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North Sea 2050 - a dialogue

“Operation” North Sea

Melanie Schultz van Haegen, the Dutch Minister of Infrastructure and the Environment, about the future of the sea

What does the future of the sea look like, in your view?

Well, first of all, it is not really all that relevant how I view that future. What matters is how all the people who have an interest in the sea perceive it. If all of us want to do something with the sea, we will also have to make it happen together – and more importantly, make sure that it is done well. This is why the process that led to this Spatial Agenda was (and still is) so important: all the stakeholders must be clearly aware of the interests of the other stakeholders, so that connections are made and added value may be sought in finding new possibilities by being compelled to work together at, on and in the sea. Naturally, I cannot draw an exact picture of the North Sea in – just to pick a date – 2050. I do see a rough outline, however, where together, we start thinking more in terms of



“Our joint views will not become a reality until everyone starts implementing them”

opportunities:

- To start building with the North Sea’s natural environment, in addition to protecting it;
- To start using the sea as a multi-purpose energy plant: we are already pumping gas from the subsoil; there are already wind farms (and their numbers are increasing).

But we can also use the energy from the waves and the tides, as well as geothermal heat (from the earth). This would mean even more re-use of pipes and gas wells (for CO2 storage – we have already started this), and contributing to the North Sea grid, which the countries around the sea are building;

- Integral area development at sea, where, from the moment you start implementing an offshore wind farm, you also incorporate those other forms of energy. Also, seeing how wind farm infrastructure and circumstances can be used to grow types of sea weed, for example – so effectively, connecting economic opportunities and linking revenue models together. In short, using space for various purposes.
- The North Sea as a product for export: promoting it (in terms of market and policy) and, where necessary, adjusting the rules and regulations to offer space for innovation and experiments; essentially, all our current Top Sectors converge on the North Sea: from Water to Logistics, from Agriculture & Food to energy and high tech.
- Connecting the land and the sea (tourism, cultural heritage, nature and administra-

tion). We still often think – literally – in terms of a watershed. Where the land stops, the sea starts – simple as that. We should really start seeing the North Sea as a part of the Netherlands, in all its aspects. The Dutch part of the North Sea is one and a half times the size of the

“Firstly, I hope the participants in the North Sea Congress will take the opportunity to contribute their feedback”

Netherlands... This is even without considering all those other countries surrounding the North Sea. To hold ambitious views with respect to this enormous area is therefore no extravagance.

How to get there?

To start, we should let go of the notion that the North Sea is just a body of water off the coast. Of course, most people see no more than what can be viewed from the beach. However, all is related: if beach recreation is *continues on page 2 >*

In various places in this paper, you will find squares with black and white sections. These are QR Codes. A QR code is a two-dimensional bar code with information that can be converted into text or links. To be able to read a QR code, you need a smartphone or tablet with camera functionality and a QR Reader. Installing a QR Reader is free and can be done through your Apple, Google or Blackberry store.



Shared use of the North Sea

The North Sea provides a space with opportunities for experience, a space for economic activities and for new management approaches. In these approaches the integration of socio-economic interests with ecological values is crucial. This means inbedding the concept of Corporate Social Responsibility into the core business of marine companies.

Alternatives to Dolly Rope

During a stroll along the beach you may have once noted orange or blue plastic threads dotted along the shoreline. These threads are called Dolly Rope and are used to protect bottom trawling nets against abrasion. 40.000 Kilos of this material are used yearly by Dutch fishermen. During trawling, these threads get detached and end up in the sea. Commissioned by the ministry of Infrastructure & the Environment, Wing supports the fisheries sector in finding sustainable alternatives for Dolly Rope. A reduction in the amount would mean a substantial contribution to the targets of the Marine Strategy Framework Directive in the Netherlands.

Sharing of data

Knowledge is the pillar underneath the management of the North Sea and is dispersed over different sources. Sharing is therefore crucial, even if it might be sensitive or of strategic importance. In 2011, for example, we coordinated a project in which fishermen and other stakeholders shared their knowledge of an area at sea called "Vlakte van de Raan". This combined knowledge was then used to develop a shared vision and measures that were supported by all stakeholders to protect this area. This approach can be applied to the management of the wider North Sea with its many users and stakeholders.

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MAGAZINE

**OVER
de ZEE**

NUMMER 2 – FEBRUARI 2016

- EZ wil samen met visserssector werk maken van aanlandplicht
- Sloere dijk krijgt zacht karakter
- Stormvloedkeringen in zwaar weer
- Vissen kennen geen grenzen
- Nanoplastics gevaarlijker dan microplastics

➤ LEES ALLE ARTIKELEN



Kennis van de zee gaat vooraf aan wijs gebruik en het behoud van haar waarden

‘Fishing’ for ideas and images

6 work meetings - 11 films - 100 unique participants – a hard core of 40 men and women who hold the sea close to their hearts.

5 themes rose to the surface and were incorporated in 9 map images with 2 dimensions: the North Sea entire and the Dutch ecological and economic area.

In the past months, the Kantine Visafslag at Scheveningen has been the epicentre of the talks about the North Sea Spatial Agenda. A single sea, a single room, a single language and a shared story – that was the idea. Today’s catch: a good idea will get everyone going. The hot seat, demand and supply. The magic question and the impossible task of setting a new course to 2050. Views, ambitions, potential, tasks and measures, wrapped and tied into a dialogue about the sea and the coast. Indissolubly connected.

The Ministry of Infrastructure and the Environment, the Ministry of Economic Affairs and the “Ministry of Stories” joined forces to explore the great story of the opportunities and potential of the sea. Old

continued from page 1>

to be stimulated, this will be significant for shipping ambitions, for energy, for water quality and for water safety.

Mainly set notions and prejudices prevent us from really working together; the idea, for example, that by definition, other stakeholders are competitors and interests will conflict. We all have different interests but in the end, we all want the same where the North Sea is concerned: Get the most out of it. We all want a clean sea, beautiful nature, and recreation, to use economic opportunities. If everyone wants to realise his or her share, this cannot be done alone. All is so interconnected that in fact, the key to the solution is: to work together. I believe the process for the Spatial Agenda has struck the right chord in this respect, especially thanks to all the parties participating in it.

A framework for cooperation and a view we all share, coming up – what is the next step?

Firstly, I hope the participants in the North Sea Congress will take the opportunity to contribute their feedback on all the things that are going to happen – this will enable

salts with an economic and an emotional stake shared their future views on the sea and the coast. Diverging, converging, and diverging again. Talking, drawing, listening and summarising. We made the quote. The intended results and – since they must – the discards are taken on shore. Part of the catch was enjoyed and digested already on the journey. The larger chunks are brought to be shared with the rest of the Netherlands – to start with, with YOU as participant in the North Sea Congress.



This makes this congress a continuation of the discussions at the Kantine Visafslag. It is intended for ongoing ‘fishing’ and for the further elaboration of the recipes for the future.

At the back of this tabloid you will find an opportunity to share your specific contribution to the future of the sea with us. Consider it a final fishing line, cast before we get to the port of political The Hague.

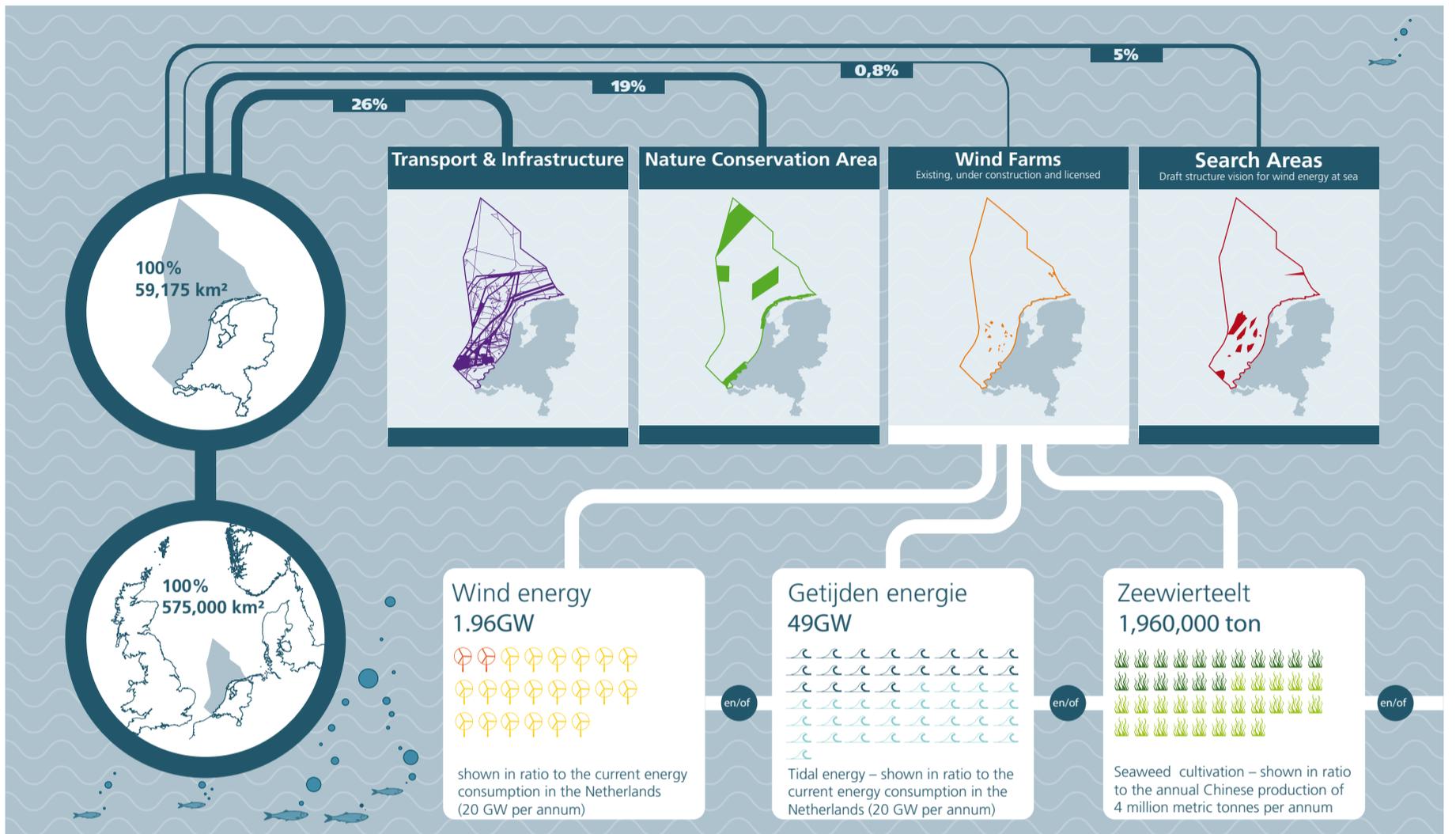
We wish you an inspiring and productive day.

Jeroen Vis, Eelco Koolhaas, Lodewijk Abspoel

us to give this approach greater focus. And then, what? That is a reasonable question since, what are views without action to turn them into reality? Also throughout this process, parties consulted each other. I – and the ministry – also received a wealth of advice. We must be careful that not everyone is going to look to the government to make it happen. I will make sure this approach will get its place in the new National Water Plan, which is on its way. I will also ensure that it can be linked to other plans and views of the government. However, I would also like to return all that good advice: after all, our joint views will not become a reality until everyone starts implementing them: fisheries and shipping, the energy companies, environmental organisations and all those innovative partners who will think of new options. The real strength of the North Sea is the strength of the people who feel connected to it. We literally have a world at our feet. Where policy is lacking, the market gets a chance. And remember: 2050 may seem a long time away, but to get there means: starting today.



Bycatch North Sea days



Policy innovation through the North Sea 2050 Spatial Agenda, jumping in the deep?

Donné Slangen, director of projects and areas for space and water at the Ministry for Infrastructure and the Environment – also chairman of the Interdepartmental Directors’ Consultation Board for the North Sea.

A spatial agenda for the North Sea: what does that look like?

‘Making policy for the North Sea towards 2050 is quite a challenge. The multitude of functions and interests, opportunities, ambitions, tasks and possible bottlenecks that concern the sea now and in the future – both nationally and internationally- require a shared context from which to work. A mere sectorial approach will no longer do. Onshore issues are already being tackled through spatial agendas, in which the challenges between the various tiers of administration are brought together. That approach seems suited also for the sea. It will help connect the sea and the land in a language of images, moreover. This will create a shared framework and allow the parties to get closer together.’

Using the spatial agenda approach for the North Sea, how is that working out?

‘The methodical approach of developing vision and identifying ambitions, tasks and measures is used a lot for onshore issues, so that investment decisions can be made between the various administrative layers.

That does not apply to the North Sea, but the method has many advantages. I am concerned with an agenda for the future. Like other agendas, also this one could be made in any form or shape. My condition was that we would do it together with Economic Affairs, and without taking over any responsibilities from current policy dossiers.’

“Building with the North Sea nature and the focus on culture and cultural aspects, these were positive surprises to me.”

This started a creative process, with films, story telling and sessions of dialogue?

‘Yes, in fact. When Jeroen Vis and Lodewijk Abspoel came to me with the idea of doing this North Sea spatial agenda completely differently than through a traditional, outsourced study, I had my doubts for a moment. Working with films, stories, images from the sea and a creative

outboard motor of the “Ministry of Stories” has its risks. Will it yield anything? Produce something the minister can take to the Parliament? Will it be serious enough and set the right tone? Those doubts were quickly abandoned since, after all, in this, my era of “faster & better” (where we are trying to shorten the construction time for infrastructural projects from 15 to 7 years), a lot of positive effect has been achieved through creative processes.’

And did you see it happen?

‘In advance, I expected a lot in the areas of energy extraction, saline crops, new forms of use of space and smart combinations of forms of use and space. I also expected that new forms of energy would start to be used and that our joint views for the long term would get a boost. I expected the export of knowledge, products and policy and also attention for land-sea connections, both in physical and administrative terms. Building with the North Sea nature and the focus on culture and cultural aspects, these were positive surprises to me. However, I also think a lot has yet to happen before we can

call this a fully developed future agenda for the North Sea.’

When will you be satisfied that the agenda is complete?

‘When it is clear who is going to do what with whom, based on what analysis. And once we know when activities must be finalised in view of our approach to 2050. We need to know who commits to do what, for example, and in what context an activity is realised, for example by one of the top sectors. Naturally, it is also very important that actions are SMART and that there is an overview of the financial and legal work. That also applies to the subjects in regard to which the Government must take the first steps. In the end, the minister wants to be able to show a result. The specific list of actions, even if they are studies, is essential to me. Otherwise, the North Sea Spatial Agenda is like a fish out of water. For me, this makes the North Sea Congress a work meeting. With over three hundred participants doing business to get the agenda for the future of the North Sea ready for the political arena.’



Rien Silvold, Hollandse Hoogte

Sit mare securum*

Craig, my 15 year old son, is looking at options for his continuing education. Besides astronomy and biology, a maritime course is high on his list. Where his future and expectations are concerned he goes by the motto: “the world is your oyster”.

He will have to grab every opportunity to make his dreams come true. The maritime field has plenty of options. That is not to say he will choose the Navy right away. The global dominance of the Netherlands Royal Navy may have waned somewhat in the course of time. Its pioneering role has been taken over by companies like Royal Boskalis Westminster N.V. In all the information meetings we go to together, it turns out there is a wealth of options: shipbuilding, maritime technology, maritime operations & planning and of course, the nautical college. It is up to him, and he may well choose the sea. It does worry his mum rather; let’s hope he does not choose the ocean-going trade...

His grandfather Dirk just passed away at 88. He spent a large part of his life with the Royal Navy, making the North Sea and surrounding areas safe. After the Second World War period the sea was full of the remains of envy and hatred. Stray mines and grenades had become unintentional surprises for fishermen, the merchant fleet and sand dredgers. Mines, torpedoes and other material were blown up with impressive bangs. ...*So that the sea may be safe. For now and for later.

While his dad is at this conference, putting together the possible pieces of the future of the North Sea, Craig may also just choose to stay on land. Perhaps his daughter will choose the sea in 2050, because we will have made sure that that is still an option then.

Jeroen Vis

TRADITION IN TRANSITION

Envisioning at the North Sea

The Netherlands benefits from a safe, clean, healthy and ecologically diverse North Sea, which helps meet economic and societal needs.

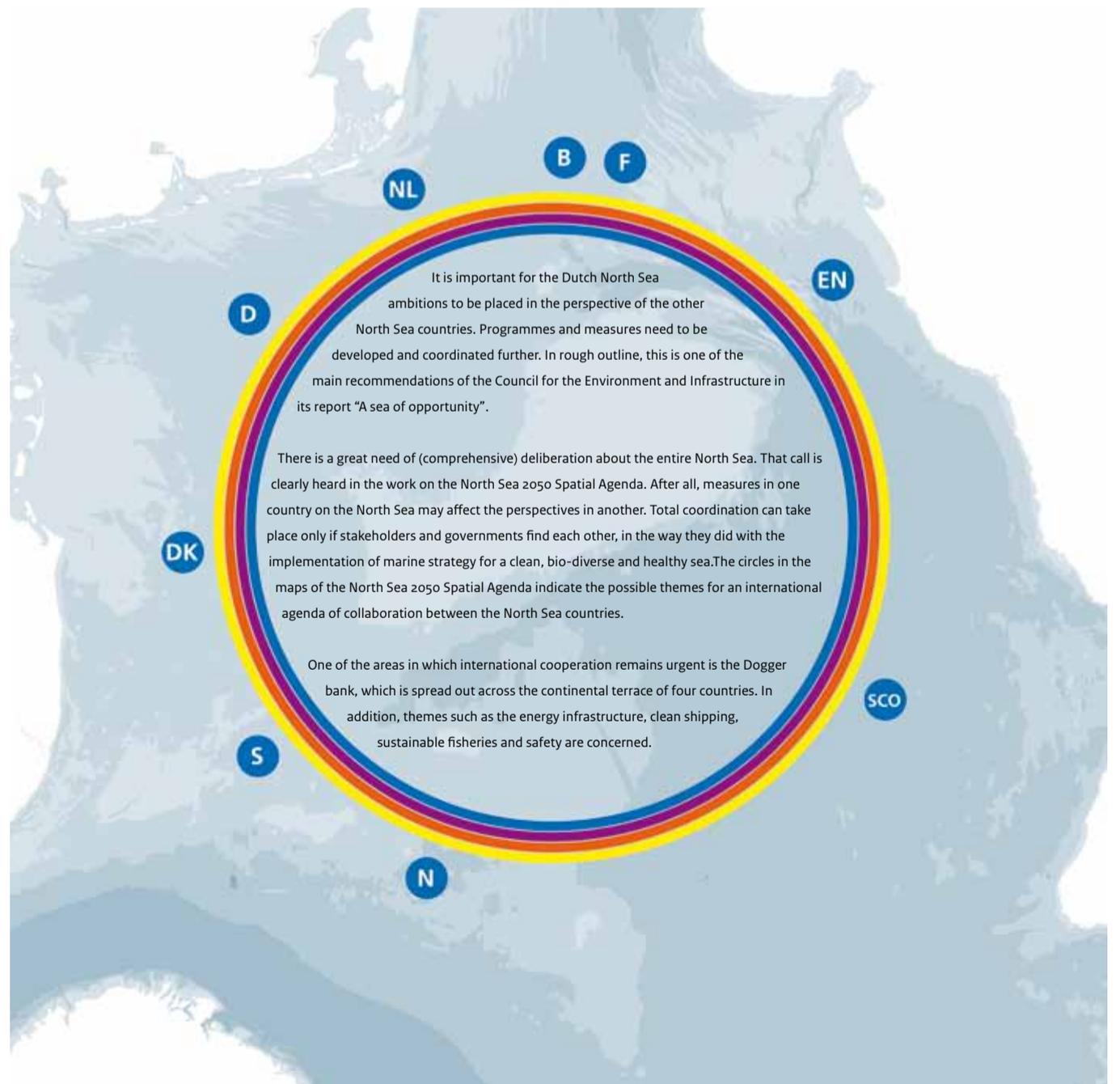
The sea also has great socio-cultural and historical significance for the Netherlands and is a source of knowledge. The sea can continue to contribute at its most perfect only if its natural resilience is recovered and extended and its attractions are retained for everyone’s benefit. The key of the new policy for the North Sea is a joint focus on desirable ways to use it, both in spatial and temporal terms, and development of the natural potential of the sea and the coast. The traditional ways of using of the sea are in transition. The future potential of the sea is there for the taking, if only the stakeholders manage to transcend their own boundaries. Then, new activities may be given a place, whereas at the same time, nature reserves can be left alone to recover.

“The sea will give us life, as long as we keep it alive.”

The knowledge of and experience with the sea is a great Dutch strength. Working together and puzzling with the various spatial requirements of societal needs in such a small country like ours is another Dutch forte. Deploying that knowledge and experience to meet the challenges at sea in terms of food, nature, energy, transport and culture will help us manage the necessary transition to the future. Can we make that leap into the future,

through integrated spatial development at sea and along the coast? The answer to that question must be a positive one – after all, only in that case can the Dutch ports retain their competitive edge and keep fulfilling their role as an international, economic carousel, with continued safety on and behind the coast, a feasible transition to sustainable energy and, at the same time, a role for the North Sea as a laboratory for new sustainable developments. In that event, the sustainable development of the North Sea will also offer the possibility to act as a springboard for the offshore maritime knowledge that has given the Netherlands its great place in the world. The sea will give us life, as long as we keep it alive.

International cooperation in the North Sea basin



More information about the methodology of the Council of Children and The Missing Chapter Foundation may be found on www.missingchapter.org



Children give advice to North Sea experts

Last week on an exploratory tour of the Port of Rotterdam and in today's dialogue session.

Just go back in time to when you were in sixth grade – the eighth group. You were 11 or 12 years old. Did you have any idea of what the world would look like today? Did you have an image of the North Sea, and what should be done about it once you had grown up? Today, the North Sea is your work floor...

Kids helping us think

If nothing else, in 2050 the North Sea is going to be used differently than today. Together, we are working hard to achieve that. Children aged 11 today will be 47 then. The Dutch Interministerial Consultation Body for North Sea Governance (Interdepartementaal Directeurenoverleg Noordzee IDON) believes it is important, therefore, for also youngsters to become involved in the future of their North Sea. Their power of thought may help us gain new insights and come up with surprising solutions.

For this reason, the Missing Chapter Foundation has introduced the Council of Children, in which children give advice to decision makers. The Council of Children at the North Sea congress is formed by group 8d of RK Basisschool de Paradijsvogel of The Hague. These 27 children advise the drafters of the North Sea 2050 Spatial Agenda.

On board

Last week, this Council of Children explored the port of Rotterdam. The Rotterdam Port Authority had generously made available a vessel and showed the children the most beautiful parts of the Rotterdam harbour. Even just the fact that this is Europe's largest port made a tremendous impression.

With the wind in their hair and the motion of the waves below their feet, they divided their topic, the North Sea, into a number of themes for the day: a safe sea, a healthy sea, a beautiful sea, a fun sea and a sea that will make you money. The children explored these themes in groups and, brainstorming and mind mapping, fired an endless stream of questions at the experts on board. In the meantime, of course, there was plenty of attention for all the impressive, beautiful and also ugly things in the harbour and on shore.

Opportunities and ideas

It was striking how much children already know about the sea. They have lots of ideas about how it should be used and where there is room for improvement: "Fishermen who also fish for waste should be rewarded." And: "Things at sea should be used better, for example by putting a wind mill on an oil rig."

For three hours, the Council of Children worked with great concentration on the themes also to be discussed at the congress today. Subsequently, at school they used the knowledge and experiences gained to devise directions for solutions.

And today...

Today in the Statenzaal, at 15.00 hrs, a dialogue with the Council of Children is to take place. This is the moment the children have worked towards in the past weeks. They will talk to a number of experts under the guidance of the Princess of Orange. You are very welcome to attend this fascinating session.

Water en veiligheid




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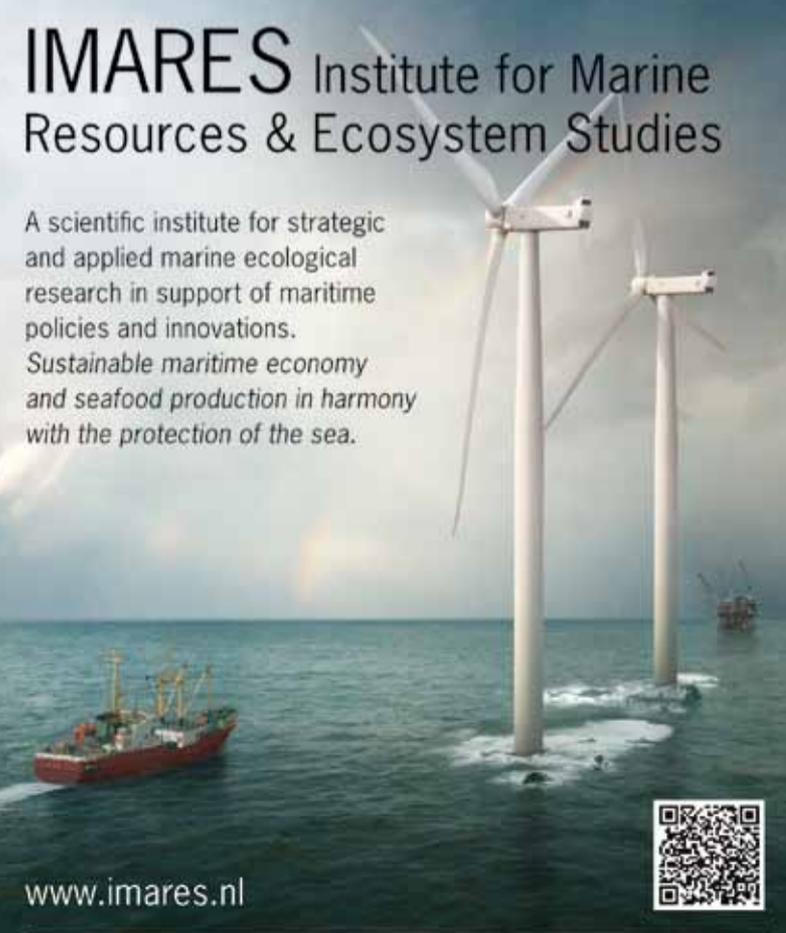
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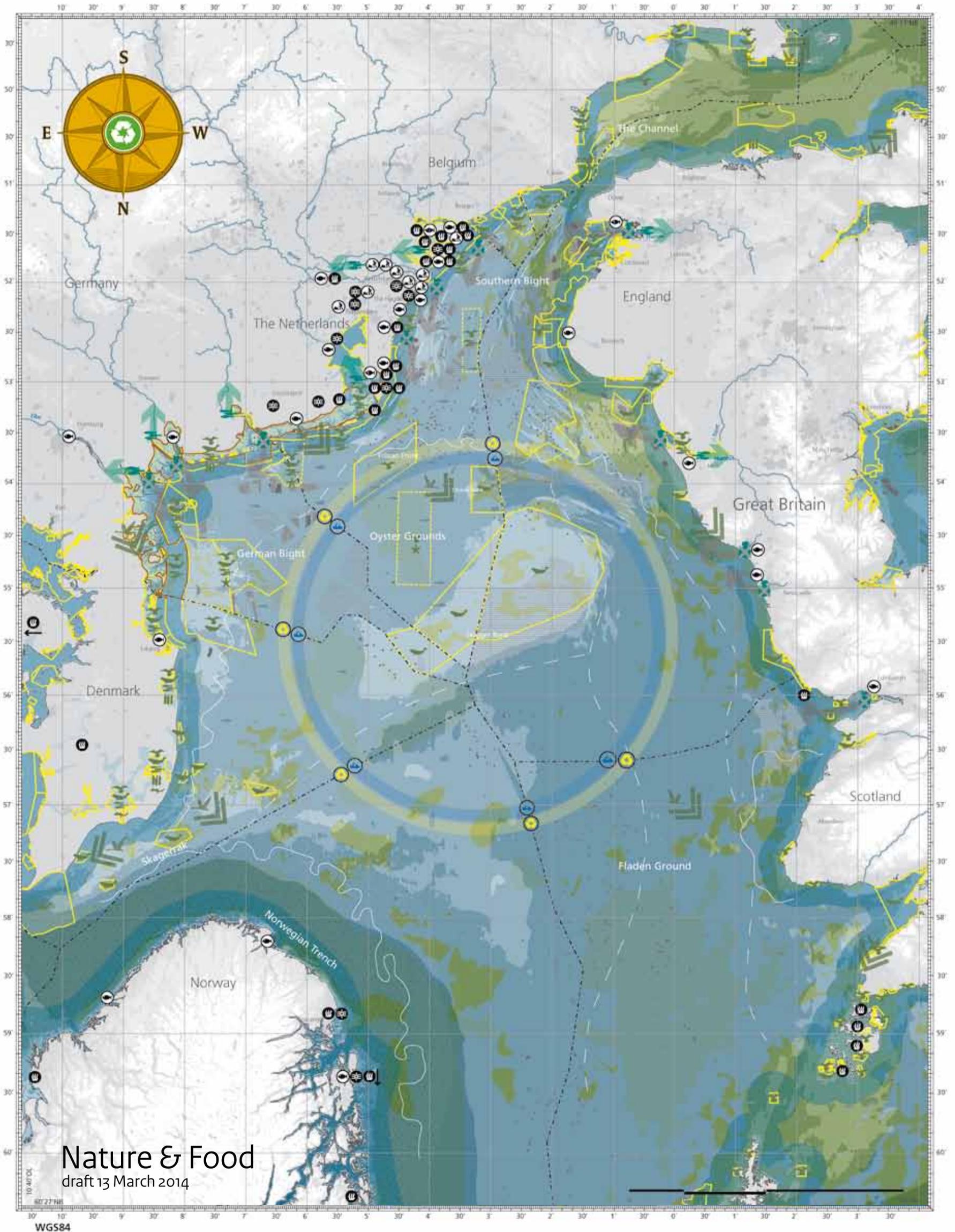


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Real fishermen tell no yarns



In the framework of the European Bird and Habitat Directive, the Voordelta, the North Sea coastal zone, the Western Scheldt and the Vlakte van de Raan as Natura 2000 sites. Designations for the Dogger bank, the Friese Front and the Klaverbank as Natura 2000 sites will follow after the operation of the Nature Conservation Act and the Flora and Fauna Act is extended to include the entire Dutch Exclusive Economic Zone (EEZ).

Themed map Nature & Food

Key

Situation in 2014

Knowledge export - existing sectors

- Fisheries
- Water works / Building with nature

Protection

- Natura 2000 - marine*
- Natura 2000 - land (selection)
- Area with special ecological value

Protected/to be protected species:

- marine mammals (SCI)
- birds (SPI)
- fish (SCI)
- amphibians (SCI)
- plants (SCI)
- benthos (SCI)

- UNESCO world heritage

Soil system and soil quality

- Rich in sand
- Rich in silt
- Rich in substrates
- Infralittoral
- Circalittoral
- Deep circalittoral
- Upper slope
- Upper bathyal
- Mid bathyal

Fixed objects with potential ecological value

- Offshore installation
- Wind farm: existing / licensed / alternative application
- Designated wind energy area / lease or agreement for lease / search area wind energy inside 12-mile zone

Water system and quality

- Fresh-salt gradient (summer salinity ≤33)
- Front
- Water mass boundary

Food

- 12-mile zone: incubator, concentration area

Tasks and opportunities for 2050

Knowledge export - Blue Growth sectors

- Marine culture / Aqua culture
- Blue Biotech

Protection

- Conversion to protected status
- Improvement of ecological quality entire North Sea

Migration

- Recovery of migration of migratory fish
- 'Flyway' migratory birds

Food

- Fish stocks in balance (indicative)
- Making the entire North Sea fishery sustainably

Water system and quality

- Terminating flows of waste

“Real fishermen” tell no yarns and why nature and food are not the same.

“Natural fishermen cannot talk. Birds and seals tell no yarns....” So begins the animation film on Nature and Food. A healthy maritime ecosystem is sturdy and resilient against outside influences. The transition task for the North Sea is to strengthen the intrinsic, natural power of the sea, both ecologically and economically. The sea will have greater societal value in 2050, something we cannot achieve only by protecting nature and the environment: we will have to do something extra.

“An increasing variation of seabed structures offers protection for growing fish”

More nature, more food

Safeguarding marine areas, such as the North Sea coastal zone, Dogger bank, Cleaver bank, the Voordelta protection zone, the Vlakte van de Raan and the Frijan Front, against specific ways of use will help the transition from biodiversity losses to recovery. Once the bottom of the North Sea has largely come to rest, a rich seabed life with a large share of organically formed hard sea floor substrates will be able to develop. Here and there, even the oyster banks and characteristic long living and vulnerable species may return. An increasing variation of seabed structures offers protection for growing fish. The wealth of food may result in a greatly varied nutritional web, from seabed dwellers (benthos) to predators such as sharks, porpoises, dolphins, thornbacks, large fish, seals and various kinds of seabirds.

Given the ambition to have maximum natural values and optimal economic use, also building with the North Sea nature is obvious. Giving nature a helping hand may potentially make an added contribution to the provision of food in the long term. Eating domestic oysters and tuna, wrapped in North Sea seaweed – North Sea sushi – is a great idea for the (distant) future. But there is more: anglers have more fun if there are more kinds of fish to catch; the North Sea becomes a more fun experience if porpoises, dolphins and, hopefully, larger whales can be seen with greater regularity.

A helping hand

In the Natural Capital Implementation Agenda, State Secretary Sharon Dijksma

explores how ecosystems may be repaired. The reintroduction of flat oysters also is specifically mentioned. The rules and regulations offer space for the installation of (artificial) hard substrates or an oyster bed in the Central Oyster Grounds. If we choose to do this, an active role of the central government, in collaboration with scientists and market parties would be obvious.

Market parties such as sand dredgers, wind turbine developers, the oil and gas companies, the shipping industry and maritime tourism can and will limit their impact on nature as a consequence of European policy. In addition, the Spatial Agenda challenges them to lend nature an extra helping hand. Leaving dredging pits in such a way that sea life will recover quickly, and making wind turbines with constructions for birds (such as cormorants) to rest on, are inspiring examples.

Possibilities for both

Man’s impact on the sea may be decreased by optimal harvesting inside the ecological and economic boundaries. Sustainably grown fish, weeds, algae and crustaceans; bringing ‘forgotten North Sea fish’ back onto the dinner table. Integral development of the North Sea, with new as well as traditional means of using it, means that space will remain for fishermen using sustainable fishing methods. After all, fish is not found in the same place, at the same time, each year.

“Man’s impact on the sea may be decreased”

Even though nature and food each have their own story, they can go hand in hand. A true recovery of habitat and biodiversity requires sufficient (correctly located) closed areas. For the (global) provision of food, access to animal and marine protein remains important. The North Sea 2050 Spatial Agenda offers room for both. We invite you to link the tasks for a marine strategy to retain a clean and healthy sea to the ambitions for the nature of the North Sea and other large waters, as well as to the implementation of the jointly reformed fisheries policy.



Recipe for flounder

Flounder is no very welcome guest in the professional fisherman’s nets. The price is low and sometimes there is so much of it that professional fishermen speak of a flounder plague. This is different for anglers, whose main catch is flounder throughout the autumn and winter. From boats, piers and beaches, you may well catch dozens. A welcome catch; the smaller ones to throw back and the larger, from around 25 cm, to take home for dinner. Fine seafood, of somewhat dry structure and a delicate flavour. Also fish stalls may sell flounder, fresh and sometimes dried. How best to cook fresh flounder? Fry whole or filleted. The latter (and if you cannot, let the seller fillet them) has my preference: frying fillets is (and should be done) super quick and you will surprise yourself and your dinner companions with a nice piece of boneless fish, a little like flat cod parings.

Of course you can fry them whole, but not, perhaps, in your kitchen. Most anglers I know will fry their unfileted flounder at a safe distance from the house, in a shed or on the balcony – because of the smell of frying.

Recipe for fried flounder fillets: put a dash of salt and pepper on the fillets (skin still on) and brown them lightly on the skin in a little olive oil with a pinch of butter. Best to use a flat frying (or fish) pan that will fit some 6 small fillets. Once the edge of the skin starts to colour – no more than 3 minutes – turn and fry on a low fire for 1 or 2 minutes on the skinless side. Serve with lemon and green cabbage and mash or the like. Or with chips – great for the kids.

When you sauté or fry fillets you get no nasty smells, no bones and personally, I think the taste of the fillets is subtler. Flounder is not expensive, although it may be hard to find large ones on the fish stall. Medium-sized ones from 25 cm are easy to fillet, even if the fishmonger’s may find it a lot of work for little money – then why not catch your own; the North Sea is full of them in winter.

By: Jan Willem Wijnstroom (Dutch Anglers’ Association)



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Foto Udo van Dongen

Wij - enthousiaste professionals en vrijwilligers met veel ervaring en expertise op het gebied van wrakduiken, ecologie en natuurbescherming - hebben de handen ineen geslagen. Doel is om meer kennis te vergaren over de Noordzee en deze zichtbaar te maken voor alle belanghebbenden.

Indien voldoende financiering beschikbaar is zal de expeditie plaatsvinden in de zomer van 2014. We zijn daarom op zoek naar sponsors en donateurs die een belang hebben bij deze boven- en onderwaterexpeditie van 10 dagen op de Noordzee en dit initiatief een warm hart toedragen.



Heeft u suggesties?

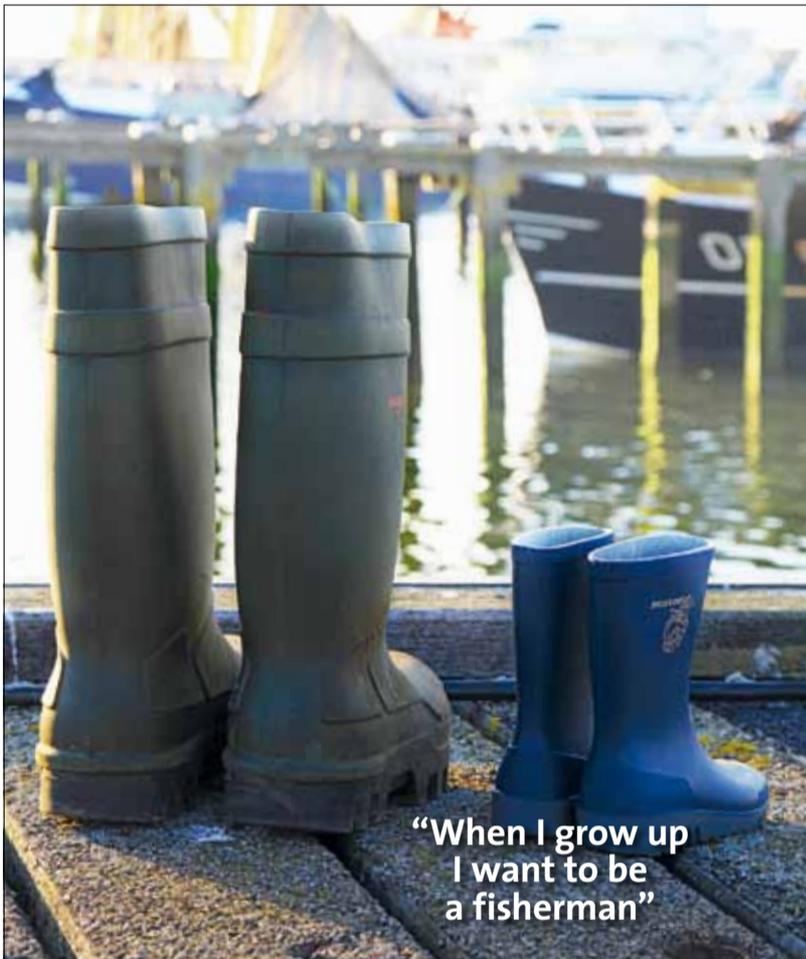
Neem dan contact op met info@duikdenoordzeeschoon.nl



Sea weed



Nature - Ambition 2050



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Tubeworm reefs, the underwater secret?

It took a while for us to get the picture: we were not looking at gravel but at a tubeworm reef.

Oscar Bos recounts the IMARES study into the biodiversity of the Borkum stones north of Schiermonnikoog in the summer of 2013. Based on the reflective characteristics of the seabed on side scan sonar recordings made earlier, it had been estimated that, apart from sand, there had to be a lot of gravel and larger loose rocks (the actual Borkum Reef). Those large rocks were there; they are nicely overgrown. After a first dive in the ‘gravel’ area, however, the divers came up greatly disappointed. Not a stone in sight! Only worms. The underwater camera and soil samples showed the same. On closer inspection, the ‘gravel’ turned out to consist mainly of thickly populated fields of *Lanice conchilega* or tubeworms. They form a three-dimensional habitat with a greater wealth of species than the ‘bare’ sandy seabed in the rest of the area and, as bio-engineers, may have a positive impact on their environment. Apart from the worms, the underwater images also show all kinds of mud sagartia, starfish, brittle stars, crabs, pipefish, gobies and other species. The reefs occur in a large part of the Dutch North Sea but have received little attention to date.

Belgian research * shows that flatfish such as plaice and flounder like to stay near the reefs since there is more food and they may find a hiding place there. Trawl fishing damages the reefs; as a consequence, a reef is formed that, biologically speaking, is much less valuable, which may be to the detriment of the flatfish. The reefs contribute to the function of the sandy North Sea seabed and deserve protection from trawling.

“Flatfish such as plaice and flounder like to stay near the reefs”

* Rabaut, M.; Van de Moortel, L.; Vincx, M.; Degraer, S. (2009). Biogenic reefs as structuring factor in *Pleuronectes platessa* (Plaice) nursery, in: Rabaut, M. (2009). *Lanice conchilega*, fisheries and marine conservation: Towards an ecosystem approach to marine management. pp. 111-121

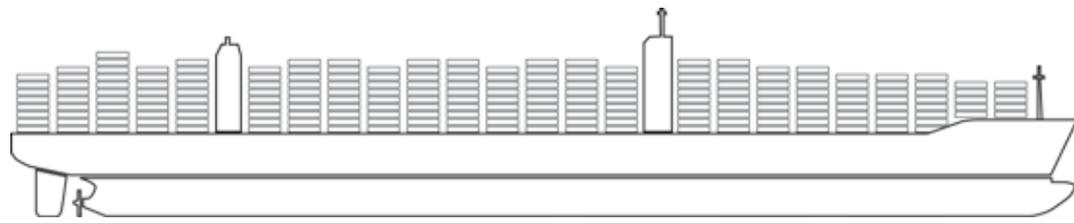


THE SEA: OUR SUSTAINABLE SOURCE OF FOOD AND EMPLOYMENT

Dutch herring or smoked mackerel at your local fish monger... but also affordable, protein-rich daily fish meals for millions of people in Africa. Sustainably caught by Dutch ship-owners from fishing communities Katwijk, Scheveningen and IJmuiden. With crews that take pride in their professionalism. In this way the sea is a source of food and employment. It goes without saying that we treat the sea carefully so that the next generations can also make a living from the sea and enjoy fish. This is all very much Dutch: care for water and oceans, care for food, care for the future!



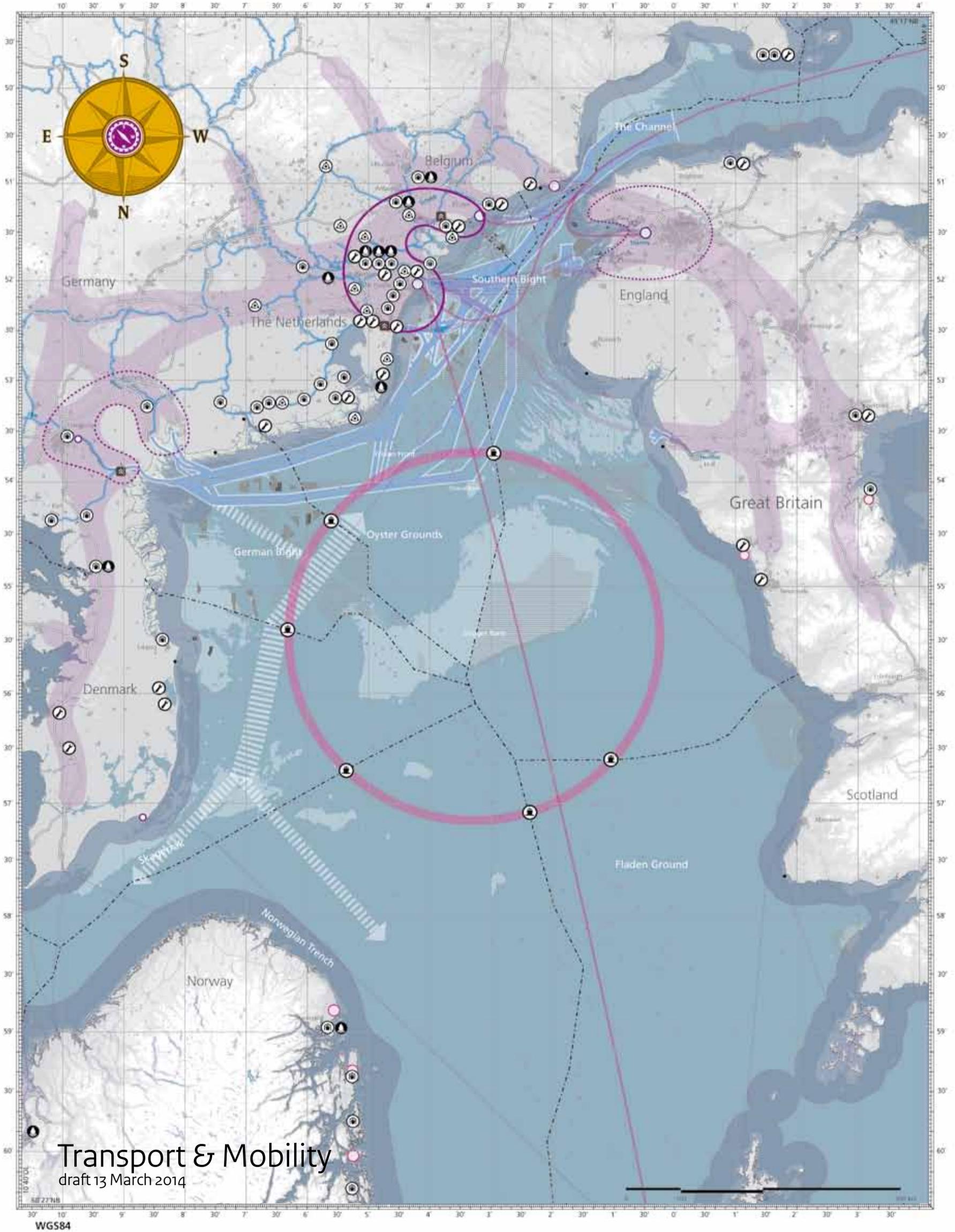
IMARES, Oscar Bos



Maersk McKinney Moller / Triple E



Clipper "brown" fleet





From Zeebrugge to Gothenburg

Themed map Transport & Mobility

Key

Situation in 2014

Knowledge export - existing sectors

- Shipbuilding
- Logistics
- Offshore wind and services

Network & hubs

- Traffic Separation System (TSS) boundaries
- Seaway
- Approach area
- Mainport Rotterdam & Port of Amsterdam
- Port & industrial complex abroad
- TENT-t network waterways
- TEN-t network railways (freight)
- TEN-t network motorways
- Approach sea lock
- Hinterland connection

Connections

- Ferries
- RoRo corridor

Non-standard route use

- Activity Fishing (Angling) & Pleasure cruising (12-mile zone)
- Obstacles
- Production platforms
- Wind farm: existing/licensed/alternative application
- Designated wind energy area / lease or agreement for lease
- Search area wind energy inside 12-mile zone

LNG network

- Import Terminal
- Import Terminal planned/ under construction
- Import Terminal planned small
- Location study Import Terminal
- LNG other
- LNG tanker route
- Pipes landing area

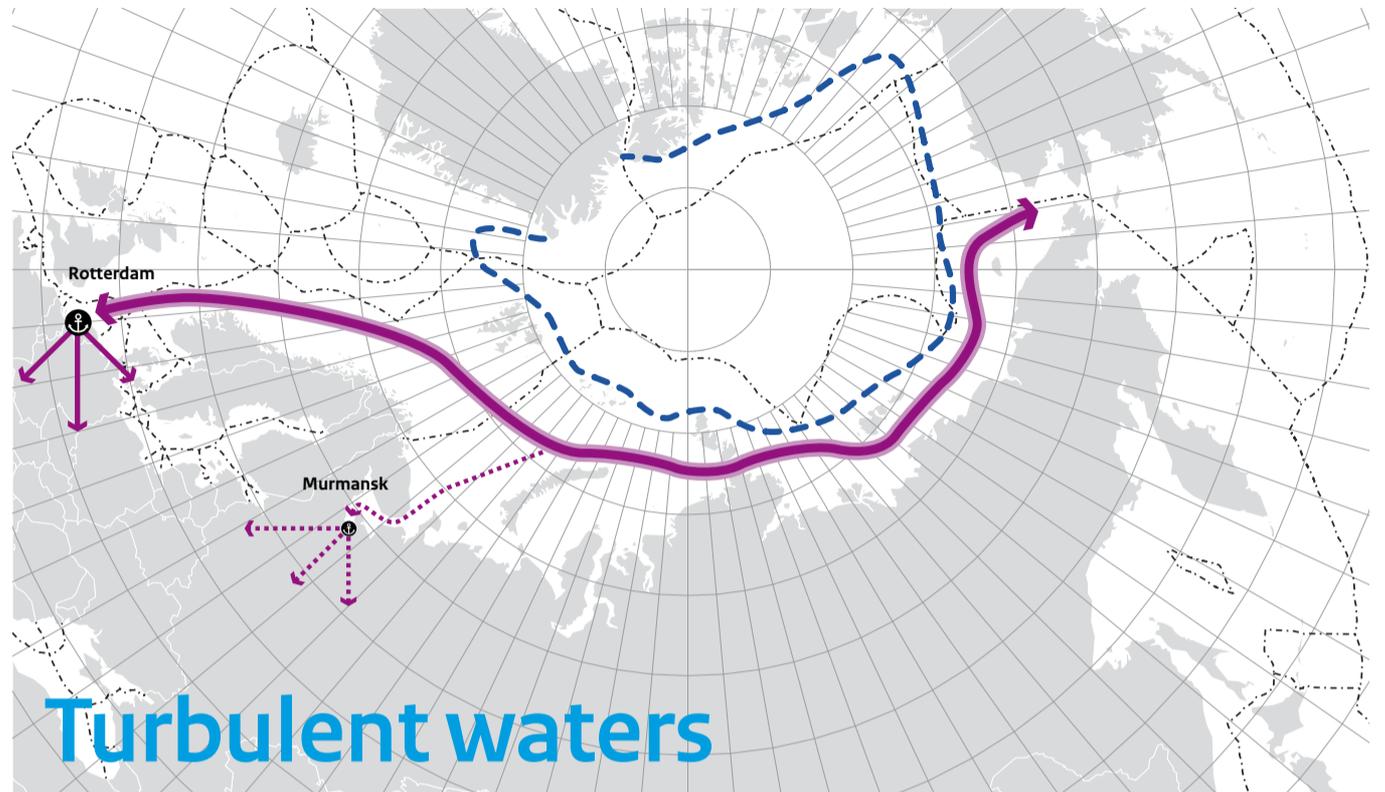
Tasks and opportunities for 2050

Knowledge export - Blue Growth sectors

- Deep Sea Mining

Network & hubs

- Reservation space TSS
- Reservation route Arctic Ocean
- Clean shipping



Safety improvements, retaining accessibility, preventing accidents at sea and ecologically responsible ways of using are ambitions with regard to shipping that exist today and will continue to exist in the future.

Whether with regard to the largest vessels in the world of 400 meters in length, fishing crafts, sailing yachts or specialist off-shore vessels, all are subject to international rules and regulations of the International Maritime Organisation (IMO) and fall under the UN Convention on the Law of the Sea (UNCLOS).

No major changes in the flows of goods to the seaports in northwest Europe are expected in the short term. It is expected that up to 2030, port capacity will not have to be expanded (by, for example, a third Maasvlakte). The import of crude oil and coal is consistent despite the transition to more sustainable energy at the current levels. Changes to do with the development of the world economy will take place in the container market. To economise and become more cost-efficient, the market will increasingly use super large vessels. This will result in fewer movements of larger vessels, but possibly also in more movements of smaller vessels in the regional routes, that cater to specific markets and routes. Zeebrugge-Gothenburg for example. Services that, like the seagoing vessels, are dependent on time slots.

A channel around the north

It is also clear that vessels will no longer sail only through the Channel. It is very likely that the Willem-Barentz passage along the North Pole will be increasingly freed up. Joint studies by the various governments, ship yards and ports in north-western Europe will have to show what the continued effect of this will be, and what consequences that will have for the use of space in the north-west part of the North Sea.

Rising water

Although the sea level is going up, this does not mean the access sailing routes to ports will no longer need to be dredged. The Directorate General of Public Works and Water Management and the Netherlands Port Authorities annually remove some 30 million cubic metres of sediment from their harbour basins and maritime access routes. The sediment is distributed to designated locations at sea. No great changes are to be expected in this respect. Besides relocating sand to improve the accessibility of the large ports, sand relocation is necessary for our coastal defence. Although the suppletion locations will come up for discussion in the context of the Delta programme and possible different ways to deal with nature, to be safe for the coming decades we will have to continue to take into account some 2,000 shipping movements for suppletion activities alone. Whether one or several strategically placed sand winning and suppletion mills will change this is currently being studied by the Directorate General of Public Works and Water Management and Grontmij.

Sail arms

What will change is the overall picture of traffic at sea, as a result of more intensive coastal navigation and the shipping movements from and to offshore activities. Especial attention for the North Sea in the coming decades should be focused on wind farms, not only in the Dutch waters but also in Germany, Denmark and England. Also France, Norway and Sweden have their ideas ready or are elaborating them. Besides the installation, maintenance comes with many shipping movements that result in crossing vessels. The inability to

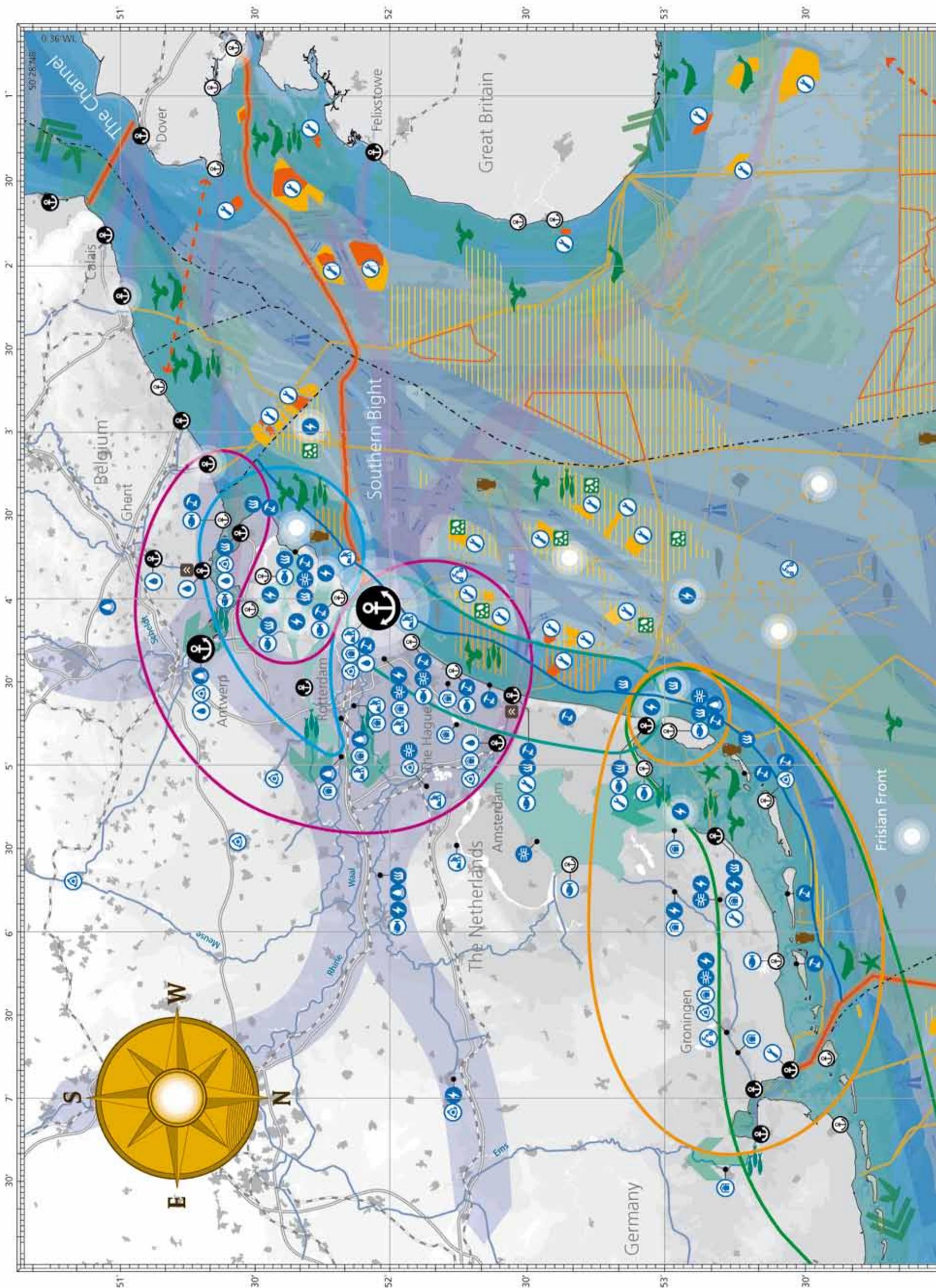
sail inside the wind farms results in temporary obstruction and busier traffic elsewhere. As such, shipping safety may be at stake in such areas. This requires timely anticipation and adjustment, since economic and ecological consequences may be considerable; after all, it is not easy to make a physical adjustment for the benefit of safe, smooth shipping.

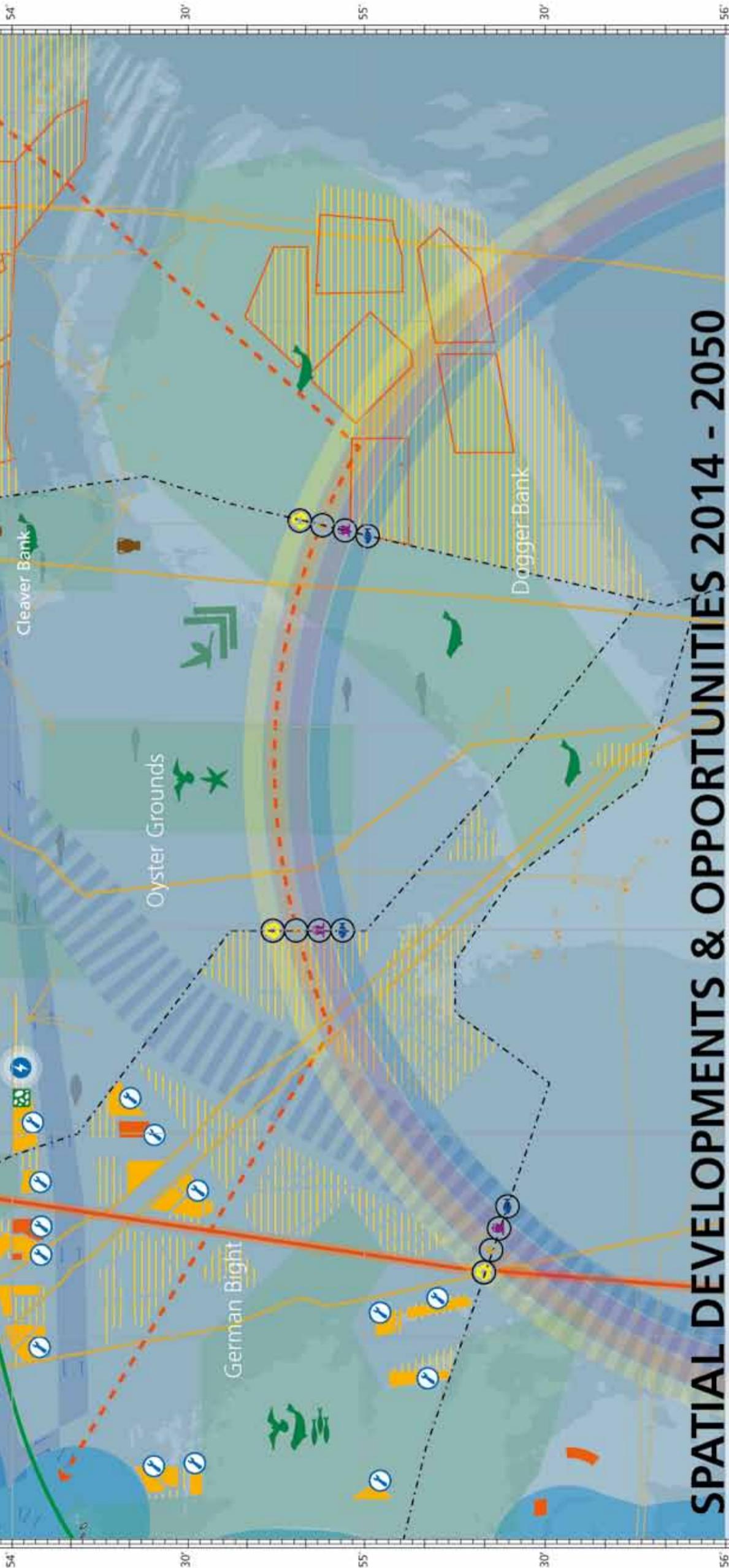
“Economic and ecological consequences may be considerable”

A port cannot simply be relocated and the relocation of shipping routes takes considerable time and effort. The North Sea 2050 Spatial Agenda offers no tailor-made solutions for these difficult issues, nor can it regulate the safe distances for shipping, space for recreational sailing and fisheries and the search and rescue tasks. Enhanced navigation may offer solutions and on-shore monitoring of areas beyond the territorial waters will need to be discussed.

Invitation

Mrs Schultz van Haegen, the Dutch Minister of Infrastructure and the Environment, has announced a revised working programme for sea shipping and the seaports for the autumn of 2014. The Spatial Agenda invites her colleagues of the Maritime Directorate General to join forces to take on these issues. A similar invitation is extended to all those involved in the rollout of wind farms at sea. Insights in the long-term developments will help pilot us to calmer seas.





SPATIAL DEVELOPMENTS & OPPORTUNITIES 2014 - 2050

- Connections & Cooperation**
- The North Sea as a system
 - Balanced ecosystem
 - Energy grid
 - Clean shipping
 - Sustainable fisheries
 - Three coastal landscapes
 - Wadden Sea region
 - Hollandse Boeg
 - Southwestern Delta
 - Mainport Rotterdam / Logistics Delta
 - Energy Valley
 - 12-mile zone

- Knowledge Export**
- Carbon Capture & Storage (CCS)
 - Conventional Energy
 - Logistics
 - Offshore Wind & Services
 - Shipbuilding
 - Fisheries
 - Water works
 - Blue growth sectors:
 - Blue Biotech
 - Deep-Sea Mining
 - Energy from water
 - Marine culture
 - Recreation & Tourism
 - Blue growth sectors, experimental pilots (indicative)

- Energy**
- North Sea Energy Grid
 - existing international high-voltage cable
 - new international high-voltage cable (indicative)
 - existing international gas pipe
 - new international gas pipe
 - Use of "local" oil and gas infrastructure
 - Exploration multi-purpose wind farms
 - existing / licensed / alternative application
 - wind farms - lease or agreement for lease
 - Multi-purpose wind farms from installation:
 - in designated wind energy area
 - in which area inside 12-mile zone

- Transport & Mobility**
- Motorways of the Sea
 - Robust traffic separation system (TSS)
 - No-go corridors (indicative)
 - Reservation Willem's Barentsz route
 - Expansion of LNG facilities
 - existing/planned import terminal

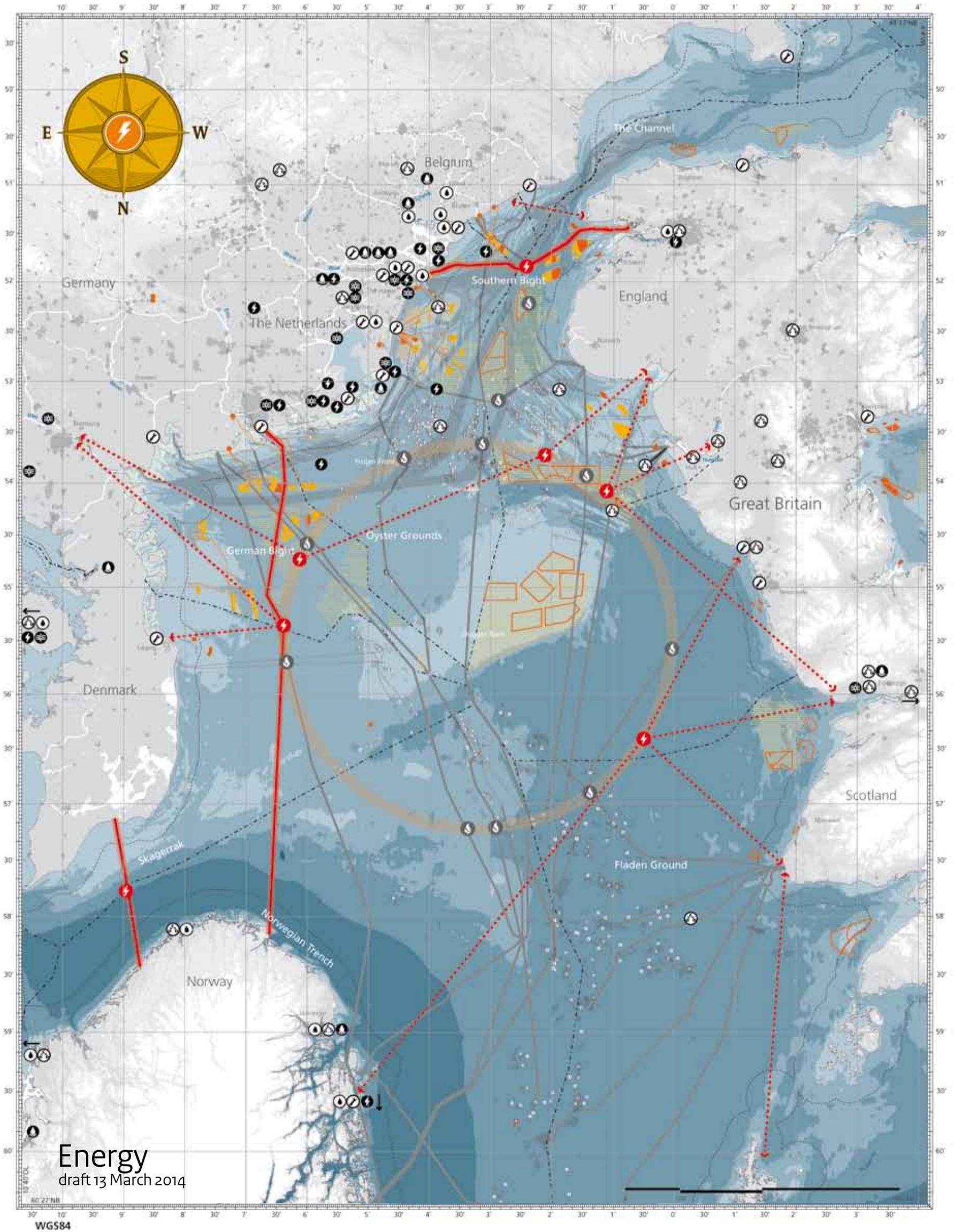
- Nature & Food**
- Ecoscape (indicative)
 - Marine Natura 2000 sites & Ecologically Valuable Areas
 - target group types:
 - sea mammals (SCC)
 - birds (SPI)
 - fish (SCC)
 - benthos (SCC)
 - flyway / migratory birds
 - fish migration to meers
 - Balanced fish stocks (indicative)

- Perception**
- Integral approach 12-mile zone
 - Archaeologically valuable areas
 - Protecting coastal foundation (>20 m below Dutch NAP line)

draft 13 March 2014



WGS84





Tidal Energy



The Eneco biologist

Themed map Energy

Key

Situatie in 2014

Knowledge export – existing sectors

- Conventional energy / natural resources
- Offshore wind and services
- Carbon Capture and Storage (CCS)

Conventional resources - in use

- Gas field / Oil field - producing
- Gas pipe / Oil pipe - in operation
- Installation – above the surface
- Installation – below the surface

Wind energy

- Wind farm: existing/licensed/alternative application
- Wind farm: lease or agreement for lease
- Designated wind energy area
- Search area wind energy inside 12-mile zone
- Wind farm power cable

International network

- Gas pipe
- High-voltage submarine power cable

Tasks and opportunities for 2050

Knowledge export - Blue Growth sectors

- Ocean Energy
- Deep Sea Mining
- Blue Biotech

International network

- Energy Grid
- Ambition International Energy Grid



In 2023, 4,450 MW in wind energy will be installed in the Dutch EEZ. This is about 1,000 wind turbines.

Those turbines take up 1,000 square kilometres net. With a turbine life span of 25 years, the 2013 Energy Agreement for Sustainable Growth will take us to 2048. The 4 large zones outside the territorial waters earmarked for wind energy in 2015 are some 3,000 square kilometres in total, which is about 5% of the space in the Dutch EEZ. If that surface could be completely used to place wind turbines, those areas would have the space to generate around 17,000 MW wind electricity. In practice, this theoretical potential is not achieved. Ecological values, practical impediments (cables and pipes), and space in and around those areas that is being used by other parties limit the potential. The development of (small) oil- and gasfields also plays a large part in this. Where this requires surface platforms, 5 nautical miles of space must be reserved around them, for helicopter traffic.

Wind in a doldrum

If we manage to produce wind energy more affordably at sea, and make it competitive vis-à-vis other sources, we can assume that wind energy will also still “have a future” after 25 years. Only time will tell. The certainty of success can be enhanced if, in the coming years, the market and the government focus on wind energy at sea for the period 2040 – 2070. Technically, basic infrastructure such as cables and connection points for the grid at sea can last longer than 25 years, definitely for the grid that will connect several North Sea

countries. These days, the spatial solution for cheaper wind energy is found in single-purpose use. Could not that space actually yield a lot more energy than 4 to 6 MW per kilometre, though? Besides the power of the wind, cannot we use the power of the sea itself in those same areas?

The price of space

Wave and tidal energy can make an additional contribution, as can (deep) geothermals and the use of the sea’s warmth. Especially wave and tidal energy can be fitted into the wind energy areas. Combining them offers financial, logistic and spatial opportunities. In 2013 an initiative was developed for a wind farm with floating tidal turbines of 100MW per square kilometre – the same amount of space taken up by 1 wind mill that generates, give or take, 6 MW. From a spatial-economic perspective, we should not ignore that opportunity the sea is offering us. The potential of wave and tidal technology can be estimated at around 1,000 to 2,000 MW for the Netherlands by 2030.

Besides making optimal use of space, innovation makes sense only with the prospect of a competitive cost price for the generation of energy. Wind farms at sea should be 40% cheaper by 2023 than they are today, to get to a price of around 10 eurocents/kWh. That is also the price that energy from water will have to achieve by that time, to become competitive. Also this will require innovation; in addition, this will give us a competitive edge over providers of energy from water in other countries. The maritime cluster in the Netherlands has the know-how to realise on the potential and develop an export product. Backing several (sea) horses at once will improve our chances of getting an optimal energy mix from the sea by 2050. There are numerous entrepreneurs who are willing to explore wave and tidal energy.

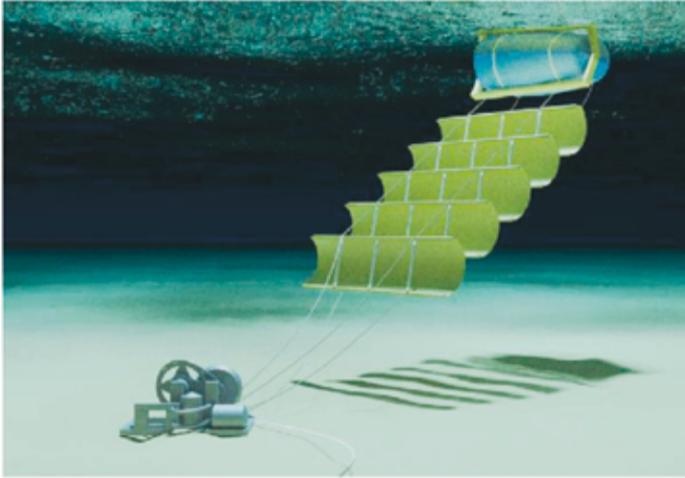
Some want to test in the coastal areas; others are ready to make the jump offshore. There are a number of barriers: limited subsidy options, no experimental plots, restricted licensing possibilities. Doubts about the fish-friendliness of the various technologies and about the impact on the seabed can only be removed through tests on the open sea; moreover, testing will contribute to a further development of the technology so that the best possible yield may be generated from the relatively low (tidal) current and waves.

“Backing several (sea) horses at once will improve our chances of getting an optimal energy mix from the sea by 2050.”

Masterplan

Getting energy from water is also about deep geothermals. Depleted gas field are suited for this. And then there are energy storage and transport: also in those areas, there are many developments, such as Power-2-gas. All things considered, a conclusion of the North Sea 2050 Spatial Agenda has to be that a master plan for the energies of the North Sea between 2030 and 2050 is urgently required. A hefty task, which will require the involvement of many parties and for which many questions remain as yet unanswered. At any rate, the North Sea 2050 Spatial Agenda recommends a social costs and benefits study into combined wind farms at sea. More energy in less space: that will take innovation, daring and an experimental plot at sea. Surely, the Netherlands can remain the world champion in integrated spatial development only if we can make it work on the North Sea?

GOLF ENERGIE IN DE NOORDZEE



SLOW MILL

Golfenergie heeft veel potentieel maar staat nog voor grote uitdagingen. Op Europees niveau wordt zwaar geïnvesteerd in nieuwe technieken om deze goed voorspelbare en schier onuitputtelijke duurzame energiebron te benutten. Innovatie richt zich vooral op de extreme belastingen die tijdens stormen ontstaan en op steeds effectievere methoden om golven te bedwingen. Er liggen grote economische kansen in de synergie tussen windmolens op zee en de Slow Mill, de enige Nederlandse golfenergie technologie die nu ontwikkeld wordt.

www.slowmill.com



In 2015 opent Tidal Testing Centre Grevelingendam haar deuren. Het Testing Centre is speciaal toegerust voor het testen van getidenturbines.

Bent u op zoek naar een testlocatie waar u onder natuurlijke condities uw turbines kunt testen? Meld u dan aan en reserveer nu alvast een plaats in ons testprogramma.

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Geothermal Energy at Sea



RiverToSuccess

EWA

Dutch Energy from Water Association

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Basically, the Dutch relate to their physical environment in terms of manipulability: no divine or natural powers, but man creating his future on the land and in the water. "God created the earth and the Dutch created the Netherlands", this is how the rest of the world views the Dutch. We should take advantage of that power. This opinion is held also by foreign companies, developers and administrators.

The transition to a sustainable, healthy North Sea cannot be realised in the Dutch waters alone. Oil and gas stores in the northern part are greater than ours. Worldwide, activity increasingly will take place in deeper water. Opportunities for the Netherlands to contribute lie in the

technical ability of companies and the knowledge of institutions to do this in the most sustainable way possible. However, we need to be able to show our innovations to prospective foreign parties, either in the Netherlands or on the Dutch sea (or in and on the North Sea). Generating energy from water is such an opportunity. Turbines in the Eastern Scheldt storm surge barrier (Oosterscheldekering) are a first step towards a know-how rollout in Europe. In addition to products and knowledge, there is also the opportunity of exporting Dutch policy or ideas on these topics. Think of safe distances between shipping routes and wind farms, sustainable fishing methods and our consultation system. Accordingly, the 2050 Spatial Agenda also regards the

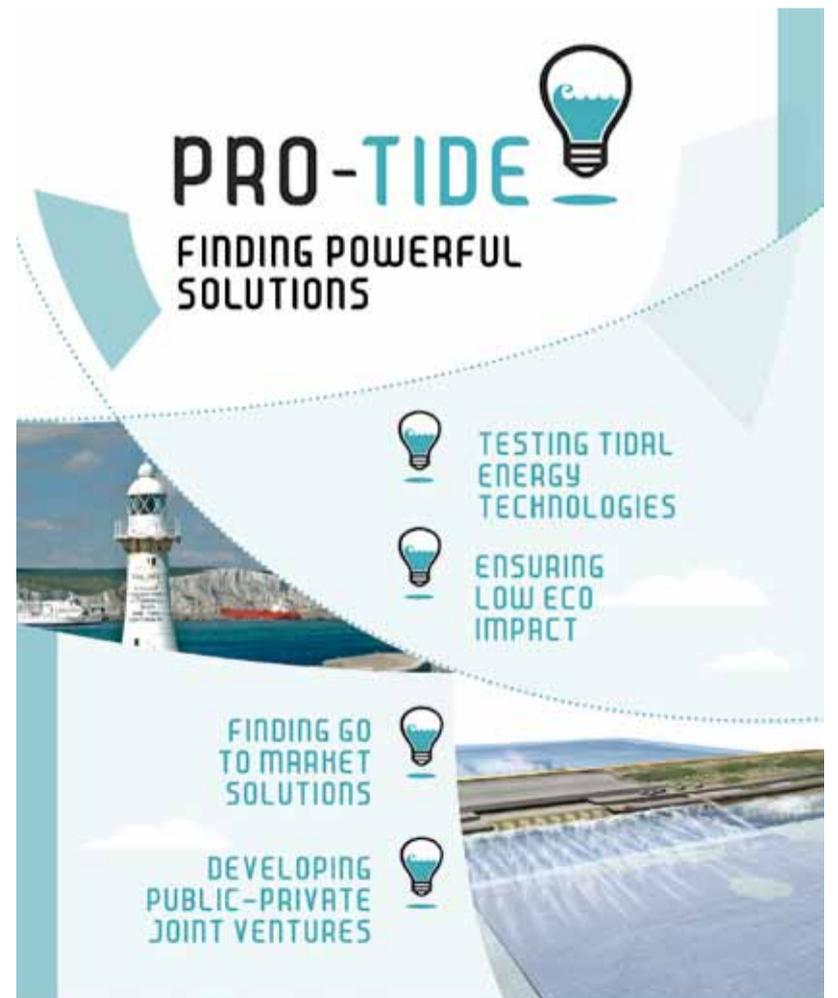
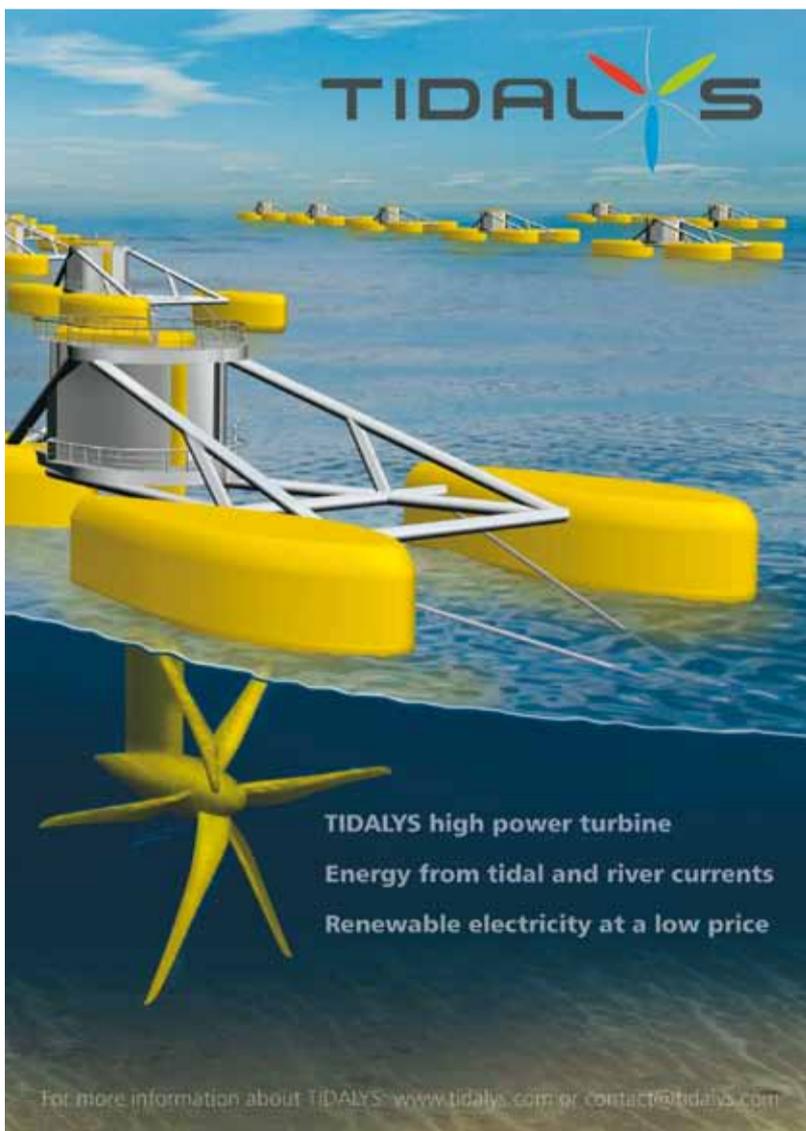
North Sea as an experimental plot and a possibility to export knowledge, products and policy.

This theme warrants more detailed elaboration. Your help is important to achieve this. Interested in the theme? Do you have an interest, an idea that may sell, or do you need help? Come to the workshop 'Expertise in export'.

Expertise in Export is held in the Merenzaal from 14.30 – 15.30 hrs. Be quick – we are looking for the 20 most export-minded congress participants!

Energy innovation and -export

The ninth pillar of the Energy Agreement is focused on energy innovation and -export. The ambition is to have the Netherlands in the top 10 in the global CleanTech Ranking by 2030. This can be achieved by excelling in smart solutions for sustainability, as a result of a favourable climate for investment and growth for existing and new CleanTech companies. With a view to 2020, the Netherlands aims to quadruple the economic value of the clean energy technology chain compared to 2010, by increasing turnover at home and abroad.

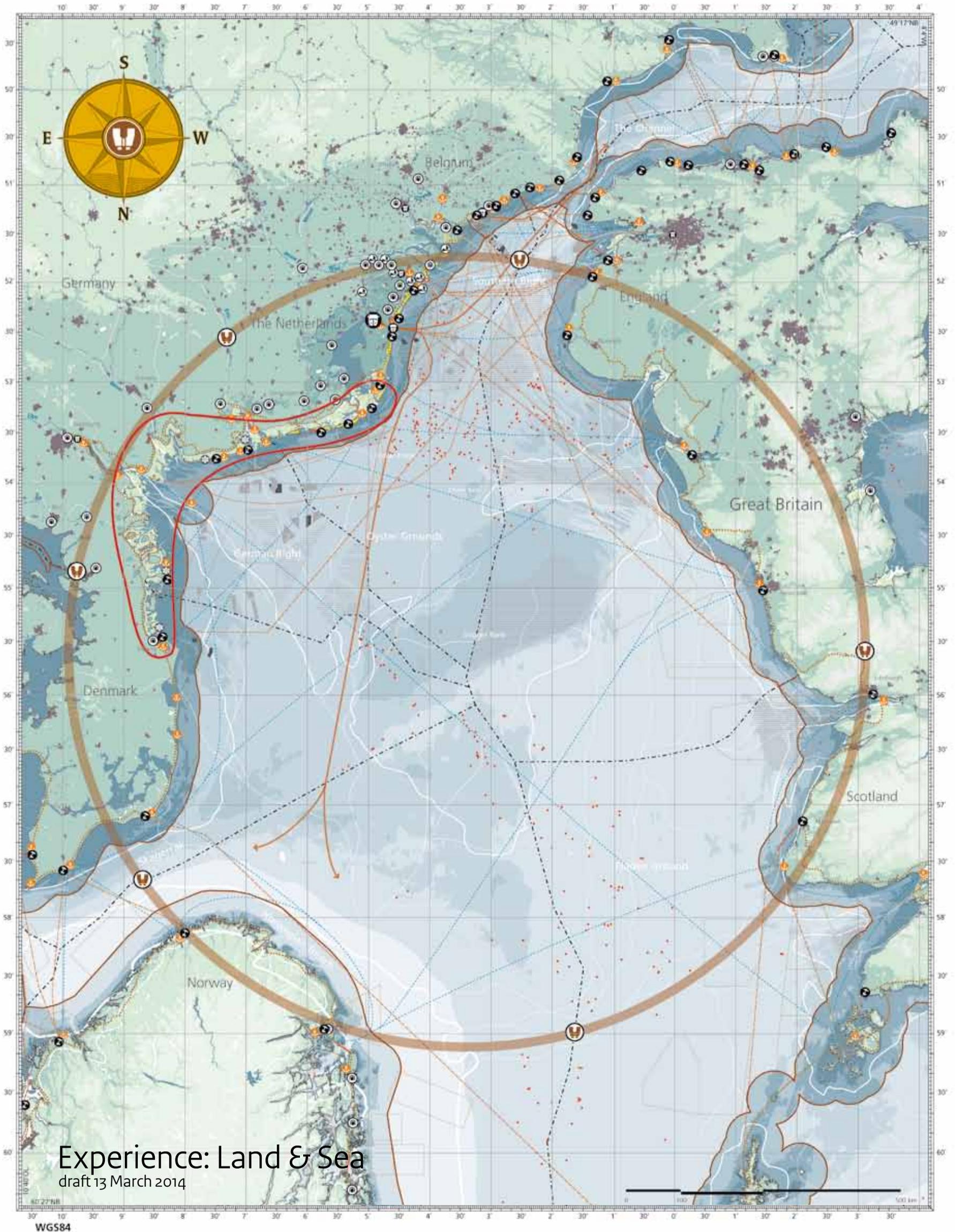


www.pro-tide.eu

Nationale themakaart




Wreck diver





Themed Map Experience: Land & Sea

Key

Situation in 2014

- Knowledge export - existing sectors**
 -  Water works / Building with nature
 -  Shipbuilding
 - Recreation / Tourism**
 -  Cruise terminal
 -  Cruise vessel routes (indicative)
 -  Marina (selection)
 -  Pleasure cruising (indicative)
 -  North Sea Cycle route
 -  Ferries
 -  Activity (Angling)/Fishing & Pleasure cruising (12-mile zone)
 - Living and working at sea**
 -  Oil platform
 -  Wind farm: existing / licensed / Alternative application
 -  Designated wind energy area / lease or agreement for lease / search area
 -  wind energy inside 12-mile zone
 - Cultural history**
 -  Coast line 8000 BC
 -  Coast line 10500 BC
 -  Prehistoric course of rivers
 -  Military
 -  Military areas
 -  Subsoil
 -  Urbanisation
 -  Dunes
 -  Relief:
- >300m 0 12-mile boundary -100m

Tasks and opportunities for 2050

- Recreation / tourism**
 -  Resort
 -  Also winter destination
 -  Wadden Sea coast international cooperation
- Cultural history**
 -  International cooperation tourism and cultural history

People do not live at sea

“When a man does not know what harbour he is making for, no wind is the right wind” is a Dutch saying. This far, the connection between the sea and the land is clear.

Ports are the gateways between the land and the sea: for fishermen, ship owners, the navy, private yachtsmen and women and cruise ships. Shipping routes are linked to harbours and berths for the vessels that sail them. The ports have developed their own dynamics. Fishermen usually go to the ports that are closest to their fishing grounds and the cargo goes to the home market by lorry. Offshore service providers are also opportunist, seeking the ports where their services are required. Other harbours have developed applied infrastructure, such as oil refineries and container terminals. Multi-modal synchronal routes to the European market are a significant challenge in that respect.

Besides those connecting gates, there is a – literal – watershed between the coast and the sea. The land stops at the beach and that is that. A few piers bravely break this boundary, where so many anglers can be found. But we have dunes and dikes to keep the sea out: that remains an important fact in our relationship with the sea for 2050. We have a Delta Commissioner for a reason.

North Sea land

The flip side of this reality is that we do not know the North Sea in all its aspects: as a part of the Netherlands. As a result, some topics do not get much focus in that familiar, commercial North Sea policy of ours. Culture, recreation and tourism are greatly appreciated and government policy guidance does not always seem necessary. The process of the North Sea 2050 Spatial Agenda shows that this is changing. People are seeking access to the sea and its cultural and recreational treasures. Policymaking for our cultural heritage below the surface is gaining momentum with the application for ratification of the UNESCO underwater cultural heritage treaty.

This revival links in to the image of man forming a bridge between the land and the sea; after all, it is man who goes back and forth between the two, like the tide – for work, recreation, or just to get away. As

such, the sea and our maritime heritage are mainly celebrated on land. The Blijdorp Zoo in Rotterdam has a wonderful sea aquarium. Den Bosch has a maritime festival. The town flourished in the 14th century, thanks to shipping: captains from the town would sail the Rhine to Cologne to get wine, to the Baltic to fish for herring and to Liege to stock up on limestone, stone, weapons and brass objects. The theme of connecting the land and the sea is an opportunity to involve the public at large more in the future of the sea. This keeps the maritime nation alive. This is not something the Spatial Agenda has made up, but a fact. In Katwijk, the memory of the bluff-bowed fishing boats that brought the fish ashore until 1913 is kept alive through its annual fishery days.

“All the way to Wageningen and the province of Limburg, people depend on the sea”

Interaction amongst governmental bodies

The dynamics of the “traditional” administrative arrangement are missing from the policy for the North Sea. The state alone is the competent authority. Administrative interaction between the land and the sea takes place mainly in regard to coastal defence, ports and shipping, fisheries and environmental tasks – often, national themes with a lot of local impact. The coastal areas and the islands form an important spawning ground and incubator for future offshore activities. In the salty Oosterschelde, the waters around Texel and the mouth of the Eems river, and the dike bodies and civil engineering structures along the coast, test locations for energy generation from the water and saline crops can be found. The maritime clusters and training facilities are located along the western coastline and around the IJsselmeer. In the coastal provinces, but also all the way to Wageningen and the province of Limburg, people depend on the sea and as such, on the connection between the land and the sea, for their livelihood. This is also where we educate future generations. Didn't the northern provinces develop their Energy Valley for a good reason: surely this will allow for the integrated development of sea and land? The maritime and offshore sectors and their suppliers may be major drivers for future jobs; bringing education in line with the developments at sea where required. The industries together with the educational sector are doing a good job there, along the lines of ‘technically innovative, ecologically sound and commercially profitable’. In higher education, administrative and practical tasks in terms of the use of space and ecological knowledge are becoming increasingly close. And the world of art is on board – now that is profit, surely?

Land-sea connections

According to the analysis in the Spatial Agenda, the fact that the land and the sea are getting closer, but also the administrative bodies whose concern this is or who represent an interest, offers perspectives. That is why the various links have been charted and mapped. By making land-sea connections, new developments will no longer be a threat for the coastal areas, but rather become opportunities to make the Netherlands stronger. There is enough space for new perspectives, to be put forward and to be developed – on condition that entrepreneurs, administrators and citizens become involved in this. The Spatial Agenda relinquishes the idea that the North Sea is simply a body of water in front of the coast. Naturally, most Dutch people don't see much more than what can be seen from the beach. But everything is connected: if you want to stimulate beach recreation this will mean something for your shipping ambitions, for energy, for the quality of the water and for water safety.

Shared interests

We must beware of entrenched ideas or notions and institutional achievements preventing us from truly working together. The idea that, by definition, other stakeholders are competitors and interests are opposed does not help. Some have experience and knowledge of the sea; others take the onshore options as their point of departure. All have different interests, yet feel the same about the North Sea: we want a clean sea, beautiful nature, recreation and economic opportunity. Just to keep the beaches clean is not enough: a clean and healthy sea involves everything man does on the sea and the land. In recent months, the dialogue on connecting the sea and the land has found its place at the Kantine Visafslag at Scheveningen. I warmly invite you to take that dialogue further inland by way of this North Sea Congress.

DE NEDERLANDSE
KUSTWACHT IN DEN HELDER



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DIVE TEAM ZEESTER



At the invitation of the Dutch Cultural Heritage Agency, dive team Zeester, represented by Klaas Koch and myself, participated in the "Spatial agenda 2050" conference.

Through this we tried to combine the interests of the North Sea wreck divers, the cultural historical value of shipwrecks in the North Sea, along with the stakeholders as much as possible. The multifunctional capabilities of the North Sea were investigated and discussed with the stakeholders. We see opportunities to increase cooperation and valuable contacts have been made.

On behalf of Klaas Koch and myself, I would like to express my gratitude to the organizers, participating agencies and other stakeholders. In particular, I want to thank the Dutch Cultural Heritage Agency and Periplus Archeomare for providing us with the opportunity to attend these meetings.

Remy Luttk

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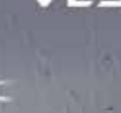
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NEDERLAND EN BELGIË

Een vereniging van gemeenten met kust- en Noordzeebelangen

KIMO Nederland en België zet zich in om de zeeën in goede conditie door te geven aan komende generaties. De organisatie vertegenwoordigt hiertoe haar leden bij nationale en internationale beleidsvorming en overleggen. Op het gebied van economie & duurzaamheid, educatie en zwerfafval voert KIMO Nederland en België projecten en onderzoeken uit. Zij maakt deel uit van KIMO International, een Europese organisatie die 160 kustgemeenten in 16 landen vertegenwoordigt.

www.kimonederlandbelgie.org



Het heden Wij dromen over het jaar 2050. Van een rijke Noordzee, waar het gebruik van de zee in balans is met de prachtige natuur.

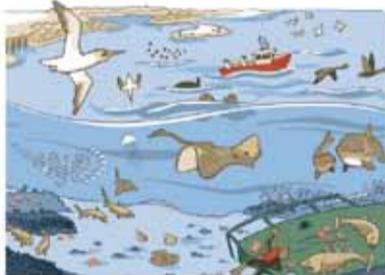
Ons droombeeld:



Duurzame visserij De Noordzee is een bron van verse vis en schelpdieren, die met weinig impact en verschillende duurzame visserijtechnieken worden gevangen.



Duurzame energie De effecten van windmolens op het zeeleven zijn zo klein mogelijk. Er zijn combinaties gemaakt met natuurbescherming, met andere vormen van energieopwekking en met multifunctioneel gebruik.



Ruimte voor natuur In de kustzone is voedsel in overvloed voor vogels, zeehonden en bruinissen. Verder op zee is een rijk dierenleven, de zeebodem is gevarieerd, kwetbare gebieden worden met rust gelaten.



Schone scheepvaart In de Noordzee wordt geen olie meer geloosd, afval wordt netjes in havens afgevoerd. Schepen stoten vrijwel geen CO2 meer uit.

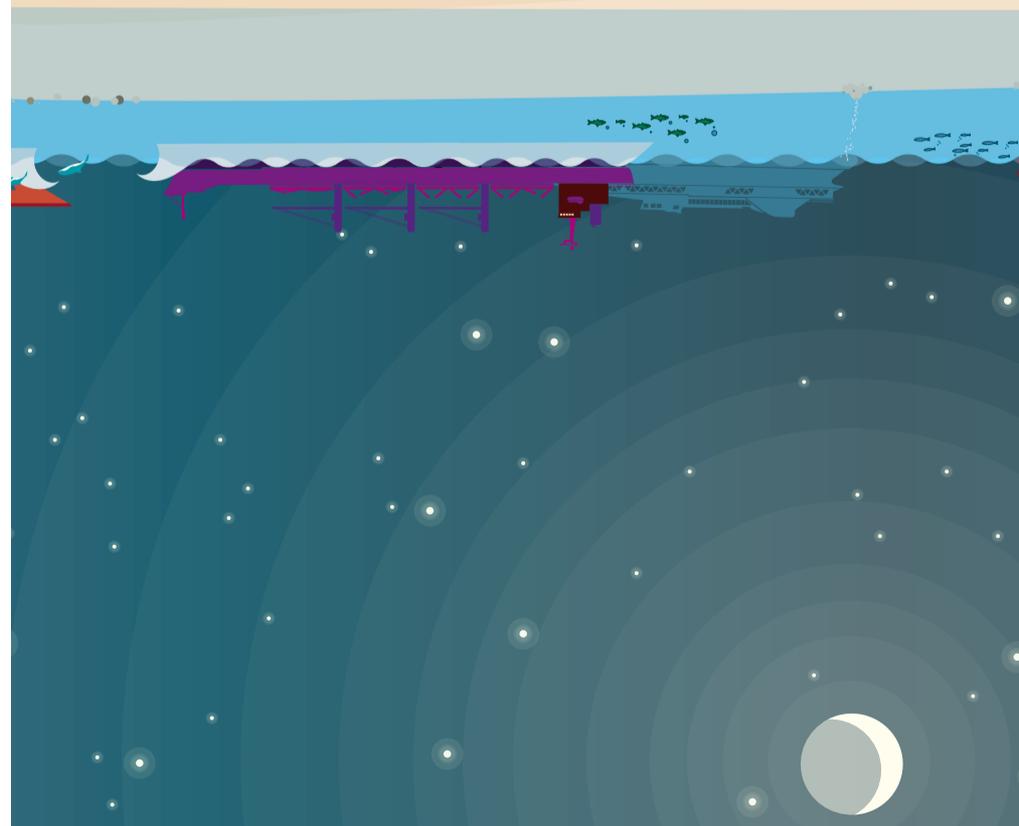
Deze droom werkelijkheid? Stichting De Noordzee ontwikkelt daarom de Blue Vision: een door NGO's uit landen rondom de Noordzee gedeelde visie op een gezond marien ecosysteem en het duurzaam gebruik van de Noordzee. Meer informatie: www.noordzee.nl/vision

The “lock” on the sea must come off



We often hear the sea is under lock and key. In the various North Sea dossiers, initial activity is aimed at solving one challenge at a time. Transport, nature or wind energy, and subsequently to look at potential co-use (non-seabed affecting fishery, for example, or tide and/or wave energy, or aqua culture). “Where activities (of a national interest) stack up in one and the same area, the point of departure is to strive for combined and spatially efficient ways of using the sea, so long as the first initiator experiences no disproportionate harm or bother from this” is the literal

policy text. This is justifiable from the perspective of the various dossiers. Wind farms and other fixed structures at sea require a lot of space; even more because of the buffer zone of 500 meters (max), which is nearly always observed in the Netherlands. Depending on the type of object, additional space may be claimed around that zone: for platforms, a circle of 5 nautical miles to be able to access them by helicopter; for wind farms, a safe distance to shipping routes, with 2 miles taken as a principle starting point. In accordance with the assessment framework for safe





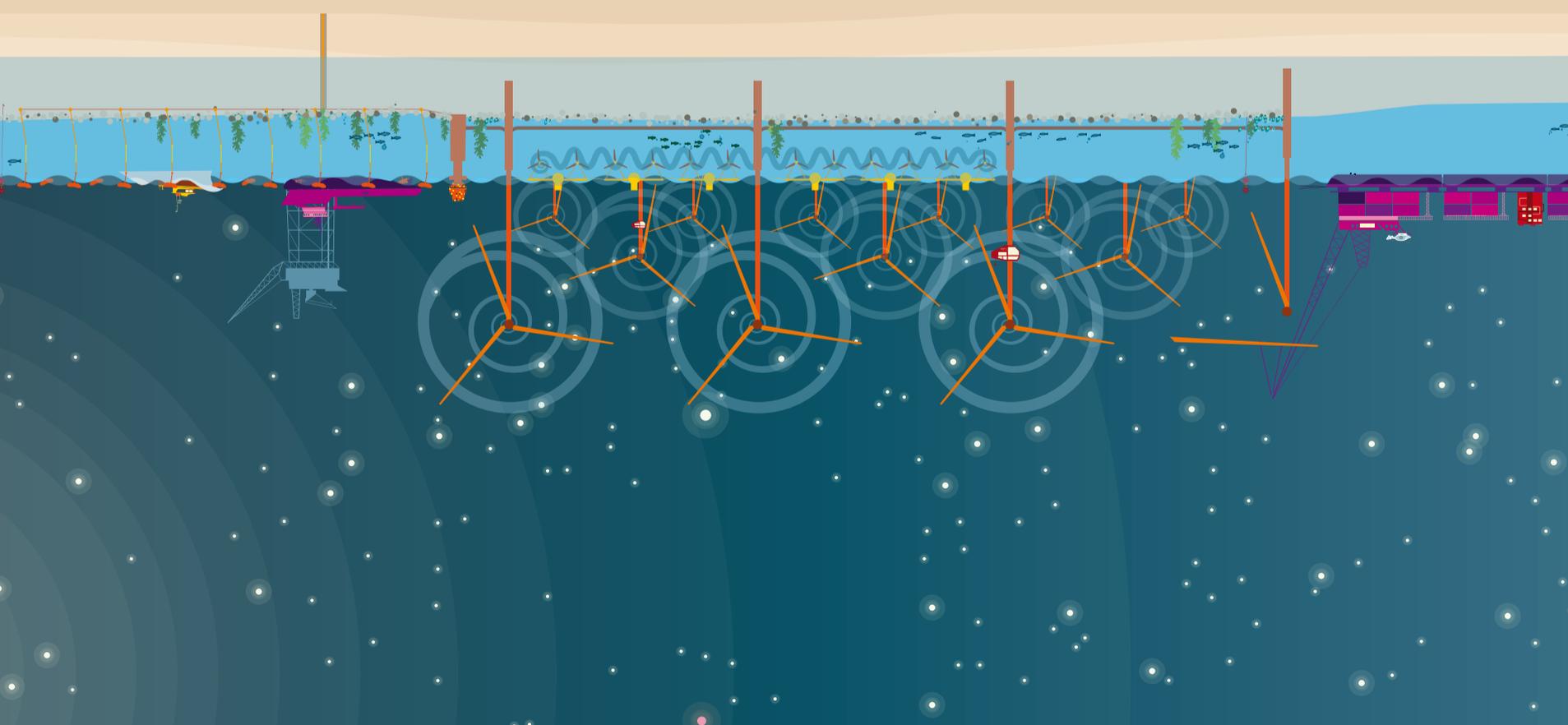
distances, that space may be reduced in consultation with the users of the sea. New economic activities, such as (wind) energy and aqua culture, generate additional traffic from and to locations at sea. This leads to an increase of traffic crossing at sea, with all due risks for man and the environment. Natural reserves, areas for renewable energy and for aqua culture are characterised by a fixed (and large) take-up of space: areas in which other activities can no longer, or not readily, take place. The space taken up by those activities at sea did not used to be empty

and unused: these were areas that used to be available for fishing, ships passing through, recreational and military purposes. Single-purpose take-up of space pushes out other forms of use, specifically (pleasure) vessels. In this way, the policy seems to result in conflicts of interest instead of in collaboration. Based on this methodology we are indeed compelled to establish that there is little space, and that hardly anything is possible or allowed these days. Free space at sea has become a scarce commodity. To develop things together has become more of a must than a pleasure:

the current approach has put the sea under lock and key. Multi-purpose enjoyment of the wealth of the North Sea in 2050 is based on integral planning in space and time, by combining functions. Protecting the ecologically most significant areas for recovery of the system, and setting apart space for safe and smooth shipping, fishing and recreation requires the smart handling of locations where combined functionalities may produce added value. Energy areas at sea where several technologies are combined form our picture of the North Sea for 2050. That will increase sustainable

yield and reduce logistics costs. The (temporary) setting apart of areas for a single purpose will become superfluous and will only still happen where the vulnerability of or safety in those areas demands it.

Multi-purpose use: it seems to be a Gordian knot. The North Sea 2050 Spatial Agenda spots the advantages of unravelling it, as well as the struggle. Accordingly, this dilemma was chosen as the theme on which to ask the Council of Children's advice.



Colophon & Disclaimer

This is a publication of the Dutch Ministries of Infrastructure and the Environment and Economic Affairs, on the occasion of the North Sea 2050 Spatial Agenda Congress held in The Hague on March 13 2014.

Disclaimer: nothing in this newspaper had any statutory implication or policy status whatsoever. It is what it is. A true discussion paper, to inspire, and to reflect the state of play in the stakeholder dialogue and should, after reading be used for Fish&Chips.

In that sense the content is merely a reflection of one, although important, step to come towards an integrated analysis of the potential of the North Sea. Please do not quote or copy text from this publication, without prior consent of the authors. Be aware that fact and fiction easily get mixed up, if the context of the message is not well understood or taken away.

This issue has been translated to share with other countries and all those with an interest in maritime spatial planning, integrated maritime policy, stakeholder management, Blue Growth and connecting sea and land.

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