

CHATHAM PARTNERS

Offshore Wind in High Seas

Unlimited potential beyond national control?

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Dear Reader

With this report, we intend to contribute to the discussion around utilising the full potential of offshore wind. We suggest that decision-makers in the offshore wind industry should ask themselves:

Could it be technically and economically feasible to install offshore wind farms in the High Seas in 20 or 30 years' time?

If this is possible, we should ask government representatives to start working to implement an international law regime as soon as possible, allowing for the utilisation of the High Seas for offshore wind.

Regardless of technical and economic feasibility, the current legal framework will otherwise prohibit the utilisation of offshore wind farms beyond the Exclusive Economic Zones. Past examples show that negotiation of the required international agreements can easily take 20 years or longer.

We hope you enjoy the read!



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I. Background

The recently published “Offshore Wind Outlook 2019” by the “International Energy Agency” (IEA) demonstrates the incredible potential of offshore wind energy for global decarbonisation. One of its suggestions is that only by utilising the best sites (defined as those as close as 60km to shore and at water depth of 60m or less), current global electricity demand could be more than met. Further from shore (up to 300km) and in deeper waters, the demand could theoretically be met 11-fold by 2040.

These figures are the result of an impressively comprehensive study conducted by Imperial College London. Without criticising or delimiting the value of these findings, a look beyond the scope of this study brings to light additional, forward-thinking opportunities to be considered by the industry.

This paper outlines possible reasons for relevance of the area known as the “High Seas” for offshore wind farms (II.). Next, it outlines the law regime currently applicable to offshore wind farms (III.) and explains why a comprehensive framework would be necessary to develop wind farms in High Seas (III.). Lastly, it suggests why working towards a viable framework for offshore wind farms in High Seas sooner rather than later is warranted, if offshore wind in High Seas should come to play a role if only in the distant future (V.).

II. Potential relevance of the High Seas for offshore wind

A first glance at the potential of offshore wind within 300km off the shores indicates there will be sufficient space in the next few years to come. But does this mean that the potential outside of Exclusive Economic Zones, in High Seas, will remain irrelevant?

1. Opportunities for offshore wind growth

Large opportunities for offshore wind vests in accessing deep water areas through floating foundation technology and grid independence through production of green hydrogen.

1.1 Floating foundations

Opportunities for offshore wind growth depend to a large extent on the development of floating foundation technology for offshore wind farms. This is also true for the potential outlined by the IEA. While the overall potential in shallow waters may amount to a production of 51,000 TWh p.a., this amount increases 8-fold to 420,000 TWh p.a. under consideration of deep water locations within 300km off coasts. Almost two thirds of the oceans do not lie within this distance and, so far, have not been accounted for as potential sites for offshore wind.

1.2 Green hydrogen

Another significant opportunity lies with the use of electrolyzers for the transformation of electricity into hydrogen. One factor allowing access to sites further offshore is the potential independence from electricity grid connections and potentially with larger independence from grid-bound electricity markets.

Beyond that, hydrogen may impact demand. The current global hydrogen consumption amounts to around 70 Million tonnes (Mt) and, according to suggestions by the World Hydrogen Council, could increase to nearly 550 mT by 2050 in decarbonisation efforts. The production of green hydrogen (i.e. from electricity) requires approximately 40 TWh per Mt. This means that only replacing the current grey hydrogen with green hydrogen would require an additional production of nearly 3,000 TWh of electricity, fulfilling the potential suggested by the World Hydrogen Council would mean 22,000 TWh of electricity produced for green hydrogen. However, the true potential of hydrogen in fighting climate change has only recently re-entered discussions. Therefore, predictions on potential production beyond 2040 are clearly difficult to make. The demand could be less, but it might just as well prove to be larger.

2. Challenges for utilising the nearshore offshore wind potential

The challenges of utilising the potential for offshore wind are predominantly environmental conflicts, other conflicts of use, onshore grid development, policy development and general climate conditions (particularly in very cold regions).

2.1 Environmental Concerns

Increasing attention is paid to environmental concerns surrounding offshore wind farms. This must be seen as a positive development for the industry, as a better understanding of environmental impacts will foster long term acceptance and simply a positive footprint overall.

But a great many of the more complex ecosystems are found in coastal areas. At the same time, due to their proximity to coasts and thus intense human activity, such ecosystems are often endangered. While consideration can be given to certain protective effects offshore wind farms can have on the environment, mostly by restricting other uses like fishing, environmental protection may restrict nearshore utilisation in certain areas.

As an example, it seems hardly conceivable that the entire North Sea would be used for offshore wind farms due to the impact this would have on the environment. Regardless of certain areas being protected, the cumulative effects of using all other space for offshore wind would take a significant toll on, say, bird populations.

It should be considered that environmental protection will prohibit utilisation of the full (theoretical) potential of offshore wind in coastal areas.

2.2 Conflicts of Use

While ecosystems and the according protections are a challenge closer to shores, they are not the only conflict of use. As with offshore wind, all resources the oceans offer are easier and more economical to access closer to the shores. This goes for fishing but also exploitation of minerals.

Due to the proximity to industries, centres of production and consumption and inhabitation in general, marine traffic, military and industrial use is higher closer to the shores. In addition, tourism and local recreational use can limit the willingness to accept visual impairment and restrict access of near shore areas.

2.3 Onshore Grid Development

Another important factor is onshore grid development. The IEA rightly suggests that areas like Europe require careful planning of onshore grids to keep up the pace with offshore wind development. By the same token, other regions that may be considered to have a significant potential for offshore wind production still lack access to relevant grids overall. This applies to large parts of the potential indicated, for example, off the coasts of Alaska, Russia, Africa and Australia. Producing electricity from offshore wind in such regions would require either very significant build out of transmission grids, development of consumption hubs in closer proximity and/or tapping into the potential of hydrogen production. But will these locations then necessarily be more economic than the High Seas?

2.4 Willingness and policies

Another limiting factor revolves around the lack of political support in regions of offshore wind potential. To name one example, the IEA includes a potential of more than 83 GWh annual production off the Russian coasts, which, to date, lacks national policies for utilisation of offshore wind.

But even in jurisdictions where offshore wind is seen generally positive, not least the environmental concerns pointed out above may limit the de facto below the theoretical potential of offshore wind build-out.

2.5 General climate conditions (cold regions)

A number of the regions that are particularly promising for offshore wind growth (mainly due to high capacity factors) lie in very cold regions. While certain challenges and costs related to such circumstances are currently being explored it remains to be seen whether offshore wind is feasible in regions closer to the poles. The challenges increase for offshore wind farms, as not only does ice-throw and a decline in productivity due to icing become problematic, but floating icebergs may pose threats to plants and their maintenance, too.

3. Reasons to consider the High Seas offshore wind potential

Bearing all this in mind, the actual potential of nearshore offshore wind (in this context defined as within 300km from the shore) is presumably considerably less than the theoretical potential. There is certainly enough space for offshore wind to play a significant role in fighting climate change. But, based on the above, the key question is:

Will there be enough usable space for offshore wind close to the shores (i.e. in the Exclusive Economic Zones) in the next 20 or 30 years?

If the answer to this is uncertain, it is worth considering the High Seas.

Obviously the costs will increase with further distance to the shore. Also, there are clearly many areas in the High Seas that do not offer conditions feasible for offshore wind production. But there are advantages, the most important being potential abundance of space. This could allow for scaling both of individual plants and of wind farms making even further distances from shore economically feasible. Besides scaling, accessing areas with high capacity factors could add to the benefits of offshore wind further from shore.

While potentially far-fetched under current economic parameters, a future liquid hydrogen market could also change logics of locating offshore wind farms. One idea would be to refuel ships running on hydrogen offshore along shipping routes on the High Seas. Another possible improvement could come with green hydrogen becoming a commodity traded in liquid markets across the world. In this case, production in strategic locations allowing supply and distribution to various areas of consumption may lead to re-thinking as to the location of production centres.

4. Summary: Will the High Seas become attractive for offshore wind?

The previous elaborations allow the following conclusions:

- ▶ The potential for offshore wind further from shore is likely to increase due to:
 - ▷ possibility to deploy offshore wind farms in deep waters due to development of floating foundation technology; and
 - ▷ demand for green hydrogen leading to independence from proximity to electricity grids.
- ▶ Even if the full nearshore (<300 km) potential for offshore wind of about 420,000 TWH appears vast, the actually realisable potential will likely be much less due to:
 - ▷ environmental concerns and other conflicts of use in nearshore areas;
 - ▷ lack of capacity of existing onshore grids and/or far distances to grids and consumption;
 - ▷ promising areas under control of countries that are not supportive of offshore wind; and
 - ▷ challenges to use offshore wind in difficult environments, particularly in cold regions.
- ▶ In turn, vast scalability and potentially attractive capacity factors could contribute to the economic feasibility of offshore in the High Seas. Another driver could be a change in the logic for locating offshore wind farms due to green hydrogen becoming a tradable commodity.

III. Legal implications of Offshore Wind farm Projects on the High Seas

The legal challenges to using offshore wind farms in the High Seas stem from its legal qualification that is based on international treaties (for a broader overview of the different classifications of water areas please refer to the ANNEX). In the Exclusive Economic Zones (EEZ), exclusivity allows the relevant state to prohibit but also to authorise and govern otherwise the installation and operation of offshore wind farms; this does not apply to the High Seas.

1. United Nations Convention on the Law of the Sea (UNCLOS)

While there is dispute around its actual legal quality, the UNCLOS treaty is generally regarded to bindingly govern the rights and obligations of states in the High Seas. This treaty is the outcome of the third United Nations Conference on the Law of the Sea between 1973 and 1982. It regulates the rights and obligations of nations with respect to the world's oceans and provides guidelines for businesses, the environment and natural resources. UNCLOS came into force in 1994 and currently has 167 states and the European Union as members.

In general, private entities are neither bound nor privileged by UNCLOS. Any rights by private entities in relation to the High Seas would have to be granted by a member state of UNCLOS. Such so-called "derivative" rights can only be granted to the extent the respective member state itself has such rights and/or privileges in the relevant area. In the EEZ only one member state is privileged (and responsible). Therefore, in the EEZ, a member state can grant a private entity its exclusivity to exploit a certain area, because the state enjoys such exclusivity based on the UNCLOS treaty. This is not true for the High Seas.

Both for the right to use a certain area of the High Seas for offshore wind but also for questions of jurisdiction and ownership this entails significant challenges:

2. Right of use

The right to use a specific part of the High Seas implies a claim for exclusivity. If one entity uses that part of the seas, no other can. Therefore, such right can only be granted by a state to a private operator if the state itself possesses such right under UNCLOS. The predominant principle applying in the High Seas is the principle of "Freedom of the Seas".

2.1 Freedom of the High Seas

The maritime zone of the High Seas is defined by the principle of freedom and the absence of any national sovereignty. It is questionable whether the current legal framework provides a sufficient basis for the construction and operation of offshore wind farms. While UNCLOS contains regulations with regard to activities by the coastal State for the economic exploitation and exploration of the EEZ and specifically mentions the production of energy from wind (Art. 56 para.1(a)), such specific provision does not exist for the High Seas. Thus, in order to develop offshore wind farms on the High Seas under the current regime, its development must be an execution of the general freedoms of the seas granted in the general clause of Art. 87 UNCLOS.

Art. 87 UNCLOS stipulates that the High Seas are open to all states, whether coastal or land-locked. Freedom of the High Seas is exercised under the conditions laid down by the Convention and by other rules of international law. More specifically, it comprises – both for coastal and land-locked states – the freedom of overflight, the freedom of fishing, the freedom of scientific research, the freedom to lay submarine cables and pipelines, the freedom of navigation and the freedom to construct artificial islands and other installations permitted under international law. Especially the last two freedoms could potentially provide a legal basis for the development of offshore wind farms on the High Seas.

a) Freedom of navigation

Freedom of navigation (Art. 87 par. 1 lit. a UNCLOS) is a principle of customary international law, meaning that ships flying the flag of any sovereign state shall not suffer interference from other states, apart from the exceptions provided for in international law. The International Law Commission (ILC) in 1955 agreed to abolish a draft definition that defined a ship as “a device capable of traversing the sea, but not the air space, with the equipment and crew appropriate for the purpose for which it is used.” The Convention of the High Seas of 1958 states as follows: “Each state shall fix the conditions for the grant of its nationality to ships, for registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between State and the ship; in particular, the State must effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.”

Today, the Convention does not provide a concrete definition of “ship” and “vessel”. In most international conventions both terms are defined in accordance with the purpose for which it is used. An offshore wind farm is classified as a type of unit, but not as a “ship”, since its main function relates to exploration and exploitation of energy, not navigation.

Therefore, simply assigning any nation state's flag to an offshore wind farm, will most likely not be enough for allowing its operation and taking space in the High Seas.

b) Freedom to build artificial islands and other installations

The Convention explicitly allows construction of artificial islands and other installations (Art. 87 par. 1 lit d) UNCLOS). It does not provide a specific definition for the terms "artificial island", "installations" or "structures" and gives no guidance as to the characteristics in terms of size and permanence that an object must possess in order to be classified as an "installation" or "structure". A distinction between "artificial islands" and "installations" can be made by stating that the category "artificial islands" is less specific than "installations". Whereas artificial islands can be constructed for any purpose, installations are usually constructed to exploit and manage natural resources for economic purposes. In this light, offshore wind farms being used for the exploitation of energy may be categorized as "installations and structures". Under that aspect, offshore wind turbines could generally be allowed on the High Seas.

c) Non-exhaustiveness

The list of High Seas Freedoms under Art. 87 para. I UNCLOS is non-exhaustive ('*inter alia*'). Therefore, any lawful use of the seas is generally permitted even if it is not specifically mentioned. This includes the construction and the operation of offshore wind farms.

d) Limitation: 'Due regard'-Standard

Art. 87 para. II UNCLOS contains an important restriction to the free use of the High Seas: All freedoms can only be exercised with due regard for the interests of other states in their exercise of the freedom of the High Seas and the rights under the Convention with respect to activities in the Area (i.e. exploitation of the seabed). Thus, states are bound to refrain from acts that might adversely affect the use of the High Seas by other states (and according derivatives). A balancing of interests in the use of the sea is required. Unfortunately, due to the obvious lack of detail, the exact meaning of the so-called 'due regard' standard is unclear regarding the operation of offshore wind farms. In particular, it is unclear how exactly other state's interests have to be taken into consideration and how a balance of interests can be created in the case of a conflict.

The fact that offshore wind power plants do fall under the term "installations" in Art. 87 par. 1 lit. d) UNCLOS could mean that this clause generally allows offshore wind farms also in the High Seas. If such installations are generally permitted, this could mean that

they must generally be considered an acceptable burden to other state's freedom of the seas. Consequently, any member state of UNCLOS could then allow a private entity to make use of its right and install offshore wind farms anywhere in the High Seas.

However, offshore wind power plants are not only individual installations. The construction of an offshore wind farm currently requires significant space. If the potential were to be realised, further scaling would be required, which means that clusters in High Seas would likely take up several hundred square kilometres. Operators of offshore wind farms will require that others do not use that space or only to a limited extent. Shipping, fishing and the exploitation of other resources within areas of offshore wind farms would not be feasible or, at least, require safeguarding certain minimum distances to the offshore wind power plants and related infrastructure.

This means that the impact of large-scale offshore wind farms is significantly larger than that of an individual installation or artificial island. Such island or installation requires the space it covers, plus maybe a certain distance around it for safety. An offshore wind farm restricts others from the use of much vaster areas. Therefore, it requires exclusive use of space. It is therefore likely that members of UNCLOS would consider construction of offshore wind farm as restricting their freedom within the High Seas to a much larger degree than acceptable under the "due-regard" principle under art. 87 par. 2 UNCLOS. If this is the case, the limitation to the freedom of the seas will apply regardless of whether offshore wind farms were potentially flagged as ships or constructed as permitted offshore installations or under reference to other more general principles of freedom under Art. 87 par. 1 UNCLOS.

Consequently, no state could claim the freedom to build offshore wind farms on larger areas by reference to its freedom on the High Seas (unless agreed by all member states of UNCLOS).

Therefore, no state can grant such right to a private entity either.

2.2 Jurisdiction and ownership

Another hindrance following the lack of exclusivity in the High Seas is the question of jurisdiction and applicable law. This is not only relevant in order to determine standards (e.g. regarding environmental and labour protection), but also for protection of ownership and taxation.

In the EEZ, coastal states can generally extend the application of national laws to installations built and operated in their respective EEZ within the limits permitted under UNCLOS. Most states that have offshore wind farms built in their EEZ have done so for their nature protection laws and/or enacted specific laws governing offshore wind (and other) installations in their EEZ.

While the application of civil codes is not always similarly extended to the EEZ, the concept of ownership in any EEZ typically follows the jurisdiction of the state claiming the exclusivity for the area. This extension of civil codes may lack explicit according order, but then the question is: What else should apply? Due to the exclusivity of a state's governance in its EEZ, other civil codes and jurisdictions are naturally excluded.

The same is not true for the High Seas. In absence of common rules (like the Flagship Principle for ships), the Freedom of the High Seas conflict with the concept of any particular state claiming jurisdiction over a specific part of the EEZ and, as a consequence, protection of ownership established under its rules. While certain governance can be enforced on the basis of registration of a corporate vehicle, such governance can only bind such entity. This means that a state can request a corporate entity registered in its jurisdiction to observe certain laws even in the High Seas. However, such state cannot legally enforce against other states (or entities operating under such state's jurisdiction) to respect its concepts and laws relating to ownership outside its own jurisdiction.

This means that, under the current regime, states and private entities will find it difficult to protect their ownership both by concept and by jurisdiction in the High Seas.

Consequently, to name only one challenge, securing financing to build an offshore wind farm in the High Seas will prove to be difficult for lack of securities.

3. Conclusion: Use of High Seas for Offshore Wind currently not feasible

The legal framework currently has a prohibitive effect on offshore wind farms in the High Seas:

- ▶ Generally, UNCLOS member states can allow the construction of certain installations in the High Seas. However, all uses must duly regard the rights and freedoms of all other member states. It is very likely that an offshore wind farm that claims exclusive use over a larger area in the High Seas would conflict with the freedoms of the other member states of UNCLOS to free use of the High Seas.
- ▶ For certain objects, namely ships and vessels, UNCLOS governs extension of jurisdiction and ownership into the High Seas. However, this currently does not apply for installations in the High Seas. Therefore, investment and financing for offshore wind farms in the High Seas would likely be impossible due to uncertainties related to protection of ownership and jurisdiction.



IV. Comprehensive framework required

In order to make offshore wind farms feasible on the High Seas, the implementation of additional regulation is required. As discussed previously, such regulation would need to address (i) right of use as well as (ii) ownership and (iii) jurisdiction.

In order to understand the possible and required regulation, it is worth taking a look at existing (and/or currently negotiated) frameworks.

1. Relevant references

1.1 Flag State Principle

The Flag State Principle ensures sovereign control on ships. The provision on ships in Art. 92 and 94 UNCLOS stipulates that ships shall sail under the flag of one State only and shall be subject to its exclusive jurisdiction on the High Seas. This pertains to adherence to standards of such country, but also to questions of ownership and financing. As stated above, offshore wind farms have to be classified as “installations” or “structures” since their main purpose is the exploration and exploitation of energy rather than navigation.

It is easily conceivable that a principle like the flag state principle could be applied to installations in the High Seas. This could solve the question of ownership and jurisdiction. However, it would not solve the question regarding the exclusive right to use a specific area.

1.2 Fishing

The fish catch in the High Seas is regulated by international organisations referred to as Regional Fisheries Management Organisations (RFMOs) and their member countries. Depending on the form of the RMFO, it is either dedicated to the sustainable management of fishery resources in a particular region of international waters or of highly migratory species. Annual negotiations are held to determine which states are allowed to catch how much of a species. This is consistent with international maritime law. Art. 118 UNCLOS encourages states to cooperate. Although these organisations are also facing trouble with managing fisheries due to piracy and illegal, unreported and unregulated fishery, their existence shows a possible path to regulating the right of use.

The concept of annual quota can work for fishing but is unlikely to serve as an example for offshore wind. Offshore wind farms require a long, reliable and exclusive allowance for harvesting a non-depleting resource in a specific area. This differs significantly from fishing, for which a consensus on amounts and shares of harvest each year is necessary because overfishing will deplete the resource

for everyone. Exclusive access to a specific area, however, is not needed. The needs for regulation are therefore very different.

1.3 Seabed mineral resources – International Seabed Authority

An example of resource and area management in the High Seas can be found in Chapter XI of UNCLOS. In this section, the Convention provides a regime for the exploration and exploitation of seabed mineral resources in the Area (i.e. also within High Seas). It is overseen by the International Seabed Authority (ISA). The Convention mandates the ISA to administer the resources for the benefit of human mankind and envisages the development of detailed rules and regulations for the prevention of damage from mineral exploration and extraction activities. The ISA is empowered to conclude contracts with public and private organisations as well as other entities authorizing them to explore and exploit specified areas on the deep seabed. While highly disputed both in the process of its setting up and in its practice, the establishment of the ISA shows a way to address the exploration and exploitation of resources in areas beyond national jurisdiction.

In principle, this regime is an example of governing the right of use in relation to resources in areas beyond national jurisdiction. However, the difference is that offshore wind requires resources that do not deplete. However, the site (and all resources related thereto) becomes available for anybody else's and/or any other use after the end of the offshore wind farm's life. This is different for mineral mining: Typically, the minerals can be mined once and are subsequently depleted from that site. While it can be used otherwise subsequently, the minerals themselves will not be reproduced in the foreseeable future.

1.4 Conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction

A further potential tool of governance in the High Seas is currently under negotiation. In August 2019 the “Intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction” published a first (so-called ‘zero-‘) draft text of an agreement concerning its subject (Draft BNJ-Agreement).

While likely to face further and significant negotiation and potentially amendment, the Draft BNJ-Agreement foresees several interesting elements of governance for areas beyond national jurisdiction:

- ▶ It foresees a mechanism for sharing of benefits. It applies both for monetary and non-monetary benefits, like sharing of information and data.

- ▶ It includes a regime to implement so-called “area-based management tools”. They mostly serve the protection of marine biology in certain areas. Upon suggestion of a member state, the conference (see below) may adopt a resolution, classifying an area in a certain form or with certain qualities (including restrictions), and each member state must then ensure that such parameters are respected under their jurisdiction and control.
- ▶ It sets minimum requirements for environmental impact assessments to be observed by the member states.
- ▶ It suggests to establish (i) a conference, (ii) scientific and technical bodies and (iii) a secretariat in order to govern, observe and implement the BNJ-Agreement.

While the primary goal of the BNJ-Agreement is the protection of marine biodiversity, many of its elements and mechanisms could be applied to offshore wind farms in the High Seas. This applies particularly to adopt a resolution, ctools”, which could zone parts of the Highs Seas for offshore wind.



2. Consequences for a regime governing offshore wind in High Seas

Existing frameworks show how the different areas that require regulation in order to allow offshore wind farms in the High Seas could be governed:

- ▶ For questions of ownership and jurisdiction, it would be rather simple to find a regime governing offshore wind farms. For example, the flagship principle applicable to ships could also be extended to installations. To avoid creation of new territories through jurisdiction, an element of time could be included, i.e. installations have to be temporary (e.g. up to 30 years).
- ▶ In terms of the right of use, there are certain parallels in the governance of sea minerals and the draft BNJ-Agreement. Different mechanisms could be implemented.
 - ▷ First, it seems conceivable that states could simply apply for construction of an offshore wind farm with a centralised authority, which then grants or denies such application based on a set of parameters.
 - ▷ Furthermore, it may be beneficial to apply concepts like “area-based management tools”. Specific areas could be assigned to the development of offshore wind farms. Private entities could then apply for their use. Known mechanisms could be implemented to ensure that the entity which has secured an area must also develop it.
- ▶ The governance could follow several paths. The draft of the BNJ-Agreement sees four alternatives for its secretariat. The role may be fulfilled by (i) a new authority, (ii) an NGO to be selected by the members of the Conference, (iii) the UN Division for Ocean Affairs or Office of Legal Affairs or (iv) the ISA. Given significant criticism the ISA has recently been facing for its practice, it is more likely that another authority will be used or established. This could then be a further potential body to also govern offshore wind in the high Seas.

Altogether, considering the existence of the flagship principle and, in particular, ongoing negotiation of the BNJ-Agreement, many alternatives are indicated and exist on how to develop a framework that would allow sufficient legal certainty to develop offshore wind farms in the High Seas.

V. If a framework is needed: Start Now!

It seems most likely (and most appropriate, too) that a new regime would be drafted within the UNCLOS Framework, as was the case with the draft BNJ-Agreement. However, the examples of the establishment of Chapter XI and of the BNJ-Agreement demonstrate that a time-span of 20 years would not be unusual to develop a framework applicable under UNCLOS.

1. The process behind establishment of ISA

The history of the development of the ISA shows how lengthy and controversial the introduction of such an institution can be.

During the negotiations on UNCLOS III, which began in 1973, questions around the possibility and regulation of deep seabed mining first gained momentum. It quickly became clear that Part XI of the Draft of the Convention, i.e. the provisions regarding deep seabed mining and the establishment of the ISA, was the most contentious section and, thus, the most difficult to negotiate. In 1982, the United States and other key industrialised States considered it contrary to vital economic and security interests resulting in the rejection of the Convention.

In 1990, consultations picked up again. The Secretary-General convened in the following years and reached a compromise in July of 1994 that resulted in the adoption of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. The overall process therefore took 21 years.

2. BNJ-Agreement and process

Likewise, the draft BNJ-agreement is the consequence of longstanding negotiations between UNCLOS' member states. A first working group was established in 2004 that held nine meetings until January 2015. The UN General Assembly then, in the summer of 2015, established a Preparatory Committee leading to the intergovernmental conference that provided the first (zero-) draft of the BNJ-Agreement.

Yet with this status, the process is far from over. While the President of the Intergovernmental Conference expressed the hope and expectation that an agreement could be reached in the first half of 2020, this seems very ambitious considering the widespread consensus that would have to be achieved to implement a meaningful mechanism. Therefore, 15 years into the process, it is still not clear if or when an agreement will actually be reached.

3. Creating a framework should start now

It is for this very reason of previous processes having been tedious and lengthy that the work and negotiations with regard to the establishment of a framework governing the use of offshore wind on the High Seas should start now – notwithstanding the fact that this seems a very long-term and ambitious project.

Another benefit of starting now is the remote chance to adopt according provisions in the draft BNJ-Agreement. This would already address a number of problematic questions, mainly the right to exclusively use certain sites for offshore wind and the environmental obligations related to it.

The wind industry is driven by innovation and forward thinking. Technical developments may make offshore wind in High Seas economically and technically feasible in times to come. However, in order to utilise this potential even after 2040, the work towards a feasible framework would have to start as soon as possible.

ANNEX – Maritime Areas by legal status

For a better understanding of the problems related to the construction and the operation of offshore wind farm projects (offshore wind farm) in High Seas, the following provides an overview of (i) the different maritime zones the sea is divided in as well as of (ii) the different legal regulations for each of these zones which were introduced by The United Nations Convention of the Law of the Seas in 1982.

1. Internal Waters

The baseline is the basis for determining the maritime zones. All parts of the sea lying landward of the baseline are referred to as internal waters. These are part of the national territory and are thus subject to the unrestricted sovereignty of the coastal state.

2. Territorial Sea

The area from the baseline to a limit not exceeding twelve nautical miles is defined as the State's territorial sea. Just as with internal waters, coastal states have in principle full sovereignty and jurisdiction over the territorial sea which includes not only the surface but also the seabed and subsoil as well as the airspace above. However, the coastal state's sovereignty is limited by passage rights of other nations, including innocent passage through the territorial sea and transit passage through international straits.

3. Contiguous Zone

Each coastal State may claim a contiguous zone adjacent to and beyond its territorial sea that extends seaward up to 24 nm from its baselines. This zone exists to strengthen a State's law enforcement capacity and prevent criminals from fleeing the territorial sea. Within the contiguous zone, a State has the right to prevent and punish infringement of fiscal, immigration, sanitary, and customs laws within its territory and territorial sea. Unlike the territorial sea, the contiguous zone only gives jurisdiction to a State on the ocean's surface and floor. It does not include air and space rights.

4. Exclusive Economic Zone (EEZ)

Each state may establish an Exclusive Economic Zone that extends 200 nautical miles from the baseline. In this zone, a coastal state has sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or non-living, of the seabed and subsoil and the superjacent waters and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds. Article 56 also allows states to establish and use artificial islands, installations and structures, conduct marine scientific research, and protect and preserve the marine environment through Marine Protected Areas.

Article 58 UNCLOS declares that Articles 88 to 115 UNCLOS relating to High Seas rights apply to the EEZ in so far as they are not incompatible with this Part of the Convention. Unlike the territorial sea and the contiguous zone, the EEZ only allows for the previously mentioned resource rights and the law enforcement capacity to protect those rights. It does not give a coastal State the right to prohibit or limit freedom of navigation or overflight.

5. Continental Shelf

Each coastal State has a continental shelf that is comprised of the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nm from its baselines where the outer edge of the continental margin does not extend up to that distance (or out to a maritime boundary with another coastal State). A coastal State has sovereign rights and exclusive jurisdiction over its continental shelf for the purpose of exploring it and exploiting its natural resources. The natural resources of the continental shelf consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or subsoil.

6. High seas

All parts of the sea that are not included in the EEZ, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State are referred to as High Seas. The High Seas make up 50% of the surface area of the planet and cover over two thirds of the ocean. The High Seas constitutes a “res communis”, an area belonging to the community of states. In contrast to the other maritime zones the High Seas are defined by the principle of freedom and the absence of any national sovereignty as laid down in Art. 87, 89 UNCLOS. Living resources, such as fish, are available for exploitation by any vessel from any State.

7. The Area

The seabed beyond a coastal state’s EEZ and Continental Shelf is called the Area. The Area is “the common heritage of all mankind” and is as well beyond any national sovereignty. States can conduct activities in the Area so long as they are for peaceful purposes, such as transit, marine science, and undersea exploration.

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