Multi-use in the Baltic Sea and the North Sea:Opportunities and Challenges for Offshore Wind Energy

Harnessing the Wind: Offshore Wind Power's Regulatory Framework
Åland, 7-8 June 2024

Photo: UiB-SEAS

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https://www.uib.no/en/seas - University of Latvia, Faculty of Law, Institute of Legal Science


Over the last twenty years, “MU has evolved into a trendy marine policy concept.”
Guyot-Téphany J. et al., 2024.

Development of MU

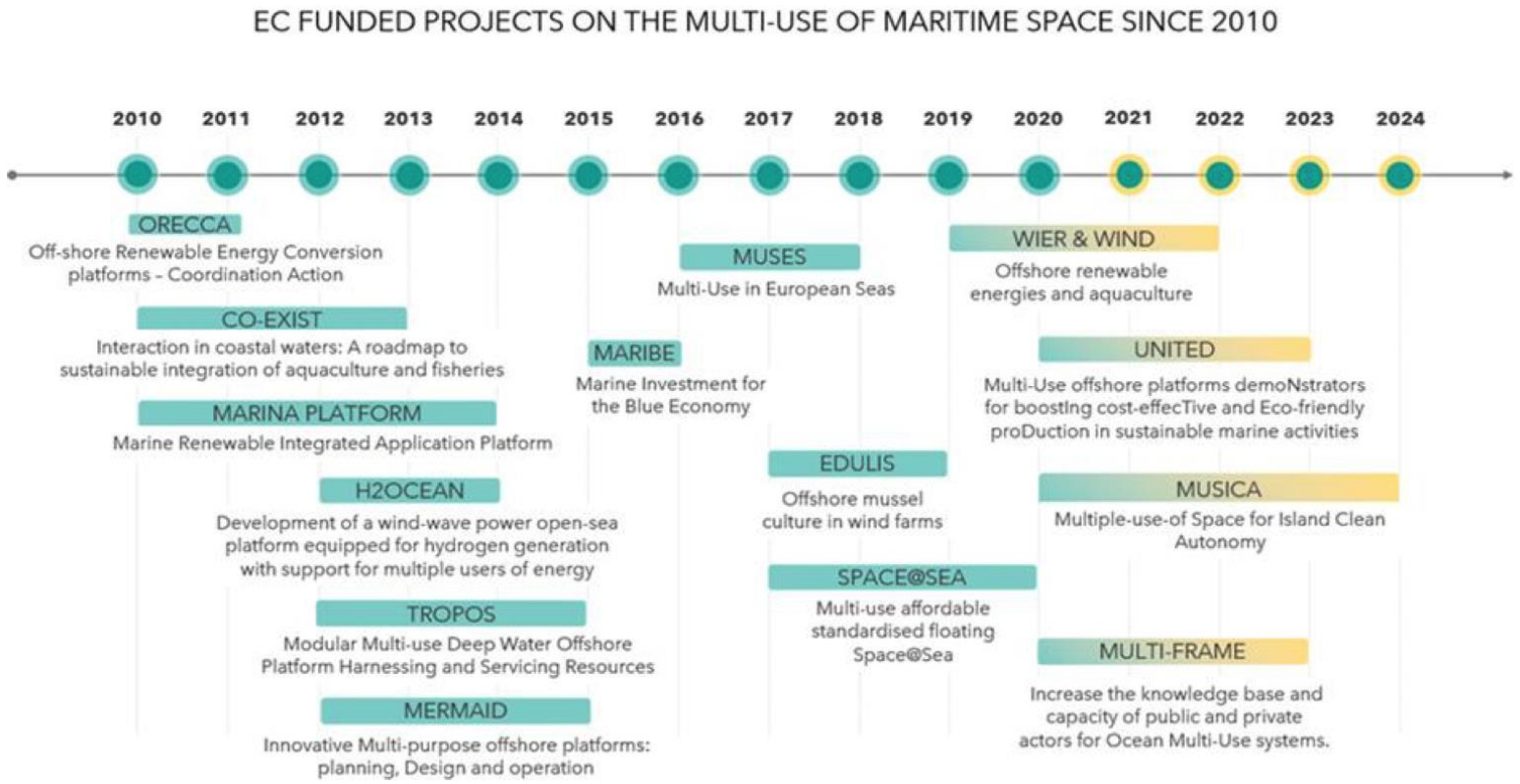
Multiple use

- 1940 ▷ 1970
- Great Barrier Reef Marine Park (Australia)

MU of European Understanding (scientific construct or niche)

- 2004 ▷ 2010
- The pivotal role of the European Commission (Horizon, Interreg)

Source: Guyot-Téphany J. et al., 2024



Source: EC, 2021

Definition of MU

- “the joint use of resources in close geographic proximity by either a single user or multiple users” (Schupp et al., 2021);
- “**conscious (intentional)** desire to share resources and space between two or more activities for the benefit of all users (EC, 2021a; Zaucha et al., 2016) which in essence means multi-functional and symbiotic mixtures (Przedrzymirska et al., 2021)” (Neimane et al., 2021).

MU types

- MU platforms – physical structures hosting multiple activities (“hard” MU)
- MU of sea space – different activities sharing sea space (“soft” MU)

Guyot-Téphany J. et al., 2024; van der Burg et al., 2020

Gap between theory and practice

- Issues of cooperation between marine users
- **Unsuitable regulatory frameworks**
- Economic benefits of immature technologies
- Unknown effects on marine ecosystems

Guyot-Téphany J. et al., 2024.

Offshore wind

- Driver for both MU (in combination with aquaculture) (EC, 2021) and MSP (Neimane, 2021)
- Contribution of MSP (in parallel with market, policies, and research and development [Przedrzymirska et al., 2021]) to the boost of MU
- Risk management/social acceptability (VASAB Secretariat, 2021)

Credit to Pexels (6862175)

Modes of MU

- 1) addition of activities, i.e., to an existing or historically created activity, a new activity is introduced (staggered development);
- 2) development of joint activities from the beginning of the project (joint development).

Ciravegna et al., 2024; EC, 2021;
Przedrzymirska et al., 2018a; Schultz-Zehden et al., 2018

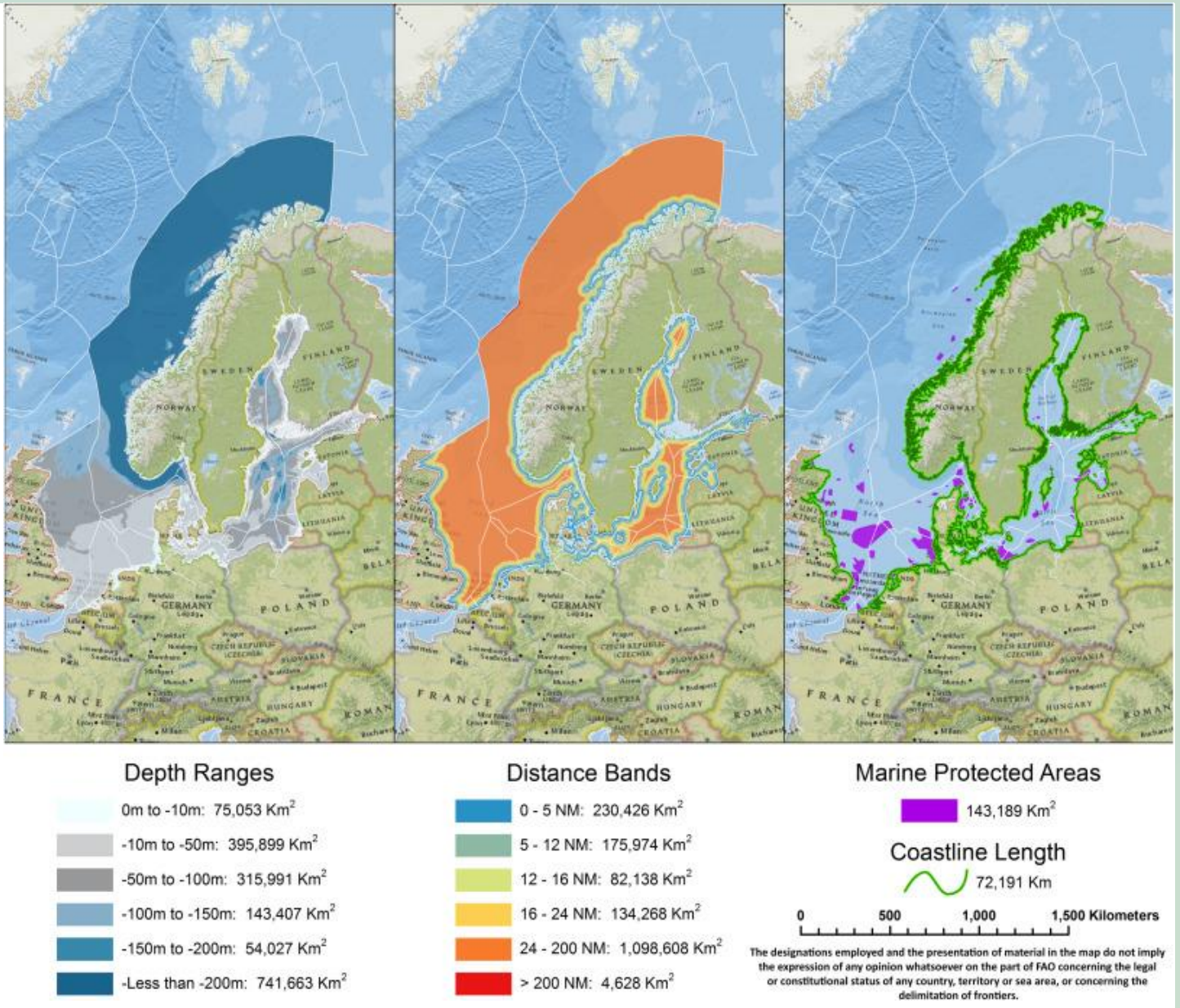
Source: https://maritime-spatial-planning.ec.europa.eu

Baltic Sea/North Sea

- Legal/institutional cultures
- Planning systems
- Hard vs. soft sustainability (Piwowarczyk et al., 2019)
- Peculiarities of each sea basin

- EEZ – 1 726 041 km^2;
- 46% – less than 100 m deep;
- 8% covered by MPAs;
- MPA's generally located close to the shore (in shallow waters);
- Large areas with a depth of 10 – 50 m;
- Industries with the highest potential (aquaculture, fixed wind energy and tourism)

van den Burg et al., 2019 (information and maps)



Offshore wind statistics (2024)

Country	Operational offshore wind farms	Offshore wind turbines
Belgium	9	399
Denmark	14	657
Estonia	-	-
Finland	1	11
Germany	30	1539
Latvia	-	-
Lithuania	-	-
Netherlands	Not specified (several)	615
Norway	1	11
Poland	-	-
Sweden	3	69
United Kingdom	55	2652

Source: various

	Baltic Sea								North Sea						Total no
	DE	DK	EE	FI	LV	LT	PL	SE	BE	DE	DK	NL	NO	UK	
1 OW and aquaculture	■	■	■		■		■	■	■	■	■	■	■		12
2 OW and tourism	■	■	■		■		■	■			■			■	8
3 OW and fisheries			■						■	■		■		■	5
4 Aquaculture and tourism								■					■		2
5 Fisheries, tourism and environmental protection							■								1
6 UCH, tourism and environmental protection	■	■	■	■		■	■	■							7
7 Tide and wave														■	1
8 OW and wave						■								■	2
9 OW and environmental protection	■	■	■				■	■		■	■			■	8
10 OW and shipping terminal														■	1
11 Wave and aquaculture		■					■				■			■	4
12 O&G and renewables													■		1
13 O&G, tourism and aquaculture															0
14 Aquaculture and environmental protection									■		■	■	■	■	5

Source: MUSES project after Przedrzymirska et al., 2018b

Country	Maritime spatial plan	MU in strategic documents	MU in national legislation	MU at an individual administrative decision level	MU in maritime spatial plan
Belgium	2019	-	✓	✓	✓
Denmark	2021	✓	✓	✓	✓
Estonia	2022	-	-	-	✓
Finland	2020	-	-	-	✓
Germany	2021 (EEZ)	✓	✓	✓	✓
Latvia	2019	-	-	-	-
Lithuania	2021	-	-	-	-
Netherlands	2009/2015/2024	-	✓	-	✓
Norway	2020	-	-	-	-
Poland	2021	-	-	-	✓
Sweden	2022	✓	-	✓	✓
United Kingdom	Different timelines	✓	✓	✓	✓


“The MU principle is unlikely to be widely applied in setting permit conditions if MU is not initially included in the maritime spatial plan.”
EC, 2021; VASAB Secretariat, 2021; van den Burg, 2020

Stage of development of MU

- Mainly based on pilot and trial projects
- Relatively underdeveloped (Schultz-Zehden et al., 2018; VASAB Secretariat, 2021)
- Early in the development process (Przedrzymirska et al., 2021)

Conclusions

- Integration of MU principle in the MSP planning
- Addressing MU challenges at the project's design phase
- Mandatory requirements of MU for sector-specific activities
- Identification of its potential benefits in the framework of current assessments (e.g. review application of environmental impact assessment and applying cumulative EIA)
- Cooperation between different authorities and integration
- Lessons of the North Sea for the Baltic Sea

Photo: UiB-SEAS

Image by J. Towner (Unsplash)

Thank You for Your Attention!

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