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Master's Thesis

Mapping the legal and policy landscape of offshore wind energy

in the context of the interface between international, EU and Danish regulation

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Resume

Dette speciale har til formål at undersøge de administrative barrierer og fordele i forbindelse med den vertikale og horisontale implementering af international og regional lovgivning i den nationale lovgivning, der regulerer den danske havvindmøllesektor. Specialets fokus vil dermed være rettet mod strømninger og synergier i berøringsfladerne imellem den internationale, regionale og nationale lovgivning, der har indflydelse på den danske havvindmøllesektor.

Havvindmøllesektoren reguleres af adskillige retsområder. Dog er havvindmøllesektoren især drevet af lovgivning vedrørende klimaret, energiret og havplanlægning. Specialet vil dermed inddrage udvalgte love og politiske dokumenter indenfor disse tre retsområder som basis for en analyse og vurdering af berøringsfladerne mellem de forskellige niveauer af lovgivning og politik.

Baggrunden for at undersøge den danske havvindmøllesektor er den hurtige udvikling af og fokus på klimaforandringer, bæredygtig energi og havplanlægning. Klimaforandringer og bæredygtig energi adresseres med fordel i et globalt perspektiv, idet lokale handlinger kan have globale konsekvenser og derved bør reguleres af international lovgivning. På det regionale niveau vil EU-ret, der komplimenterer den internationale lovgivning, blive inddraget.

Danmark har fra et teknologisk perspektiv indtaget en dominerende position, hvad angår udviklingen af havvindmøller. Dermed er det nærliggende at undersøge, om dansk lovgivning har tilpasset sig til de juridiske udfordringer forbundet med reguleringen af havvindmøllesektoren. Fokus i dette speciale for dansk lovgivning vil være de juridiske udfordringer i form af implementering af international og regional lovgivning.

Det juridiske retsområde er præget af politiske strømninger, hvorfor specialet benytter sig af den retsdogmatiske metode, således at både lovgivning og politik kan analyseres og dermed skabe en holistisk tilgang til besvarelsen af forskningsspørgsmålet. Derudover vil nuværende lovgivning blive sat i perspektiv til fremtidig lovgivning for at illustrere de strømninger, retsområdet er præget af.

Slutteligt vil specialet konkludere hvilke administrative barrier og fordele, der ses i reguleringen af den danske havvindmøllesektor. Specialet vil her skifte perspektiv fra at iagttage lovgivningen som den er (*de lege ferenda*) til at vurdere, hvordan loven kunne være (*de lege lata*).

Introduction

This thesis will examine the interface between climate change law, renewable energy and marine spatial planning in a multi-regulatory framework from a legal scholarly perspective.[1] It will be guided towards interconnections and synergies in forms of potentials and regulatory barriers. The thesis will apply a case-based approach by focusing on the multi-regulatory framework for the offshore wind sector in Denmark with and paying attention to marine spatial planning.

Background

Energy production has been recognized as the biggest contributor to CO_2-emissions into the atmosphere[2] and is on this basis highly interlinked to climate change.[3] Combating climate change has been recognised as one of the most profound catalysts for energy innovation as well as legal measures driving change in the energy sector.[4]

These are key factors in the development of renewable energy, as the production of renewable energy generally does not release CO_2-gasses and other greenhouse gasses into the atmosphere. As a renewable energy source, the development of the offshore wind sector is an area of critical interest in Denmark.[5] A main characteristic for the offshore wind sector is how marine spatial planning is used in order to organize and develop the offshore activities.[6]

[1] The interface has no legal, universal definition. Yet, in this thesis, it will be used as a room, where one regulatory level of law meets a connecting regulatory level of law.
[2] Anker, Egelund & Rønne 2008: 248. CO_2 is part of the official Greenhouse gas-emissions pursuant to Annex A the Kyoto Protocol.
[3] United Nations Conference on Sustainable Development 2012: Energy was highlighted as one of seven critical issues for considerations in relation to climate change.
[4] Barton & Campion 2018: 23.
[5] The Danish Parliament, *Energiaftale af 29. juni 2018*: 3-4.
[6] An international definition of marine spatial planning is "a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.", United Nations Educational, Scientific and Cultural Organization 2020.

However, the legal fields regulating the offshore wind sector have not always been given sufficient attention. From a legal scholarly perspective, climate change law is still in its infancy,[7] much as energy law was still being discussed in order to define it as an academic discipline in the mid-1990s.[8]

Because where national acts may have consequences on a global level for many years to come, it is important to ensure collaboration and consensus regarding the legal framework regulating the renewable energy field, climate change field and marine spatial planning. This is also significant, because dealing with these legal fields requires many different kinds of actions by authorities, organisations, private enterprises and individuals.[9] This is true not only at an international level but certainly also at a regional and national level.

Collaboration and consensus should be sought both horizontally and vertically at international, regional and national levels to avoid contradicting policies and legislation at different levels. This makes the interplay between international, regional and national climate change regulation, renewable energy regulation and marine spatial planning at each level highly relevant to analyse, in order to confront the synergies and interconnections in terms of regulatory barriers and potentials between the different levels.

To apply a case-based approach, the focus in this thesis will be rest on the interface between regulations applying to offshore wind energy and paying attention to marine spatial planning, as that is the core of what differentiates offshore wind energy from onshore wind energy from a legal perspective.

On this basis, it is beneficial to make an introduction of the legal landscape setting the frame for this thesis.

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[7] Hollo, Kulovesi, Mehling & Naseem 2013: 32.
The first environmental, energy issue was not regulated in EU context before the beginning of the 1990s, see Anker [et al.] 2008: 59.

[8] A widely recognized definition of energy law is "the allocation of rights and duties concerning the exploitation of all energy resources between individuals, between individuals and the government, between governments and between States", pursuant to Bradbrook 1996: 194.

[9] Schill 2014: 50.

Climate change law, renewable energy law and marine spatial planning in context of the offshore wind sector

The offshore wind sector is influenced by crosscutting policy considerations; however, the development of the offshore wind sector is especially connected to three regulatory disciplines: climate change law, renewable energy law and marine spatial planning.

A legal definition of climate change in a global perspective was first established in 1992 by the United Nations Framework Convention on Climate Change as ”a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”; in other words, man-made changes to the climate, such as rising temperatures caused by an increasing level of greenhouse gasses in the atmosphere.

A global definition of renewable energy has not yet been established. However, a well-known legal definition within the EU has been developed over time in the 1st and 2nd RES Directives,[10] the latest being embodied in EU directive 2018/2001 (3rd RES Directive),[11] whereof article 2(1) defines wind as a renewable source for energy.

Marine spatial planning historically has entailed regulating oil and gas exploitation offshore; but an increase in new activities at sea has confronted marine spatial planning with new challenges.[12] In addition to this, marine spatial planning is relevant to take into consideration in contet to the offshore wind sector, as a wind turbine placed offshore remains in the same place for a long time.[13]

[10] Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, OJ L 283, 27.10.2001, p. 33–40, article 2(a) (1st RES Directive); Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140, 5.6.2009, p. 16–62, article 2(a) (2nd RES Directive).
[11] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L 328, 21.12.2018, p. 82–209 (3rd RES Directive). The article reads in full: ’energy from renewable sources’ or ‘renewable energy’ means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogas.
[12] Roggenkamp 2014: 717-718.
[13] Schultz-Zehden Weig & Lukic 2019: 140.

The first Danish offshore wind turbine was built in 1991; as of 2020, there are currently 572 offshore wind turbines in action in Denmark.[14] The legislative framework regulating climate change, renewable energy and marine spatial planning in context of the offshore energy sector has, therefore, been forced to adapt rapidly to new activities and is still undergoing major changes.[15]

This adaption requires vertical and horizontal integration of legal fields regulating the offshore wind sector at international, regional and national legal levels in order to create collaboration and consensus and avoid conflicting policies.[16]

It is on this basis relevant to explore the regulatory barriers to and potentials of the horizontal and vertical integration of the legal levels regulating this field.[17]

Denmark as an example

Danish regulation of energy and climate law has been chosen because of the state's rich tradition for utilizing wind energy and being a pioneer when it comes to windmill technology.[18] Denmark was one of the first countries in the world to place wind turbines offshore.[19]

Vestas, one of the leading wind turbine producers in the world, is a Danish company, and has influenced Danish energy policy orientation at the EU and international level, since wind power became an important energy source in Denmark in the early 1980s.[20] In other words, the positioning of Denmark as a technological offshore innovator in wind has put it ahead of many states in the EU.[21] This creates an interesting basis for the legislative framework possibly being well-integrated, well-developed and progressive. However, the Danish approach to the interface between national legislation on one hand and international and regional legislation on the other has to be clarified in order to make a basis for a statement like this.

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[14] Calculation made on the basis of facts from Energistyrelsen 2020.
[15] Anker [et al.] 2008: 20.
[16] This thesis uses the term "vertical implementation" to describe the process of implementation of international law via EU law at the domestic level. The term "horizontal implementation" is used to describe the implemention of EU law at national level.
[17] Hollo [et al.] 2013: 43-44. In addition to this; for an explanation of how the word *compliance* is used in this thesis, see Cassotta 2016: 199, defining the meaning of the term as "the meeting of obligations in terms of environmental law".
[18] Dyrhauge 2017: 85-86.
[19] Romero, Stanescu, Roggenkamp 2019: 119.
[20] "The main policy shifts in Danish energy policy happened in the late 1970s and early 1980s", cf. Dyrhauge 2017: 85.
[21] Dyrhauge 2017: 85-86.

Traditionally two main theories are used in order to describe how to approach the relationship between international and national law: monism, which holds that international law and domestic law should be seen as a single universal legal system, and dualism, which describes international and domestic law as two separate legal systems. This distinction affects the hierarchical relation between contravening international and domestic law and the impact of international law on national law. [22]

Denmark mainly follows the dualistic doctrine This means the Danish state is only bound at a domestic level by international law incorporated in Danish national regulation.[23]

Due to the binding effect of legal obligations in incorporated international agreements, a country can commit itself to implement pieces of legislation into or change its national legislation in order to adapt to the obligations.[24]

As an example, the Denmark has ratified certain international treaties and joined the EU, which means an interface has been established between Danish domestic regulation and objectives and obligations on regional and international level, thus requiring Danish national regulation to be in harmony with the objectives and obligations established on other legal levels.

Denmark has, as a member state of the EU and a member state of certain international treaties, approached the implementation of e.g. long-term targets regarding renewable energy in its national legislation.[25]

An examination of the legal framework regarding renewable energy, climate change and marine spatial planning related to offshore wind energy at an international, regional and a national level is, therefore, necessary in order to identify the synergies and interconnections having an impact on

[22] Björgvinsson 2015: 2.
[23] Anker [et al.] 2008: 39.
[24] Treaties are binding for the participating countries under the principle of *pacta sunt servanda* ("agreements must be kept") and must be handled in good faith, cf. Vienna Convention on the Law of Treaties (123 UNTS 46), article 26. See also article 288 TFEU regarding the direct effect.
[25] As late as in December 2019 the Danish government signed an ambitious agreement (Aftale om klimalov af 6. december 2019*)* in order to fulfil its international obligations, see The Danish Parliament 2019.

Danish legislation. This will be done in order to identify the synergies and interconnections in the organisational structure, that have an impact on Danish legislation.

The aim of this thesis is, therefore, to enquire into the capacity of the interface in terms of regulatory barriers and potentials of the Danish legal framework for renewable energy in the context of offshore wind energy at an EU and global level.

Research Question

On the basis of the above-mentioned reflections concerning the understanding of the interplay between international legislation, regional legislation and national legislation, following research question for this thesis will be examined

> *What are the regulatory barriers and potentials in the vertical and horizontal implementation of international and EU law in the offshore wind energy sector in Danish law?*

To answer this question, the relevant legislative framework must be identified in order to examine the interplay between different sources of law and policy existing at the international, EU and Danish level. This process requires the legal theory to be established.

Theory

This thesis will operate within the legal landscape of offshore wind energy in Denmark. To present the normative framework, where the synergies and interconnections appear, it is beneficial to adopt a traditional top-down approach starting with the international context represented by selected international treaties, then the regional context that is the EU regime and lastly the national context in the form of Danish regulation.[26] The thesis will take a theoretical approach based on this normative framework while examining different sources of law and policy at an international-, EU- and national level.

[26] Regime is in this thesis used as a "sets of norms, decision-making procedures and organisations coalescing around functional issue-areas and dominated by particular modes of behaviour, assumption and biases.", cf. Hollo [et al.] 2013: 331.

The reasoning behind analysing law and policy at different levels is due to the presence of the interactivity between the different levels in what is called normative pluralism and cultural pluralism.

The interactivity will be approached through a polycentric systems approach and legal pluralism. Polycentrism paves the way for analysing the three levels (international-, EU- and national law) by putting the levels in systems as well as confronting and comparing the three levels through legal spaces, in order to explain how the structure of the levels should be used.[27] Legal pluralism holds that legal rules are produced by various sources and social environments and its main characteristic is that legal sources are interactive and not organised in a hierarchy.[28] These theories put together create an instrument capable of explaining the interconnections and comparisons of the legal spaces.[29]

The result of the aforementioned examination of the legal landscape will hereinafter be considered in order to confront the synergies and interactions in the form of potentials and regulatory barriers.

The thesis will finally confront how the framework can move towards integration and overcome regulatory barriers. To do so, the thesis will take a pragmatic approach in order to offer suggestions on how to solve practical problems and eliminate barriers. The thesis will thus go beyond "what the law is now" (*de lege ferenda*) to take a look at "what the law should be" (*de lege lata*).

Methodology

In order to answer the research question and address the theory, the legal method and material to be used must be defined as well as the reasoning behind these choices.

Choice of method and material

When deciding on the analytic tools and sources used for this thesis, certain selections and rejections have to be made in order to make the thesis manageable and useful. In the future, the scientific value of this thesis can be expanded upon by conducting a more far-reaching study. This thesis, with its limited scope, can help point the way for such a broader study.

[27] Petersen & Zahle 1995.
[28] Arnaud 1995: 149-169.
[29] Cassotta 2012: 10-12; Scuintani, Vedder, Reese & Vanheusden, 2014: 159-160.

The choice of method has been based on the nature of the legal field and its sources of law and the choice of material has been limited by selecting sources based on relevance, scope and current interest in order to answer the research question in the best possible way.

This thesis will on the basis of the aforementioned choices have scientific value as a legal study.

Method

The objective of this thesis is to describe the current state of the interface found in the multi-level regulation of the offshore wind sector through analyses of relevant international, regional and national pieces of legislation and underlying policies.[30] Thus, the method should fit with a multi-level governance and a multi-layer or centralized governance of climate- and renewable energy law as well as marine spatial planning.

The research question is of normative nature and matches a legal dogmatic approach, where different sources of law and policy by nature interact, thus creating a normative complexity. This thesis will on this basis benefit from the legal dogmatic method and -approach.[31]

The relevant legal sources and interpretation methods will, therefore, be examined and discussed via the dogmatic method in order to analyse the interactions, gaps, overlaps and synergies between the different sources of law and policy at international, EU and national level. In addition, the opinion of legal scholars will be reflected in this thesis.

Finally, EU legislation is drafted in several languages, which are equally authentic. One could argue that an analysis should include the wording of all the authentic versions when interpreting the wording.[32] Yet, due to language barriers, the English version will be the baseline for this thesis.

[30] Note, the main focus is *the interface* and not the legislation itself.
[31] The dogmatic method is described as ”research that aims to give a systematic exposition of the principles, rules and concepts governing a particular legal field or institution and analyses the relationship between these principles, rules and concepts with a view to solving unclarities and gaps in the existing law.”, Smits 2015: 5.
[32] C-283/81, *Srl CILFIT and Lancifico di Gavardo SpA v Ministry of Health* [1982] ECR 332, para 18-20.

Material

This thesis involves a review of materials on renewable energy, climate change, and marine spatial planning which may exceed the bounds of legal sources in the narrow sense of that term. However, as this thesis examines the relationship of law and policy, consideration of such materials is necessary for a full analysis.

The thesis has an international-, EU- and national-legal perspective and assesses the policy and rules within the nature of international-, EU and national policy and hierarchy including primary and secondary legislation and principles of international law. The sources are chosen in order to "track" an interface between the legal levels, thus the sources must be interconnected by regulating similar subject matters.

In the following chapters, the sources used are both hard law (such as legislation and binding agreements) and soft law (such as policies and non-binding agreements). The material will be examined with a focus on the interface between the legal levels. Yet, a key distinction should be made between hard law and soft law, and it is relevant to keep the legal value of the material used in mind.[33] Indeed, the relationship between hard and soft law in the climate change field has not been simple, consistent and linear throughout recent time.[34] Hard law, such as legislation and binding agreements, are used as a source to analyse and define the legal positioning in a certain field, while soft law, such as policies and non-binding agreements, are used as an inspirational guide in order to interpret and understand certain legal positions. On this basis, the analysis of the interplay between different sources of law will take this distinction into account in this thesis.

Attention should be drawn to policy regarding renewable energy and climate change, as it can have an influential effect on the formulation of law on each legal level. Material concerning key policies will, on this basis, be used in order to create an understanding of the reasoning behind the way lawmakers have formulated the law.

[33] See also the distinction between primary and secondary sources of law made in Anker [et al.] 2008: 31-32
[34] Roggenkamp, Redgwell, Rønne, & Quayo 2016: 122-123. E.g. UNCLOS article 60(3) (hard law) referring to soft law as "any generally accepted international standards established in this regard by the competent international organization."

Scope

The scope of this thesis is to find the law in the context of the interface between international-, EU- and Danish law focusing on renewable energy law, climate change law and marine spatial planning applying to offshore wind energy in Denmark.

Due to the relatively new and rapidly changing nature of the offshore wind sector, the law regulating the field has been required to adapt to reality. Danish legislation has been chosen because of its rich tradition for utilizing wind energy – including offshore wind energy. The need to ensure compliance between the legal levels in order to create a vertically harmonized legal framework capable of paving the way to fulfil the objectives set at an international, regional and national level is the reasoning behind the choice of scope in this thesis. [35]

The legal landscape takes a multilevel form consisting of three distinct levels being international, regional and national level. The perspective will, therefore, vary from an international perspective (chapter 1), a regional perspective (chapter 2) and a national perspective (chapter 3) in order to understand the interface and synergies between the different levels in terms of potentials and regulatory barriers.

The legal frameworks for renewable energy, climate change and marine spatial planning are shaped by many factors relevant at a given time such as culture, nature, history and political context. With these factors as a basis, the material scope includes the legal framework regulation as well as policies in order to create a holistic approach. The regulation used is interconnected with and ruling on the field of the research question as well as policies are used to put the regulation in a broader context creating a holistic approach.

The timeline will cover legislation in force and contemporary policies in order to confront the *current* state of law. Most present legislation has its roots in legislation from after the oil crisis in 1973 even though the legislation has been updated many times since. An examination of the legal landscape placing present law in context is important, because a deep understanding of the pre-existing landscape is needed in order to outline weaknesses and strengths in the present law of context. A line

[35] Compliance at international energy law is mentioned as one of the major issues in Heffron 2015: 18.

will be drawn for material from before 1973.[36] The scope does technically not have an end date, as some discussed legislation and policies have yet to come into force.

Delimitation

The objective of this thesis is not to give an exhaustive analysis of all legislation regarding the offshore wind sector. Instead, this thesis will use a holistic approach focusing on a few selected pieces of material in order to make a multi-regulatory and informal analysis of the interface between selected pieces of policy and regulation at an international- and regional level and the equivalent national regulation in Denmark confronting the interconnections and synergies in this interface. Thus, it should be noted that the outcome of this thesis only represents a sample of the reality the offshore wind sector is facing, as it is influenced by various factors – both legal and non-legal - not included in this thesis.

The thesis will examine the vertical and horizontal interactions between international, regional and national regulation and thereby delimitate an examination of the vertical interaction connected to a subnational level. A later analysis of the subnational level will increase the scientific value of this thesis.

The thesis will only focus on Danish legislation regarding the offshore wind sector at a national level in order to make a full analysis while respecting the word limit.

This thesis will not take into account material concerning court decisions and jurisprudence in the offshore wind energy sector due to the scope in mind, which is the law in context of the interface. Yet, key aspects will be highlighted when it is beneficial to the thesis.

The regulation will focus on the promotion of renewable energy, climate change as well as marine spatial planning. These legal fields applies to the development of the wind energy sector. Thus, legal challenges occurring to the later lifecycle of a wind power plant will not be addressed in this thesis.

[36] Roggenkamp [et al.] 2016: 7.

Furthermore, the objective of this thesis is not to describe the historical evolution of the regime governing the offshore wind sector. Yet, certain key aspects will be highlighted when relevant in order to enlighten the present synergy of the interface.

Research outline

This thesis is divided into three chapters.

The first chapter relates to the regulation of the offshore wind sector in terms of climate change, renewable energy and marine spatial planning from an international perspective. Instead of being a description of the regulation, the chapter will seek to highlight the main features of the legislation in order to create a basis for a later analysis of the interface between the regulation at international, regional and national level. In order to do so, only features influencing the interface between the regulatory levels will be included.

The second chapter is focused on the equivalent regulation of the offshore wind sector in a regional perspective that is the EU-level perspective. The analysis will use the same approach as in the first chapter. The focus will be to "track" the findings in the international regulation seen in chapter 1 into an EU-level perspective. This will be done in order to observe the interface between the regulatory levels.

Finally, the third chapter is focused on the regulation of the offshore wind sector in a national perspective that is the Danish perspective. The chapter will confront the findings in the previous chapters in a multilevel context of sources of law and policy. This will be done to confront the interactions and synergies between different sources of law and policy applicable to climate change- and renewable energy aspects of the Danish wind sector as well as marine spatial planning.

Finally, the thesis will conclude on what are the potentials and regulatory barriers in the vertical and horizontal implementation regarding the offshore wind sector in Denmark.

1. Chapter 1: International level of governance

1.1 Introduction

The aim of this chapter is to assess the framework of regulation applicable to the offshore wind sector at an international level. International law is the system of law governing relations between states. The focus will be on international law and policy that has an impact at regional EU level. This will enable examining the interactions and synergies in the interface later on in the thesis.

Climate Change regulation in the form of the United Nations Framework Convention on Climate Change (UNFCC), the Kyoto Protocol and the Paris Agreement will be examined. Finally, the UNCLOS will be enlightened in order to shed light on marine spatial planning in an international perspective. This choice is due to the link between renewable energy, climate change and marine spatial planning in the context of the offshore wind sector.

The abovementioned introductions will be done in order to clarify specific peculiarities in the laws and consider them in as part of an overview of the legal field regulating the Danish offshore wind sector.

The following section provides an introduction of the legal form and moves on to its main features in order to highlight provisions of most relevance to the Danish offshore wind sector.

1.2 United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC of 9 May 1992 is an ancestor of the global framework regulation for modern climate change and energy law.[37] The convention was made by the UN General Assembly due to a rising awareness of climate change after the first IPCC Assessment report was published in 1990. [38]

The convention has 197 parties from all around the world making membership to it nearly universal. The parties are organized into different categories (“Annexes”), yet all parties follow the ultimate

[37] United Nations Framework Convention on Climate Change (UNFCCC), New York, United Nations, General Assembly, 9 May 1992, in force 21 March 1994; Hollo [et al.] 2013: 83.
[38] IPCC Assessment reports are made by the Intergovernmental Panel on Climate Change (IPCC) (est. 1988) objectifying at providing ”internationally coordinated scientific assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies,”, cf. UN General Assembly Resolution 43/53 of 6 December 1988, paragraph 5.

objective of the convention set forth in article 2: the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[39]

The UNFCCC is a framework convention, meaning it is not a legally binding tool itself and contains no formal enforcement power.[40] However, article 17 to the UNFCCC paves the way for adopting protocols to the convention, which can entail legally binding obligations to its parties. This interlinks the UNFCCC to the Kyoto Protocol and the Paris Agreement and, therefore, the UNFCCC is a legal basis for regulation to the offshore wind energy field at an international level.

1.2.1 Features of the UNFCCC

Defining the objective

The UNFCCC's objective is found in article 2, which calls for a level of greenhouse gas emissions (GHG) able to "prevent dangerous anthropogenic interference with the climate system."[41] The timeline for reaching the objective is described as being "within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." The wording of the article may seem too vague to establish a specific level of GHG to aim for and a fixed deadline; however the choice of the vague wording leaves room for later improved scientific knowledge to affect the process and it invites the parties to the convention to decide on their own targets and timelines while having the ultimate objective in mind.[42] This paves the way for making the targets flexible.[43] This manoeuvre also invites the parties to the UNFCCC to decide on their respective national regulation in accordance

[39] Note, that this objective is the "ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt to achieve", meaning that protocols and any legal instruments adopted by the UNFCCC will follow the said objective as their "ultimate objective".
[40] It may also be described as an "umbrella"-convention spreading out protocols underneath it. See also Zaman 2018: 5.
[41] Article 1 UNFCCC provides definitions to the convention, yet it does not define "dangerous anthropogenic interference". However, IPCC assessment reports sheds light on 5 broad reasons for concern applying to the term being "1. Risks to unique and threatened systems 2. Risks from extreme climatic events 3. Regional distribution of impacts 4. Aggregate impacts 5. Risks from large scale discontinuities." Yet, a clear, specific and final definition does not exist, cf. Hollo [et al.] 2013: 86.
[42] Fx greenhouse gasses are defined vaguely as "those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.", cf. article 1(5) to the UNFCCC.
[43] See e.g. the later Decision 1/CP-16 adopted by the UNFCCC in 2010 laying out a global, long term goal of limiting temperature increase to 2 degrees Celsius in its shared vision for long term cooperative action. This goal was reformulated in 2018 to 1.5 degrees Celsius, cf. IPCC 2018: 5.

with the aims at an international level.[44] The aims may, on the basis of this reasoning, be seen rather as environmental quality standards to aim for rather than specific, fixed goals.[45]

Common but Differentiated Responsibilities and Respective Capabilities (CBDRRC)

The UNFCCC lays out its principles in article 3. Which contains an example of Principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDRRC).[46] Article 3(1) reads

> The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.

Note the wording *equity*, *differentiated responsibilities* and *respective capabilities*, emphasising that the parties are subject to differentiating responsibilities on basis of the parties' varying potentials.

The principle is also present when the convention uses a structure distinguishing between "developed countries" and "developing countries" as seen in its Annex I and II. This structure reflects the global perspective of including all parties to work together in order to limit GHG emissions, yet acknowledging differentiation is needed due to different circumstances in the respective countries. Annex-I countries are the industrialized countries, most of them also taking part in the Organisation for economic Co-operation and Development (OECD) or being countries with economies in transition (EIT).[47] Annex-II countries is the OECD-countries, but not the EIT-countries. Finally, non-annex-I parties consists of mostly "developing countries".[48]

The establishment of CBDRRC through the annex-structure has however faced criticism. The establishment of the annexes are based on lists of names rather than criteria to determine who would be considered an Annex-1 country versus a non-annex-1 country. This creates a lack of flexibility when addressing countries, who develop their economy and thus, facilitates a change from being

[44] In apposition, an argument against setting specific targets and timetables is that the scientific background at that time lacked certainty making fixed targets an thereby creating inflexible solution, see Hollo [et al.] 2013: 85.
[45] Hollo [et al.] 2013: 85.
[46] Bodansky 2016: 341.
[47] Note, Denmark is an Annex-1 party and Annex-2 party, cf. annex I and II to the UNFCCC.
[48] United Nations Climate Change 2020 (Parties and *Observers)*.

"developing" to in fact being "developed". This creates a "firewall" between developed and developing countries.[49]

Commitments

The commitments of the convention are found in article 4(1)b, which highlights a commitment for *all parties* to "[f]ormulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change (…)" This provision commits the parties to prepare measures to mitigate climate change.

By promoting such measures at regional and national level, the article emphasizes the convention's approach to the interface between international, regional and national law by encouraging vertical and horizontal harmonisation when dealing with measures to mitigate climate change.[50] This as well as commitments by the parties to commit to national (or regional programmes containing) measures specific to domestic challenges shows the UNFCCC parties are adopting a "bottom up-approach" to article 4(1)b.[51]

Article 4(2) highlights commitments only applying to annex-I country parties, which underlines the use of CBDRRC by directing commitments to a specific group of the parties to the convention. The article reads in its relevant part, "[e]ach of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change". This too indicates a "bottom up-approach" reaching out to the parties national policy, yet, the convention also points out in its relevant parts in article 4(2)b, that

> In order to promote progress to this end, each of these Parties shall communicate, within six months of the entry into force of the Convention for it and periodically thereafter, and in accordance with Article 12, detailed information on its policies and (…) with the aim of returning individually or jointly to their 1990 levels(…)

Note the stated aim to return to 1990 levels of GHG and the timeline of six month are bith using a "top-down approach" in order to create targets for the parties to follow. The article also highlights a preference in order to get the parties to report on their policies and acts related to the convention. This

[49] Bodansky 2016: 341.
[50] Hollo [et al.] 2013: 89.
[51] Bodansky 2011: 6.

creates an overall transparency to the implementation process and having visible objectives and targets to aim for promotes cooperative actions from the parties.[52]

Communication measures

Article 12 to the UNFCCC addresses the communication of information related to implementation.[53] It requires all parties to provide reports to the Conference of the Parties (COP) with e.g. information consisting of a "national inventory" seen in article 12(1)a, and a "general description of steps taken or envisaged by the party to implement the convention", cf. article 12(1)b.[54] In contrast, only Annex-1 parties shall provide "A detailed description of the policies and measures that it has adopted to implement its commitment", cf. article 12(2)a. These provisions reflect a pledge-and-review-approach,[55] which paves the way for collective actions putting the respective party's national governance in a central position and giving the international framework a possibility to review and keep track of national plans and trends.[56] It also fosters transparency in the legal framework, which promotes the parties being able to examine and understand trends in different jurisdictions and at a global level.[57] The interface will benefit from these measures by being able to work on a clear and enlightened basis, where transparency will cause better – and easier – understanding of the different regulatory levels when access to information is provided.

Regulatory potentials and barriers

Even though the UNFCCC is a non-legally binding treaty with no enforcement mechanisms and intentionally vague phrasing, it sets out environmental principles and guidelines to reach its ultimate objective. The ultimate objective also applies to all legal instruments in the umbrella shaped legislative framework under the UNFCCC. This form creates a one-way synergy.[58] The vague phrasing creates room for interpretation, making the convention adaptable to future improvements in scientific knowledge. Furthermore, the treaty uses an approach based on CBDRRC acknowledging

[52] Bodansky 2011: 15.
[53] See also article 4(1)j to the UNFCCC (refering to all parties); article 4(2)b to the UNFCCC (refering to Annex 1-parties).
[54] See also article 7 to the UNFCCC establishing the COP. The COP is also described as "the supreme decision-making body of the Convention. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional and administrative arrangements." cf. United Nations Climate Change 2020 (*Conference of the Parties (COP).*
[55] Bodansky 2011: 6.
[56] Cassotta 2016: 199.
[57] Hollo [et al.] 2013: 115.
[58] Savaresi 2016: 20.

the different potentials in the respective parties. Yet, this approach also backfires by locking in the parties to specific positions.

The treaty represents both the top-down and bottom-up-approach: the UNFCCC sets out aims, yet it embraces a transparent process of implementing the convention by reporting activity to the Conference of the Parties (COP). It also creates a centralised revision mechanism. This creates a basis for a pledge-and-review-approach, which encourages vertical and horizontal harmonisation between the regulatory levels.

1.3 The Kyoto Protocol

Adopted on 11 December 1997 and entering into force on 16 February 2005, the introduction of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (the Kyoto Protocol) was a result of the protocol process authorised by UNFCCC article 17. This protocol follows the same ultimate objective as contemplated by the UNFCCC.[59] On this basis, the Kyoto protocol is relevant because it sheds light in context to the international level of regulation of offshore wind energy.

The Kyoto Protocol has currently 197 parties to it.[60] Its commitment period has been prolonged and will remain in force until the end of 2020.

Furthermore, article 2(1)a(iv) obliges parties in Annex-1 to "implement and/or further elaborate policies and measures" such as "[r]esearch on, and promotion, development and increased use of, new and renewable forms of energy". The Kyoto protocol is, therefore, interlinked to the offshore wind energy field, as it is a renewable form of energy.

[59] Article 2 to the UNFCCC reads in its relevant part: "The ultimate objective of this Convention and *any related legal instruments* that the Conference of the Parties may adopt(…)" (emphasis added).
[60] Denmark is being part of Annex I and II.

1.3.1 Features of the Kyoto Protocol

Binding targets

The Kyoto Protocol is a key tool in the climate regime. It represents the first international agreement establishing quantified emissions targets for all industrialised countries.[61] The targets form the basis for binding commitments by the parties to reduce their overall GHG emissions by at least 5 percent compared to 1990 levels, and fixed timetables in terms of a first commitment period from 2008 to 2012 pursuant to article 3(1) to the Kyoto Protocol.[62] This only applies to developed countries. The protocol uses a "target-and-timetable" approach, thus making the Kyoto Protocol being subject to a "top-down approach". The binding targets only apply to developed countries making the Kyoto protocol subject to CBDRRC.[63]

Furthermore, the Kyoto Protocol establishes a clear definition of GHG in its Annex A, whereof 6 gasses are defined as constituting GHG.

CDM

As part of the so-called "Kyoto mechanisms", the protocol establishes a Clean Development Mechanism (CDM) in its article 12.[64] The mechanism is based on the idea that an Annex-1 country (e.g. Denmark) can meet its binding emission reduction commitment through a mix of domestic projects and projects abroad. The reasoning behind this is that it is irrelevant where the reduction of GHG happens as long as it does happen. The CDM thus can apply to offshore wind energy projects.[65]

The objectives of the CDM, in addition to the ultimate objective of UNFCCC, is to allow developed countries to achieve their limitation targets by helping developing countries promote sustainable development. The article lacks necessary details for operationalizing the CDM; instead article 12(7) states the Conference of the Parties supervised by an executive board shall "elaborate modalities and

[61] Organisation for Economic Co-operation and development 1999: 66.
[62] Note, the developed countries being part of Annex I.
[63] Jiménez 2017: 3-4.
[64] The Kyoto protocol also uses other flexible mechanisms such as Joint implementation (JI)(article 6) and International Emission Trading (IET)(article 17).
[65] United Nations Framework Convention on Climate Change Booklet 2019: 48: "Positive list of technologies or measures that are defined as automatically additional for project (…) covers (…) Grid connected or off grid renewable electricity generation technologies (e.g. Solar, Off-shore wind". Currently 2 CDM projects are offshore wind energy, cf. Centre on Energy, Climate and Sustainable Development 2020.

procedures" of project activities.[66] Yet, critics contend the model on how to regulate the CDM was "too difficult to grasp".[67] This concern fostered an online *CDM Rulebook* governed by private actors.[68] In addition, the process of CDM projects should comply with international and regional regulation as well as the national regulation in the country hosting the CDM project.[69] The CDM incorporates hard law, soft law and regulation at different vertical levels and various bodies, all contributing to a multi-layered structure of the regulation of CDM.

On this basis, CDM can be considered a "public-private-partnership" challenging the traditional paradigm of states as the only actors in public, international law.[70] This leads to a deformalization of the market design of the legal field by causing polycentric governance, when various actors causes the regulatory power to be spread out.[71] These factors transform the legal CDM landscape into a web of various actors and bodies from the public and private sector, which produces a multi-layered, dynamic regulatory process. [72]

This process also brings the interface between the vertical levels in action. The interface consists of the top-down-approach as well as this innovative and nontraditional approach, which includes sources and actors not commonly seen in legal contexts. This highlights, that the interface is not only operating between the traditional vertical legal level, but also has to operate among soft law and public and private actors. It is therefore necessary for the interface to aim for compliance and transparency between the regulatory levels. This also shows the need for a holistic approach when examining synergies and interconnections between the multi-layered structure of the legal field and its various actors in the interface when regulating offshore wind energy through CDM projects.

[66] Conference of the Parties is defined in article 1(1) to the Kyoto Protocol. An example of such procedures is the Decision 3/CMP.1 Modalities and procedures for a Clean Development Mechanism defined in Article 12 of the Kyoto Protocol, 2016.
[67] Hollo [et al.] 2013: 37.
[68] The CDM rulebook was governed by Law firm Baker & McKenzie with funding from eight countries and organizations making it a grey area of governmental and non-state actors. See Hollo [et al.] 2013: 37.
[69] Hollo [et al.] 2013: 39-40.
[70] Hollo [et al.] 2013: 37; 77.
[71] Hollo [et al.] 2013: 36.
[72] Hollo [et al.] 2013: 38.

Reporting

The Kyoto Protocol requires reporting,[73] for which relevant principles and guidelines are defined by the Conference of the Parties, pursuant to article 17 to he Kyoto Protocol. This brings transparency to the interface, making it possible to gain knowledge of emission trends, in different – and international – jurisdictions.[74]

Regulatory potentials and barriers

Even though the Kyoto protocol is still in force, it is relevant to reflect on its lessons and how the future interfaces between the vertical regulatory levels will be formed, when the Kyoto Protocol is faced out.

The Kyoto Protocol is mainly continuing the structure of the UNFCCC. Daniel Bodansky states that he "believe[s] it [the Kyoto Protocol] suggests the need for a more evolutionary approach to the development of the climate change regime" (Bodansky 2011),[75] Bodansky notes that most international regimes do not develop at once, but gradually grow over time. The legal framework should therefore be flexible in order to fit a process evolving from relatively weak and later on becoming strong.[76] Additionally, the regime under the UNFCCC has "yet to deliver a robust legal architecture" This indicates the Kyoto Protocol has not ensured the ultimate objective of UNFCCC.[77] Note also, that the CDM was faced with massive critique due to the lack of actual reduction of GHG emissions.[78] Despite the critique, the influence of the Kyoto Protocol as a base for later legislation has been profound.[79]

1.4 The Paris Agreement

The Kyoto Protocol was followed by the Paris Agreement on 12 December 2015 within the UNFCCC and entering into force on 4 November 2016.[80] The Paris agreement is currently ratified by 187 out of 197 parties to the UNFCCC.

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[72] Article 7(3); article 10b.
[74] Bausch & Mehling 2011: 20; Hollo [et al.] 2013: 115.
[75] Bodansky 2011: 17.
[76] Bodansky 2011: 17-18.
[77] Hollo [et al.] 2013: 35.
[78] World Wildlife Fund 2018: 1.
[79] See e.g the (historical) 1st RES Directive article 3(2) and in the preamble paragraph (1), (3) and (6), where the Kyoto protocol is directly mentioned.
[80] UNFCCC, Decision 1/CP.21, Adoption of the Paris Agreement.

The political negotiation process leading up to the Paris Agreement was affected by difficult negotiations at the Copenhagen Climate Change Conference in 2009 due to different views on fundamental substantive issues among the parties.[81] These issues were still on-going when the drafting of the Paris Agreement began.[82] This resulted in a paradigm shift in the way climate change was approached compared to earlier regulation under the UNFCCC. This was done by setting forth a new way to address the different geometry of commitments between the parties,[83] more precisely by "launch[ing] a process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to *all* Parties".[84] (emphasis added).

The objective of the Paris Agreement is set out in its article 2, being the ultimate objective of the UNFCCC, cf. article 2(1) to the Paris Agreement, and aiming at holding the increase in the global average temperature to well below 2 degrees and pursuing efforts to limit the temperature increase to 1,5 degrees above pre-industrial levels, cf. Article 2(1)a to the Paris Agreement. This interlinks the Paris Agreement to renewable energy such as offshore wind energy.[85] The main features of the Paris Agreement will on this basis be introduced in order to assess the framework for offshore wind energy at an international level.

1.4.1 Features of the Paris Agreement

Nationally Determined Contributions (NDCs)

Article 4 to the Paris Agreement sets out mechanisms addressing all parties ("*each party*") to the agreement. Each party shall *prepare, communicate and maintain* "Nationally Determined Contributions" (NDCs), and the Paris Agreement requires parties to "pursue domestic mitigation measures, with the aim of achieving the objective of contributions", pursuant to article 4(2) to the Paris Agreement.[86] NDCs are, on this basis, central to the post-2020 climate change architecture as

[81] Savaresi 2016: 18. The conference worked towards the Copenhagen Accord, however it was not adopted.
[82] In addition to this, a turning point between the developed and the developing countries was reached in 2010, where developing countries would take the lead in being the major pollutants compared to the developed countries and yet being under weak or even no legal obligations due to the at the time present Kyoto Protocol, see Cameron 2000: 7.
[83] Savaresi 2016: 17.
[84] Decision 2.CP/17, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action.
[85] Cassotta 2016: 198.
[86] Note the distinction between obligations "explained as "A duty "to implement", compared to a duty "to achieve", is an obligation of conduct rather than result.", see Cassotta 2016: 202 and Bodansky 2015: 2.

long-term target-and-action-plans for climate mitigation and adaptation as well as the measures defined by each individual country.[87]

Yet, most of the binding obligations in article 4 are of procedural nature only, meaning they impose no substantial obligation. Instead, the substance of each party's duties will depend on its interpretation of the language in each provision and, therefore, be defined by domestic legislation and the vision on climate change in the respective country.[88] This also means the interface between the Paris Agreement and the regulation implementing its obligations will come into play and put focus on the parties domestic regulation, because those regulations echo each party's vision on climate change.[89] Also, the implementation of the Paris Agreement into the parties' domestic regulations will be fundamental for the agreements further effectiveness.[90]

The NDCs shall be reviewed every five years in order to make new pledges for another five-years-period as stated in article 4(9) and 14(2) of the Paris Agreement. This approach has a clear "bottom-up" design since each party itself declares which targets and actions it is willing to follow without being dependent on the targets of the remaining participating parties.[91] This also highlights that the parties will have to improve its pledges every five years, showing the "principle-of-progression" is present in the Paris Agreement.[92] Finally, it highlights that the agreement is meant to be a long-term vision on how to approach climate change.

The Paris Agreement is therefore a flexible, nationally driven, global approach allowing a wide range of options for the participating parties in order to contribute to its objectives while also taking into account the ultimate objective of the Convention. This is meant to "strengthen the global response to the threat of climate change, in the context of sustainable development (…)" pursuant the article 2(1) to the Paris Agreement.

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[87] Leal-Arcas & Minas 2016: 635.
[88] Jiménez 2017: 4. Note also, that e.g. article 4(2) to the Paris Agreement stresses an unequivocally obligation, see Savaresi 2016: 20.
[89] Savaresi 2016: 20.
[90] Cassotta 2016: 202.
[91] The "bottom-up" approach is seen as the counterpart to the "top-down" approach as mentioned connection to the Kyoto Protocol, which has targets and timetables as obligation.
[92] Cassotta 2016: 197; 201: "Principle of Progression" is defined as requiring each party's NDC to "represent a progression beyond the current undertaking of that Party".

The above-mentioned also illustrates the desired paradigm shift, from international regulation putting focus on binding obligations in a "top-down-approach" and only including developed parties, changing to a "bottom-up-approach" which aims at including all participating parties in order to put focus on each party's vision to climate change and improvement.[93] Yet, the Paris Agreement also stresses using CBDRRC among the parties.[94] As an example, article 4(3) states

> "Each Party's successive *nationally determined contribution* will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its *common but differentiated responsibilities and respective capabilities*, *in the light of different national circumstances*." (emphasis added)

The article shows that each party's legal obligation to the Agreement will depend on the interpretation of the party's *nationally determined contribution*. It also reflects a new way to approach differentiation between the parties by including the term "in the light of different national circumstances".[95] These factors pave the way from the CBDRRC approach seen in the Kyoto Protocol, which used annexes to divide the countries to CBDRRC in the Paris Agreement providing for "self-differentiation". This gives the Paris Agreement a build-in-flexibility.

Article 4(8) sets forth that NDCs should be communicated and the parties should provide "the information necessary for clarity, transparency and understanding". In addition, article 4(13) sets out that "Parties shall promote environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting". These provisions show a focus on the interface between the Paris Agreement and the parties national level of regulation in the form of their NDCs. It aims for creating clarity, compatibility and to ensure effectivity.

It is also worth highlighting that the word *nationally* is used several times in the Agreement.[96] This emphasizes the synergy between the Paris Agreement and the national legal level of its parties. It also reflects that each party must decide its own endeavours when "reflecting its common but

[93] Bodansky 2016: 290.
[94] Note also, the developed party's should "continue taking the lead by undertaking economy-wide absolute emission reduction targets.", cf. Article 4(4) in the Paris Agreement illustrating the principle of CBDRRC. Note also the use of the word "*should*", see Bodansky 2016: 305.
[95] This wording is also found in the preamble and article 2(2), 4(3), 4(4) and 4(19) to the Paris Agreement.
[96] The words *national* or *nationally* is used 50 times in total in the Paris Agreement compared to *international* or *internationally* (12 times) (excluding the phrase *International Atomic Energy Agency*)

differentiated responsibilities and respective capabilities, in the light of different national circumstances".

Sustainable Development Mechanism (SDM)

Article 6 of the Paris Agreement is dubbed by many its Sustainable Development Mechanism (SDM), seen as the equivalent to the CDM in the Kyoto Protocol. Yet, there are fundamental differences.[97] The main differences between the SDM and the CDM are first of all, that the SDM must deliver an overall reduction in GHG emissions (*contra* the CDM shifting GHG emissions between developed and developing countries), and secondly, the SDM must function in a context, where all parties are actively following the ultimate obligation under UNFCCC (*contra* the CDM functioning between developed and developing countries).[98]

Article 6(2) to the Paris Agreement points out some parties may "pursue voluntary cooperation in the implementation" of their NDCs. This emphasizes encouragement of horizontal cooperation while approaching it as a voluntary choice. This leaves room for specification.[99] The wording of article 6(2) is chosen in an enabling way as can be seen in this passage: "Parties shall, where engaging on a voluntary basis in cooperative approaches (…)" Note the words *shall* and *on a voluntary basis* used in the same sentence forming an oxymoron. On this basis, the terms of the article are not legally binding. They are meant instead to facilitate transnational cooperation in the implementation of NDCs rather than prescribing it, as an actual obligation would do.[100] The Paris Agreement is thus a *hybrid agreement* containing both binding and non-binding provisions.[101]

Compliance mechanism

Article 15 to the Paris Agreement calls for a mechanism to "facilitate implementation of and promote compliance", namely a committee to facilitate the process and thereby add to the interface in a manner that is "transparent, non-adversarial and non-punitive" and report to the Conference of the Parties serving as the meeting of the Parties to this Agreement, cf. Article 15(3). Article 15 therefore facilitates a *compliance mechanism*.[102] All this applies to the synergy of the interface between the

[97] Bodansky 2016: 307.
[98] Carbon Market Watch 2017: 3.
[99] Savaresi 2016: 26.
[100] Bodansky 2016: 297.
[101] Cassotta 2016: 199.
[102] Cassotta 2016: 201.

Paris Agreement and its parties' domestic legislation.[103] In addition, article 3 to the Paris Agreement states the need to "support developing country Parties for the effective implementation of this Agreement." Yet, the choice of words "facilitating", "implementation" and "promoting compliance" of article 15 has faced criticism (Cassotta, 2016).[104] Thus, article 15 creates uncertainties on how this process will work.[105]

Regulatory potentials and barriers

Overall, the Paris Agreement facilitates a paradigm shift within the international climate change regime. This is done through a hybrid approach focusing on global, long-term targets in the light of individual parties' respective responsibilities, capabilities and circumstances and in line with the aim of creating transparency through reporting and in line with the "pledge and review"-practice consistent with article 12 of the UNFCCC.[106] The Paris Agreement also shows a balance needs to be found between a "top-down approach" and a "bottom-up approach."

A "top-down approach", having an overall global view with little or no focus on the conditions connected to the various parties, could cause a rigid and ineffective regulation which would not take into account particularly favourable or particularly critical circumstances and individual ambitions of a party, that might be exploited in a more efficacious way. This will cause the interface to be formed by possible fixed definitions of form, content and nature.[107]

However, a solely "bottom-up approach" focusing on national regulation lacks the ability to address a global audience and to coordinate and utilize cross-border collaborations.

The approach shown in the Paris Agreement strikes a middle way by addressing a global audience through binding, administrative obligations, yet focuses on the parties' domestic ambitions to determine their actual obligations. It shows a transition from the Kyoto Protocol. The approach used is therefore a so-called "top-down-bottom-up approach".

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[103] Cassotta 2016: 199: "compliance mechanism is a provision in a legal instrument that has been designated to encourage compliance with the legal rules (often including positive incentives or technical assistance)" and also referring to Paddock [et al.] 2011: 380-381.
[104] Cassotta 2016: 201.
[105] Cassotta 2016: 201.
[106] Savaresi 2016: 21.
[107] Bodansky 2011: 1.

In a vertical legal perspective on the multilayer structure in the climate law regime, this top-down-bottom-up approach, which allows ”each participating party to define its own commitments unilaterally” (Bodansky 2011),[108] will let the parties' national regulation be the determining factor when defining their obligations. This requires the parties to act accountably when implementing the targets under the Paris Agreement.[109] If a party does not make changes “bottom-up”, it will make the enforcement of the Paris Agreement difficult.[110] However, the *accountability*, *transparency* and *facilitation* will have to facilitate the enforcement of the Paris Agreement by making the public aware of trends. Though the Paris Agreement does not provide for official enforcement tools, public pressure may put state governments under pressure, thus forcing changes to happen. This can also facilitate bettered vertical implementation at national regulatory levels by establishing a dialogue between the involved parties.[111]

The synergy of the interface to the Paris Agreement will on this basis rely on accountability by the parties when setting forth targets in their national regulation, obligating the same core obligation to all parties, yet with tose obligation being subject to “self-differentiation”.[112] The interface will also be formed by transparency and the bottom-up-approach to direct focus on domestic legislation at an international legal level by reflecting the domestic policies rather than overlying them.[113]

Yet, what is crucial is that the Paris Agreement fails to include in its text mandatory provisions regarding implementation and utilization of renewable energy in its text.[114] This fact paired with the strong link between climate change and renewable energy has not yet been dealt with at an international level, thus leaving a regulatory gap.

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[108] Bodansky 2011: 1.
[109] Cassotta 2016: 197.
[110] Cassotta 2016: 196.
[111] Cassotta 2016: 203-204.
[112] Note also, the Paris Agreement does not provide enforcement or sanction tools in case of a party not fulfilling its obligations, see Cassotta 2016: 197.
[113] See the bottom-up-approach being examined in the context of the Copenhagen Accord and the Kyoto Protocol in Bodansky 2011: 300.
[114] Cassotta 2016: 208: “Nevertheless, there are no mandatory provisions on the Paris Agreement that oblige states to control and implement green renewable energy commitments.”

1.5 The United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (UNCLOS) entered into force on 16 February 1994 and regulates all ocean space.[115] The convention establishes a legal order so the parties to the convention may utilize "ressources, the conservation of their living resources and the study, protection and preservation of the marine environment", pursuant to its Preamble 25 to the UNCLOS. Thus, UNCLOS operates in an area between the interest of utilisation of resources and the protection of marine environment.

Wind turbines may be sited onshore or offshore and the regulation governing them will depend in part on their location. UNCLOS, through the form of a framework convention, represents the international legal discourse on the siting of offshore wind turbines. Therefore, an examination of the UNCLOS regarding the regulation of the offshore renewable energy sector at an international level is beneficial in order to assess the legal framework of the offshore wind sector.[116]

1.5.1. Features of the United Nations Convention on the Law of the Sea

Maritime zones and sovereignty

UNCLOS differs between different maritime zones; the territorial sea pursuant to article 2 to the UNCLOS and the exclusive economic zone pursuant to article 55 to the UNCLOS are relevant to the present offshore wind sector.[117]

Coastal states have the right to establish the breadth of their territorial seas up to 12 nautical miles pursuant to article 2 to the UNCLOS.[118] Each coastal state has the full sovereignty rights in this zone, meaning the coastal state has the same kind of jurisdiction in its territorial sea as on land and may apply laws in accordance to article 21 to the UNCLOS. This power is only limited by the consideration granted to the innocent passage of traffic in articles 21-22 to the UNCLOS. Therefore, the placing of offshore wind turbines should be carefully planned in order to accord with these articles.

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[115] United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 397. Ratified by Denmark on 6 November 2004.
[116] Note also, that UNCLOS is seen as customary law, which makes it apply to non-parties as well, see Romero [et al.] 2019: 122.
[117] Danish Energy Agency 2015: 24.
[118] Being measured from the baseline (article 5 UNCLOS). The sovereignty also covers both airspace and the seabed, cf. Article 2(2). Note, that the sovereignty is only limited by UNCLOS and other international laws.

The coastal state may also claim an area called the exclusive economic zone (EEZ) lying beyond the territorial sea as defined in UCLOS articles 55 and 57.[119] In the EEZ, the coastal state has e.g. sovereign rights to regulate the construction and use of installations and structures, such as "artificial islands, installations and structures" pursuant to article 56(b)i. The term "artificial island" is not being defined further in the convention, however, it is clear wind turbines, which are not "real islands" under article 60(8) and 121(1), would qualify as an "artificial islands, installations and structures".[120]

Within its EEZ, the coastal state is also given the

> sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources (…) 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

cf. article 56(1)a. On this basis, UNCLOS recognises the coastal state has the sovereign rights to utilize wind energy in the EEZ.[121]

Regarding offshore cables connecting the offshore wind turbines to the electricity grid on land, article 79(1) to the UNCLOS provides that "[a]ll States are entitled to lay submarine cables and pipelines on the continental shelf". Article 79(3) however states, that the delineation of laying of pipelines are subject to the consent of the coastal states, meaning each coastal state has the jurisdiction over cables and pipelines connected to offshore wind turbines in their continental zone, which covers both the territorial sea and the EEZ.[122]

Coastal states have on this basis jurisdictional power over the resources in their territorial zone and EEZ and are therefore able to regulate offshore wind power turbines and their cables in these zones.[123] As more specific regulation of the offshore wind sector is not provided by the UNCLOS, further regulation will have to rely on other international laws or the jurisdictional power of the coastal state.

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[119] The physical boundary of the EEZ "shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.", see article 57 UNCLOS.
[120] Roggenkamp [et al.] 2016: 64. A distinction between whether a wind turbine is an artificial island, installation or structure will not be made in this thesis.
[121] Romero [et al.] 2019: 113. Note also, that the sovereign rights are limited by e.g. the right of transit passage, cf. section 2 (article 37-44) UNCLOS.
[122] Roggenkamp & Müller 2014: 718.
[123] Romero [et al.] 2019: 122.

Regulatory potentials and barriers

The UNCLOS creates a framework regulation enabling it to adapt to changing circumstances;[124] But adaptation to new technologies such as offshore wind energy will require further international regulation.[125]

The approach to the right to innocent passage and the placing of offshore wind plants creates an interface between these two activities. Yet, an increased level of intensity in the use of the ocean space may lead to the offshore wind sector and the right to innocent passage have to compete for marine spaces.[126] The lack of a clear approach to this interface poses a regulatory gap.

Another regulatory barrier is that sovereignty is held at a national level, thus relying on national bodies to govern. A level of governance at regional level could remove potential regulatory gaps and opposing interests related to cooperation between coastal states that share maritime spaces. This would also create overall benefits and transparency on the field.[127]

In addition, the absence of a pipeline-specific leaves a regulatory gap that needs to be filled.[128]

Leaving UNCLOS unchanged for now and relying on the coastal states to regulate their offshore energy sector would be a convenient response to the current lack of legislation, since drafting international law is fraught with challenges. However, this would not provide a clear and consistent framework for regulation.[129] It may also lead to a lack of oversight, hindering the potential utilisation and effectiveness of offshore wind energy.

Another regulatory issue needing to be addressed in the future is that UNCLOS does not provide for regulation farther from the coast (the high sea). Future offshore wind turbines could possibly be placed in that area.[130]

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[124] Barnes 2016: 29.
[125] Redgwell 2015: 89.
[126] Roggenkamp & Müller 2014: 737.
[127] This argument is partly formed by the inspiration from, Cameroun, Veum & Hekkenberg 2011: 11.
[128] Roggenkamp [et al.] 2016: 66.
[129] Also see the reflections regarding the ruling of the high sea, Lund 2010: 107; 124.
[130] Article 87 to the UNCLOS defines the freedom of the high sea. See also Romero [et al.] 2019: 199; Lund 2010: 107; 124.

1.6 Summary and comments

Some main features can be outlines at the international level of regulation.

The regime at an international level is based on framework legislation pointing out objectives and general principles in its umbrella shaped framework of treaties. The overall structure of the framework is characterized by its relatively recent revolution. In addition, the presence of various actors, both public and private actors and bodies has led to a polycentric multi-regulatory governance of the legal field.[131] This also calls for an innovative approach to be able to confront the deformalization of the legal structure.

The targets found at an international level are often vaguely formulated, hindering an effective approach towards common, clear and well-defined regulations. This may create a level of uncertainty and add a barrier to the vertical implementation.

In addition, not all obligations in international conventions are legally binding and non-binding synergies influence the discourse in the field, making the line between soft and hard law, binding and non-binding targets blurred. Yet, the analysis has shown an evolution from non-binding targets, which roughly could be considered as principles more than binding obligations, to lawmakers making clear, binding and long-term global targets at an international level. This form makes it easier to ensure progress and develop trust and foreseeability in the regime the regulating offshore wind sector.

Both a “top-down” and “bottom-up” approaches are present at this level, yet the “bottom-up” approach is being the dominant approach in recent regulations. This approach paves the way for the national level of regulation to be dominant in order to actually define obligations and ensure vertical harmonisation and compliance. This is also motivated by the transparency in the field, which makes monitoring possible. National legislation also takes a dominant position in the way, that international level regulation has to interact with other levels of governance in order to ensure the enforcement of international legislation through the “bottom-up-approach”.

[131] Roggenkamp 2016: 14f.

In addition, the use of CBDRRC should be used in a way, that allows developing countries to evolve into developed countries, thus the framework should be able to adapt to this evolution over time.[132]

Yet, what is crucial, is the lack of addressing renewable energies as a measure to mitigate climate chance. Thus, this finding establishes a regulatory gap.

The framework provide flexibility in the way, that parties must implement international measures in their respective national legislation. Yet the regulation assessed in this chapter does not say much about how parties may arrange their domestic policies and legislation in order to create compliance with the international level. In order to asses this issue, the regulatory framework at a regional level must be examined.

2. Chapter 2: Regional level of governance

2.1 Introduction

The aim of this chapter is to assess the regulatory framework regarding regulation applicable to the Danish offshore wind sector at a regional level that is the EU. On this basis, The Lisbon Treaty will be introduced, followed by The Clean Energy Package, The 2nd and 3rd RES Directives and the Marine Spatial Planning Directive.

The EU as an institution has been described as an "autonomous entity, a supranational organisation, and somewhere in between the two",[133] which possesses legal personality. In other words, the EU is a sui generis institution. The EU has established an independent institutional system, which has the power to create laws. Laws can take the form of regulations, that are directly applicable in all member states in the same way as national law, or directives, which are intended to harmonise the domestic regulation in a member state, leaving it to the respective member state to decide on how to incorporate the directive.[134] This provides flexibility to deploy EU legislation in the way, that fits the particular domestic circumstances the best.

[132] Bodansky 2016: 298-299.
[133] Anker [et al.] 2008: 46. The EU as a legal personality was formally established in the Treaty of the Functioning of the European Union (TFEU).
[134] Anker [et al.] 2008: 53.

This makes a basis for the introduction of the Treaty of Lisbon, which is fundamental to the understanding of the EU, as it sets out the organisational details.

2.2 The Lisbon Treaty

With the ratification of the Treaty of Lisbon amending the Treaty on European Union (Now: Treaty on the Functioning of the European Union[135] (TFEU)) and the Treaty establishing the European Community[136] (TEU) on 17 December 2007, certain changes were made in the structure and governance of the EU, hereby aiming at establishing a single EU with a single legal personality and a common set of objectives and principles.[137] The Lisbon Treaty is on this basis vital for the understanding of the EU as a constitution and law- and policymaker, as well as it provided provisions on climate change, energy and marine spatial planning.[138] The Lisbon Treaty and its amendments will on this basis be introduced in order to create an understanding of the following EU regulation in this chapter.

2.2.1 Features of the Lisbon Treaty

Treaty on the Functioning of the European Union (TFEU)

The objective of environmental law within the EU is seen in TFEU article 11, stating that "[e]nvironmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development." The integration principle alludes the EU institutions to coordinate their legislation in order to fulfil their "loyalty obligation" when exercising their competence in order to support the EU.[139] This finding creates an obligation for the member states of the EU to integrate environmental protection requirements in their national regulation.

Article 194 to the TFEU provides for the legal foundation for energy within the EU. It sets out four objectives to follow for the energy policy to follow, whereof ensuring the functioning of the energy market and development of new and renewable forms of energy are especially relevant to the offshore

[135] Consolidated version of the Treaty on the Functioning of the European Union OJ C 326, 26.10.2012, p. 47–390.
[136] Consolidated version of the Treaty on European Union OJ C 326, 26.10.2012, p. 13–390.
[137] Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community (OJ C 306, 17.12.2007); entry into force on 1 December 2009.
[138] Anker [et al.] 2008: 51.
[139] This was e.g. recognised in C-53-96 Hermes International v. FHT Marketing, [1998], ECR I-3603, para. 32, however see Anker [et al.] 2008: 54.

wind sector, cf. article 194(1)a and c. The European Parliament takes the position that article 194 also provides for the promotion of renewable energy.[140] Article 194(1) also advocates the member states to follow the aims mentioned "in a spirit of solidarity between Member States" emphasising cross border cooperation. Article 194, therefore, creates a legal basis and objectives to keep in mind for further regulation under the EU.

Furthermore, the articles 191-193 to the TFEU cover the environmental chapter, whereof article 191(1) embodies the goal of the EU to play a leadership role when it comes to the fight against climate change.[141] The articles combined cover the renewable aspect of energy, which is interlinked to offshore wind energy, as offshore wind energy is energy from renewable sources.[142] Article 191(2) determines the policy on the environment to take into account "the diversity of the situations in the various regions of the union." This is interesting in the light of the different approaches seen in treaties at an international level. The EU is on this basis following a flexible approach aiming to utilise the diversity of the various regions of the union while creating room for the member states to define their policy while taking into account diverse circumstances in the respective member state.

Article 192(2) to the TFEU is fundamental to the EU energy policy in that regard, that article 192(2)d states that member states have the power in competence regarding "measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply." This finding shows that the competence to choose which mix of energy sources is to be used in a member state lies at a national level. On this basis, it may be stated, that energy is subject to national law rather than EU law. Yet, this is problematic, when energy from offshore wind turbines works in tandem with international climate change policy and international marine spatial planning between, thus the synergy between national competence versus the EU's competence of energy constitutes a regulatory challenge to the interface between the regulatory levels.

Treaty on the European Union (TEU)

The Treaty on the European Union (TEU) sets out the objectives and principles of the EU. [143] Article 5 provides for the *principle of conferral*, meaning the EU can only rule on matters where it has been

[140] European Parliament 2020: 1-2.
[141] Hollo [et al.] 2013: 515.
[142] Castiella 2018: 305.
[143] The TEU "describes the extension of the European project into additional policy areas and areas of cooperation", Anker [et al.] 2008: 44.

given competence. This gives the EU a legal position to participate in international treaties with its 27 member states, where competences are mixed or shared between the EU and the member states.[144]

Article 4(2)e and i to the TEU provides for shared competence in the environment area and in the energy area. This leads to *both* the member countries and the EU having competence to pass laws on the legal fields, yet the member countries can only do so if the EU has not already regulated the area or has decided not to do so.[145]

The EU with its member states have on this basis joined the UNFCCC, the Kyoto Protocol and the Paris Agreement as well as the UNCLOS.[146] The legal framework at an EU level is, therefore, formed by the international regime. Furthermore, the EU aims at being a frontrunner when it comes to promoting and designing sustainable energy.[147] This also reflects an intention to an "EU-bottom-up-approach" regarding climate change. This makes the EU a cornerstone in the regulation of offshore wind energy – as it influences both international and national levels of regulation.

2.3 The Clean Energy Package

Clean Energy for All European Package (the Clean Energy Package) completed in May 2019 is the latest EU policy update in this field. It is an energy policy framework consisting of four directives and four regulations, which provides an update to the current European energy policy framework as well as governance of the EU political framework.[148] The Clean Energy Package is a response to the commitments under The Paris Agreement and the rapid increase in the share of renewable energy by bringing together energy and climate change policy in the EU, focusing on measures aimed at creating a new market and measures to align and integrate climate goals into the new market design.[149] The Clean Energy Package is on this basis vital when confronting the political synergies surrounding the offshore wind sector.

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[144] Anker [et al.] 2008: 54.
[145] Article 2(2) to the Treaty of Lisbon.
[146] Council Decision 94/69/EC of 15 December 1993 approved the UNFCCC in the EU, Council Decision 2002/358/EC of 25 April 2002 approved the Kyoto Protocol in the EU, Council Decision (EU) 2016/1841 of 5 October 2016 approved the Paris Agreement in the EU and Council Decision 98/392/EC of 23 March 1998 approved the UNCLOS in the EU.
[147] Hollo [et al.] 2013: 509.
[148] Nouicer & Meeus 2019: 13.
[149] European Commision 2019: 4.

The policy aims are e.g. to strike a balance between decision making at an EU level and at national level, because all levels are involved when governing energy policy in order to unearth synergies, that could not be found if each member state acted alone.[150]

The Clean Energy Package provides for a holistic approach towards climate change including a variety of different sectors working together as a tandem, however especially relevant to the offshore energy sector, the Clean Energy Package provides for long term certainty facilitating investment and speeding up procedures to receive permits to projects and increase competition in the market integration of renewable electricity.[151]

Furthermore, the rapid increase in the share of renewable energy paired with a decentralised production calls for a new design of the traditional electricity market model. The offshore wind sector is part of this movement. A decentralised market has more actors and creates new roles, which need to be governed correctly in order to reach the full potential of the market.[152] On this basis, the Clean Energy Package provides for a potential promotion and integration of the offshore wind sector into the new market design.

In order to unearth the influence of the Clean Energy Package in relation to the offshore wind sector, the 2nd RES Directive will be presented in chapter 2.4,[153] where after it will be compared to the 3rd RES Directive amending the 2nd RES Directive in chapter 2.5.[154]

2.4 Directive on the promotion of the use of energy from renewable sources (2nd RES Directive)

For the EU to honor its obligations under the UNFCCC, the directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources (2nd RES Directive) was introduced. It entered into force on 25 June 2009 and was the successor of the Directive 2001/77/EC on Electricity production from Renewable Sources (1st RES Directive). The subject matter is set out in article 1 being e.g. the establishment of a common framework aimed at promoting renewable energy across Europe, encouraging trade in renewable energy and trading with third parties.

[150] European Commision 2019: 1.
[151] European Commision Fact Sheet 2019.
[152] European Commision 2019: 4.
[153] The 2nd RES Directive is not a part of the Clean Energy Package.
[154] The 3rd RES Directive is part of the Clean Energy Package.

2.4.1. Features of the 2nd RES Directive

Mandatory national targets

Article 3 sets out legally binding, nationally, mandatory overall targets applicable to each EU member state. This is done in order to achieve at least a 20% renewable energy share in final energy consumption in the EU by 2020. Recital 15 and 21 specifying the initial starting year being 2005.[155] This goes along with an indicative interim trajectory in order to guide the process cf. article 3(2) and recital 18.[156] Recital 14 is expanding the *main purpose* of the targets being to ”provide certainty for investors and to encourage continuous development of technologies which generate energy from all types of renewable sources.”[157] The targets are legally binding to the member states and are a reflection of the collective reduction on emissions on 8 % found in annex B to the Kyoto Protocol.[158]

The targets are based on an overall share of renewable energy in *gross final consumption* and not domestic production, meaning the article encourages energy efficiency and encourages the use of renewable energy from other member states or third countries.[159] This shows the potential of a horizontal cross border cooperation between the member states and between member states and third countries.

There is no direct penalty mechanism in the final text of the directive for not reaching the targets, however the European Commission is able to lay down legal actions in case a member state is lacking behind.[160]

Flexibility mechanisms

The 2nd RES Directive echoes the Kyoto mechanisms described in chapter 1.3.1. of this thesis by establishing three voluntary, cost-effective and cooperative mechanisms.[161] This generates a potential for the member states of the EU to meet their renewable energy mandatory national target in an easier

[155] Leal-Arcas & Minas 2016: p. 658. Final energy consumption means the energy delivered to end consumers.
[156] Jankowski 2010: 280.
[157] Jankowski 2010: 279. Note also the recitals are not legally binding, but should be seen as a tool for interpretation.
[158] The first commitment period of the Kyoto Protocol running from 2008-2012, see also Leal-Arcas & Minas 2016: 622.
[159] Leal-Arcas & Minas 2016: 661.
[160] Jankowski 2010: 287.
[161] Pointed out in article 6 (statistical transfers between member States), article 7 and 9 (Joint Projects between Member states and between member states and third countries) and article 11 (Joint Support Schemes), see also Leal-Arcas & Minas 2016: 658-659.

and more profitable way through support schemes. It also encourages the development of and ease the infrastructure within the EU.[162] The support schemes are not harmonized at an EU level, but will have to be defined by each member state as well as they are voluntary to take part in.

The support schemes also highlight a balance to be found between governmental regulation to promote renewable energy and the investors rights to a fair treatment when investing in energy on basis of the free movement of goods within the EU.[163]

NREAP

Another characteristic is the legally binding obligation to adopt a National Renewable Action Plan (NREAP) in article 4. Each member state shall adopt a NREAP setting out "national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020". Offshore wind turbines are included in the NREAP, as current wind turbines use electricity as energy carrier.[164] The NREAP is "intended to trigger an information-based process of cross-fertilization of ideas and policies between EU member states."[165] This finding shows a potential of horizontal Europeanization.[166] Yet, the NREAP will also lead the implementation of the directive in the hands of national governments.[167] This will generate decentralised national policy frameworks allowing member states to define their own RES support schemes.[168]

In addition to this, annex I to the 2nd RES directive points out national targets for the share of energy from renewable sources in gross final consumption of energy in 2020. Hereby it is established, that Denmark should attain a 17,0 % share of energy from renewable sources in gross final consumption of energy in 2005 and a 30 % target for share of energy from renewable sources in gross final consumption of energy, 2020. This shows a clear focus on renewable energy.

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[162] Howes 2010: 133.
[163] Talus 2016: 263.
[164] https://ens.dk/ansvarsomraader/vindenergi/fakta-om-vindenergi (last accessed 1.5.2020)
[165] Solorio & Jörgens 2017: 15.
[166] Horizontal Europeanization refers to "the direct diffusion or transfer of policies from one EU member state to another, within and affected by the institutional, political and discursive context of the EU institutional, political and discursive context of the EU.", Solorio & Jörgens 2017:. 11-12.
[167] Solorio & Jörgens 2017: 32.
[168] Annex VI to 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources and Solorio & Jörgens 2017: 33.

Reporting

The 2nd RES Directive also sets out reporting obligations in article 22. The member states should hereby report to the Commission. It will facilitate a centralized monitoring and reporting mechanism pointing out e.g. regulatory barriers, Article 24 facilitating a transparency platform is also generating a possibility for the member states to reflect on each other's measures and encourage cooperation.[169]

Administrative measure

Article 13 and 14 points out measures addressing "administrator and regulatory" barriers, whereof especially article 13(1)d states that "rules governing authorisation, certification and licensing are objective, transparent, proportionate, do not discriminate between applicants and take fully into account the particularities of individual renewable energy technologies."[170] The articles explain what actions the member states need to do in order to avoid regulatory barriers when implementing the 2nd RED directive and to facilitate an integrated framework aiming for transparency and ensure investor confidence.[171] This is also a response to the earlier critique stating that the main course for the slow development of wind energy is delay in authorisations, unfair grid connection and slow reinforcement and extension of the electric power grid.[172] The obligations consist of both binding obligations and recommendations, but either way the member state is forced to reflect on its arrangements.[173]

Access to the electricity grid

Article 16(2)b provides for the member states to establish either priority access or guarantee access to the grid-system of energy from renewable energy sources. By eliminating this physical barrier, the article facilitates the potential of integrating renewable energy in national energy systems.[174]

Regulatory potentials and barriers

The 2nd RES Directive uses a "top-down-approach" when setting out binding objectives being reviewed by a centralized review process.[175] This also draws a line to the objectives found at an international level in chapter 1 of this thesis. However, by the national mandatory targets and the

[169] Jankowski 2010: 289.
[170] Howes 2010: 136.
[171] Jankowski 2010: 288.
[172] European Commission COM 2006 849 final: 10; Jankowski 2010: 287.
[173] Howes 2010: 136.
[174] Solorio & Jörgens 2017: 33.
[175] Solorio & Jörgens 2017: 33.

NREAP, the 2nd RES Directive creates a basis for the member states to define their own RES Support Schemes, using the "bottom-up-approach". This finding has the potential to cause decentralized national policy frameworks to set the pace in the field.[176] This will also generate a synergy formed by an overall tension between centralized governance and decentralized governance.

Ensuring access to grid-connections and also promoting an increased use of renewables through a transnational flow by using cost-effective and cooperate mechanisms is also a leap forward when it comes to integrating renewable energy sources, eliminating potential grid barriers and also facilitating a simpler and more convenient way to approach integration and optimize reducing in GHG emissions in accordance with objectives found at an international and regional levels. In addition, it facilitates a bottom-up-approach letting renewable energy demand and national policies play a defining role.[177]

Yet, the 2nd RES Directive has also faced criticism for providing a slow implementation process creating a barrier for an effective transnational flow within the EU.[178] Furthermore, member states deviating from their NREAP and national support schemes will reduce the transparency and clarity and therefore decrease trust in the EU and grid operation rules hindering the competition for renewable energy producers and causing administrative burdens and delays.[179] This barrier could in the future be solved through a direct penalty mechanism. A sanction in sight would be a motivational factor as well as a preventative measure.[180]

A "one-stop-shop"-body[181] had been proposed in the Directive Proposal to the 2nd RES Directive, yet it did not make it into the final directive. A one-stop-shop-approach could have been an effective tool in order to minimize the number of administrative actors and coordinating different levels of administration.[182] In addition, a Committee on Renewable Energy Sources was added in order to assist the Commission, cf. article 25(1), adding another actor to the administration web guiding the wind energy sector.[183] These factors may hinder an effective promotion of renewable energy across Europe.

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[176] Solorio & Jörgens 2017: 33.
[177] European Commission COM 2006 849 final: 18.
[178] Leal-Arcas & Minas 2016: 661.
[179] Leal-Arcas & Minas 2016: 662.
[180] Jankowski 2010: 290.
[181] A "one-stop-shop" is a single administrative body, that coordinates all neccesary authorisations, Jankowski 2010: 27.
[182] Jankowski 2010: 288.
[183] Jankowski 2010: 289.

2.5 Directive on the promotion of the use of energy from renewable sources (3rd RES Directive)

Directive 2018/2001 of 11 December 2018 (3rd RES Directive) will be the future recast of the 2nd RES Directive, as it entered into force 24 December 2018 and is in transposition period to be implemented in the member states until 30 June 2021.[184] The directive establishes a common framework for the promotion of energy from renewable sources, which will include substantive amendments compared to the 2nd RES Directive.[185] On this basis, it is closely interconnected to the future regulation of the wind energy sector. The focus in this thesis will therefore be to confront the amendments in the 3rd RES directive compared to the 2nd RES Directive.

As the 3rd RES Directive is part of the Clean Energy Package, the overall aim of the directive is to facilitate the transition to a clean energy economy. In addition to this, the subject matter is pointed out in article 1 being e.g. to establish a common framework for the promotion of energy from renewable sources and setting binding union targets for the overall share of renewable energy.

Unlike the 2nd RES Directive, the 3rd RES Directive takes article 194(2) TFEU as its legal basis, which emphasize the distinction between regional levels setting out obligations and the member states competence to set out the general procedure on how to fulfil these obligations by defining their own energy mix. This almost forms an oxymoron.[186] This makes a complex introduction to the legal content of the 3rd RES Directive and forming a synergy between the competences of the EU and the competences of the member states.

2.5.1 Features of the 3rd RES Directive

Targets

The 3rd RES Directive provides for binding, overall renewable energy target on 32 % of the overall energy consumption for 2030 in its article 3(1). It is noteworthy, that contrary to the 2nd RES Directive, national targets are not specified in the directive, meaning it is a joint obligation between

[184] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [2018] OJ L 328/82.
[185] Nouicer & Meeus 2019: 13.
[186] This argument is formed by Hancher & Winters 2017: 5.

the member states to reach the targets and the individual national contributions should be set at a national level, revealing a bottom-up-approach providing flexibility.[187]

The article facilitates a possibility for upwards revision of the target by 2023. The revision is to be made by the Commission *in light of substantial cost reductions in the production of renewable energy* as seen in preamble 8 to the 3rd RES Directive. This witnesses a possible expectation for the expenses when producing renewable energy to be lower in the future and thus, provides flexibility for this scenario.

Setting long term goals could cause equivalent long-term certainty for investments and encourage development of technology to produce renewables, cf. preamble 9 to the 3rd RES Directive. This would facilitate cost reductions, which could boost the share of renewable energy and require the current targets for 2030 to be revised upwards. The Directive has on this basis foreseen a possible advancement of the targets in the future, which otherwise could lead to a regulatory barrier.

Support schemes

Article 4 provides for state aid in the form of support schemes for renewable energy. It aims to do so in a cost-effective and market-based way. In relation to the 2nd RES Directive, the 3rd RES Directive includes aims when designing the support schemes. Member states shall ensure that support "is granted in an open, transparent, competitive, non-discriminatory and cost-effective manner", cf. article 4(4). This emphasize a rising focus on the synergy between the focus on promoting nationally produced renewable energy and free movement of goods within the internal market. In addition, the priority access for renewable energy to grid connection is not continued from the 2nd RES Directive to the 3rd RES Directive. However, the barrier for grid access is indirectly addressed, when the support scheme aims at being designed to maximize the integration of electricity from renewables in the electricity market, cf. article 4(3).

[187] This motivation is described in recital 9 to the Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [2018] OJ L 328/82. Yet, the member states are obliged to implement their own national targets, cf. Article 3(2).

Another characteristic is the opening of support schemes to renewables produced in other member states, cf. article 5. However, the approach used in the article is voluntary, which means it is decided at a national level, if a member state should open up their support schemes to other member states.[188]

In addition, article 6 establishes an obligation for member states to ensure, that support granted to renewable energy projects are not revised in a negative way by being subject to retroactive changes, thus ensuring stability for investors by providing a foreseeable future.

Flexible mechanisms

Flexible mechanisms in the form of statistical transfers between member States, Joint Projects between Member states and between member states and third countries and Joint Support Schemes are mainly being repeated from the 2nd RES Directive to the 3rd RES.[189]

Transparency

Article 8 provides for a Union Renewable Development Platform (URDP) established by the Commission, from where the member states on a voluntary basis can submit annual data on their national contribution or trade renewable energy. This may create transparency, however only if the member states choose to make use of the URDP.

Reducing administrative procedures

Article 15(1) provides for the member states to ensure that any national rules are "proportionate and necessary and contribute to the implementation of the energy efficiency first principle". The article also facilitates that predictable timeframes are established for rules concerning authorisation, certification, licensing procedures. This is done in order to address administrative hurdles.[190]

Article 16(1) deals with organisation and duration of the permit-granting system and emphasizes that the "applicant shall not be required to contact more than one contact point for the entire process",

[188] By 2023, the Commission will evaluate, if the opening of support schemes should become an obligation, cf. article 5(5).
[189] Annex XI to the 3rd RES Directive provides a comparison table, where article 8(1) in the 3rd RES Directive being equivalent to article 6(1) in the 2nd RES Directive, article 8(4-5) being equivalent to article 6(2-3), article 9(1-5) being equivalent to article 7(1-5), article 11(1) being equivalent to 9(1) and article 11(2)a-c being equivalent to article 9(2)a-c.
[190] Proposal for a Directive on the Promotion of the use of energy from renewable sources (recast) of 23.2.2017 COM(2016)767 final/2, available at https://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7_1.pdf (last accessed 27.4.2020), p. 5.

which read in context with preamble 50 (promoting *single contact points/administrative contact point*) facilitates a "one-stop-shop". This is a leap forward towards simplification compared to the 2nd RES Directive. In addition, article 16(2) ensures the documents submitted from the applicant can happen in digital form, making the procedure digitalised, which emphasize the aim for simplification of the process.[191]

The 3rd RES Directive recasts 3 directives and collects the directives into one piece of legislation. This simplifies the administrative process by collecting the legislation to take into account in one document.[192]

Regulatory potentials and barriers

The 3rd RES Directive remains on the same track as the 2nd RES Directive by aiming for further simplification of administrative barriers for renewable energy. However, a change in the focus has been observed. From mainly focusing on the promotion of renewables in the 2nd RES Directive to focusing on the balance between promotion of renewables paired with the interests of the internal market in the 3rd RES Directive. This is seen through the removal of regulatory barriers within the internal market and through the promotion of cooperation measures between member states and third parties. This finding has the potential to ensure a market-based, economic development of renewables rather than economic development based on state aid.

A new structure for pointing out targets has been seen in the 3rd RES Directive. Targets in the 3rd RES Directive are pointed out at a regional level, while the member states are defining their respective national targets in their NREAP. This finding shows a new structure for pointing out targets, that has an overall "bottom-up approach", where national level has a prominent role,

Also facilitating a long-term plan ensuring investor certainty will promote renewable energy and secure a rising energy sector, which will affect the offshore wind energy sector.

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[191] See also article 16(3) to the 3rd RES Directive providing for online information on the organisation and duration of the permit-granting-process. The reasoning behind this is also to motivate project developers and citizens to invest in renewable energy by creating a possibility for understanding the procedures in accordance with preamble 51 to the 3rd RES Directive.

[192] Annex X(a) to the 3rd RES Directive. Even a "correlation table" to the 2nd RES Directive is seen in annex XI providing an overview.

2.6 Directive establishing a framework for maritime spatial planning (MSP Directive)

The EU adopted on 23 July 2014 the directive establishing a framework for maritime spatial planning.[193] The MSP Directive aims at establishing a "framework for maritime spatial planning aimed at promoting sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources" as seen in its article 1(1). Through this is applies to the planning and coordination of offshore activities, such as offshore wind turbines.[194]

Spatial planning activities are generally not being regulated by the EU, due to the risk of the EU to contradict the restrictions on the planning of land use, cf. article 192(2)b to the TFEU.[195] This limit is however a regulatory barrier, causing that the EU is limited in its actions in order to comply with this provision. The role of the EU is therefore to provide guiding rather than being prescriptive.[196]

The MSP Directive addresses its interface with UNCLOS and international law in general in article 1(1), 2(4) and preamble 10, stating that "[t]his Directive shall not affect the sovereign rights and jurisdiction of Member States over marine waters which derive from relevant international law, particularly Unclos", cf. article 2(4) and thereby underlining a hierarchy between UNCLOS and the MSP Directive.

2.6.1 Features of the MSP Directive

Targets

Article 4(1) sets out a binding obligation for each member state to establish maritime spatial planning. Maritime spatial planning is defined as "a process by which the relevant Member State's authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives", cf. Article 3(2), the objective being e.g. "to contribute to the sustainable development of energy sectors at sea". In addition, the MSP Directive sets out minimum requirements in article 6 to be followed for maritime spatial planning. Article (3) points out, that maritime spatial plans shall be reviewed every 10 years.

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[193] Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning, OJ L 257, 28.8.2014, p. 135–145 entering into force on 17 september 2014.
[194] Anker & Jørgensen 2015: 6. See also preamble 1 to the MSP Directive highlighting that production of renewable energy in maritime space requires "an integrated planning and management approach."
[195] Anker & Jørgensen 2015: 6.
[196] Cameroun [et al.] 2011: 12.

The maritime spatial planning is not intended to interfere with the member states competence to design the content or format of the plans pursuant to article 4(3). The MSP Directive is on this basis only creating a frame for maritime spatial planning; however, the actual content of maritime spatial planning is defined by the member states at a national level. This is in accordance to the previous consideration about the role of the EU.

Article 5 sets out objectives of maritime spatial planning. What is especially relevant to the offshore sector is the "sustainable development of energy at sea" pursuant to article 5(2). This applies to the offshore wind sector.

A timetable is seen in article 15(3) to the MSP Directive, which command member state to establish the maritime spatial plan "as soon as possible, and at the latest by 31 March 2021."

Reporting

A timetable has also been set up through article 14 (1) to the MSP Directive, establishing an obligation for the member states to send all relevant material to the Commission or any other member state concerned within three months of the publication. This creates transparency in the process and cooperation between the member states.

In addition, the Commission shall submit a report every four years outlining the progress. This will provide for a centralised revision and monitoring of the progress and challenges in the field, forcing the EU and the member state to reflect on their actions and paving the way for a possible pledge-and-review-approach.

Cooperation

The MSP directive addresses its take on cooperation in article 11 showing the aim for a common approach between member states towards Maritime spatial planning.

Regulatory potentials and barriers

The subject of spatial planning in the context of the offshore energy sector is a newly evolved field at EU level. However, as discussed in the context of the UNCLOS, the EU is an already existing

platform for regional governance, which provides an alternative to the consideration about changing the regulation at an international level. The MSP Directive can on this basis be a middle ground solution when pushing the maritime regime towards increased use of the maritime space, which is e.g. happening in context of offshore wind turbines.

The MSP Directive allows for the member states to decide on its own planning of maritime activities; however, the planning process is regulated by timeframes, minimum norms and monitoring obligations. This has the potential to provide guiding and compliance, while member states has the competence to design the content.

The MSP Directive also establish a platform for communication, which brings transparency to the legal field. This has a strong potential to create overall benefits in the marina spatial planning of the offshore wind sector.

2.7 Summary and comments

The regional level enshrines and repeats the movement found at an international level moving from a "top-down approach" towards a "bottom-up approach". This is done by following the same obligations as found at an international level and to some extent provide actual targets. However, the procedure on how to do so is aimed at being defined at national levels as well as the latest EU legislation (3rd RES Directive) is not providing binding targets at a national level. The flexibility in a member state to define its own targets emphasize the fact that the environmental field in the EU is subject to shared competence.

A clear main line at the regional level is the movement towards simplification of the production of renewable energy through one-stop-shops and limiting measures such as licensing. In addition, expert bodies and report activities have been added at a regional level. All together, these movements are working towards simplifying legislation and ensuring that legal requirements are proportionate and necessary for the activity, it is regulating. This provides a potential for a well-coordinated approach towards climate change as well as the promotion of renewable energy. This will have a positive effect on the offshore wind sector.

Creating platforms for cooperation and the development of an integrated energy market is also a measure taken into account, which provides potential for the further development of offshore wind energy.

When confronting the GHG emission target setting, it is clear that the EU is a frontrunner in context to the international climate change regime. This affects the bottom-up-approach in relation to the international climate change regime. Yet, the EU regime provides for a flexible framework that allows national policy to play a significant role when using a bottom-up-approach towards its member states.

Finally, an overall EU-approach to the coordination of a clear structure of the offshore wind energy sector and the grid connection between the coastal state could, in the authors mind, be advantageously to the legal field, especially when having in mind, that the offshore wind sector can play an important role in the achieving of future GHG targets.[197]

3. Chapter 3: National level of governance

3.1 Introduction

The aim of this chapter is to assess domestic legislation and policy in the offshore wind energy sector in Denmark. On this basis, the Political Agreement of 6. December 2019, the Danish Climate Law, the proposal on the New Danish Climate Law, The Renewable Energy Act, The Act on the Continental Shelf, The Act on the Delimitation of the Territorial Sea, The Electricity Supply Act and the Act on Maritime Spatial Planning will be introduced.

This will be done in order to confront the impact of the regulation at international level (chapter 1) and regional level (chapter 2) in a national perspective, as the Danish regulatory framework for national energy law, climate law and marine spatial planning are subjects to commitments found at an international and regional levels. The reasoning for this is to identify how the synergy and interconnections found at international and regional levels have had an impact at national law in Denmark. These findings will be put in the context of the interface between the different levels. Finally, the findings of these considerations will create a fundament in order to identify regulatory

[197] These thoughts are based on ideas from Jankowski 2010: p. 291.

barriers and potentials in the implementation of international and EU law in the offshore wind energy sector in Danish law.

In Denmark it is important to differ between onshore and offshore wind turbines, because they are subject to different legislation.[198] The following introduction will focus on the offshore aspect of the sector. Furthermore, Danish regulation makes another differentiation between near-shore and offshore large-scale wind turbines, yet no clearly defined distance requirement is made.[199]

Finally, it should be noted, that Denmark has, as part of the EU, committed itself to implement and certain legal obligations.[200] As an example, the 2nd RES Directive did not require Denmark to make changes in its legal regulation, and the implementation was of administrative character.[201] This shows a possible frontrunner attitude in the Danish governance of the offshore wind sector. However, an examination of legislation and policies needs to be done in order to make a statement like this.

3.2 Political Agreement of 6. December 2019

The Political Agreement of 6. December 2019 was founded across parliamentary parties in Denmark. This resulted in political consensus regarding certain matters on climate change.[202] On this basis, it applies to the offshore wind sector. The agreement is a so-called "white paper", which mainline is to provide a statement of intention, thus the agreement is not legally binding.

The Agreement points out future targets for GHG emissions in Denmark to be legally binding and long-term in the form of a reduction on GHG emissions to 70 % in 2030 compared to 1990 levels and climate neutrality ("klimaneutral") in 2050 in order to stay below 1,5 degrees. However, a fixed procedure in order to reach the targets has not yet been made.[203]

The Agreement points out, that yearly monitoring shall ensure development as well as sub targets and national action plans shall be established.

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[198] Anker & Jørgensen 2015: 4.
[199] Anker & Jørgensen 2015: 4.
[200] Denmark joined the EU (at that time; the EC) on 1 January 1973.
[201] Rådsmøde 2008: 7.
[202] Aftale om klimalov af 6 december 2019.
[203] "klimaneutral" means, that GHGs emissions discharged is less than what is obtained (Klimaneutralitet betyder, at der ikke udledes flere drivhusgasser, end der optages.), see L 177 Forslag til lov om klima: 5.

Furthermore, it is stated, that Denmark should be a frontrunner in international climate action. ("Danmark [skal] være et foregangsland i den internationale klimaindsats").[204] The content of this statements in context to the bottom-up-approach found both at an international level and regional level may have an actual far-reaching potential when forming the future policy at international and regional level. To put it into other words; the decision power of pacesetting and target ambitions are put into the hands of national governances, and Denmark has made a statement describing a progressive policy. This creates a potential for the offshore wind sector, as it should contribute to the actions related to climate change.

It is predicted, that the offshore wind sector will expand from currently 1300 MW in 2017 to 4900 MW in 2030 by the funding of three new offshore wind farms.[205] This finding also shows a strong political will to support the offshore wind sector as well as a need to do so in order to reach the targets found in the Political Agreement of 6. December 2019.

The Agreement, as it is not legally binding, requires to be implemented into legislation in order to provide legally binding targets. This has so far resulted in a legislative proposal for a new Danish Climate Law. In order to introduce this proposal, the current Danish Climate Law will be introduced followed by the proposal on the New Danish Climate Law.

3.3 The Danish Climate Law

The Danish Climate Law (LOV nr. 716 af 25/06/2014 om Klimarådet, klimapolitisk redegørelse og fastsættelse af nationale klimamålsætninger) came into force on 26 June 2014. The aim of the law is e.g. to provide a framework regarding climate policy in Denmark in terms of a low emission society by 2050 and to promote transparency and publicity. However, the law is rather short and consists of 7 sections, whereof two sections relates to the entry into force. However, the New Danish Climate Law is expected to recast the present Danish Climate Law, when the New Climate Law enters into force.[206]

[204] Aftale om klimalov af 6 december 2019: 2.
[205] Danish Energy Agency 2019: 48.
[206] L 177 Forslag til lov om klima fremsat den 26. februar af Klima-, energi- og forsyningsminister Dan Jørgensen, section 13(3).

3.3.1 Features of the Danish Climate Law

Targets

The law does not provide legally binding targets. Thus, it is not in accordance with the Political Agreement of 6 December 2019. This establish a regulatory gap, that needs to be addressed in the New Danish Climate Law.

The Danish Counsel on Climate Change (Klimarådet)

In order to promote professionally coherent decision making, an independent expert-based Danish Counsel on Climate Change (Klimarådet) is established in section 2. This is done on the basis of the reasoning, that to tackle climate change, experts are necessary to provide competent guiding and confront the process pursuant to section 2(1).

Once a year, the Danish Counsel on Climate Change shall make a report available to the public based on its recommendation and analysis of national climate targets and international climate obligations, cf. section 2(4). Furthermore, the Danish Ministry of Climate, Energy and Utilities shall provide a report every year assessing the recent years climate policy and efforts, cf. section 5. This advocates for transparency and a central revision body as well as it makes a basis for coordination of the governance.

Regulatory potentials and barriers

The potential for the law may seem outdated and simple in the light of recent legislation. However, it provides for a platform adding expert knowledge and independency to the Danish climate regime. The reporting activity adds transparency and force the parliament to reflect on climate related actions in previous years.

To put the drafting of the Climate Law in context; the Climate Law was drafted and put into force during the Kyoto Protocol, that through a top-down-approach provided legally binding targets to a national level. Thus, it was not necessary for national law to provide binding targets. Yet, this issue needs to be addressed in the future in the New Climate Law in order to comply with the Paris Agreement.

Abovementioned findings also prove, that the international level of governance has had an impact and influence on Danish national level of legislation.

3.4 The proposal on the New Danish Climate Law

A proposal has been made on 26 February 2020 putting the intention of the Political Agreement of 6 December 2019 into a legislative act ("The New Climate Act").[207] The final and legally binding outcome will be essential in order to put Danish governance in line with international and regional legislation. The main features of the proposal will on this basis be assessed, even though the New Climate Act has not taken its final form and is not legally binding.

3.4.1 Features of the proposal on the New Danish Climate Law

National climate targets

The aim of the proposal is to provide legally binding, national targets pursuant to section 1(1). The target is first of all to reduce GHG emissions with 70 % in 2030 compared to 1990 levels. In addition, a long-term target of climate neutrality ("klimaneutral") in 2050 is also seen. The reasoning behind this is to comply with the aims of the Paris Agreement, thus keeping the temperature below 1.5 degrees Celsius. These targets are therefore in accordance with the aims of the Paris Agreements, and also outlining the long-term perspective required.

Danish based GHG emissions

In addition, the reduction of GHG emissions shall be done within Denmark pursuant to section 1(3)4. Thus, cooperation cross border is only permitted in case it is clear, the national climate targets are not being achieved as seen in section 7(4).

Annual climate action plans

Annual climate action plans are to be ("klimahandlingsplan") The climate action plans will contain milestone targets. The milestone targets are to be established in cooperation with the Danish Climate Counsil on Climate Change. This is in accordance to the NDC in the article 4 to the Paris Agreement. This will create transparency and require reflections on progression to be made.. The Climate Action Plan shall be made public pursuant to section 2(2). This legally binding provision provides for a new

[207] L 177 Forslag til lov om klima fremsat den 26. februar af Klima-, energi- og forsyningsminister Dan Jørgensen.

climate action plan to be done at least every 5 years and planning 10 years ahead. This also reflects the long-term structure of the Paris Agreement. In addition, a climate action plan cannot be less ambitious than an earlier climate action plan, which reflects the "principle-of-progression" in the Paris Agreement.

Milestone targets

The proposal on the New Danish Climate Law contains a mechanism in the form of annual climate action plans, where milestone targets are to be made every 5 years in accordance to section 2(1). The milestone targets shall plan 10 years ahead. In addition, the milestone targets cannot be less ambitious than the previous milestone targets, thus this is in line with the "principle-of-progression" seen in the Paris Agreement.

Regulatory potentials and barriers

The proposal on the New Danish Climate Act is not legally binding as it is a proposal. This should be taken into account when assessing the regulatory potentials and barriers. Yet, the proposal on The New Climate Act has the potential to comply with the aim of the Paris Agreement.

3.5 The Renewable Energy Act

The Renewable Energy Act[208] entered into force on 1 January 2009 with the aim to promote production of renewable energy, cf. section 1(1). It applies to land, the EEZ and the territorial sea according to article 3. This interlinks it to the offshore wind sector, as it is a renewable energy source.

3.5.1 Features of the Renewable Energy Act

Siting

The siting of offshore wind turbines is in general regulated by the Renewable Energy Act, chapter 3.[209] Section 22(1) confirms the jurisdictional power of the state to utilize energy from wind in the territorial sea and in the EEZ. This matches the similar provisions in UNCLOS as seen in chapter 1.5. Denmark claimed an EEZ in 1996.[210]

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[208] LBK nr. 125 af 07/02/2020 om fremme af vedvarende energi.
[209] Anker & Jørgensen 2015: 4.
[210] See Lov nr. 411 af 22/05.1996 (Lov om eksklusive økonomiske zoner), yet, the concept of an EEZ is also customary international law, see Anker [et al.] 2008: 38. This finding shows that Denmark would be able to claim an EEZ without formally ad

Three permits are required in order to utilise energy offshore. Permits are granted by the Danish Energy Agency, which acts like a one-stop-shop.[211] This is in accordance with the future 3rd RES Directive, article 16. This shows a Danish frontrunner-approach to the compliance with future regulation at an EU-level.

Section 22(2) establish a preliminary investigation permit. This can be done in two ways. One way is through a call for tender, where the applicants are invited to submit a quotation for a designated area, thus the procedure is competitive. Another way is when the applicant takes the initiative to establish an offshore wind farm in a designated area through a so-called open-door process as seen in section 22(2).[212] The article itself does however not provide much information about how the permit should be granted, besides the utilisation of energy should be relevant pursuant to section 22(7). This is decided by the Danish Energy Agency on a case-by-case basis. Yet, it must be assumed, that the decision is based on a balance of interests, however this makes the permit procedure unclear to the applicants.

Section 25 facilitates an establishment permit. An establishment permit requires an already granted preliminary investigation permit in order to be able to use these results for the establishment permit procedure.

Article 29 facilitates an operation permit. Permission is only given if the requirements to establish the project are met. Actual operation of the wind power plant is not allowed before the permit is issued.

In addition to the three permits, an Environmental Impact Assessment (EIA) is neccesary, if the wind turbine is expected to have an environmental impact. So far, all Danish offshore wind turbines have been assessed to be subject to an EIA.[213]

[211] This finding complies with article 16(1) to the 3rd RES Directive. The Danish Energy Agency has been delegated this competence, cf. BEK nr. 1068 af 25/10/2019, section 3.
[212] Anker & Jørgensen 2015: 10; Gonzáles & Arántegui 2015: 40-41.
[213] Danish Energy Agency 2020.

The lead time for the granting procedure has been criticized within the EU for being too long and the issue has proven to be a regulatory barrier in some member states.[214] This might be underlined by the fact, that actual operation is not permitted before the permissions are issued. However, this barrier has not been reported to appear in Danish regulation. [215]

Regulatory potentials and barriers

The Renewable Energy Act establish a three-step permission procedure in order to construct an offshore wind turbine, however the procedure needs more clarity in the wording of the sections in order to promote a clear and transparent process and in order for potential offshore wind producers to gain an oversight of the process. In addition to this, the process being subject to in a great extent the relevant authority's practice adds uncertainty to the process, as this practice may vary from case to case. The lack of a formal procedure to streamline the administrative procedure makes the procedure complex. This causes a lack of reliability in the regulatory framework and thus establishes a regulatory barrier.

3.6 The Electricity Supply Act

The Electricity Supply Act[216] was put into force 1 November 2000. The main objective is to ensure the electricity supply is organised and implemented while taking into account the security of supply, the national economy, the environment and consumer protection, cf. section 1(1). Furthermore, the aim is the promotion of renewable energy from sustainable sources pursuant to section 1(2). The act applies to the sea territory and the EEZ, cf. section 2(2), which makes it relevant to the offshore wind sector.

3.6.1 Features of the Electricity Supply Act

Access to grid connection

Section 27(c) provides for a priority access for renewable energy. However, this access has been limited to smaller production plants (400 KW), resulting in offshore wind turbines being effectively

[214] Gonzáles & Arántegui 2015: 2.
[215] Gonzáles & Arántegui 2015: 2.
[216] LBK nr. 119 af 06/02/2020.

denied priority access as well as actual offshore wind farms, cf. section 27(c), part 6. Yet, before the limitations entered into force, this section had already limited practical effect.[217]

This provision does not comply with the priority access found in article 16(2)b to the current 2nd RES Directive, however the construction has not been found in the 3rd RES Directive. Danish legislation is on this matter on track and complying with future regulation to be implemented and, therefore, confirms its front-runner ambition.

Electricity permits

If the wind turbine is capable of producing more than 25 MW, it requires a permit in accordance to section 10(1). Normally, a single wind turbine is not capable of producing 25 MW or more, however an actual wind turbine farm consisting of various wind turbines in a somehow collected environment will be seen as one single unit of wind turbines, and will thus have exceed the capacity of 25 MW, making the wind turbine farm subject to a permit. The permit will last for 20 years in accordance to section 10(2). This timeline promotes a foreseeable future.

Section 11(1) requires a permit to establish an electrical production plant as well as section 22a requires a permit for establishing electricity grids offshore. The licenses are granted by the Danish Energy Agency.

The offshore wind sector is on this basis subject to extensive permissions activity.

Regulatory potentials and barriers

The abovementioned describes an extensive planning process. However, through a one-stop-shop-form, the regulatory burden is eased. In addition to this, the right to innocent passage established by UNCLOS is also influencing the development as a balance between interests has to be found. These factors work together as a tandem and calls for a further regulatory frame.

[217] L 16 Forslag til lov om ændring af lov om elforsyning, lov om Energinet og lov om fremme af vedvarende energi. Fremsat den 2. oktober 2019 af klima-, energi- og forsyningsministeren Dan Jørgensen: 6.

3.7. The Act on Maritime Spatial Planning

The Act on Maritime Spatial Planning entered into force on 1. July 2016.[218] Its objective is to promote economic growth, development of the Danish marine area and the utilisation of marine ressources in a sustainable way by determining the framework for planning of the Danish maritime area, cf. section 1. The aim is therefore to establish a balance between economical growth and sustainability.

The Act implements the MSP Directive and follows the same objective. The field on application is the Danish maritime areas, which makes the Act on Maritime Spatial Planning apply to the offshore wind sector.[219]

3.7.1 Features to the Act on Maritime Spatial Planning

Section 6 in the Act on Maritime Spatial Planning implements article 4, 6 and 7 in the MSP Directive. On this basis, Danish legislation comply with the timetable in article 15(3) to the MSP Directive, which commands member state to establish maritime spatial plans before 31 March 2021.

Maritime Spatial Plans

The MSP Directives article 8 sets out the maritime spatial planning. The article is implemented by section 7 in the Act on Maritime Spatial Planning. The leading authority body is pointed out to be the Ministry of Industry, Business and Financial Affairs, who is delegated to determine the spatial planning and timetables for the activities and use of the marine spatial planning. This emphasize a focus in economic interests.

Timetables

The MSP Directive has established timetables in article 14 and 15. Section 10 provides for similar timetables ensuring the implementation of the timeframes.

Cooperation

Chapter 7 addresses the cooperation with member states to the EU. Article 18 provides for the Ministry of Industry, Business and Financial Affairs in the context of his duties to cooperate with

[218] LBK nr 400 af 06/04/2020 om maritim fysisk planlægning.
[219] This is defined as the territorial sea and the EEZ in accordance to section 3(1).

EU-member states, bordering Danish maritime zones. The aim of the provision is to ensure that marine spatial planning is coordinated and coherent. This shows an overall approach to ensure coordination of activities in marine spatial planning. In context to the offshore energy sector, this approach seems beneficial in order to regulate the rising activities of offshore regime.

Regulatory potentials and barriers

The rising use of offshore wind turbines requires planning acts in order to organise the activity in maritime space. The Act on Maritime Spatial Planning is therefore beneficial and represents a potential to the offshore wind energy sector. In addition, the act was formed by the Ministry of Industry, Business and Financial Affairs, thus emphasizing an economical incitement in the balance between sustainability and economic growth. However, the offshore wind sector wind has the potential to boost the economical aspect in a sustainable way by producing renewable energy. The offshore wind sector has on this basis the potential to balance these interests.

3.8 Summary and comments

Governance of energy, climate change and marine spatial planning in Denmark has been formed by legislation and policies on global and regional levels. Yet, through a rising bottom-up-approach and a Danish frontrunner attitude, Denmark has the potential to influence international and regional levels of governance. Thus, the three levels have shown to work together as a tandem and influence each other.

The legal fields are constantly changing.[220] The fact that changes on one level will unquestionable create changes to the surrounding levels requires adaption to be made both vertically and horizontally for each level to complement each other. Yet, these changes of direction will cause a lack of reliability due to the uncertainty when predicting future scenarios. Thus, this establishes a regulatory barrier to the offshore wind sector.[221]

The focus on legislation on national level through a bottom-up-approach requires, that legislation is carefully designed and precise in order to facilitate a strong framework. Especially in a civil law country, where law is primarily searched for in legislation. Danish legislation has shown to be formed

[220] This observation is further backed up by the long tradition for major changes in the legal energy field, see Anker [et al.] 2008: 239.
[221] This regulatory barrier is documented in a survey research, see Gonzáles & Arántegui 2015: p. 30.

by permit processes, which are to a great extent based on estimates by the relevant authority. These factors need to be taken into considerations in the future in order to make the governance of the Danish offshore wind sector even better and more efficient.

Offshore wind turbines are subject to extensive regulatory instruments and procedures regarding citing.[222] The regulation having its roots in an interplay between various pieces of regulation and licenses guarded by authorities. This creates a high risk of not meeting some requirement, which challenges the administration and establishment of the offshore wind turbine and especially making the process difficult to grasp for non-experts. This represent a regulatory barrier hindering an effective - and practical manageable - utilisation of offshore wind energy at a national regulatory level.

Danish law is currently on a steppingstone in the process of implementation of the legislation in the Clean Energy Package. It is also the very last policy update on this matter within the EU. The full effect of the Clean Energy Package will manifest itself after the implementation process is completed.

Yet, as Denmark being a forerunner in the renewable policy aspect, the international and European influence have had a limited impact on Danish offshore wind sector.[223] This is illustrated by the 2nd RES Directive being solely an administrative process to implement as well as Danish legislation assessed in this thesis has shown to currently be on track with the current implementation process of the 3rd RES Directive.

Conclusion

In the introduction, the research question was asked: what are the regulatory barriers and potentials in the vertical and horizontal integration of international and EU law in the offshore wind sector in Danish Law?

While this thesis provides a respond to this question, it should be kept in mind, that there is no single formula for domestic policies to regulate the offshore wind sectors in general. National policies and legislation will be dependent upon the structure of national culture, nature, governance, history, political context and other national circumstances. Every country will need to assess its own

[222] Anker & Jørgensen 2015: 31.
[223] This argument is inspired by Dyrhauge 2017: 97.

potentials and barriers in order to develop an integrated framework. Yet, it is possible to identify some mainlines, which have been identified in this thesis through an analysis of the present state of law at international, regional and national level.

A regulatory barrier is that the framework for the offshore wind sector did not find its final form from the start. It has faced major changes in order to address previous regulatory barriers and expand upon potentials. However, these changes have proven to establish a regulatory barrier themselves. Changes in the legal framework has decreased the foreseeability of the regime, which has influenced the accountability of the Danish offshore wind sector.

Another regulatory barrier is the inclusion of various actors, both private and public in the governing of the offshore wind sector. This has led to a polycentric governance and thus, establishes a decentralised governance of the offshore wind sector.

Another regulatory barrier is the gap at international level of establishing a link between climate change measures and the promotion of renewable energy at an international level.

Another regulatory barrier is the need for clearance of the jurisdiction of marine spatial planning. The framework needs to be adapted to the rising level of activities in the form of offshore wind turbines. The current jurisdiction power belongs mainly at national level. A possible solution is to delegate the jurisdictional power to be governed at regional level.

Another regulatory barrier is the extensive permit processes at Danish national level. This challenges the administration and establishment of the offshore wind sector.

Yet, a potential is the aim for transparency; this aim is present at all regulatory levels. This benefits the exchange of information through establishing of centralised revision bodies and publication of reports. This will form a synergy in the interface of the regulatory levels and on this basis increase trust in the regime. It will also pave the way for a pledge-and-review-approach. Thus, it will be possible to exchange experiences and ideas within the offshore sector. This will benefit the overall governance of the offshore wind sectors in the future.

Another potential is the rising “bottom-up approach” found at international and regional levels. It allows the Danish wind sector to play a significant role at national level of governance and influence regional and international levels of governance.

Another potential is the increased focus on the internal market *contra* state aid. This will provide the Danish offshore sector with investor confidence and the opportunity to trade electricity within the EU on market-based conditions. This contributes to the development of the Danish offshore wind sector.

Abbreviations

EU	=	European Union
GHG	=	Greenhouse gasses (CO_2, CH_4, N_2O, PFCs and SF_6)
TFEU	=	Treaty on the Functioning of the European Union
TEU	=	Treaty on European Union
UNFCCC	=	United Nations Framework Convention on Climate Change
RES	=	Renewable Energy Sources
EEZ	=	Exclusive Economic Zone
CDM	=	Clean Development Mechanism
SDM	=	Sustainable Development Mechanism
NREAP	=	National Renewable Action Plan
URDP	=	Union Renewable Development Platform

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