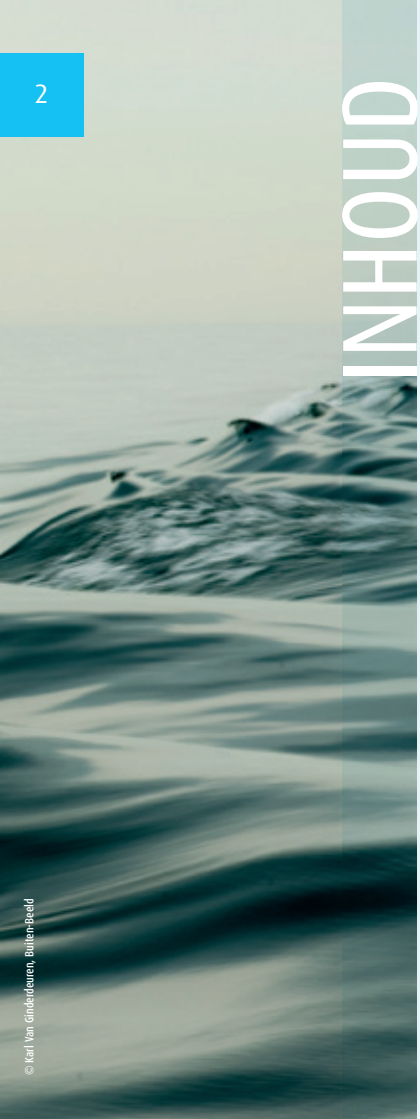
Something is moving at sea...

A marine spatial plan for the Belgian part of the North Sea

INHOUD



A sea of busyness

The Belgian part of the North Sea is one of the most intensively used seas in the world. Shipping, tourism, fisheries, sand exploitation, windmills etc. All these activities make use of what the sea has to offer. However, this busyness causes high pressure. Several activities may be in each other's hair and may also have an impact on the environment. In order to make this all balance, the Belgian authorities have drawn up a marine spatial plan for the Belgian part of the North Sea.

A MARINE SPATIAL PLAN?

WHO ...

The North Sea belongs to everyone. No-one can appropriate it, neither can any government. However, the Belgian federal authority can lay down rules for het Belgian part of the North Sea (which we will call 'our North Sea' throughout this brochure). For instance, it can grant permits to companies for certain activities, such as the building and exploitation of wind farms. It can also take measures for the protection of the marine environment, such as designating protected areas. Besides, it has the authority for drawing up a spatial plan for all who are active at sea, such as shipmasters, dredgers, power companies etc.

... DOES WHAT ...

Our part of the North Sea is small but very busy. Activities are numerous and varied, such as shipping, fishing, energy generation, dredging operations, sand and gravel exploitation, tourism and military exercises. All these activities have different objectives too, economic, ecological, social, cultural ones, and objectives dealing with security.

... WHERE ...

Activities are possible in the different layers of the sea, that is on the seabed, in the water and on the surface. In this way, sand exploitation, shipping and scientific research can take place in one and the same area.

... AND WHEN ...

The activities do not always take place at the same time. Sometimes they depend on the season. During summer, for example, there is more tourism. But fishing is also seasonal.

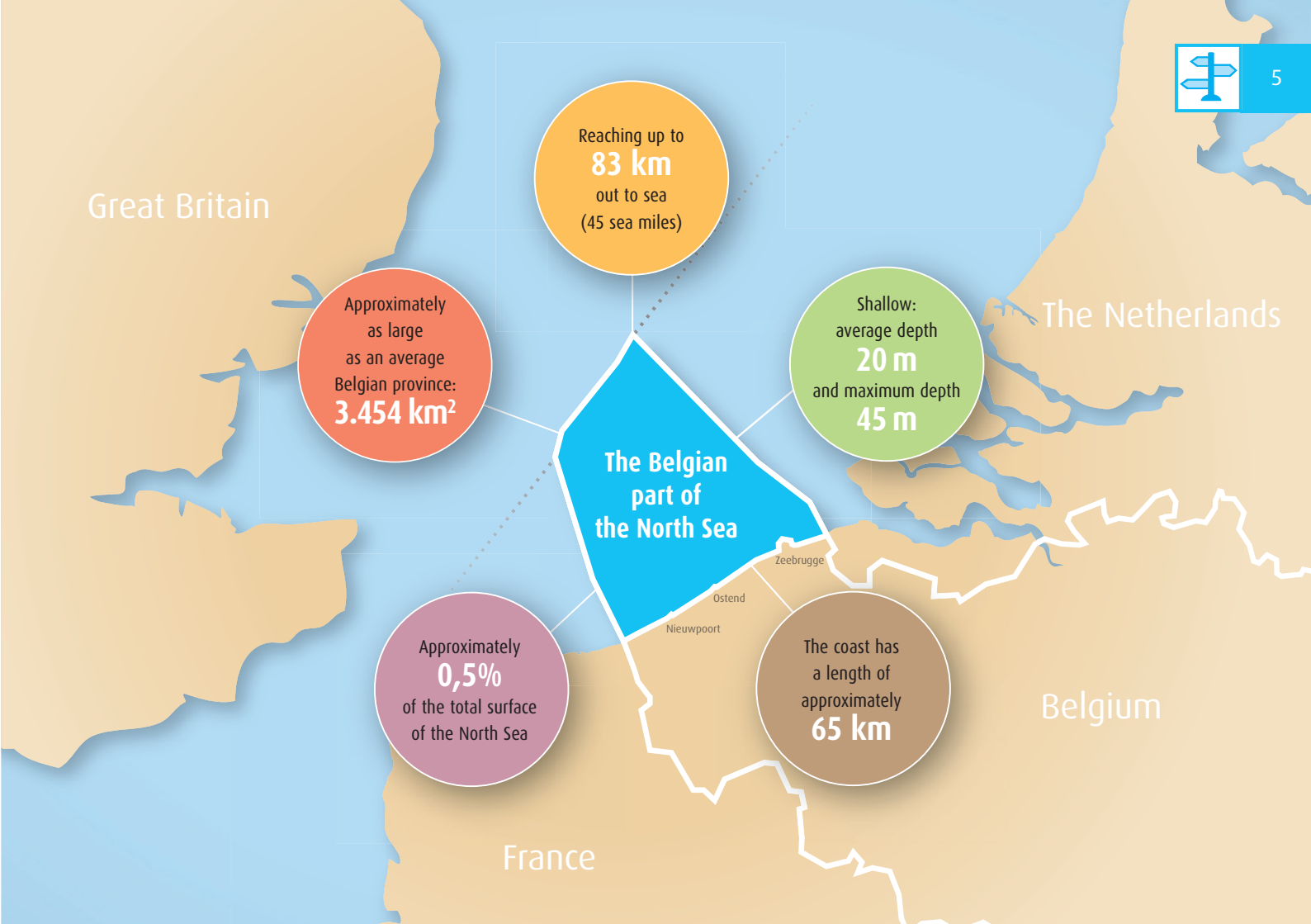
... AT SEA?

It is important to have all activities geared to one another, and in doing so, to optimally protect the sea and the life it contains. This is why the federal authority has drawn up a marine spatial plan for the Belgian part of the North Sea. This plan maps our North Sea and its users, and tries to reconcile their spatial impact to one another.

The plan covers a period of six years, that way, the authority commits itself to evaluate the plan on a regular basis, and adjust it if need be. At the same time, everyone knows what is planned and where, and what the longer term vision is. This provides security for those who want to undertake new activities.

The Belgian Minister for the North Sea took the initiative for this plan. This makes Belgium a pioneer not only in Europe, but even in the whole world!

This brochure explains every activity in our North Sea by means of a specific map. At the end of the brochure, an overview map renders the total picture (see p. 23). For those wanting to read the complete plan: see 'Want to know more?' p. 20.


Great Britain
Reaching up to
83 km
out to sea
(45 sea miles)
Approximately
as large
as an average
Belgian province:
3.454 km²
Shallow:
average depth
20 m
and maximum depth
45 m
The Netherlands
The Belgian
part of
the North Sea
Zeebrugge
Ostend
Nieuwpoort
Approximately
0,5%
of the total surface
of the North Sea
The coast has
a length of
approximately
65 km
Belgium
France

NATURE CONSERVATION

More than 2,100 species: this is the scope of wealth of life on and in our North Sea waters. Hidden between the many sandbanks (which are rare in the world) lay some 'hotspots' for the biodiversity, such as gravel beds A and sand-mason reefs B. These are important, as they constitute habitats attracting an exceptional amount of wildlife on and in the bottom of the sea. Also sea mammals such as the porpoise are often seen here, and more than 60 species of sea birds find something to their taste in our coastal waters. As from now, so as to protect nature, there are restrictions in the most valuable spots of our North Sea for activities such as fishing and sand exploitation. They are meant to keep the impact on sea life as small as possible, while yet maintaining the existing activities. Conversely, some human interventions may attract more wildlife, something the plan intends to stimulate.

In our North Sea several marine protected areas (MPAs) have already been marked out for quite some time. The plan adds no extra MPAs but intends to improve the coordination of activities in existing areas with environmental conservation. E.g. in the **special area for conservation (SAC) 'The Flemish Banks'** C (named after the sandbanks) **four sensitive subzones** were designated, here, fishing is only allowed using environmentally friendly techniques, or under specific conditions (see 'Fisheries and aquaculture', p. 12). Also, sand and gravel exploitation is strongly limited within 'The Flemish Banks', and may only be done under certain conditions.

The porpoise appears more and more in the North Sea

In three **special protection areas for birds** D, the existing restrictions are maintained, such as a ban on certain constructions and industrial and commercial activities.

Apart from these existing protected areas, there are areas which have been designated for **future** activities, which do not have a disrupting impact, but which may just have a positive side effect on life at sea and in the sea:

- An area for a future **'plug at sea'** E: a high-voltage station at sea to which the cables run from several wind parks and are subsequently guided from there to the mainland. For example, here a resting place for seals could be created, however, this is not compulsory for obtaining a licence to construct a power station.
- An area for wind farms and other forms of **renewable energy** F: around the existing windmills, shipping and fishing are prohibited. The cemented windmill feet will allow species like cod and bib to feed on. Crabs and shrimp appear to be much bigger when living within a wind farm. And there is also more whiting than in other parts of our North Sea. These positive effects can be stimulated. Two **artificial reefs** G for example, have been built in the wind farm zone in order to attract more fish and other animals. In the long term, there will be room for seals too (see also the Seal Action Plan, 'More information', p. 20).
- Two areas between the windmills for future **sustainable aquaculture** H, such as breeding molluscs or fish: aquaculture will be allowed here provided it reduces the fertilization (eutrophication) of the seawater in these areas.
- Two areas for future **'energy atolls'** I: doughnut shaped islands where energy can be to be stored. The sand beaches of these islands have to be built in such a way that there nature can develop itself (this is required to obtain a licence to construct an atoll). For example, they will serve as breeding spots for coastal birds such as the lesser black-blacked gull, or the common tern.

PROTECTED SAND BANKS, 'SAC FLEMISH BANKS' WITH 4 SUBZONES C

AREA FOR RENEWABLE ENERGY (WIND FARMS) F

ARTIFICIAL REEFS G

SUSTAINABLE AQUACULTURE H

GRAVEL BEDS A

'PLUG AT SEA' E

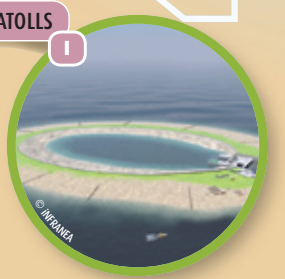
SPECIAL PROTECTION AREAS FOR BIRDS D

3
4
2
1

NATURE RESERVE 'BAAI VAN HEIST'

Zeebrugge

ENERGY ATOLLS I



Ostend

Nieuwpoort

SAND-MASON REEFS B

The Netherlands

Belgium

France

ENERGY, CABLES AND PIPELINES

The sea offers quite a few opportunities to generate sustainable, 'green' energy. Wind farms are the most visible form. For this sustainable energy generation a specific space has been provided, further off shore. No shipping traffic is allowed around the existing wind farms. A specific zone is also dedicated to 'energy atolls', i.e. installations for temporary storage of energy, for instance when there is a lot of wind, and for the 'plug at sea'. For all these activities, a concession and an environmental permit are needed, along with a report on the environmental impact.

Apart from wind energy, the area for various kinds of **renewable energy** A also serves for generating energy from the waves or the tides.

The areas for future activities serve for:

- the **'plug at sea'** B: the high-voltage station at sea to which cables run from several wind parks and from which cables run to the mainland. This way wind energy is landed efficiently.
- the two **energy atolls'** C: the doughnut shaped islands where energy is stored thanks to the level difference. When there is a surplus of (wind) energy, for example at night, this energy is used to pump sea water out of the basin. When there is too little (wind) energy, one lets the basin be filled up again and the water passes through turbines, causing electricity to be generated.

New **cables** for electricity and telecommunication as well as **pipelines** D for gas, are clustered as much as possible into 'corridors'. This way, they hinder the other activities such as sand and gravel exploitation, seabed fishing and shipping as little as possible.

Pipelines are buried between 70 centimetres and 2 metres under the seabed, and covered by a protective layer of gravel.

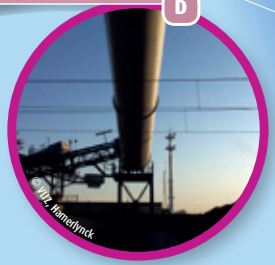
There are no oil pipelines in the Belgian North Sea.

In 2014, there are about 150 operating windmills at sea which provide electricity for almost 600.000 families.

'PLUG AT SEA'
B

AREA FOR RENEWABLE ENERGY (WIND FARMS)
A

CORRIDORS FOR CABLES AND PIPELINES
D



ENERGY ATOLLS
C

Zeebrugge

Ostend

Nieuwpoort

Belgium

The Netherlands

France

SHIPPING, PORTS AND DREDGING

Our North Sea is one of the busiest seas in the world. It constitutes an important junction since it gives access to all Belgian sea ports and it is located on the passageway for all ships between the northern and southern part of the North Sea. On a daily basis an average of 400 ships of all types, such as commercial ships, fishing boats, patrol boats, passenger ships and pleasure boats pass by.

In shipping, the principle of free and 'innocent' passage is applied. This was thus stipulated in the international 'Sea Constitution', the United Nations Convention on the Law of the Sea. Specific **shipping routes** A have been designated so as to indicate that in these areas, shipping has priority over other activities, but the ships are not obliged to follow these routes.

In the future, the **ports** B of **Zeebrugge** and **Ostend** may be extended on the seaward side. A zone surrounding these ports has been reserved for that purpose.

Dredging C – the removal of sand and silt – is necessary so as to allow the ships to pass through the waterways (especially close to the coast), and to allow the construction and maintenance of ports. The dredged material is later dumped on **sites specifically designated for disposing dredged material** D. There is also an area reserved as an **alternative disposal site** E, which has the least impact on the fishing grounds.

In the area for renewable energy F shipping and dredging are not allowed around the existing wind farms. This injunction forbidding the use of a waterway will be extended as soon as the exploitation of a new wind farm starts.

The **'plug at sea'** G can also be used as a tug station (this, however, is not required for constructing the plug).

The port of Ostend (on the left) and the port of Zeebrugge (on the right)

SHIPPING ROUTES A

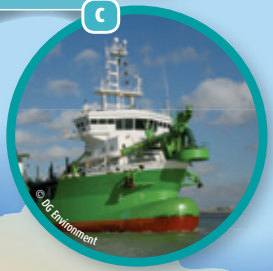
'PLUG AT SEA' G

ANCHORAGE PLACES

AREA FOR RENEWABLE ENERGY (WIND FARMS) F

DREDGED MATERIAL DISPOSAL SITES D

DREDGING C



PORT B
Zeebrugge

PORT B
Ostend

ALTERNATIVE DISPOSAL SITE FOR DREDGED MATERIAL E

Nieuwpoort

The Netherlands

Belgium

France

FISHERIES AND AQUACULTURE

Our North Sea serves as breeding ground for a great many different fish species: juvenile dab, plaice, whiting and sole find here protection and food. As adult animals, they belong to the main commercial fish species. In order to conserve and strengthen this ecological function of our North Sea, it is important to develop sustainable forms of fishing. Therefore, the most valuable areas are reserved for fishing only when using techniques which do not disturb or touch the seabed, or only slightly.

In the **four sensitive zones** A **of the existing special area for conservation (SAC) 'The Flemish Banks'** B (see 'Nature conservation', p. 6), professional fishing is only allowed in the following fashion:

- In zone 1, fishing is only allowed using adapted gear, such as nets which disturb the sea bottom less, and with a kind of a sieve separating large and small fish.
- Zone 2 and 4 are reserved for testing new techniques which reduce the impact on the bottom of the sea, thus making them more environmentally friendly.
- Zone 3 is the most stringent zone: here is a ban on all techniques that disrupt the seabed.

In these four zones, there are no restrictions for techniques which do not touch the sea bottom, such as line fishing or trammel net fishing.

Sport fishing (e.g. line fishing) is allowed in the **entire** special area for conservation 'The Flemish Banks', provided the bottom of the sea remains undisturbed. However, by way of exception, the following techniques touching the sea bottom are allowed as well:

- Fishing on foot or on horseback (e.g. **horseback shrimp fishing** C).
- Recreational shrimp fishing (by boat): hobby shrimp fishers who have been active for at least three years, are allowed to go fishing ten times a year. The permit is valid for a maximum of six years. Outside 'The Flemish Banks', there is no restriction.

There is a ban on fishing around the existing wind farms due to the injunction forbidding the use of a waterway in the area for **renewable energy** D.

Sustainable aquaculture E is allowed on two wind farms. It may become an important new activity for the fish production in Belgium (under conditions, see 'Nature conservation', p. 6).

For the **coastal fisheries**, the area where only **light boats** (under 70 tons) are allowed, has been extended from 3 to 4.5 sea miles F.

FISHING EVERYWHERE EXCEPT AROUND THE WINDMILLS

AREA FOR RENEWABLE ENERGY (WIND FARMS) D

SUSTAINABLE AQUACULTURE E

PROTECTED SANDBANKS: 'SAC FLEMISH BANKS' B

LIMIT AT 4.5 SEA MILES F

4 ZONES FOR FISHING WITH ADAPTED TECHNIQUES A

HORSEBACK SHRIMP FISHING ALONG THE ENTIRE COAST C

1
2
3
4

Zeebrugge
Ostend
Nieuwpoort
Belgium
The Netherlands
France

SAND AND GRAVEL EXPLOITATION

In our North Sea each year two to three million m³ of sand is exploited. It is mainly used for the building industry, as a basic raw material for concrete. But sand is also needed to protect the coast against floods.

There are four **exploitation sites** A. As soon as an area has been exploited up to 5 metres deep, it is closed up so as to let it recover again. Also the **ecologically valuable gullies** B are no longer accessible for sand exploitation.

For exploiting sand and gravel, a **permit** is required, as well as a prior environmental report on the impact which the exploitation has on the environment. Sand exploiters pay a compensation per m³ of sand that is exploited. These compensations are entirely used for examining the consequences of the exploitation of sand and gravel on the seabed and the environment.

COASTAL PROTECTION

In order to protect our coast against storms and flooding, beaches need to be raised with enormous volumes of sand (average 550,000 m3 per year). This means that sufficient sand and gravel exploitation sites are necessary.

In the vicinity of De Panne, a specific location is provided to perform coastal protection **experiments** C e.g. so as to investigate the effect of raising sand banks on the safety of the coast.

The last heavy storm was the '250-yearly' storm of 1953, which flooded the centre of Ostend.

SAND AND GRAVEL EXPLOITATION ONLY IN EXPLOITATION AREAS

EXPLOITATION AREAS A

ECOLOGICALLY VALUABLE GULLIES B

TEST ZONE COASTAL PROTECTION C

The Netherlands

Zeebrugge

Ostend

Nieuwpoort

COASTAL PROTECTION

Belgium

France

MILITARY USE

Our North Sea is sometimes used for military activities and exercises. This mostly concerns shooting exercises seawards from the mainland, and exercises for defusing mines. The plan designates several zones for these activities.

During the **military exercises** no shipping, fishing, dredging or exploitation is allowed in these **areas** A. The other users of the sea have to be informed in due time, which is done by a 'notification to sailors'. Shooting exercises are forbidden during weekends, bank holidays and school holidays.

Very rarely, a real war mine is found by shippers, fishermen or dredgers.

Off Heist, there is a small area where war ammunition was dumped after World War One. Indeed, in 1919, the remaining ammunition from the war had to be gotten rid of in a fast and safe way. In several countries this happened at sea. Here too, such a storage site was created, called the **Paardenmarkt** B so called after the sandbank where it is located. Fortunately, this site seems to protect the ammunition effectively, as it is covered by a thick layer of silty sand, providing a natural encasement, making the storage secure. The evolution of this storage area is monitored meticulously. Of course, the existing ban on activities touching the seabed (such as fishing, sand and gravel exploitation) is maintained

AREAS FOR MILITARY EXERCISES A

AREA FOR DEFUSING MINES A

PAARDENMARKT B

The Netherlands

Zeebrugge

Ostend

Nieuwpoort

Belgium

France

TOURISM AND RECREATION

Swimming, kite and wind surfing, sailing, water skiing, walking, sunbathing etc., the sea, the beach, the dyke and the dunes offer many recreational possibilities. Tourism is one of the most important activities in the coastal region.

Certain activities are not allowed in order to reduce the impact on the North Sea environment. For example, recreational trammel net fishing at sea is forbidden, as porpoises are too easily trapped in trammel nets. Recreational fishing is only allowed in the special area for conservation 'The Flemish Banks', provided the seabed is left undisturbed. By way of exception, recreational shrimp fishing is allowed only under particular conditions. Other exceptions are fishing on foot or on horseback (see 'Fisheries and aquaculture', p. 12).

Kite surfers are pulled across the water by a kite

CULTURAL HERITAGE (A.O. WRECKS)

In our North Sea there are 215 registered **wrecked ships** A laying on the sea-floor, besides a lot of unknown wrecks ... Wrecks have a great cultural value and are very popular with wreck divers and sport fishers. Besides, they are of great ecological value as they are effective refuges and nurseries for various fauna and flora species. Wrecks which form obstacles for ships have to be salvaged or moved. There is a new law, making it possible to protect wrecks as underwater cultural heritage.

SCIENTIFIC RESEARCH, MEASURING POLES, RADARS AND MASTS

Buoys, **measuring poles** B, radars and masts make shipping safe. Radars are to prevent ships from colliding with one another and from sailing into fixed installations. The masts serve as weather stations, among other things.

Our small piece of the North Sea belongs to the most studied sea areas in the world. Scientific research is amongst other things important for monitoring the state of the environment, as well as for its conservation and restoration. This way we may further unveil the mysteries of our North Sea.

Fisheries research: scientists at work on the research vessel the Belgica

WRECK
A

MEASURING POLE
B

The Netherlands

Zeebrugge

Ostend

Nieuwpoort

Belgium

France

Source wreck locations and more information: www.vlaamsehydrografie.be/wrakkendatabank.htm

WANT TO KNOW MORE?

- the complete **Marine Spatial Plan**: consists of a Royal Decree and 4 annexes with all details (summary available in English) on the website of the **Federal Public Service Health, Food Chain Safety, and Environment**:
  www.environment.belgium.be > marine environment > marine spatial planning

- brochure **'Seal Action Plan'** (only available in Dutch and in French):
  www.samenaanhetwerk.be/actieplanzeehond

- brochures **'A marine strategy for the North Sea'** and **'Living Water! Biodiversity and Natura 2000 in the Belgian part of the North Sea'** (only available in Dutch and in French):
  info@environment.belgium.be

- the website of the **Royal Belgian Institute of Natural Sciences – OD Nature**:
  www.mumm.ac.be

- the website of the **Flanders Marine Institute** (with amongst other things, the Compendium for Coast and Sea):
  www.vliz.be

- the website of the **Institute for Agricultural and Fisheries Research**:
  www.ilvo.vlaanderen.be

- the website of the **Coast Guard** (see 'Coast Guard partners' for authorities competent at sea):
  www.coastguard.be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COLOPHON

This brochure was made by the Belgian Federal Public Service Health, Food Chain Safety and Environment.

Date
March 2014

Editors
Mieke Van de Velde, Marijn Rabaut, Charlotte Herman and Steven Vandenborre

With thanks to
Sylvia Jorissen and Joëlle Smeets

Gaphic design
Cunéiforme Ltd.

Original maps
Grontmij and Ghent University, commissioned by the Federal Public Service Health, Food Chain Safety and Environment

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Responsible publisher
Dr. Dirk Cuypers, Executive Committee Chairman of the Federal Public Service Health, Food Chain Safety and Environment
Place Victor Horta 40, box 10
1060 Brussels

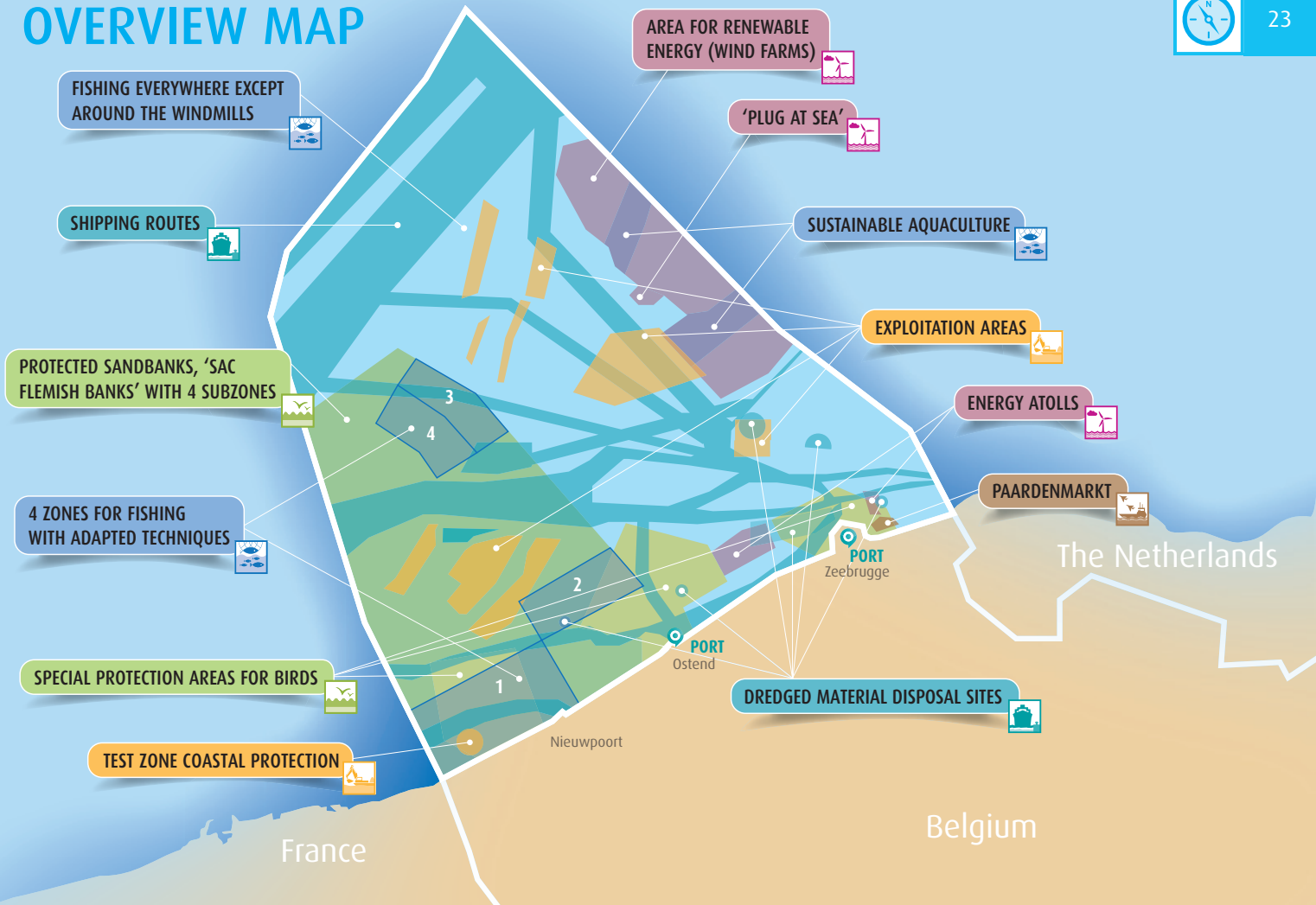
Legal depot
D/2014/2196/16

The digital version of this brochure is available on:
www.environment.belgium.be > marine environment > marine spatial planning

Cette brochure existe également en français.
Deze brochure bestaat ook in het Nederlands.

Printed on 100% recycled paper using vegetable ink.

OVERVIEW MAP



federal public service
HEALTH, FOOD CHAIN SAFETY
AND ENVIRONMENT