Off-Shore Wind Energy Development in International Law

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1 The Factual Background

The production of energy from wind through the use of offshore installations is a business that has been growing rapidly over the last decade. Wind power is used, specifically, to generate electricity – one of the several types of energy produced through renewable energy sources. Europe is currently leading the world in both wind-energy technology and development.

From an ecological perspective, wind-energy can help reduce the emission of greenhouse gases by displacing fossil-fuel power generation, therefore contributing to mitigate climate change. From a social perspective, offshore wind turbines are viewed by the public as less obtrusive than turbines on land, as their size and noise are mitigated by the distance. From an economic perspective, offshore wind-energy can help a country reduce the import of energy from other countries as well as create new jobs and local business opportunities. From a legal and political perspective, wind-energy production can help a country meet renewable energy standards set forth at the international level.

However, offshore wind-power remains today the most expensive energy generating technology being considered for a large scale deployment. Wind turbines can also have adverse impacts on seascapes and marine life.

The following paragraphs review the international legal regime applicable to the development of offshore wind farms, taking into account the possible impacts produced on the marine environment and its living components by the placement and functioning of wind turbines.

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1 The scholar to whom this volume is dedicated is one of the editors of a collection of essays on a subject that is in line with the topic of this paper: Jean-Paul Beurier, Alexandre Kiss and Said Mahmoudi (eds), New Technologies and Law of the Marine Environment (Kluwer Law International 2000).

In the perspective of the United Nations Convention on the Law of the Sea (UNCLOS),\(^3\) the question of which legal regime applies to offshore wind-energy exploitation essentially depends on the location of wind farm installations. Most of the development in installations for wind-energy production is likely to happen in offshore waters, for at least two reasons. First, because winds are stronger and more stable out at sea than close to land, and installations placed far offshore can be larger and produce more energy. Second, because it is believed that offshore wind farms would cause less concern among neighbouring people, as the blades of the turbines would not be seen – and would not be heard – from shore. This, of course, does not eliminate the risks of adverse impacts that wind farms may have on marine biodiversity and habitats.

The considerations just made should not, however, give the perception that all prospective developments of wind-energy production will occur only on the high seas. At the moment, neither the technology nor the required financial investments are yet available for high seas installations.\(^4\)

In the territorial sea, which is subject to the same sovereignty that the coastal State exercises on its land territory, with the only exception of the duty to guarantee the right of innocent passage to ships of all other States,\(^5\) every aspect of wind-energy projects (planning, permission, leasing of the seabed, construction, cabling, energy distribution, maintenance and liability) is in principle regulated by the laws of the coastal State. Article 21 of the UNCLOS provides that the coastal State may adopt laws and regulations, in conformity with the UNCLOS itself and other rules of international law, relating to innocent passage through the territorial sea – ie rules impacting navigation – with respect of, inter alia, the protection of installations, cables and pipelines. The coastal State is required to give due publicity to such laws and regulations.

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\(^5\) UNCLOS art 17.