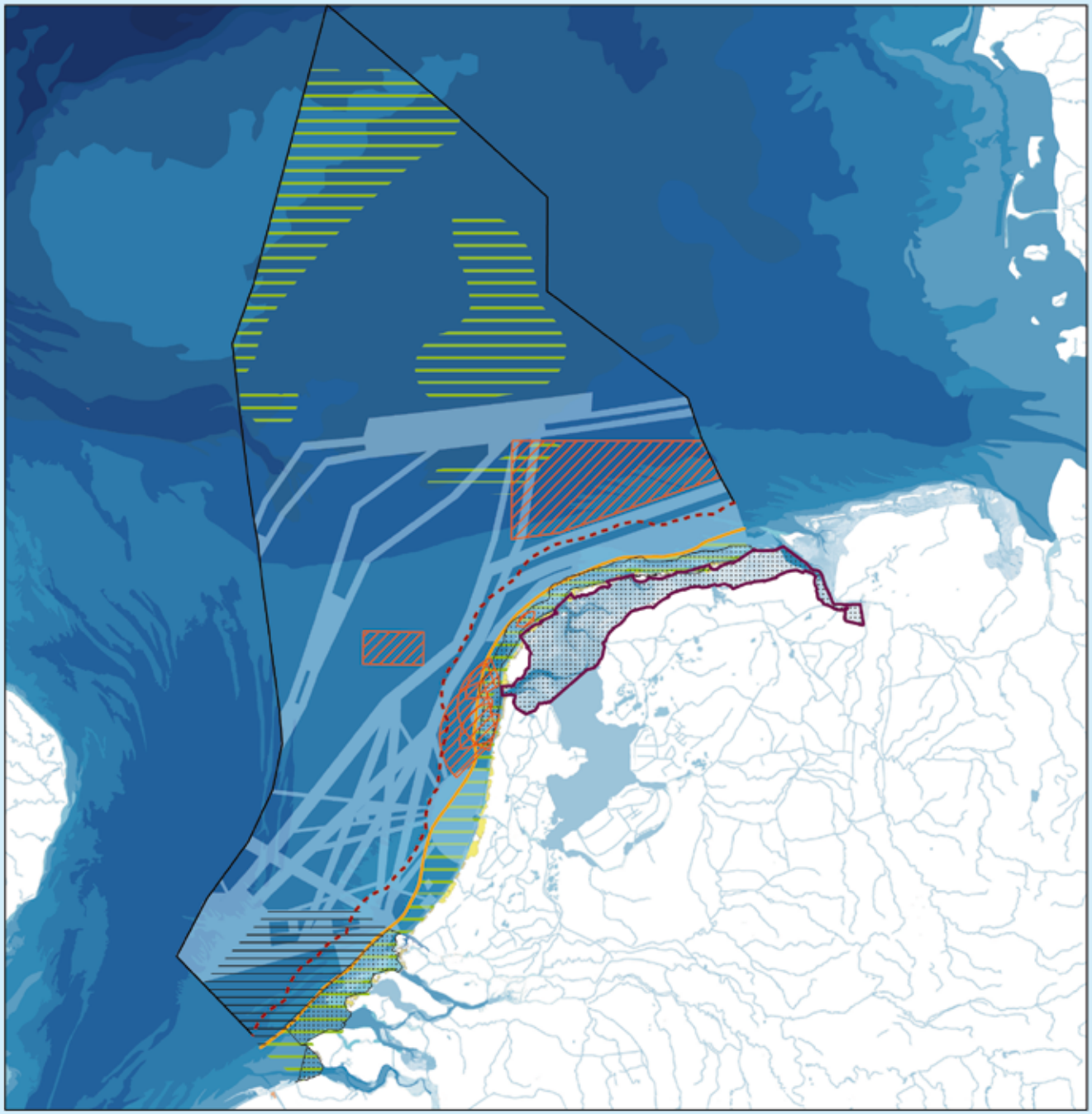
0 5 10 20 **Kilometres**

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Map 2 Key Planning Decision (KPD) map of the North Sea and the Wadden Sea (Spatial Planning Policy Document)



Spacial Planning Policy Document map 10:
North Sea and Wadden Sea

- Established NAP -20 metre depth contour
- 12 mile zone, also exclusion area windenergy (not for Near shore windpark (Egmond), IJmond and Maasvlakte)
- Shipping routes (including harbour approach and anchor areas) also exclusion area wind energy
- Defense restricted area, also exclusion area wind energy
- Reservation area coarse sand also exclusion area wind energy
- Area with special ecological values
- EU Birds and Habitats Directive areas
- Key Planning Decision area according to the Key Planning Decision Waddenzee 1993

Seabed
Depth in metres compared with the low low water spring level

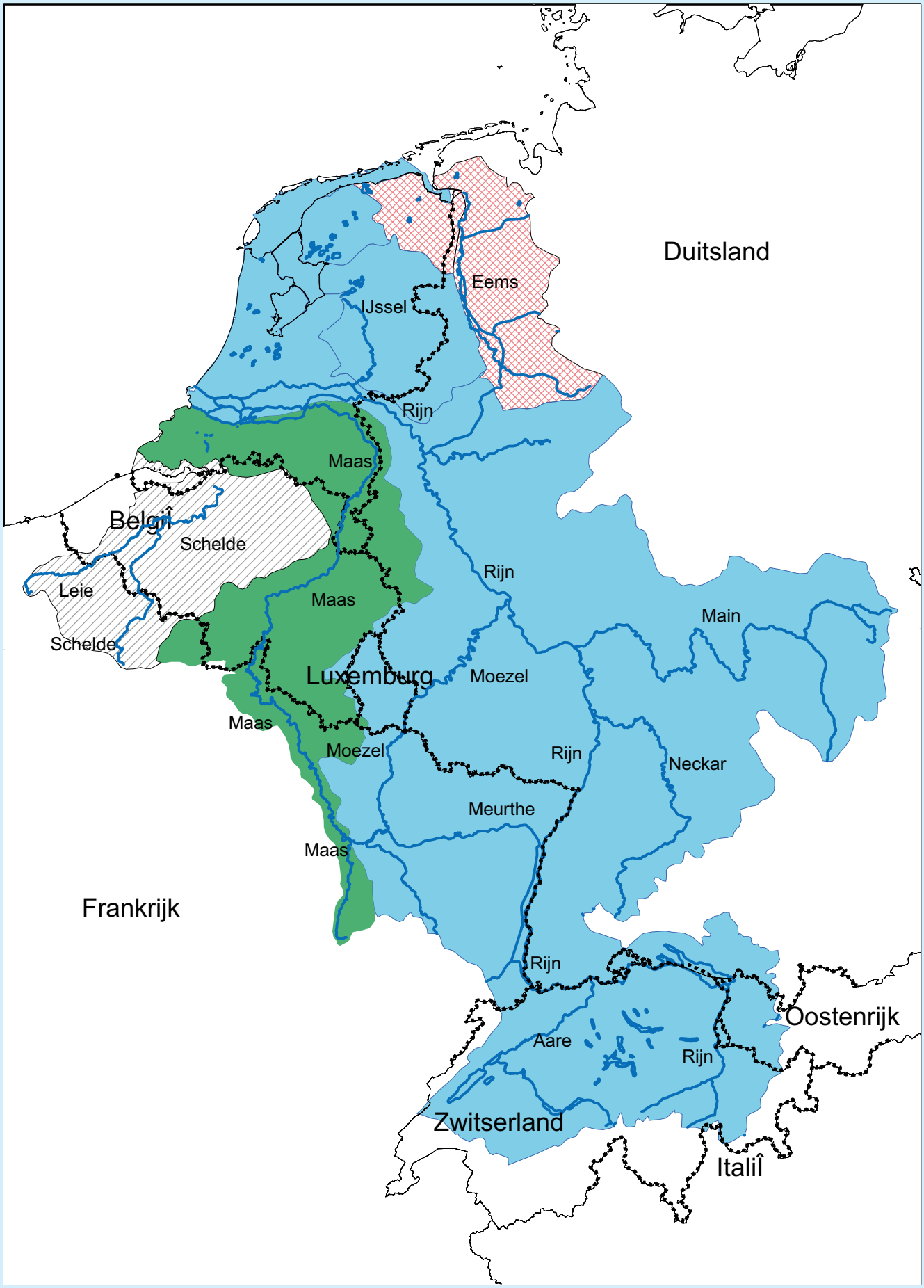
0 5 10 20 30 40 50 60 70 80

Boundary Exclusive Economic Zone (EEZ)

(1:2.000.000)

0 20 40 80 120 160 km

This map presents an indicative image of the units mentioned in the legend



Legend

Boundaries
Bordeline of countries

Rivers

Riverbasins
Rhine
Eems
Meuse
Scheldt
Otherwise

0 10 20 **Kilometres**

Scale 1:4.200.000

N

Rijkswaterstaat
Noordzee

Map 3 EU-Water Framework Directive: Rhine, Meuse, Scheldt and Eems International river basins

Map 4 EU Water Framework Directive: bodies of water in coastal waters

Legend

Boundaries

12 mile zone

Boundary 1-miles

Each body of water excists of two parts:

Coastal waters (0 - 1 mile)

Territorial waters (1 - 12 mile)

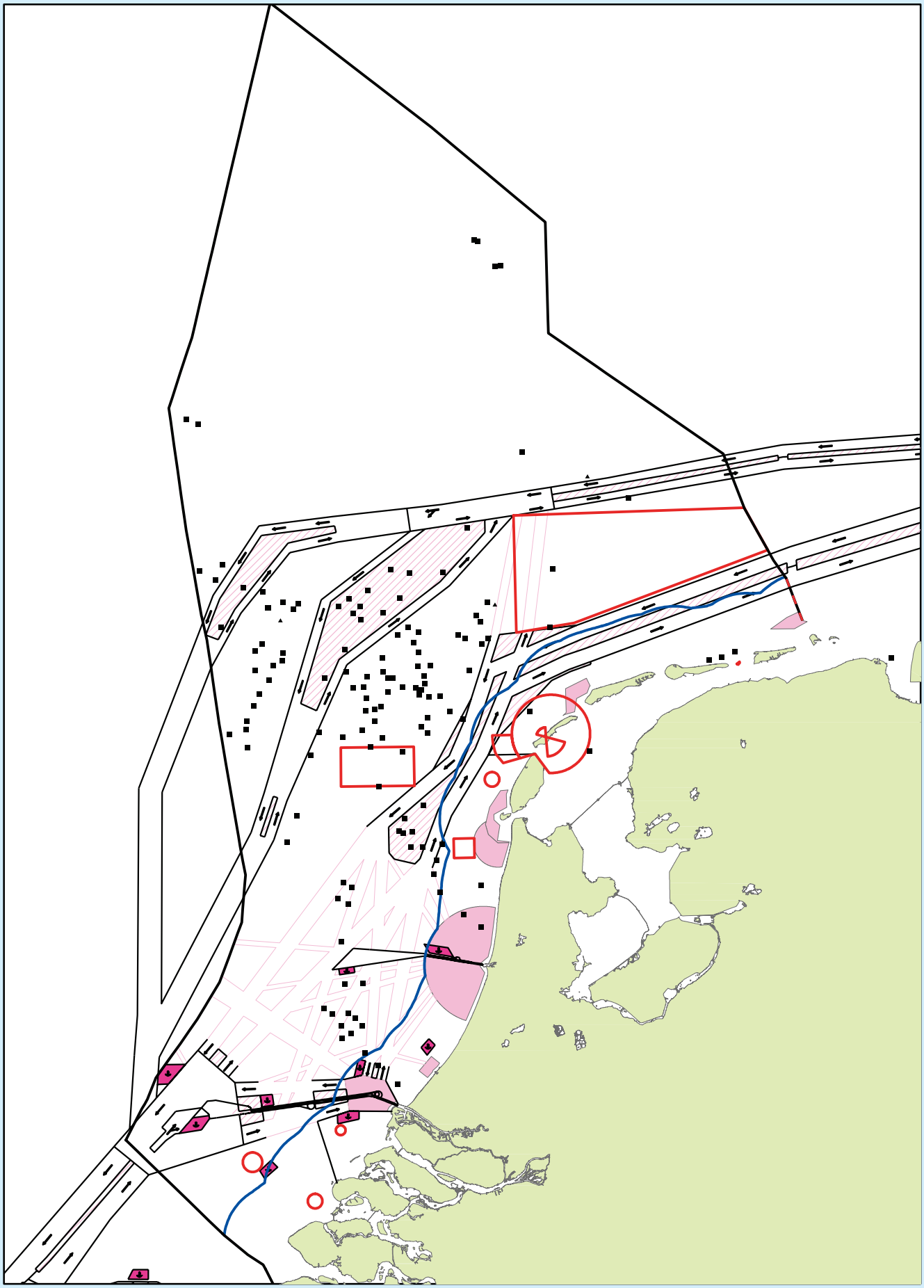
0 5 10 20 **Kilometres**

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Map 5 Current use: military areas, oil and gas production, shippingroutes



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles
- Border plan area IMPNS 2015

Traffic separation scheme
- Shippingroute
- Clearways
- Shipping separation zone
- Habour approach areas
- Anchor areas

Military areas
- Military areas

Oil and gas production
- Platforms
- Drilling rigs

Topography
- Land

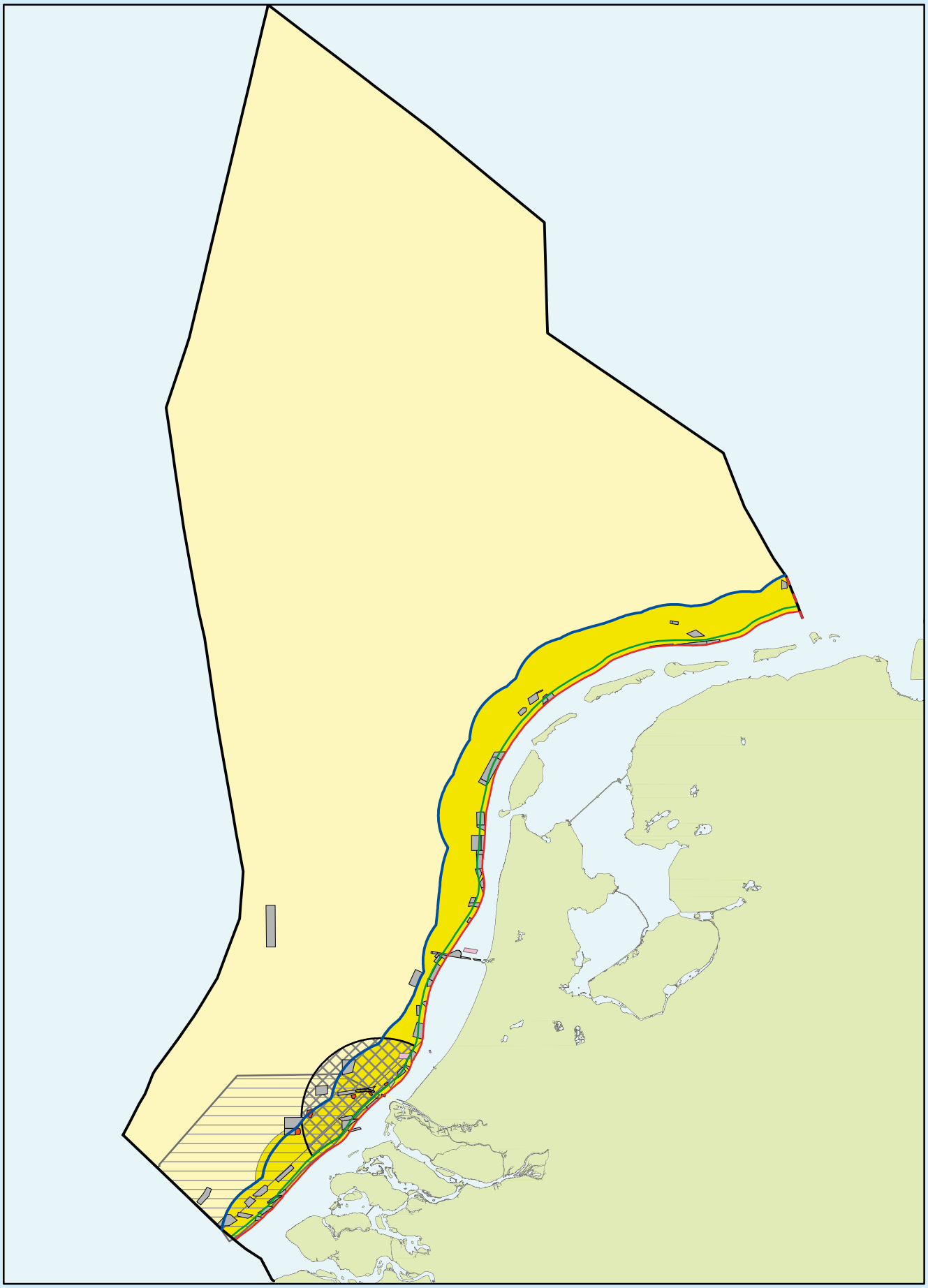
0 5 10 20 Kilometres

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Map 6 Opportunity map sand extraction and dredgings dump



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles
- Border plan area IMPNS 2015

Bouderies by policy
- Established NAP -20m depth contour + 2km
- Established NAP -20m depth contour
- Search area sand extraction Second Maasvlakte
- Reservation area coarse sand

Surface minerals
- Opportunity areas for surface minerals
- Potential area for surface minerals
- Area of permitted sand extraction
- Actual occurrence of coarse sand
- Dredgings dump area

Topography
- Land

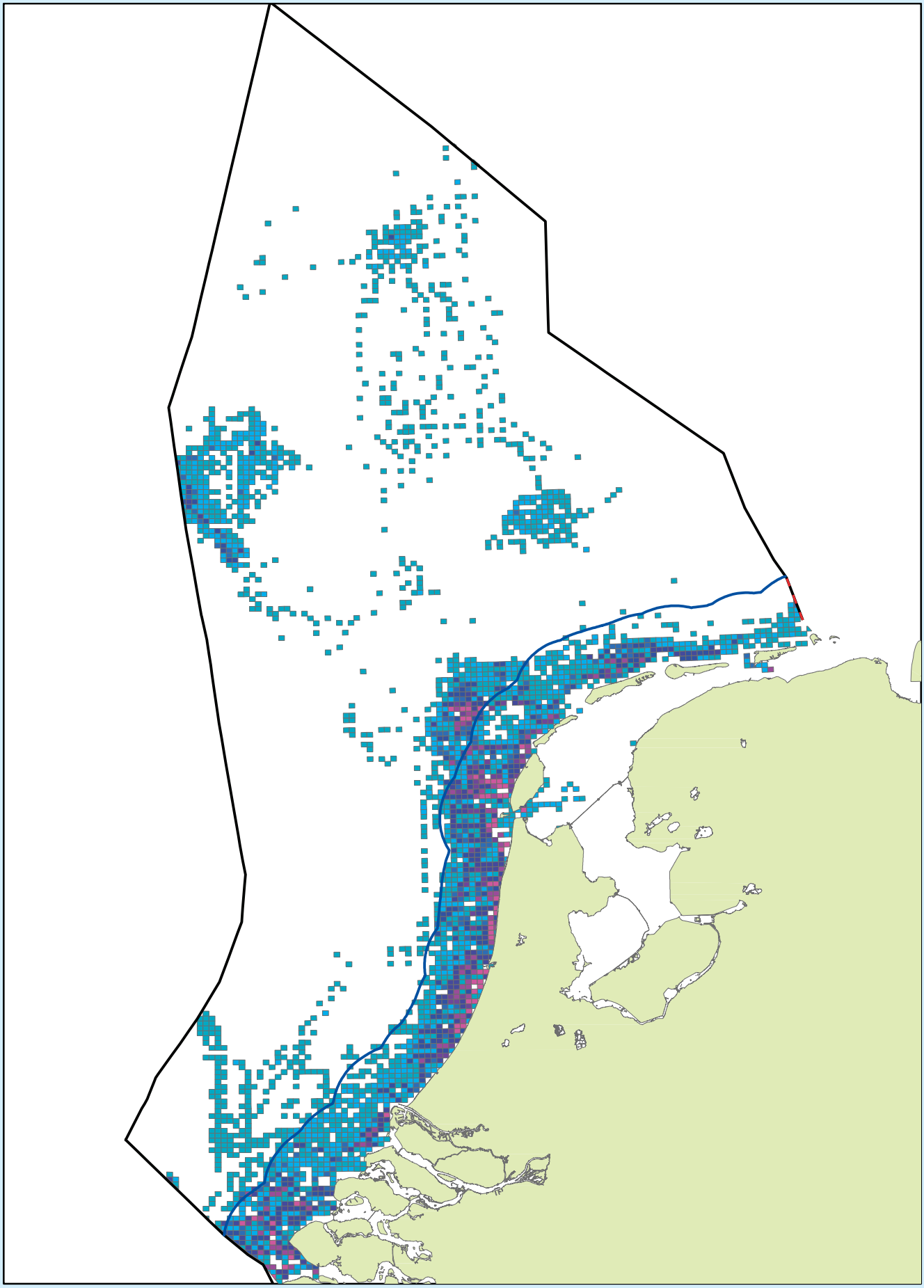
04.59 18 **Kilometres**

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Map 7 Current use fishing intensity by Dutch beam trawlers (≤ 300 hp)



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles

Fishery intensity
Intensity beam trawlers (≤ 300 hp)
Average number of registrations (1999-2002)

0 - 4	24 - 36
4 - 12	36 - 44
12 - 16	44 - 64
16 - 24	> 64

Topography
Land

0 5 10 20 **Kilometres**

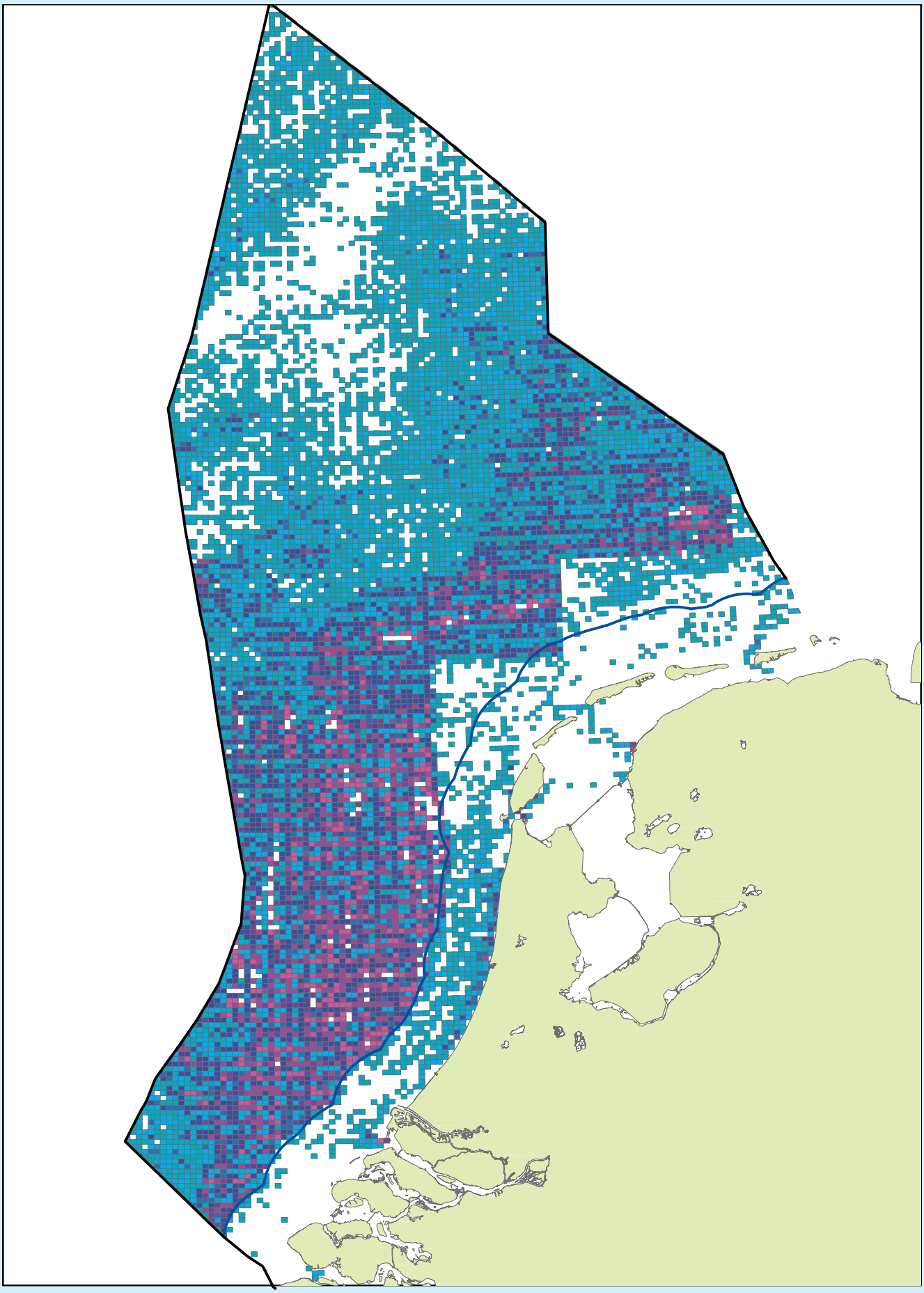
Scale 1:2.000.000

N

Source: RIVO

Rijkswaterstaat
Noordzee

Map 8 Current use fishing intensity by Dutch beam trawlers (≥ 300 hp)



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles

Fishery intensity
Intensity beam trawlers (≥ 300 hp)
Average number of registrations (1999-2002)

0 - 4	24 - 36
4 - 12	36 - 44
12 - 16	44 - 64
16 - 24	> 64

Topography
Land

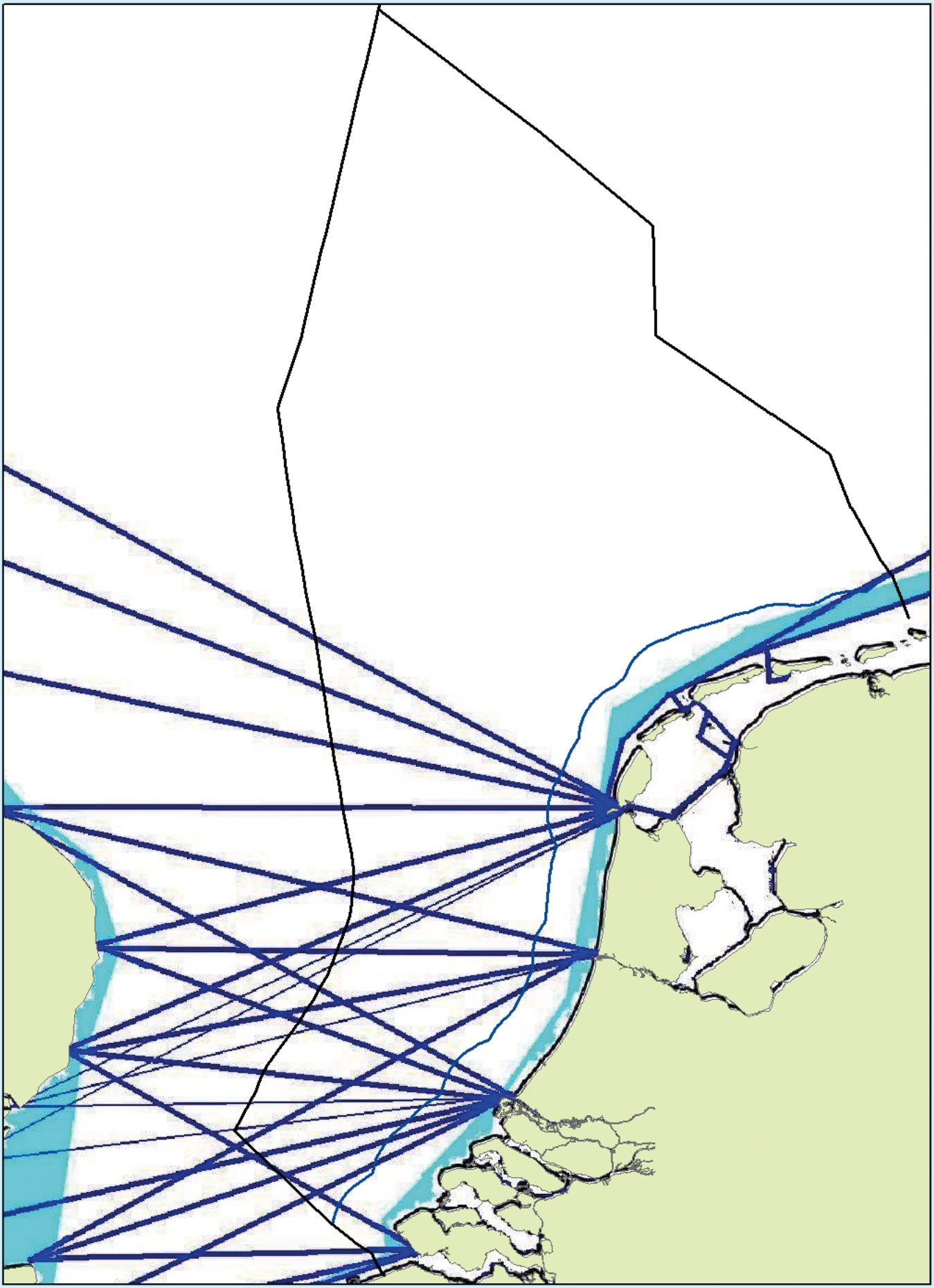
0 5 10 20 Kilometres

Scale 1:2.000.000

N

Source: RIVO

Rijkswaterstaat
Noordzee



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles

Recreational traffic
- Routes and intensity
- Coastal zone

Topography
- Land

0 12.5 25 Kilometres

Scale :2.000.000

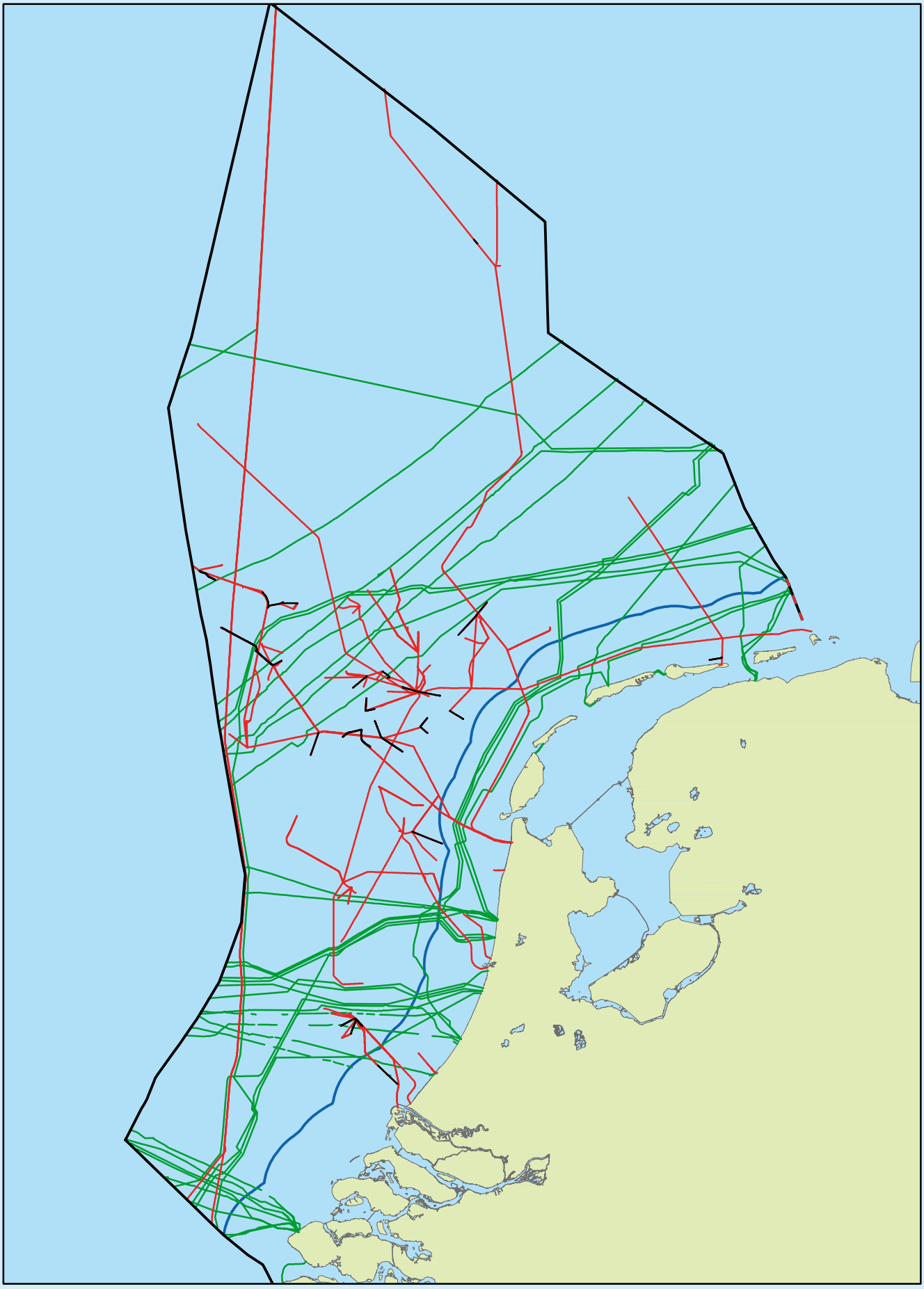
N

Source: ANWB

Rijkswaterstaat Noordzee

Map 9 Current use recreational ships on the North Sea

Map 10 Current use of cables and pipelines



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles

Cables and pipes
- Pipelines
- Cables (telecom)
- Cables (umbilical)

Topography
- Land

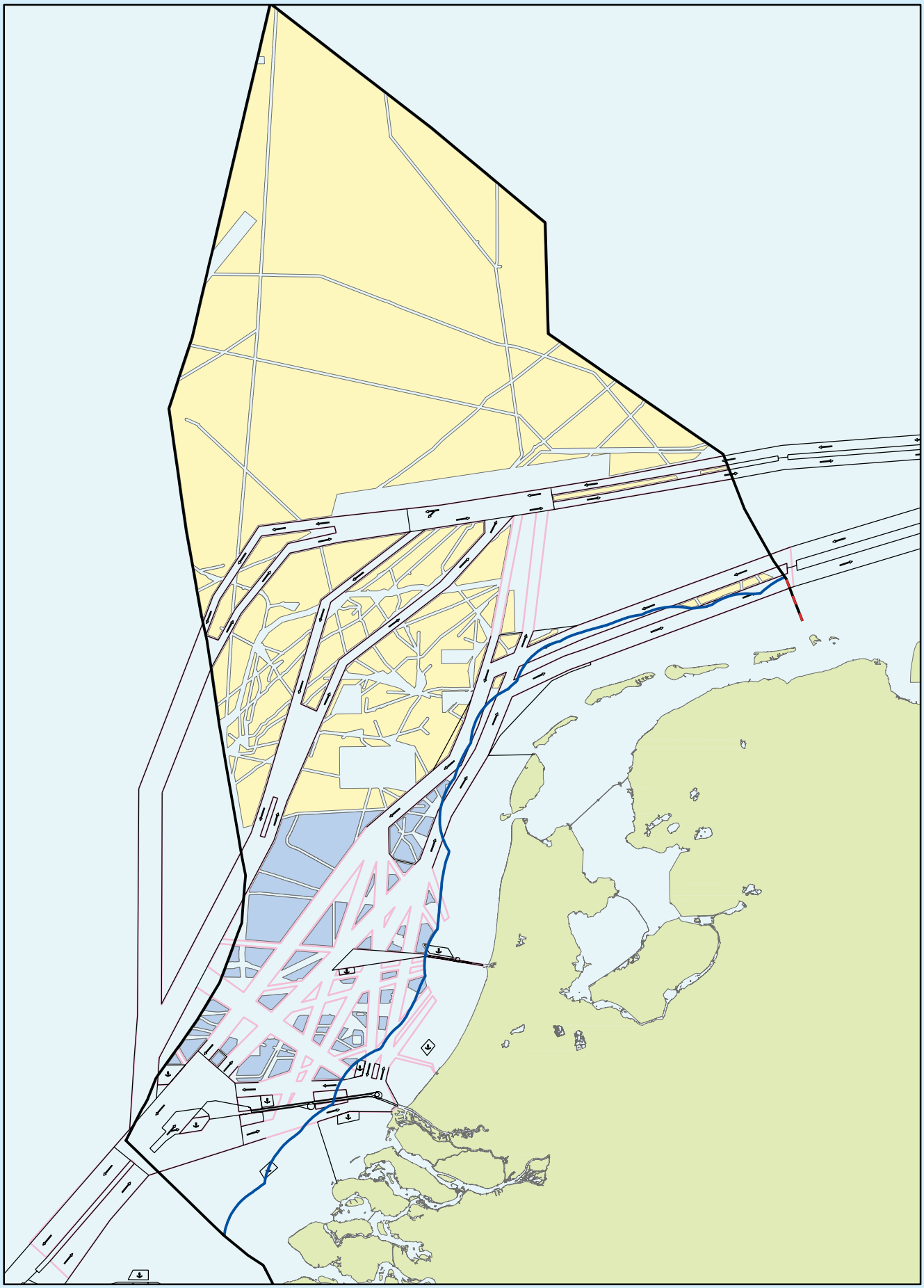
04.59 18 **Kilometres**

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Map 11 Opportunity areas windturbine parks



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles
- Border plan area IMPNS 2015

Shipping
- Shipping routes
- Clearways

Windturbine parks
- Opprtunity areas (2,5 to 6 times the required area)
- Potential areas

Topography
- Land

0 5 10 20 **Kilometres**

Scale 1:2.000.000

N

Rijkswaterstaat
Noordzee

Boundaries and coordinates of the areas designated by the IMPNS 2015

Areas in the EEZ

Coordinates of the vertexes of the areas with special ecological features that are limited in the IMPNS 2015.
Numeration clockwise from north to south.
Boundaries with neighbouring countries are specified with _B or _D or _GB.

	WGS84									ED_50 geografisch	
	Codenr	POINT_X	Egr		Esec		POINT_Y			Nsec	X	Y
Doggersbank*	D_1_D	3,63556	3	38	8		55,6447	55	38	41	3,63702566041	55,64540897300
Doggersbank*	D_2_D	4,26	4	15	36		55,365	55	21	54	4,26143923011	55,36569114940
Doggersbank	D_3_GB	2,7624	2	45	44,6		54,3772	54	22	38	2,76384180919	54,37796210860
Doggersbank	D_4_GB	2,89688	2	53	48,8		54,6209	54	37	15,4	2,89832707990	54,62167241760
Doggersbank	D_5_GB	3,20748	3	12	26,9		55,381	55	22	51,7	3,20894682106	55,38173311050
Friese Front	FF_1	5,23371	5	14	1,4		54,2233	54	13	23,9	5,23508453543	54,22402836040
Friese Front	FF_2	5,22712	5	13	37,6		53,8297	53	49	47,1	5,22848178562	53,83047145510
Friese Front	FF_3	4,21599	4	12	57,6		53,4165	53	24	59,3	4,21736370174	53,41722649460
Friese Front	FF_4	4,21497	4	12	53,9		53,7998	53	47	59,4	4,21635622476	53,80058402950
Klaverbank	KB_1	3,31583	3	18	57		54,1994	54	11	57,8	2,80769460759	54,20217738150
Klaverbank	KB_2	3,31766	3	19	3,6		53,8312	53	49	52,3	3,31725198433	54,20012140850
Klaverbank	KB_3_GB	2,90389	2	54	14		53,8364	53	50	11,2	3,31906944020	53,83195346090
Klaverbank	KB_4_GB	2,86525	2	51	54,9		53,9626	53	57	45,3	2,90530972910	53,83719816840
Klaverbank	KB_5_GB	2,80626	2	48	22,5		54,2014	54	12	5,2	2,86667495512	53,96333451120

* The border of the German Doggersbank area as indicated by Germany.

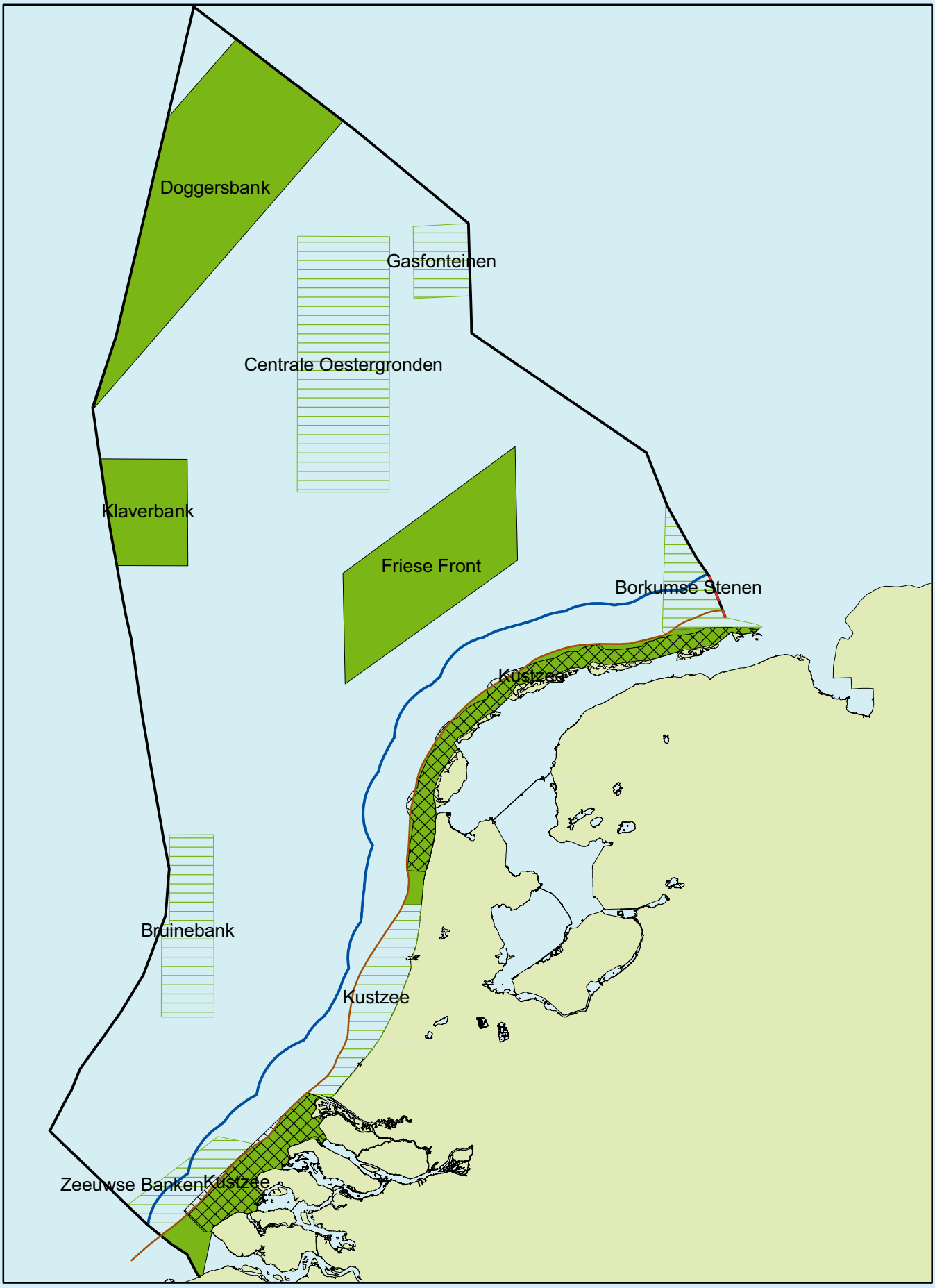
Areas in the Kustzee

The Kustzee north of Bergen is limited on four sides as follows:

* on the sea side by the established NAP -20 metre depth contour
* north of Schiermonnikoog by drawing the border of the existing BHD area to the west until it crosses the established NAP –20 metre depth contour
* on the land side according to the present SAC borderlines. Between Petten and Bergen this is the low low water level.
* at Bergen by the line that lies at 52 degrees and 38 minutes north latitude (or Y=52,6333) also in projection wgs84.

The Kustzee in the Delta-area is extended with the mouth of the Westerschelde estuary. This area is limited on four sides as follows:

* on the sea side by the established NAP -20 metre depth contour
* on the north side by the existing SAC zone of the Voordelta
* on the east side by the existing SAC zone Westerschelde
* on the south side by the Belgian border



Legend

Boundaries
- Boundary of the NCS
- Boundary 12-miles
- Border plan area IMPNS 2015
- Established NAP -20m depth contour
- BHD-areas

Areas with special ecologic values
- Restricted and protected areas IMPNS 2015
- Other areas

Topography
- Land

0 5 10 20 Kilometres

Scale 1:2.000.000

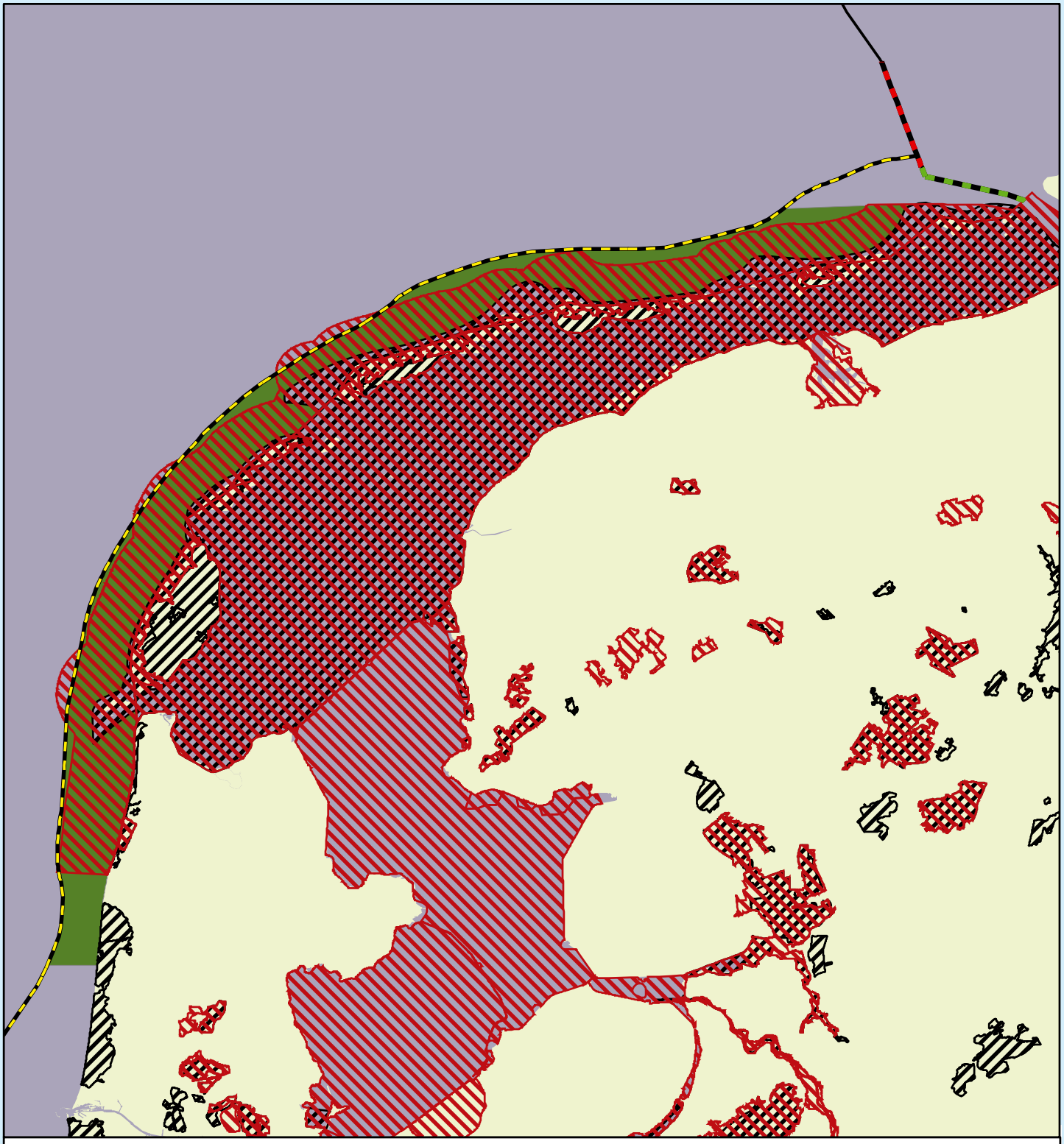
N

Rijkswaterstaat
Noordzee

No rights can be derived from this map

Map 12 All areas with special ecological values

Map 13 Protected ecological features in the coastal waters north of Bergen

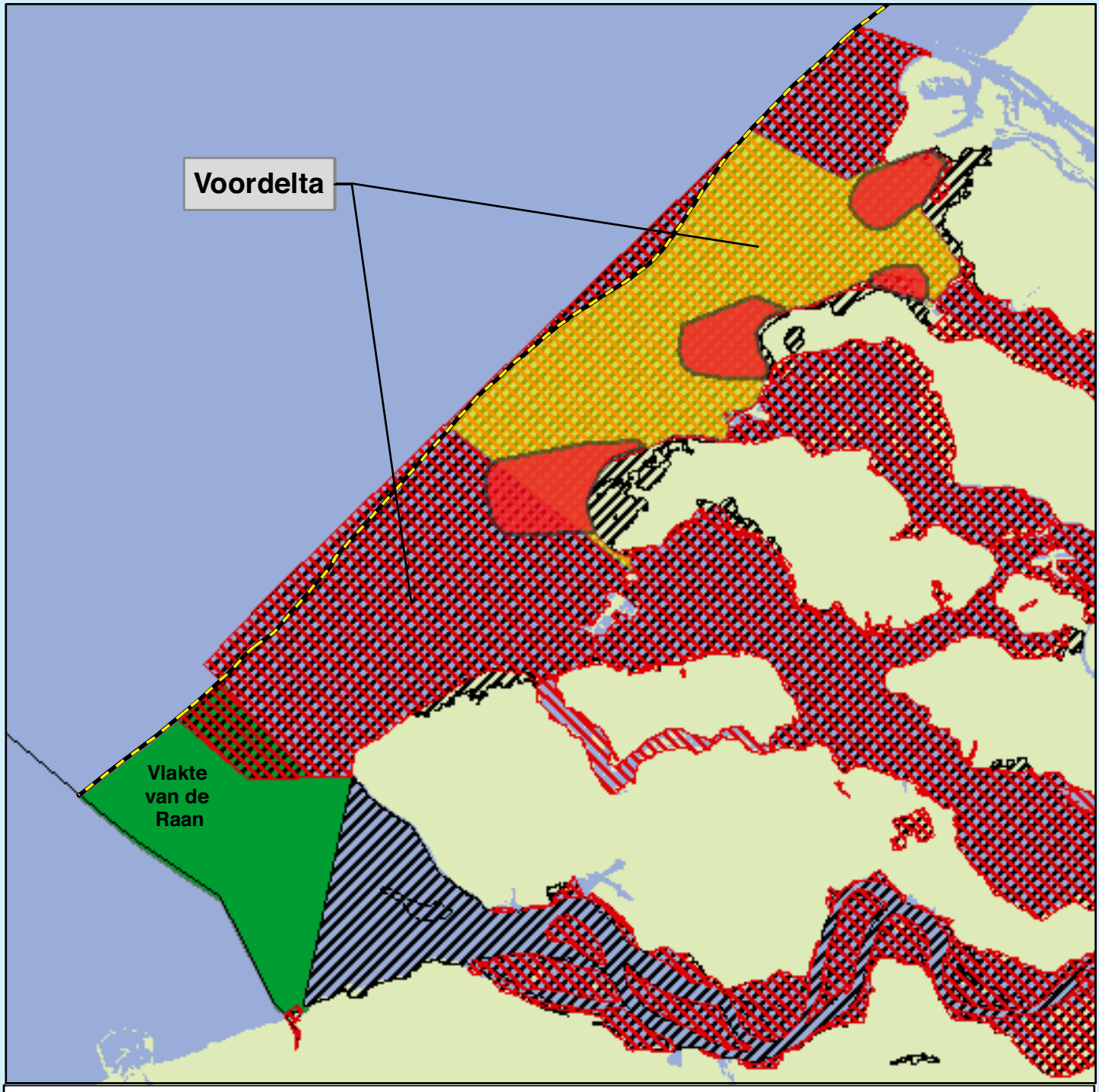


Legend

- Conservation areas in the coastal zone north of Bergen
- Border plan area IMPNS 2015
- Established NAP -20 metre depth contour
- Boundary of the NCS
- Bird Directive areas
- Habitat Directive area
- Restricted and protected areas IMPNS 2015

0 5 10 20 30 40 Kilometres

Ministerie van Verkeer en Waterstaat
Directoraat-Generaal Rijkswaterstaat
Noordzee en RIKZ



Legend

- Boundary of the NCS
- Established NAP -20 metre depth contour
- Areas with emphasis on nature
- Marine reserve search area
- Bird Directive areas
- Habitat Directive area
- Restricted and protected areas IMPNS 2015

N

0 2,5 5 10 15 20 Kilometres

Ministerie van Verkeer en Waterstaat
Directoraat-Generaal Rijkswaterstaat
Noordzee en RIKZ

* The seaward boundary of the existing conservation zone Voordelta will be changed accordingly to the boundary of the remaining of the Kustzone (the established -20 metre NAP depth contour) as soon as possible. On the map the South-West borderline of the special conservation zone Voordelta has been indicated in accordance with the text of the decision of designation.

Abbreviations

AIS	Automatic Identification System
AmvB	Order in Council
BHD	Birds and Habitats Directives
BHN	Enforcement Policy Plan for the North Sea
BKL	Basic coastline
BPRW	Management Plan for National Waters
CFP	Common Fisheries Policy
CTT	Chemical Toxicity Test
EEZ	Exclusive Economic Zone
EMS	European Marine Strategy
EMSA	European Maritime Safety Agency
HID	Chief Engineer/Director
IBV	Voordelta Integrated Policy Plan
IDON	Interdepartmental Directors' Consultative Committee North Sea
IMO	International Maritime Organisation
IMPNS 2015	Integrated Management Plan for the North Sea 2015
MBS	National Environmental Policy Plan for the Shipping Industry
MPA	Marine Protected Area
NAP	Normal Amsterdam Sea Level
NCP	Dutch Continental Shelf
NMMN	Nature for people, people for nature
NSMN	North Sea Management Network
NW4	Fourth Water Management Policy Document
OWN	Consultative Committee for Water Management and North Sea Affairs
PKHN	Interdepartmental Permanent Liaison Group for Enforcement in the North Sea
RON 2	Second Regional sediment extraction plan of the North Sea
RWS	Directorate-General for Public Works and Water management
SAC	Special Area of Conservation
SAR	Search and Rescue
SVM	Progress report on shipping and the environment
TAC	Total Allowable Catch
UNCLOS	United Nations Convention on Law of the Sea
WFD	Water Framework Directive

For a list of Dutch legislation relevant to the North Sea, see chapter 1, figure 1.5.
For a list of state agencies with management tasks, see Annex 4.

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