

Something is moving at sea

The marine spatial plan for 2020-2026



CONTENTS

	A sea full of activity	3
	A marine spatial plan for the Belgian part of the North Sea	4
	A sea full of life	6
	A sea full of energy	8
	A sea full of ships	10
	A sea full of nutrition	12
	The sea as a force of nature	14
	The sea as building material	14
	The sea as a training ground	16
	A sea full of heritage	18
	A sea full of knowledge	18
	A sea full of possibilities	20
	A sea full of joy	20
	A sea full of questions!	22
	Want to know more?	24
	Colophon	26
	Overview map	27



A sea full of activity

The Belgian part of the North Sea is one of the most heavily used marine areas in the world. In an area that covers no more than 0.5% of the entire North Sea (3,454 km² or the size of an average Belgian province), there are a lot of activities every day: from shipping to green energy, from fishery to sand extraction. If all these activities are to take place safely, clear agreements between the various users of the North Sea are needed. To this end, the federal authorities draw up a marine spatial plan for the Belgian part of the North Sea. This plan is reviewed every six years and thus guarantees the necessary balance between legal certainty and flexibility. This brochure presents the marine spatial plan, for the period 2020 to 2026.



A MARINE SPATIAL PLAN FOR THE BELGIAN PART OF THE NORTH SEA

WHO OWNS THE NORTH SEA?

The North Sea belongs to everyone. However, in order to protect it and its inhabitants, it may be necessary to impose certain rules.

For example, the Belgian federal authorities may grant permits to companies for certain activities in the Belgian part of the North Sea (which we will call 'our North Sea' in this brochure). Just think of the construction and operation of wind farms or the extraction of sand. The authorities also take measures to protect the marine environment, such as the designation of marine protected areas.

Did you know

Belgium was one of the first countries in the world to draw up a marine spatial plan?

FROM AQUACULTURE TO SAND EXTRACTION

Our part of the North Sea is small but very busy. The activities are numerous and varied:

- nature conservation
- energy production
- shipping
- dredging activities
- fishing

- aquaculture
- sand extraction
- coastal protection
- military activities
- tourism
- protection of cultural heritage
- research
- commercial and industrial activities

IN TIME AND SPACE

The numerous activities in our North Sea are not only diverse in nature, they also vary in the where and when. For example, windmills tower above the sea surface, herring fishermen's nets float in the water and sand is extracted from the seabed. Some activities can take place simultaneously, others are mutually exclusive. It needs little explanation, for example, that pleasure boating is on the back burner during military shooting exercises. Seasons also play a role, not only in coastal tourism, but also e.g. for fishing.

IN BALANCE WITH EACH OTHER AND WITH NATURE

It is important to ensure that all activities are properly coordinated and that the sea and all its biodiversity are optimally protected. This is why the authorities

have drawn up a marine spatial plan for our North Sea. The plan maps out our North Sea and its users and tries to reconcile their spatial impact with each other and with nature.

A PLAN EVERY SIX YEARS

The plan runs over a period of six years (from 2020 to 2026): in this way, the authorities commit themselves to evaluate the plan at regular intervals and, if necessary, to adjust it. This enables the various users to know what can be done, and where and when. This will provide greater certainty for everyone who carries out or aspires to carry out an activity at sea.

ONE MAP PER ACTIVITY

This brochure explains the most important activities in our North Sea by means of specific sectoral maps. At the back, an overview map shows the total picture (p. 27). Also test your knowledge of the marine spatial plan with a short quiz (p. 22).

The complete plan can be found on www.marinespatialplan.be.



Great Britain

The Netherlands

Belgium

France

Reaching up to
83 km
out to sea
(45 nautical miles)

The size of
an average Belgian
province:
3.454 km²
(1.334 miles sq)

Shallow:
average depth
20 m (65.5 ft)
and maximum depth
45 m (147.6 ft)

The Belgian
part of
the North Sea

Approximately
0,5%
of the total North Sea
surface area

Coastal length of
approximately
65 km
(40.3 miles)

Zeebrugge

Ostend

Nieuwpoort



A SEA FULL OF LIFE

More than 2,000 species of animals and plants: this is the wealth of life on and in our North Sea. Approximately 140 species of fish inhabit our North Sea and more than 60 species of seabirds find their place in our coastal waters. Marine mammals, such as the porpoise and the seal, are also becoming increasingly common.

This biodiversity is the result of the many shallow sandbanks in our North Sea. The **gravel beds** (where oyster banks used to be present) and **banks of sand mason worms** (the worms that also sporadically ap-

The seahorse is also found in our North Sea



© Mijiel Declercq

pear on the beach) also form real 'hotspots'. They are unique havens for critically endangered species such as the dead man's finger and the mermaid's glove.

In our North Sea, some areas were already designated as marine protected areas:

- the '**Vlaamse Banken**' ('**Flemish Banks**') in the west, designated for the protection of
 - shallow sandbanks, gravel beds and banks of sand mason worms
 - the porpoise, the common and the grey seal
- **Three bird protection areas** along the coast

In the marine spatial plan 2020-2026, another marine protected area will be added at the Dutch border, the '**Vlakte van de Raan**'. In addition, the nature reserve '**Baai van Heist**' will be included in the bird protection area near Zeebrugge. In this way, improved management of the site can be achieved by optimising monitoring, scientific research and enforcement.

The aim of these areas is not to exclude all activities, but to protect marine life. To this end, activities that could be harmful to present species and habitats have to undergo a so-called appropriate

Did you know

Belgium, with its 37% marine protected area, is far above the European average of 8.9%?

assessment. Only if this assessment shows that there is no negative impact on the protected area, is the activity allowed.

In addition, **three search zones** have been designated, two of which are within the 'Vlaamse Banken'. Within these zones, restrictions can be imposed on activities that affect the seabed in order to ensure nature restoration and conservation.

Would you like to know more about the inhabitants of our North Sea? Consult the brochure 'The sea is teeming with life ... How to protect and restore the rich biodiversity of our North Sea?' (p. 24).



MARINE PROTECTED AREA
'VLAAMSE BANKEN'

GRAVEL BEDS



MARINE PROTECTED AREA
'VLAKE VAN DE RAAN'

3 SEARCH ZONES
FOR THE PROTECTION
OF THE SEABED

BANKS OF SAND
MASON WORMS

BIRD PROTECTION
AREAS



NATURE RESERVE
'BAAI VAN HEIST'

The Netherlands

Belgium

France

Zeebrugge

Ostend

Nieuwpoort





A SEA FULL OF ENERGY

Climate change constitutes one of the biggest challenges of the 21st century. Our North Sea is also making its contribution; not only by absorbing greenhouse gasses, but it also offers many opportunities to produce sustainable, green energy. The offshore wind turbines already supply energy. Other energy sources such as wave and tidal energy are being researched.

Did you know

Belgium has the largest percentage of offshore renewable space in the world?

The 2014-2020 marine spatial plan designated an **eastern zone for renewable energy**. These wind farms provide

energy for half of all Belgian households. In addition to this zone, the marine spatial plan 2020-2026 identifies **three new zones**. These are located at least

The modular offshore grid, installed by the system operator Elia

32 kilometres from the coast, 10 kilometres further out to sea than the already developed offshore wind-farms. These new zones cover a total area of 285 km² and were named the Princess Elisabeth Zone. All in all, 4 gigawatts of renewable energy will be produced on our North Sea.

The **modular offshore grid** is better known as the socket at sea. Three wind farms are connected to this socket in order to reduce the number of underwater cables running to the coast. This is not only good for the consumer, but also good for the environment as it reduces soil disturbance.

New **pipelines** for gas, electricity and telecommunications **cables** are bundled, to the extent possible, in the established **corridors**. By providing such corridors:

- disruption to other activities by pipelines and cables are minimised
- the impact on marine environment is minimised by not having to carry out excavation and burying works at a multitude of locations
- and legal certainty for the cable operators is achieved.

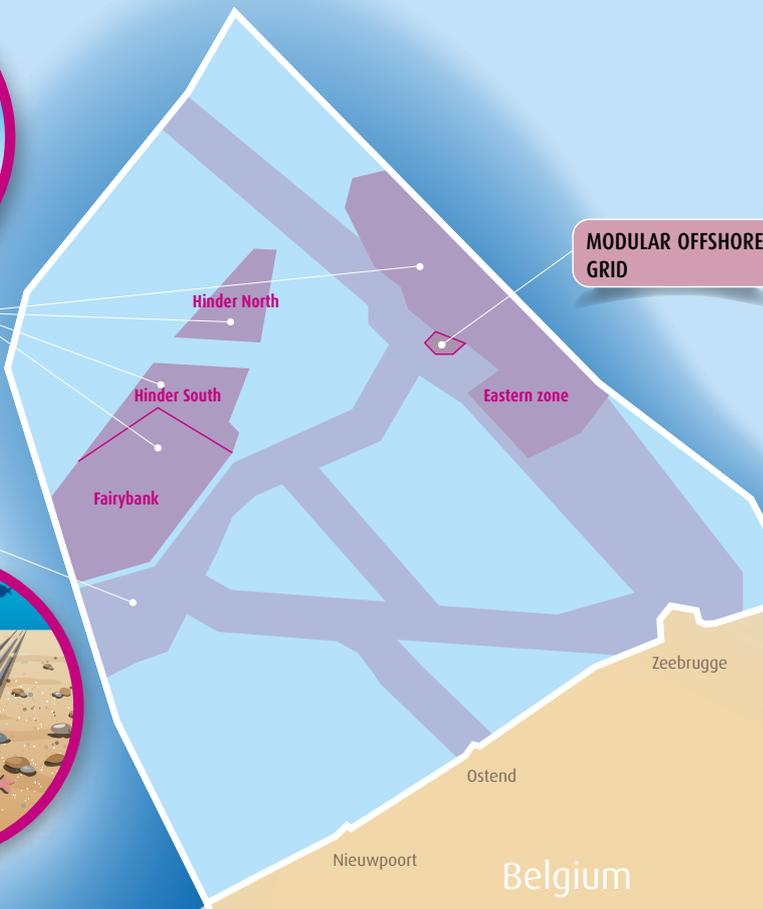




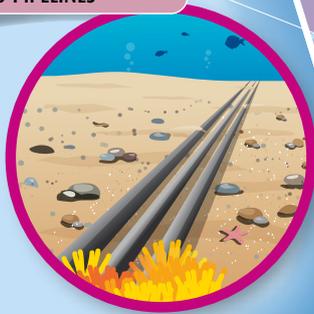
ZONES FOR RENEWABLE ENERGY



MODULAR OFFSHORE GRID



CORRIDORS FOR CABLES AND PIPELINES



France

Belgium

The Netherlands

Zeebrugge

Ostend

Nieuwpoort



A SEA FULL OF SHIPS

Our North Sea is one of the busiest seas in the world and is the gateway to all Belgian seaports. Every year there are more than 300,000 shipping movements, ranging from commercial ships, fishing boats, patrol ships and passenger ships to pleasure boats.

The freedom of navigation is one of the oldest principles in the world. This was laid down in the international ‘constitution’ of the sea, the United Nations Convention on the Law of the Sea. In the plan, however, specific **shipping routes** are indicated to guarantee safety. The water is deep enough to allow large ships to pass through without problems to i.a. the ports of Antwerp and Zeebrugge.

There are restrictions for shipping in and around the zones for **renewable energy**. These guarantee the safety for both ships and windmills. Research into the possibilities for multiple use of the wind farms is being conducted. For example, aquaculture and passive fisheries will be allowed under certain conditions.

To allow for the possible expansion of the ports of **Zeebrugge** and **Ostend**, a zone around these ports is reserved.

Dredging – the removal of sand and sludge – is necessary for shipping to sail smoothly in the fairways (especially

close to the coast) and to construct and maintain ports. The dredging spoil is subsequently dumped at the specific **dredging dumps** designated for this purpose. The plan also provides for alternative locations for the dredging spoil if the originally designated dredging dumps can no longer be used for whatever reason.



The port of Zeebrugge

A ‘walk-to-work’ ship with accommodation for the maintenance of wind farms



© Roland Moreau

Did you know
a new Belgian shipping code was adopted in 2019 to replace the old legislation of the 19th century?



SHIPPING ROUTES



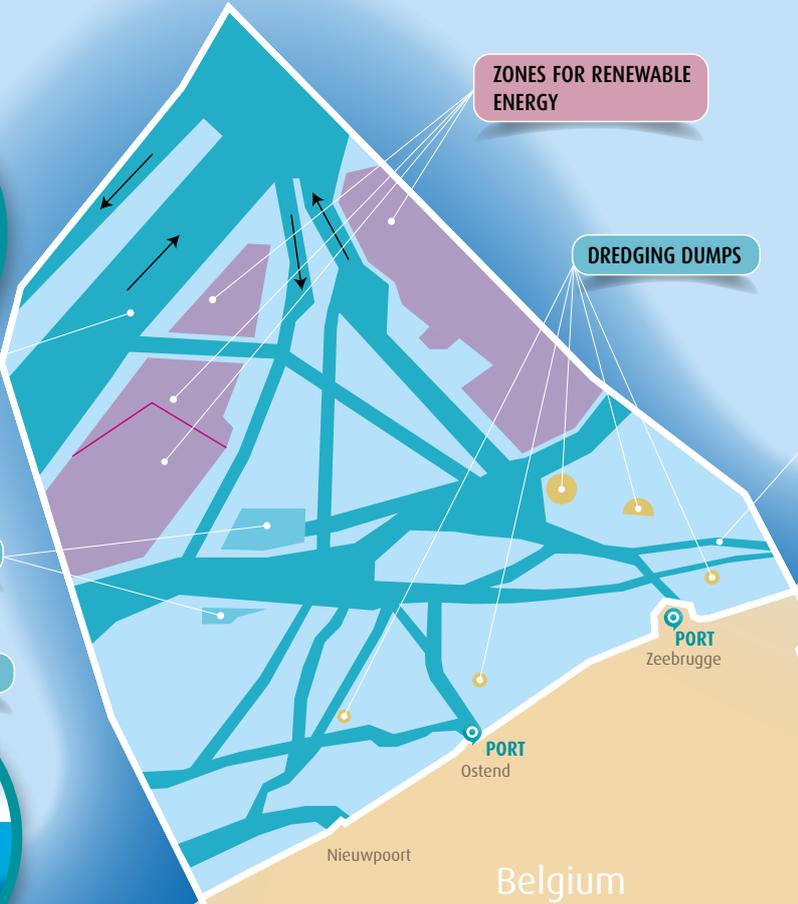
DREDGING

ZONES FOR RENEWABLE ENERGY

DREDGING DUMPS

ANCHORING AREAS

DREDGING DUMPING



France

Belgium

The Netherlands



A SEA FULL OF NUTRITION

Our North Sea serves as a breeding ground for many different fish species: i.a. young dab, plaice, whiting and sole find protection and food. As adults, they are among the most important commercial fish species.

To maintain and strengthen this ecological function of our North Sea, it is important to develop sustainable forms of fishing. That is why the most valuable zones within the three search zones in and outside the marine protected area '**Vlaamse Banken**' (see 'A sea full of life' p. 6) will be protected: only fishing techniques that do not or only to a limited extent affect the seabed will be allowed there.

Fishing with the beam trawl: a heavy metal crossbeam is towed over the seabed with nets

In the marine protected area the 'Vlaamse Banken', recreational fishing is permitted everywhere as long as they do not impact the seabed (for example fishing by rod).

As an exception, the following techniques that do affect the soil are allowed:

- Fishing on foot or on horseback (for example, **shrimp fishing on horseback**)

- Recreational shrimp fishing (by boat): hobby shrimp fishermen who have been active for at least three years are allowed to sail out ten times a year. The admission is valid for a maximum of six years.

There are no fishing restrictions outside the 'Vlaamse Banken'. Only in and around the zone of the existing wind farms, fishing cannot take place due to the sailing ban. **Sustainable aquaculture** may be developed in the renewable energy zones. **Passive fishing** (fishing with static gear, such as fish cages) will also be allowed in the new renewable energy zones, subject to the necessary conditions.

Aquaculture and passive fishing can become important new activities for fish production and fishing in Belgium (under conditions).

Did you know

aquaculture is the fastest growing food-producing activity in the world?





FISHING ALLOWED EVERYWHERE WITH EXCEPTION OF THE OFFSHORE WIND FARMS

SUSTAINABLE AQUACULTURE AND PASSIVE FISHING



SUSTAINABLE AQUACULTURE



3 SEARCH ZONES FOR THE PROTECTION OF THE SEABED

MARINE PROTECTED AREA 'VLAAMSE BANKEN'

SHRIMP FISHING ON HORSEBACK



France

Belgium

The Netherlands

Zeebrugge

Ostend

Nieuwpoort



THE SEA AS A FORCE OF NATURE

To protect our coast from storms and floods, beaches are regularly raised with huge volumes of sand (an average of 550.000 m³ per year). The sand cliffs that appear on the beach after the passage of a storm (see photo) clearly show the necessity. Sufficient areas for sand extraction are therefore needed (see below).

A specific location near De Panne is designated to carry out **coastal defence** experiments. For example, the effect of raising sandbanks on coastal safety can be investigated and experiments can be conducted with the use of tube worms to prevent erosion.



Sand cliffs in Bredene after a storm in December 2017

THE SEA AS BUILDING MATERIAL

In our North Sea, two to three million m³ of sand is extracted every year. This is mainly used in the construction industry, as a basic component for concrete. A lot of sand is also needed to protect the beach and the coast against flooding.

Since the quality and grain size of the sand are not the same everywhere, there are **extraction areas** in different places in the North Sea. However, the **ecologically valuable trenches** are not accessible for sand extraction.

To be able to extract sand, an environmental impact report is required. Based on this report, a permit may or may not be granted for sand extraction. The sand companies pay a fee per m³ of sand that is mined.

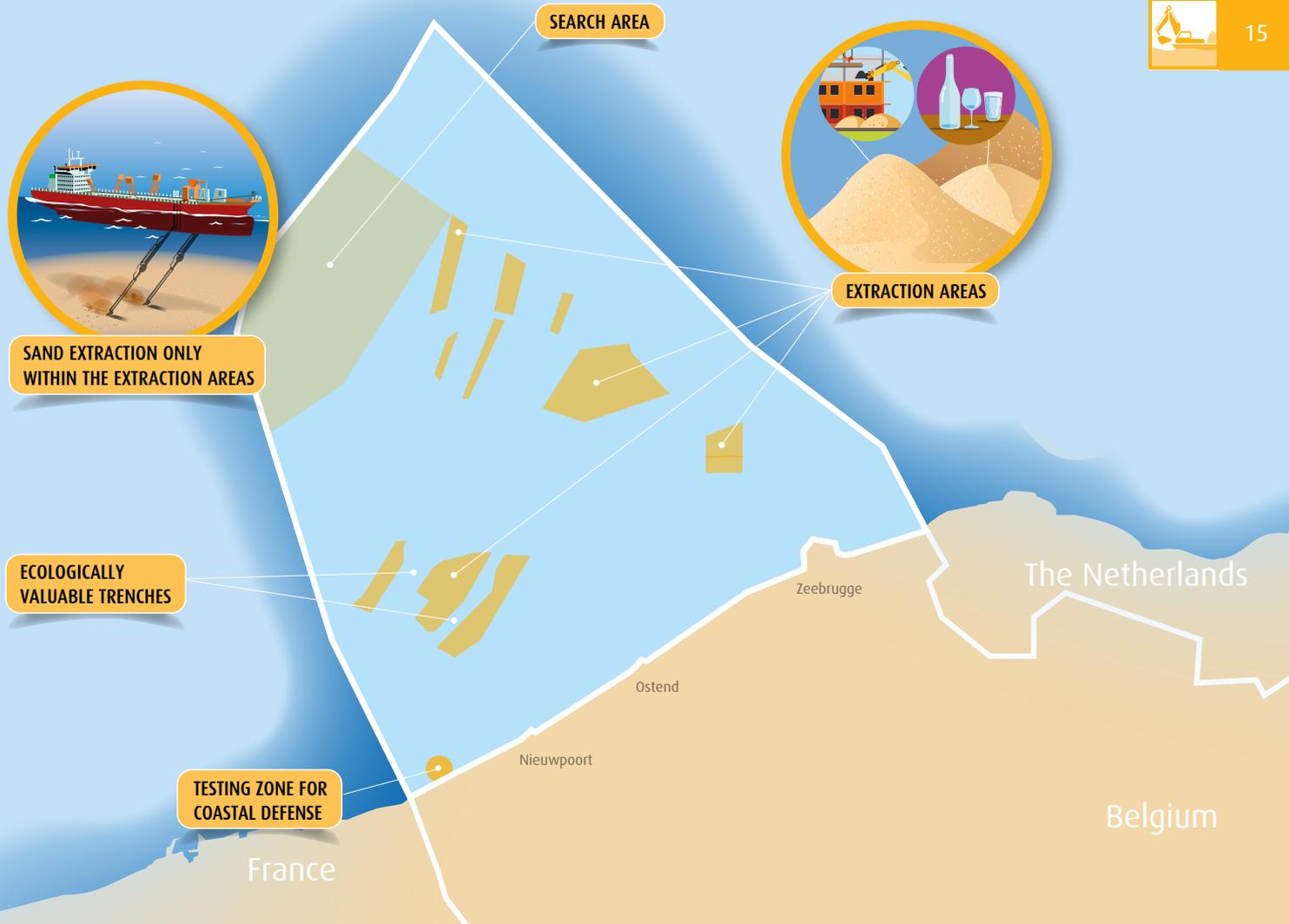
These fees are used, among other things, for research into the effects of the extraction of sand on the seabed and on the environment.

A trailing suction hopper dredger sucks up sand and pumps it into the cargo



Did you know

sand is the most used natural resource after fresh water?



SEARCH AREA

EXTRACTION AREAS

SAND EXTRACTION ONLY WITHIN THE EXTRACTION AREAS

ECOLOGICALLY VALUABLE TRENCHES

TESTING ZONE FOR COASTAL DEFENSE

France

Zeebrugge

The Netherlands

Ostend

Nieuwpoort

Belgium



THE SEA AS A TRAINING GROUND

Our North Sea is sometimes used for military activities and exercises. It mainly concerns shooting exercises from land towards the sea and exercises to defuse mines. The plan provides specific areas for these activities.

During **military exercises**, sailing, fishing, dredging and mining are not permitted in these areas. Other users of the marine areas have to be informed in a timely manner. This is done through a “Notice to Seafarers”, a biweekly publication with recent nautical information and corrections and additions to the nautical maps.

Did you know

Belgium houses and leads the *NATO Center of Excellence in Naval Mine Warfare* in Ostend?

Shooting exercises from land are not allowed during weekends, public holidays or school holidays, as not to disturb the touristic season.

A **munition destruction area** is also designated. Both world wars left their mark in our North Sea: unexploded mines can still be found in various places. These can for example be discovered during the preliminary investigation for the construction of wind farms and cannot always be landed and dismantled safely on shore. By providing a specific place where these mines can be detonated, one avoids disturbing the environment at different locations.

After the First World War, several countries were left with heaps of war ammunition, and no clue how to safely dispose of them. At the time, their best idea was storing it at sea. Our country has also created a storage facility for this at Knokke-Heist. It was named ‘**Paardenmarkt**’ (‘the Horse Market’), after the sandbank on which it is located. The condition and evolution of this location is closely monitored. All activities that affect the soil (such as fishing and sand extraction) are of course strictly prohibited, unless they are directly related to the management of the site.

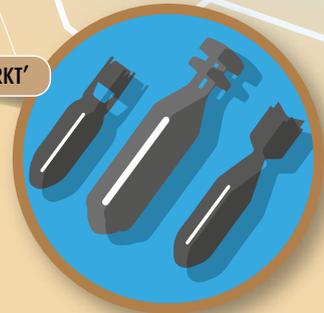




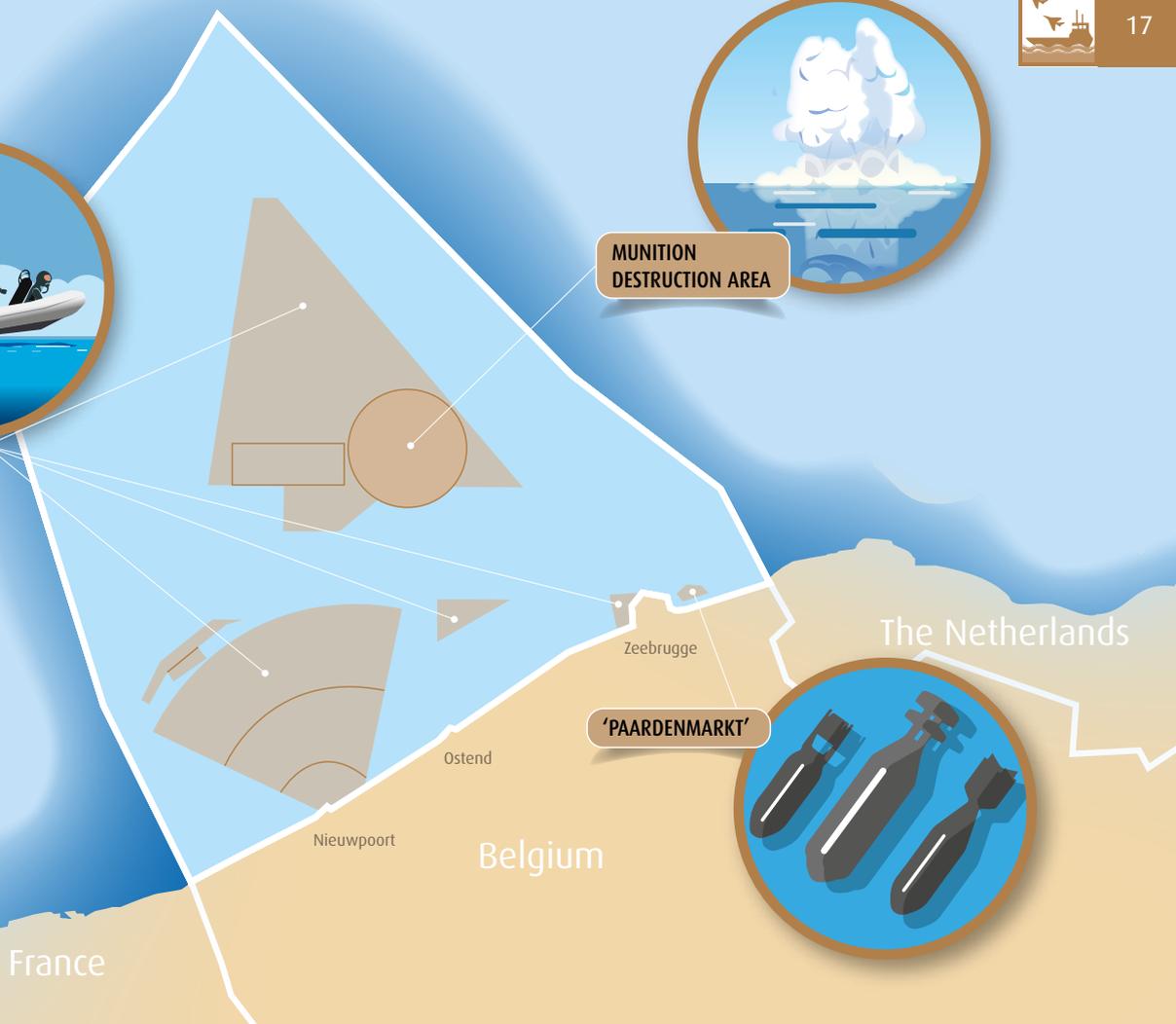
MUNITION DESTRUCTION AREA



AREAS FOR MILITARY EXERCISES



'PAARDENMARKT'





A SEA FULL OF HERITAGE

There are more than 300 **shipwrecks** in our North Sea. Wrecks have great cultural value and are very popular with wreck divers and anglers. Moreover, they have great ecological value as they serve as important shelters and nurseries for different types of fauna. There is a law that makes it possible to protect wrecks as a underwater cultural heritage. Nine wrecks have been recognized so far (February 2020), indicated in yellow on the map.

Did you know
when cleaning up the light ship the 'West-Hinder' in 2019, more than 4.5 tons of waste was collected?



© Onnesend ediged - Dieter Deercos

The fin of a Great War UB III type submarine located on the Fairy Bank

A SEA FULL OF KNOWLEDGE

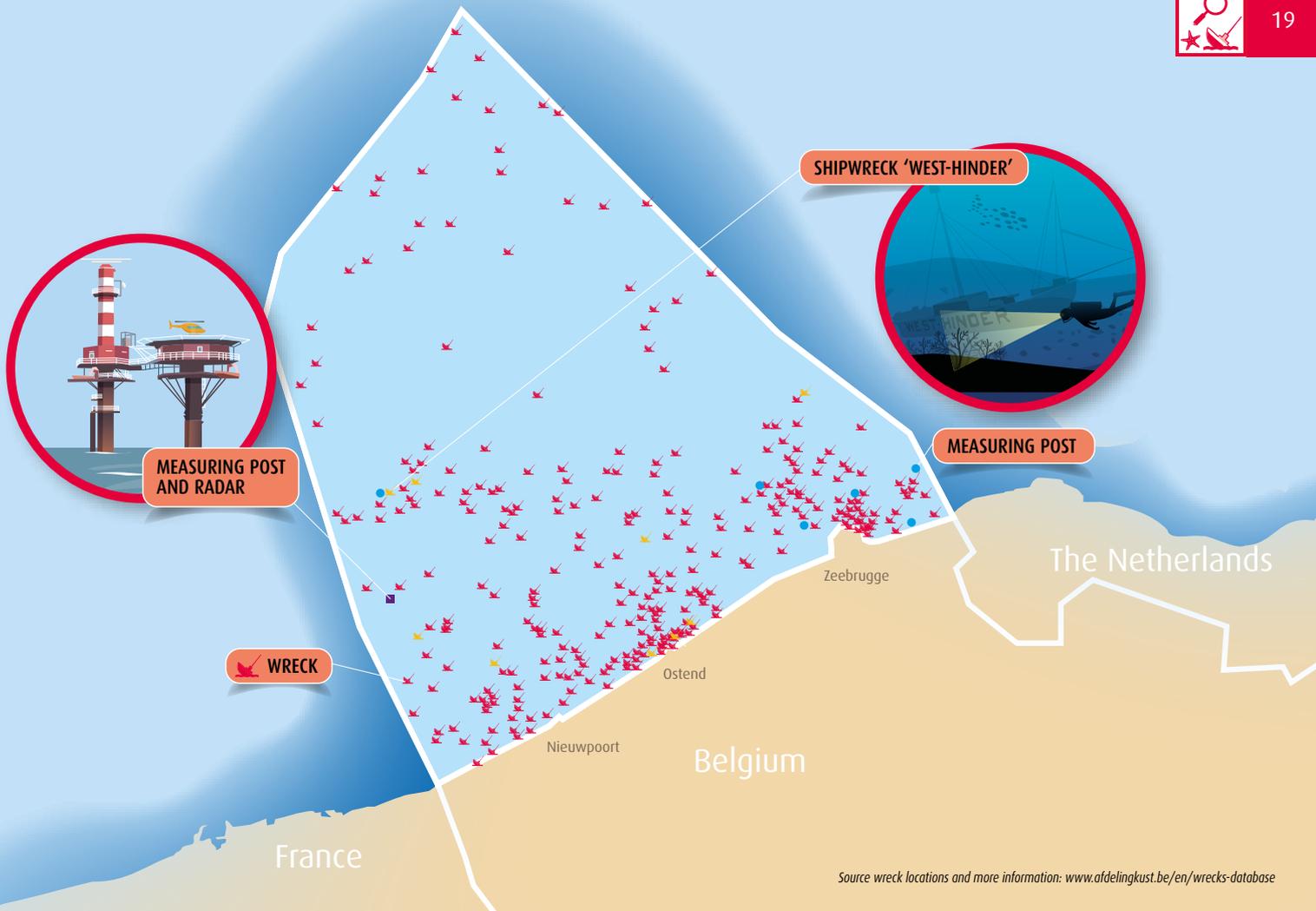
Buoys, **measuring posts**, **radars** and masts ensure safe shipping. The radar coverage makes it possible to remotely monitor ship movements in order to detect risks as soon as possible. The masts serve as weather stations, among other things.

Our small part of the North Sea is one of the most studied sea areas in the world. Scientific research is important for, among other things, monitoring the state of the environment and for the protection and restoration, but also to correctly assess the impact of certain activities. Further research remains necessary to meet the challenges of tomorrow.

Scientists prepare their rock drill on the research vessel the Belgica to take soil samples



© Rijkswater



MEASURING POST AND RADAR

SHIPWRECK 'WEST-HINDER'

MEASURING POST

WRECK

France

Belgium

The Netherlands

Zeebrugge

Ostend

Nieuwpoort



A SEA FULL OF POSSIBILITIES

The blue economy is one of the fastest growing segments of the economy: its total turnover in Belgium grew by 59% between 2009 and 2016. The blue economy encompasses many sectors that have already been addressed in this brochure, such as fishing, maritime transport, wind energy and sand extraction. In addition, it also includes many other activities that may be less obvious, such as deep sea mining and seaweed farming.

Did you know
experiments are ongoing i.a. off the coast of Scotland with underwater data centres to save on cooling costs?

Many Belgian companies that are active in the maritime sector are world class, just think of our dredging companies. To further enable innovations, the plan provides **five zones for commercial and industrial activities** in our North Sea.

Depending on the activity, some places are better suited than others (among other things due to water depth, flow speed and distance from the coast). It has been decided not to have a limited definition of the activities that can be developed within these zones. The blue economy is, after all, a rapidly developing

sector. For example, the first Belgian wind turbines at sea produce 3 megawatts, while the last ones built in 2019 produce nearly 9.5 megawatts each.

When a company or consortium wants to make use of one of these zones, a call for competition is launched to ensure that the scarce marine space is used optimally. Applications are then assessed for, among other things, impact on the sea view and nature, and on their societal added value.

A SEA FULL OF JOY

Swimming, kite and wind surfing, sailing, water skiing, fishing, walking, sunbathing ...: the sea, the beach, the dike and the dunes offer numerous relaxation options. After all, tourism is one of the most important activities in the coastal region.

Certain activities are not permitted to limit the impact on the marine environment. Recreational shredding net fishing at sea is prohibited for example, porpoises easily get caught and die in these nets.

Recreational fishing in the marine protected area the 'Vlaamse Banken' is only permitted if they do not impact the seabed. As an exception, recreational shrimp

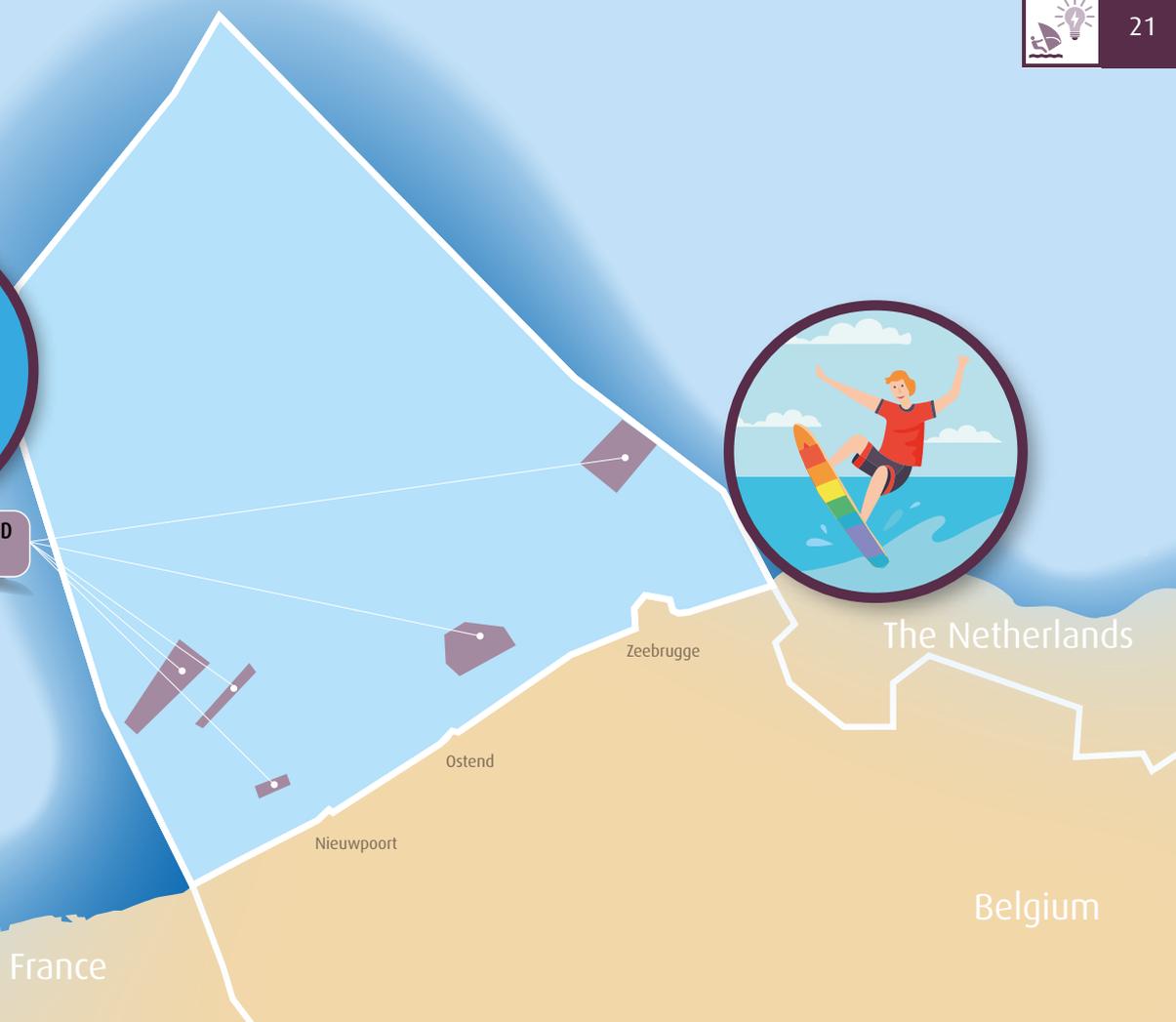
fishing is permitted under certain conditions. Other exceptions are fishing on foot and on horseback (see 'A sea full of nutrition' p. 12).

Did you know
since 2013, shrimp fishing on horseback at Oostduinkerke has been recognized as a UNESCO 'intangible cultural heritage of humanity'?





ZONES FOR COMMERCIAL AND INDUSTRIAL ACTIVITIES



France

Nieuwpoort

Ostend

Zeebrugge

The Netherlands

Belgium

A SEA FULL OF QUESTIONS!

- 1** What is approximately the length of the Belgian coast?
- 75 km
 - 65 km
 - 55 km
 - 45 km

- 2** Which percentage of our North Sea is marine protected area?
- 5%
 - 23%
 - 37%
 - 98%

- 3** What is not a sustainable form of energy production?
- Wave energy
 - Wind energy
 - Tidal energy
 - Coal energy

- 4** Approximately how many ships pass through our North Sea in a year?
- 300.000
 - 50.000
 - 2.000
 - Infinite amount

- 5** Which fish does not live in our North Sea?
- Cod
 - Whiting
 - Pangasius
 - Sole

- 6** How many cubic meters of sand gets extracted on a yearly base from our North Sea?
- 2 to 3 million
 - 200.000
 - 1 billion
 - 900.000

- 7** What is the name of the munition storage area which dates back to the Great War?
- The Animal Market
 - The Horse Market
 - The Fish Market
 - The Free Market

- 8** Which kind of ship was the West-Hinder, the protected wreck that was fully cleared of trash in 2019?
- A pirate ship
 - A war ship
 - A submarine
 - A light ship (a sort of floating light-house)

- 9** Which activity is not part of the blue economy?
- Developing Bluetooth
 - Fishery
 - Wind energy
 - Maritime transport



© Roland Moreau

Solutions

1) b, 2) c, 3) d, 4) a, 5) c, 6) a, 7) b, 8) b, 9) a





WANT TO KNOW MORE?

- www.marinespatialplan.be: website of the Federal Public Service Health - Marine Environment Service containing the full marine spatial plan
- www.ournorthsea.be: website of the Federal Public Service Health - Marine Environment Service
- ☞ brochure 'The sea is teeming with life ... How to protect and restore the rich biodiversity of our North Sea?' and other publications (info@health.fgov.be)
- www.naturalsciences.be > science > research > natural environment: website of the Royal Belgian Institute of Natural Sciences - Natural Environment
- www.economie.fgov.be > energy (Dutch/French): website of the FPS Economy - Energy Department
- www.mobilit.belgium.be > shipping (Dutch/French): website of the FPS Mobility and Transport - Shipping Department
- www.mil.be (Dutch/French): website of Defense
- www.vliz.be: website of the Flanders Marine Institute
- www.ilvo.be: website of the Institute for Agricultural and Fisheries Research
- www.afdelingkust.be/wrakkendatabank (Dutch): wrecks database of the Flemish Hydrography - Coastal Division - Agency for Maritime and Coastal Service
- www.west-vlaanderen.be (Dutch/French): website of the province of West Flanders





COLOPHON

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

Date

February 2020

Editors

Jesse Verhalle and Mieke Van de Velde

Design

Cunéiforme Ltd.

Contact

FPS Health, Food Chain Safety and Environment

Contact Center

02 524 97 97

info@health.fgov.be

Published by

Tom Auwers, President of the Executive Committee,

FPS Health, Food Chain Safety and Environment

Place Victor Horta 40, box 10

1060 Brussels

Legal deposit

D/2020/2196/5

Cover picture

© Omni-C

Reproduction of text and maps is permitted on condition of the prior agreement of the FPS Health, Food Chain Safety and Environment.

The digital version of this brochure is available at www.marinespatialplan.be

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

Printed on FSC paper using vegetable ink.



OVERVIEW MAP



FISHING ALLOWED EVERYWHERE WITH EXCEPTION OF THE OFFSHORE WIND FARMS



ZONES FOR RENEWABLE ENERGY



SHIPPING ROUTES



EXTRACTION AREAS



MARINE PROTECTED AREA 'VLAAMSE BANKEN'



MARINE PROTECTED AREA 'VLAKE VAN DE RAAN'



ZONES FOR COMMERCIAL AND INDUSTRIAL ACTIVITIES



BIRD PROTECTION AREAS



TEST ZONE FOR COASTAL DEFENSE



PORT Zeebrugge

PORT Ostend

Nieuwpoort

'PAARDENMARKT'

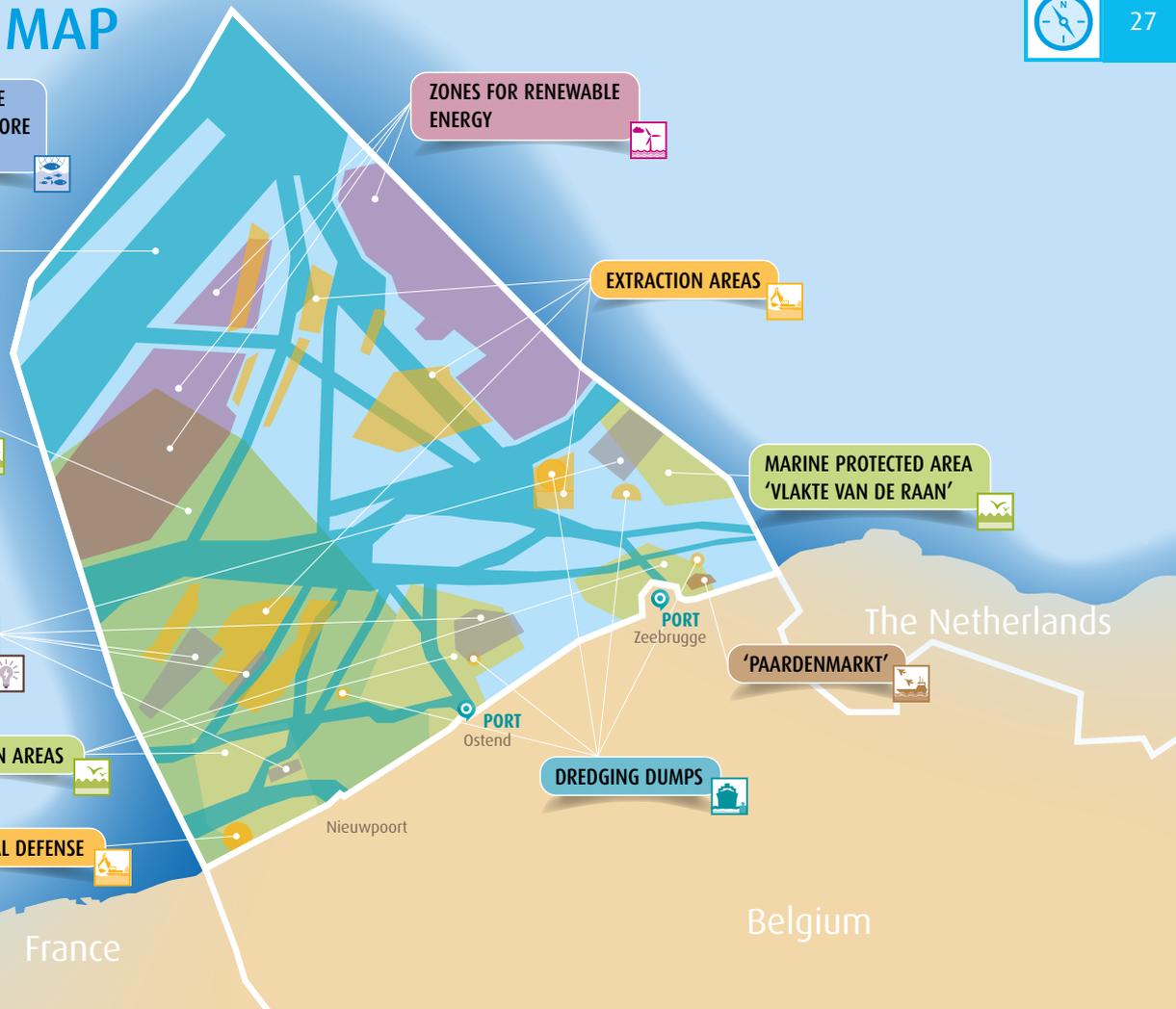
DREDGING DUMPS



The Netherlands

Belgium

France





federal public service
**HEALTH, FOOD CHAIN SAFETY
AND ENVIRONMENT**