# COMMONS ARE THE FUTURE

## it's a wonderful sea / 2010

oceans are wonderful, largely unknown territories. Their spatial qualities different, location-time-specific matter. are overwhelmingly obvious and their continuous and variable dynamics If we are prepared to validate this specificity, it seems more than probasociety: common interest. Everybody has the right to use the sea, to enjoy those for landlocked projects will be required. common-pool resources are sensitive to problems like pollution, wastage and overuse. This is why the sea needs to be properly managed as

### avidly ogling the sea / 2010 the encroaching urge to appropriate marine areas

their adjacent coastal states, and this is an ongoing trend. By issuing its 'Law of the Sea' in 1982, the United Nations has allocated parts, based on its constituent ecosystems. sovereign rights and obligations relating to the first 12 nautical miles Transcending the existing state structure will allow the implementation of 'territorial sea' and the next 12 nautical miles of 'contiguous zone' of an international, coherent land, water and seas policy. Within a coorto coastal states worldwide. Beyond the outer limit of these zones, dinating European policy framework, the territorial zone remains to be 'exclusive economic zones' (EEZ) have been designated, which run to an administered regionally. outer limit set at maximum 350 nautical miles into the sea measured from the land/sea limit (baseline). Within these EEZ, coastal states have been allocated certain rights and obligations of research, exploitation, maintenance and management of natural sources found within the head of water, on the seabed and in the upper subsoil layer. At the moment, about 30% of the surface of oceans and seas on earth is situated within 2010 Maintand Territorial Sea Contiguous Zone the EEZ of a sovereign coastal state, and the impact of this EEZ-status on a global level is strategically important. Those parts of seas and oceans located just outside these 3 delimited areas are called 'international waters' or 'high seas'. These remaining 70% are (to put it simply) intended for collective use; this part can be defined as a collective space on a worldwide scale. However, a collective status that has not been allocated

or recognized explicitly is all too often demoted to the vulnerable status of 'freely available'... Clearly, maritime spatial planning is on the rise worldwide. Policy concerning this matter is evolving steadily. While Europe is setting out the The 'Future Commons' project advocates conservation of the sea as a developers are already proposing their first initiatives.

## sustainable development" sounds a lot like its credo for planning on

the sea deserves due care / 2010

the need for a global vision

managing the sea, a vision of the future / 2070 the 'Future Commons' map

Oceans and seas are an immeasurable space, differing from the land in a EU-Maritime Commons (EU-MC) Zone. This vision for a new EU-Marimany respects, yet like all open space on earth, this immense area is time Commons Zone was generated by design-based research and as a increasingly under pressure. The increasing rate of land wastage is just result this map features an absolute first: a specific example of simultaone of the factors that will cause the demand to make open sea-space neous spatial planning for the marine area off the coast and the adjacent available for development ever more urgent. Throughout the centuries, inland coastal zone area. It proposes to bring the former EEZ, including maritime law has kept on connecting ever-larger maritime areas with the 'contiguous zone', under management of the European Union and consequently to divide it into larger, supra-national natural-jurisdictional

MARITIME COMMONS (i.c. EU-MC) the Sea Convention (UNCLOS, 1982) anno 2010 combined with the principles

basic outlines for its future marine and maritime policy options, project common and recognition of its growing importance, strongly regulated by the European Union. for managing the effects of climate change in coastal zones. 'Planning' for the most part implicates accepting development, which, With this exploration of an updated concept of commons, the present in terms of spatial use, translates as 'appropriation of extra space'. project intends to fuel the ethical debate on marine spatial planning, But Europe's intention to "guarantee economic growth in a climate of starting from a basic socio-ecologically inspired concern.

## TYPES OF COMMONS

In order to facilitate the debate on commons and the development of a future vision of commons, it is necessary first to define them. What constitutes a common? This map - to be read as a Nolli-map of the commons on land, in the coastal area and at sea - provides a survey of the density of commons on land and at sea, on a regional scale, with gradations of black proportionate with the presence of commons. The blacker the surface, the more commons are established in that area, the whiter, the less commons are present, at this scale. Earlier research into commons as they were in 2010 led us to a definition and classification of commons on a regional level and a method for mapping commons. The present map of commons in 2070, which is based on this research, provides a vision of a potential evolution of commons over the coming 6 decades.

If, on the other hand, official policy were to fail to support the develop-

All legends of this 'Future Commons' map correspond with P. Barnes' natural commons: the new porous hybrid coastal areas - dunes, shallow classification of commons: natural commons, commons originating from intertidal areas and temporary wet zones - are designated as commons the community and commons originating from culture. because they are of common interest for natural coastal defence and the The starting point is a conviction that preservation and development of conservation of biodiversity and ecosystems. commons are essential in order to support positive societal evolution and to meet challenges such as climate change, migration toward coastal community commons: junctions and landing points of, for instance, the areas and energy. This map shows the number of commons functioning electric network, established on former traditional energy production at a regional level in 2070 (in black), as a result of policies actively sup-sites (such as obsolete thermal plants) are commons, airports are parportive of the development of commons. It focuses on, respectively, commons on land, commons in the coastal area and maritime commons. commons, because of their ecosystem services to the community (water

ment of commons, this would entail a loss of commons, an objectionable

whitening of the map, completely contradictory to the ambitions of the cultural commons: besides their value as nature reserves, the newly starting point.



natural commons: forests provide, amongst other beneficiary effects, biodiversity and a reduction of CO2-emissions. They serve as recreation areas for the new population of coastal communities. Due to their regenerative function, forests are highly rated as commons. (The forests natural commons: thanks to the fact that the European Union has transmarked on this map are the most recent ones, planted on the occasion of formed the EEZ into a European Union Maritime Commons (EU-MC), the a big reforestation campaign for a low-carbon society).

community commons: infrastructures required for the functioning of the sea floor, the water column and the surface of the sea are all part of community (ports, road networks, power lines, wireless networks...) are the commons. Strict policies preclude any disturbance or exhaustion of also considered to be commons. Because of repeated crises in the public the existing ecosystems (sand banks, sea floor life...) sector and its service providers, the tendency to privatise traffic systems The swarm symbolises future evolutions in natural elements and is has been reversed in favour of a significant upgrading of the role of public reserving the necessary physical and mental space for these evolutions. In 2070, the use of community commons is free once more. cultural commons: historical castles, churches, cemeteries, cooling sludge processing installations and clusters for generating renewable towers, windmills and turbines are designated as commons, as are energy, which also harbour some forms of mariculture and other func-

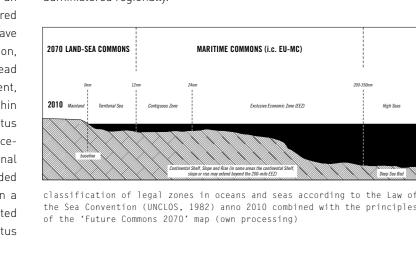
commons on the maritime coastal zone / 2070

belfries (Unesco Heritage).



About three quarters of the earth's surface consist of water. Seas and land, whereas planning and designing for marine areas is in fact a very reveal a cosmic dimension. In addition, the sea has this unique value to ble that for maritime spatial planning, different planning principles from its benefits. Just like forests, water and the atmosphere, the sea can be The actual planning process needs to be backed up by existing fundaconsidered as a 'common-pool resource', a natural common resource, mental scientific research, but it also requires global critical vision-dequasi-free for anybody to enjoy. Because they are inexhaustible, natural fining research, in which an important role is reserved for design-based

> On the verso side, the 'Future Commons' map shows what may, by 2070, have become a new European Union 'Southern North Sea' Zone, namely



Securing the sea as a common good guarantees consolidation of its social, economic, environmental and spatial significance in a dynamic whole. In addition, establishing additional commons on land - inland extensions of the sea - will create opportunities and favourable conditions

arisen waterscapes also function as significant relaxation and recreation

zones for inhabitants of the coastland. Historical wreck clusters and

the sea horizon belong to the same category of commons as cultural

extract of the maritime commons from the 'Future Commons' map

threat of privatization of maritime areas has been averted, for the benefit

of the common good. Natural structures and elements on and beneath

community commons: the infrastructures required to monitor these ecosystems are part of the commons. Navigation support infrastructure,

tions, are commons. The Channel Tunnel, floating educational leisure

activities, a sand motor and other large scale infrastructure works for

coastal protection are elements of common interest. Energy networks

are partially privatised but as they are essential for transportation from

the clustered renewable energy production units to the coast, they also

are a part of the commons; the government also invests in them. The

cloud symbolizes those future elements required for the functioning of

society in 2070 which can only be established at sea or on a sea floor

cultural commons: just like seascapes, underwater archaeological sites and shipwrecks are part of the commons. The sea monster symbolizes

the unknown and the immaterial. It also stands for the new values that

t is likely that in the future more marine cultural commons will be

will be important on a cultural level to society in 2070.

## functions has been installed on land.

'Managed retreat' entails replacing hard infrastructural coastal defences ting of new mud flats and salt marshes, with incubation- and research with natural defences: landscapes adapted to absorb or moderate the centres for the new coastal communities as well as a concentration of

North Sea and coastal area' research project outlines a situation where

This future vision for 2070 has translated 'managed retreat' into diverse coastal defence measures treat existing ecosystems and their corresponding supply, regulatory and cultural services (fishery, the supply of lands, depolderings, extruded winter beds, lagoons and brackish lakes drinking water, recreation, education, research...) with maximum consiand ponds, intertidal zones with creek areas. This illustration shows only deration. This exploration of a potential future vision for 2070 distinguia speculative indication of their size, location and role - for a more specishes three ways of dealing with space within the Belgian part of the North fic account of these principles, further research is necessary. Sea, the coastal area and the polders, in the light of climate change. The regions situated at a higher altitude, beyond the limits of the polder new temporary inland water spaces, flooding either partially or comareas, are new commons: forest areas resulting from the reforestation pletely, forming new commons. programme. At lower altitudes, a 'managed retreat' of the coastline has been esta
depoldered territory used as an artificial testing ground for intensive, blished in certain areas as a new form of coastal defence. strictly regulated mari- en aquaculture. In order to safeguard marine ecosystems, a number of temporary, reusable

The 'Future Commons' map made by the 'Magnificent Surroundings # grounds further inland.

number of measures to induce moderation and adaptation.

NEW COMMONS

BY 'MANAGED RETREAT'

As the **lagoon** is directly connected with the sea, it contains sea water as well as brackish water. This is a naturally depoldered quiet area, consis-

The immanent climate change has already made it necessary to take a This strategy of using, for example, saltmarsh lagoons in the interme-

floating constructions have been installed at sea. In order to prevent estuaries and marshlands maintain a balance in the freshwater/salt-

offloading any detrimental functions onto the sea and its ecosystems, it water ratio for the corresponding ecosystems. Certain forms of sporadic

has been ensured that, if at all possible, the infrastructure for all kinds of temporary residential or professional occupation that leave only a mini-

diate zone as a safety valve will reduce the risk of flooding of the higher

mal footprint, hardly affect the rhythm of nature and are fully in accor-

new forms of agriculture and market gardening on this brackish soil.

dance with the logic of this unstable land, are viable here.

Over time, certain coastal areas may get flooded either completely or just partially. What matters is that inhabitants learn to live with the unpredictable rhythm of these floodings and temporal encroachment upon the land by the sea.

### CARTOGRAPHY OF COMMONS AND TRANSPORT NETWORKS 2070

has not verified the information within this product or quality assured it.

2010, based on R. Buckminster Fuller's Dymaxion World Map (Labarque P.

In 1942, Richard Buckminster Fuller used his Dymaxion Projection represents it as six times its actual size.

In accordance with this future vision, these marine commons will be agenda, meticulously striving for a more balanced use of natural resources and respect for the dynamics and evolution of nature and species in oceans and seas. centred on a low-carbon Europe in 2070.

maritime freight transport network in a low-carbon Europe maritime cargo transport network in 2070: introduction of 'Intermediary

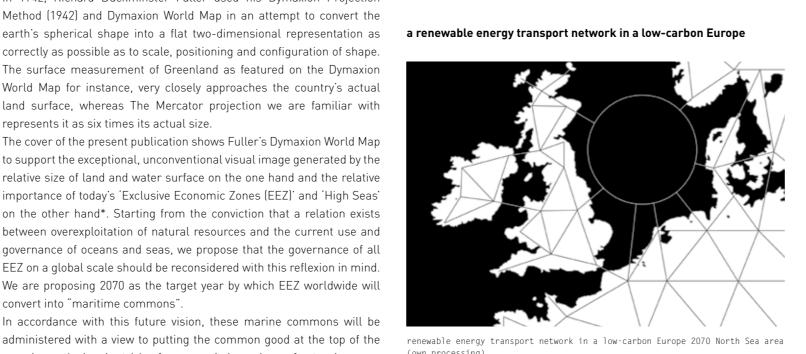
In 2070, the share of global maritime freight transport to the North Seaports along the 'North-South Pendulum Connector'\*\* and the 'Transoceanic Pendulum Connector' (J.P. Rodrigue 2008) can be absorbed by a a minimal deviation from shipping routes (Rodrigue, J.P., 1998-2010)

Hub Terminals' (own processing)



Method (1942) and Dymaxion World Map in an attempt to convert the earth's spherical shape into a flat two-dimensional representation as a renewable energy transport network in a low-carbon Europe correctly as possible as to scale, positioning and configuration of shape. The surface measurement of Greenland as featured on the Dymaxion World Map for instance, very closely approaches the country's actual land surface, whereas The Mercator projection we are familiar with The cover of the present publication shows Fuller's Dymaxion World Map to support the exceptional, unconventional visual image generated by the relative size of land and water surface on the one hand and the relative importance of today's 'Exclusive Economic Zones (EEZ)' and 'High Seas' on the other hand\*. Starting from the conviction that a relation exists between overexploitation of natural resources and the current use and governance of oceans and seas, we propose that the governance of all EEZ on a global scale should be reconsidered with this reflexion in mind. We are proposing 2070 as the target year by which EEZ worldwide will

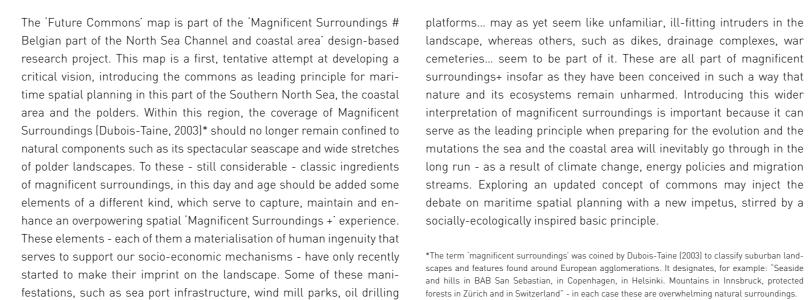
ew generation of large-scale low-carbon mega ships. Given their enormous size and limited manoeuvrability, these super vehicles will, instead of docking in inland harbour facilities, deliver their loads at 'Intermediary Hub Terminals' at sea, whence new forms of transport will take over (for instance: some variant of short sea shipping) to carry freight to the traditional ports or to hubs of underground logistic networks. 'Intermediary Hub Terminals'\*\*\* could for instance be established on the Atlantic shipping route at the crossing of the North-South Pendulum and the Transoceanic Pendulum connector, near the Channel bottleneck, to service, amongst others, Le Havre. As the hypothesis of such 'Intermediary Hub Terminals' is rather premature - their potential impact needs to be researched more in-depth - this future vision 2070 proposes a floating 'Intermediary Hub Terminal' on the other side of the Channel and near the Southern North Sea harbours, i.e. Rotterdam and Antwerp. This hub would also serve a series of shipping routes to important ports such as Zebruges, Ghent-Terneuzen, Duinkerken, Calais, Dover, Harwich and Port of London and would, because of its position in the respectfully governed new North Sea Commons, be conceived as a disassemblable



on a critical reflexion about our current and future global networks of the 2070 low-carbon Europe has also established large scale centralised communication, energy provision, transport, etc. We think it would be renewable energy production poles at those locations where they promost relevant to take them into consideration in this theoretical exercise duce the highest yield. As soon as energy losses from transport can be reduced to a minimum, a new intercontinental energy transport network becomes a possibility. For Europe, this would mean increased efforts to generate energy from water, wind, biomass, geothermal heat and the sun, while North Africa would concentrate on enhancing its solar energy production capacities, possibly also for export. The 2070 future vision translates this hypothesis into a more efficient localisation of blue energy production units at sea and in coastal areas (wind, tidal streams, gulf stream, osmosis plants and other potential energy sources still in the future) on the one hand, and the realisation of

> tp://www.vliz.be/NL/home/&p=show&id=460, dated 09.12.2010. his 'Emerging Global Maritime Freight transport System' Rodrique distinguishes seven 'main ansshipment markets', interconnected via the 'Circum Equatorial Route, the 'North-South Pendum Connector' and the 'Transoceanic Pendulum Connector'. One of these is the area surrounding the Channel, the North Sea and the Baltic Sea, on the outer edge of the North-South Pendulum Connector and the Transoceanic Pendulum Connector. (Rodrigue, J.P., 1998-2010) \*\*\* These 'Intermediary Hub Terminals' act as exchanges within global maritime networks. These cial cargo can be pooled and transferred to a number of different shipping routes, effectively functio-

## MAGNIFICENT SURROUNDINGS +



The 'Future Commons' map is part of the 'Magnificent Surroundings # platforms... may as yet seem like unfamiliar, ill-fitting intruders in the Belgian part of the North Sea Channel and coastal area' design-based landscape, whereas others, such as dikes, drainage complexes, war research project. This map is a first, tentative attempt at developing a cemeteries... seem to be part of it. These are all part of magnificent critical vision, introducing the commons as leading principle for maritime spatial planning in this part of the Southern North Sea, the coastal nature and its ecosystems remain unharmed. Introducing this wider area and the polders. Within this region, the coverage of Magnificent interpretation of magnificent surroundings is important because it can Surroundings (Dubois-Taine, 2003)\* should no longer remain confined to serve as the leading principle when preparing for the evolution and the natural components such as its spectacular seascape and wide stretches mutations the sea and the coastal area will inevitably go through in the of polder landscapes. To these - still considerable - classic ingredients long run - as a result of climate change, energy policies and migration of magnificent surroundings, in this day and age should be added some streams. Exploring an updated concept of commons may inject the elements of a different kind, which serve to capture, maintain and enserves to support our socio-economic mechanisms - have only recently \*The term 'magnificent surroundings' was coined by Dubois-Taine (2003) to classify suburban land-







hance an overpowering spatial 'Magnificent Surroundings +' experience. socially-ecologically inspired basic principle. These elements - each of them a materialisation of human ingenuity that started to make their imprint on the landscape. Some of these mani-

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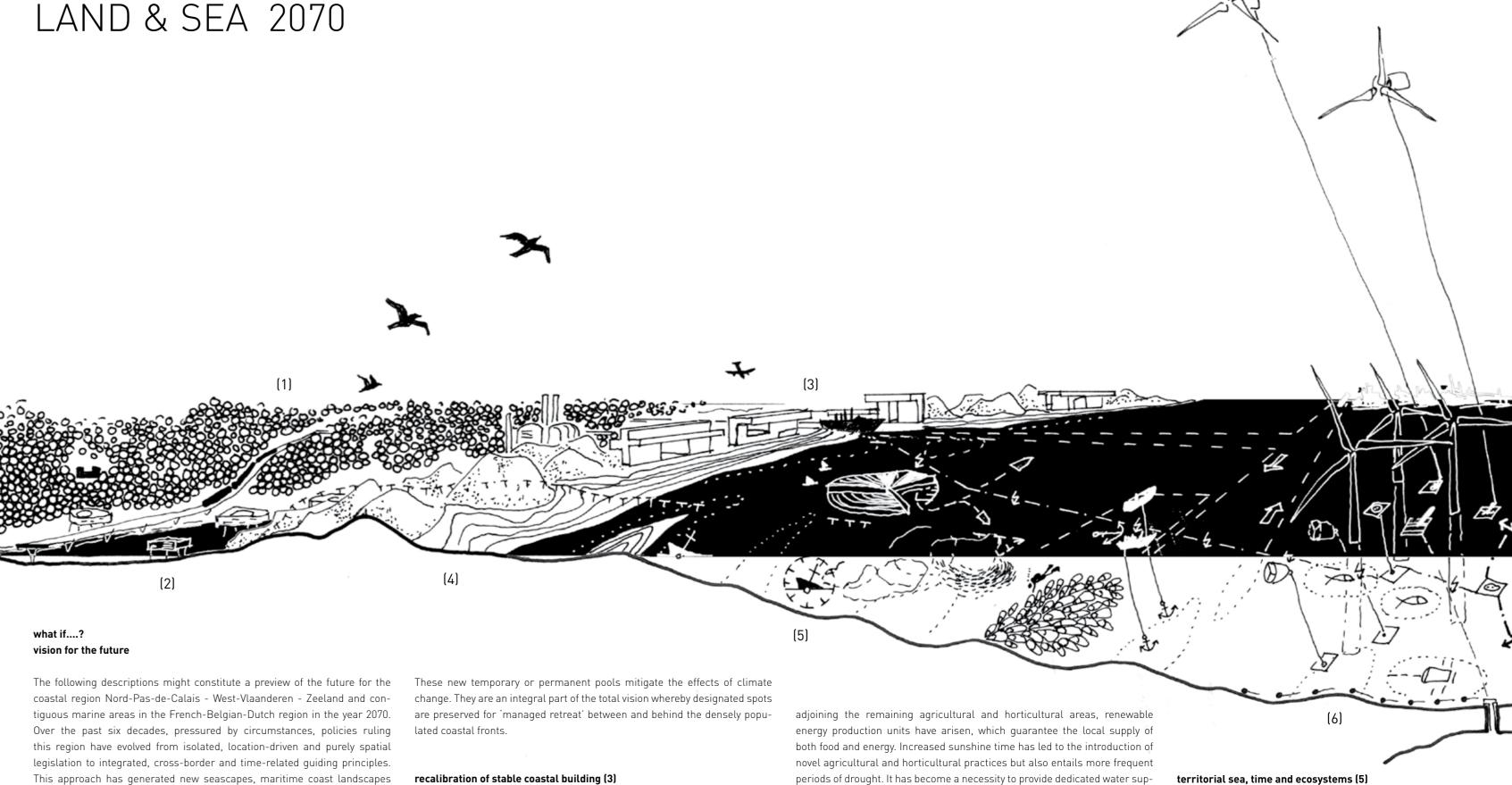
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a changing meteorology, the multiple variations of a coastline -, and, with all that, to have a pervasive sense

of chaos and cosmos, chaosmos." (Kenneth White 2006)

### and coastal landscapes, which have lost none of the characteristics of has now undergone significant recalibration. Under pressure from climate areas, which are mutually supporting each other. change, increasing population growth and energy crises, in the course of the 2010's and 20's the foundations were established for the development of specific climate change resistant coastal front construction, within a novel parcel cohesion of maritime coastal zone and marine areas (4) In order to be able to fulfill low carbon society's objectives, a programme structure and with greater density and energy efficiency. In-depth remodeling

2070, living to the rhythm of the sea in the maritime coastal zone; man adapting his lifestyle to the tides; situation at low tide (above) and situation

references: literature and maps: ALLAERT G.(2010), De Kusttram bouwt mee aan een duurzame mobiele samenleving, in 'De Kusttram Een veelzijdige kijk op de ontwikkeling van de Belgische kust', Uitg.

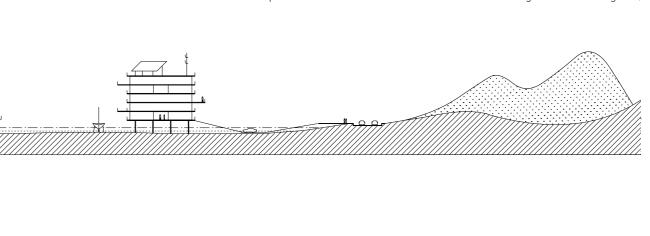
coast and polder areas from the inland regions. As these forests are publicly wetlands, 'low-carbon' coastal conglomerates have now emerged. accessible, they are commons and function as inland counterparts of the

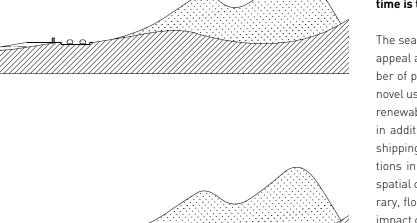
magnificent surroundings.

adjacent marine commons.

reforestation of stable hinterland (1)

living to the rhythm of the sea on the maritime coastal zone (2) Climate change has caused average sunshine time to increase, which has terrestrial coastal region with marine protected areas.





and landscape areas are earning them a lot of respect from steadily increasing numbers of visitors. rent units in coastal areas by physically connecting nature reserves in the

# balance in the permanently monitored ecosystems.

ply areas. This has meant turning the former linear coastal structure into a What was called the 'Atlantic Wall' at the beginning of the 21st century loose succession of tightly clustered built-up areas alternated with natural In the territorial part of the North Sea, a strong concentration of diverse coastal area functionalities, marine functionalities and vulnerable ecosystems has by necessity led to the replacement of the existing location driven regional planning by time driven spatial management. For the protection of ecosystems, cultural heritage and other commons, a number of 'restricted evolutive zones' were designated during the turnaround

1:200 000

densities of the commons

visit **www.magnificentsurroundings.org** for the latest information

### of large-scale reforestation was implemented off the coastal area, starting and the integration of a diverse range of public and semi-public functions and the integration of a diverse range of public and semi-public functions. around 2015. Today, anno 2070, a densely wooded forest area separates all have generated a more space. Their usefulness as coastal ment of users of this large-scale common have proved to be crucial to the defense, their water regulating properties and intrinsic value as recreational implementation of such time driven spatial management. maritime coastal zone and stable landlocked area complementing each another Attempts are being made to encourage the formation of larger-sized cohe-

Today, anno 2070, the former Exclusive Economical Zones (EEZ) have evolved given tourism a boost. A number of residential and recreational infrastruc- Maritime heritage at sea and on land has thrived as a result of evolving to become the European Maritime Commons Zone (EU-MC), administered More commons have been established in the coastal area itself, in the shape tural clusters have developed and as a consequence an optimised public protection policies. Ship wrecks, for instance, have either been transformed by the European Union, in accordance with policy based on 'limits to growth'. of water regulating wetlands in the transition zone between land and sea. transport structure has been established. In the margins of these regions, into quiet spots in the generally crowded recreational areas on the seashore, Regulations against overfishing, loss of biodiversity, a significant shifting of or become strict 'no-go zones', depending on the requirements to maintain a fishing grounds caused by climate change and strict European standards have ultimately led to a scale down in fishery. Temporal and geographical restrictions were also imposed on ecological fish farms, and some oyster banks were established. As sand and gravel became increasingly scarce, exploitation of raw materials has been restricted. Aided by heightening general interest in the environment and successive economic crises in the The sea is an exceptionally dynamic environment and a common. Its growing first decades of the century, this scarcity has led to a strict European mining appeal and its increasingly intensive use have prompted us to set out a numpolicy. Today, anno 2070, mining activities are only permitted for those purpober of preconditions necessary to preserve its uniqueness. A broad range of ses for which no re-use alternatives have been found. The offshore windmill novel uses (recreation, production units for marine culture and for generating parks from the 2010's-20' have been interconnected and connected by the renewable energy, anchorage for port activities and navigation) has appeared North Sea Ring to the European Low Carbon Super Grid. Production units for in addition to more traditional uses of the sea such as navigation, fishery, the generation of renewable energy have been maximally concentrated and shipping, transport and mining. All of these have to conform to tight restric- interconnected and are now combined with, among other things, sea-farms, tions in order to safeguard ecosystems and to preserve the commons. All work and monitoring platforms, transformation and connection platforms. In

ports or sea harbours redundant.

### spatial constructions connected with these activities are, by necessity temporary, floating structures, built in such a manner that they have zero negative Experiments have been run with floating 'Intermediate HUB-terminals' that impact on the marine environment and their ecological footprint remains low. will enable the European port infrastructure to accommodate super ships Technological ingenuity has been a crucial factor in meeting these precondi- using renewable energy. This makes further extensions to existing inland tions for preserving the commons.

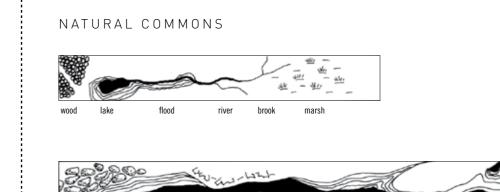
KEY TO SYMBOLS

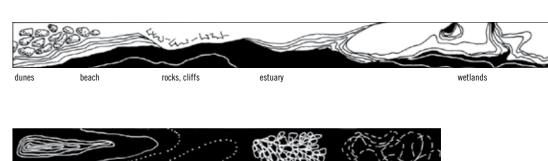
Just like forests, water and the atmosphere, oceans and seas can be considered as 'common-pool resources', 'free' natural common resources. As they are inexhaustible, common-pool resources are sensitive to problems like pollution, spillage and overuse. This is why the sea has to be administered as a valuable common good, a common. The elements detailed in the legend for

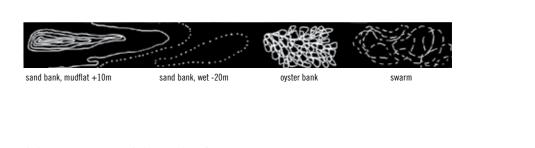
the 'Future Commons' map (land, coastal area and sea) have been classified

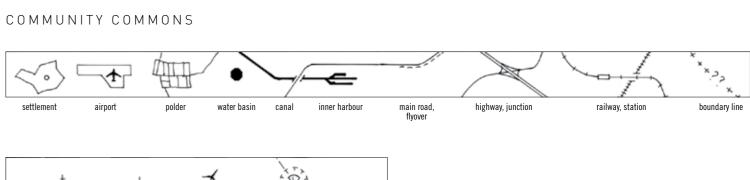
according to their categories, after P. Barnes (2006): natural commons,

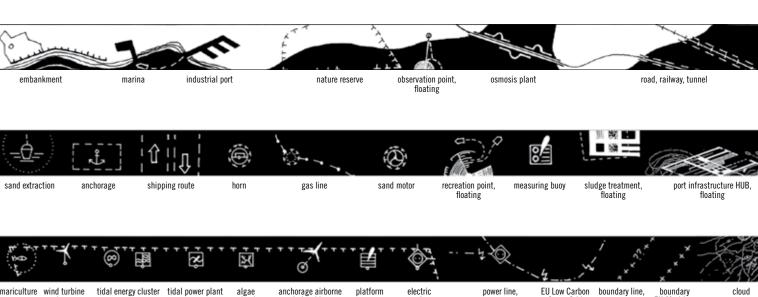
community-generated commons or culture-generated commons.











CULTURAL COMMONS

