



CMI Tokyo Conference 2025
Mobile Offshore Renewables Units IWG Parallel Session
16 May 2025

comitemaritime.org/work/moru/

“The sea with its winds, its storms, and its dangers never changes
and this demands a necessary uniformity of juridical regime.”

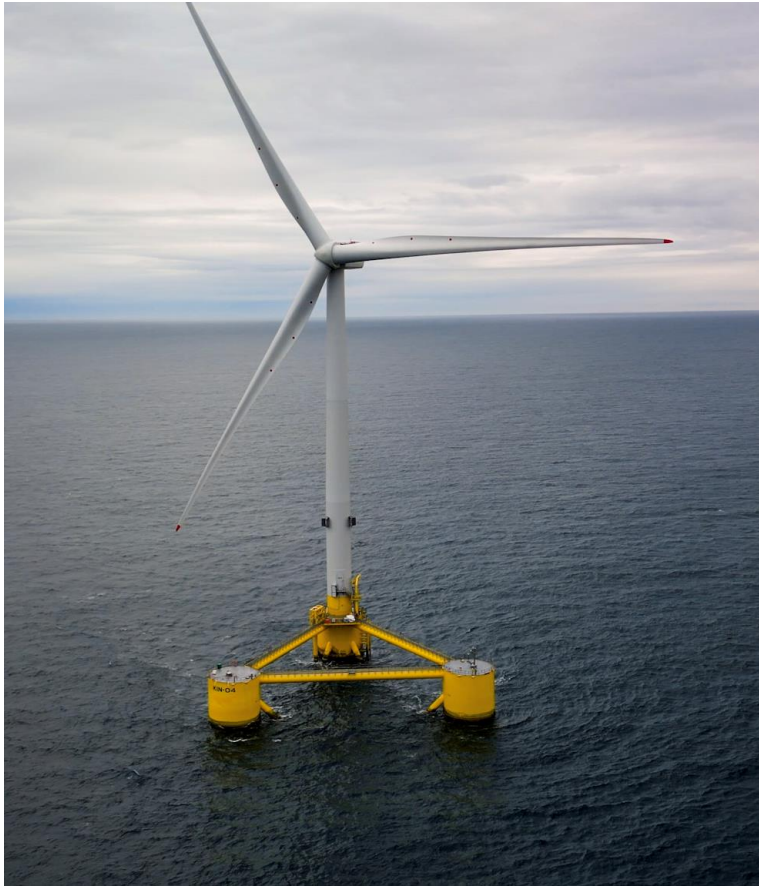
—Pasquale Stanislao Mancini, in his inaugural address to the University of Turin, 1860

“Mobile Offshore Renewables Unit” or “MORU” means any non-self-propelled, floating offshore unit or facility consisting of:

- (i) a ship-shaped hull, SPAR, semi-submersible, tension-leg platform, barge, or other buoyant hull concept; AND
- (ii) all internal and topsides equipment permanently attached to that hull, provided that such floating offshore unit or facility:
 - (a) is primarily designed for the purpose of directly or indirectly generating electric power or other form(s) of renewable energy by conversion of wind, wave, tidal, or solar energy, or differences in water temperatures or salinity, or a combination of any of the foregoing; OR
 - (b) is primarily dedicated to the conversion, transformation, conditioning, transmission, distribution, and/or temporary storage and subsequent release of electrical power or other form of renewable energy originally generated by one or more MORUs described in paragraph (a) above; OR
 - (c) is primarily dedicated to the conversion of any electrical power or other form of renewable energy generated by one or more MORUs described in paragraph (a) above into chemical products; OR
 - (d) is a hybrid unit combining the functions of two or more of the classes of units described in any of the paragraphs (a), (b), and/or (c) above.

MORUs: Generating Assets

Floating Wind Turbines



Credit: Photo of the Kincardine Offshore Wind Farm project courtesy of Principle Power

Floating Tidal Energy Converters



Credit: Scottish Government, CC BY 2.0
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Floating Wave Energy Converters



Credit: Mocean Energi Ltd

MORUs: Generating Assets (cont.)

Floating Solar Energy Converters



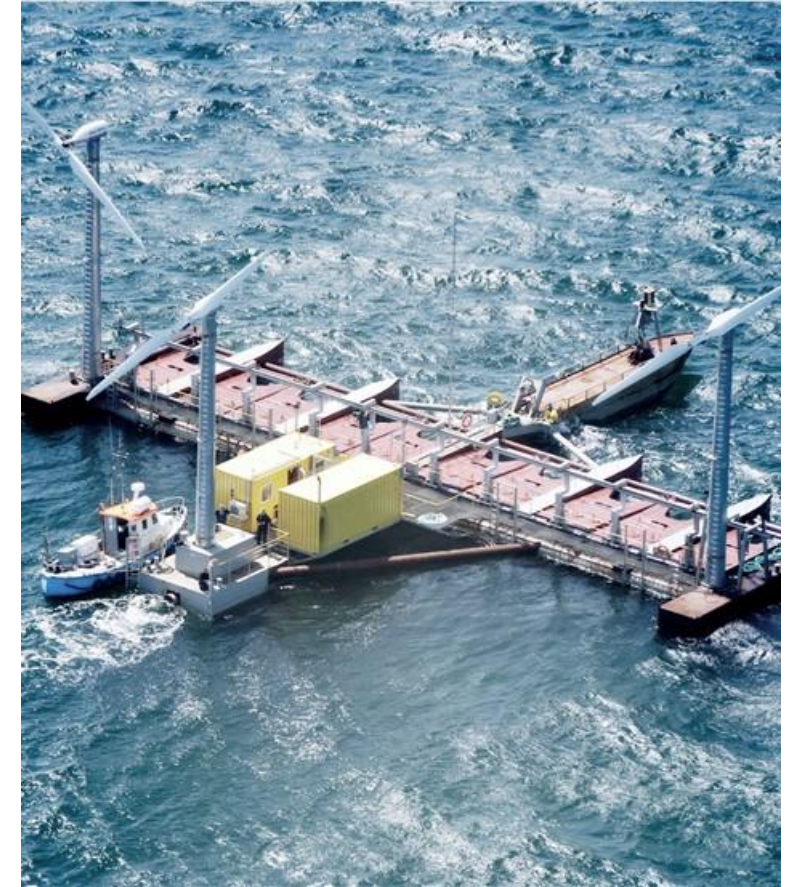
Credit: Ocean Sun

Floating Ocean Thermal Energy Converters



Credit: Global OTEC

Hybrids



Credit: Floating Power Plant

MORUs: Auxiliary Units

Floating Grid Integration Systems (e.g. Floating Substations)



Credit: BW Ideal / Hitachi Energy

Floating Power-to- X Facilities



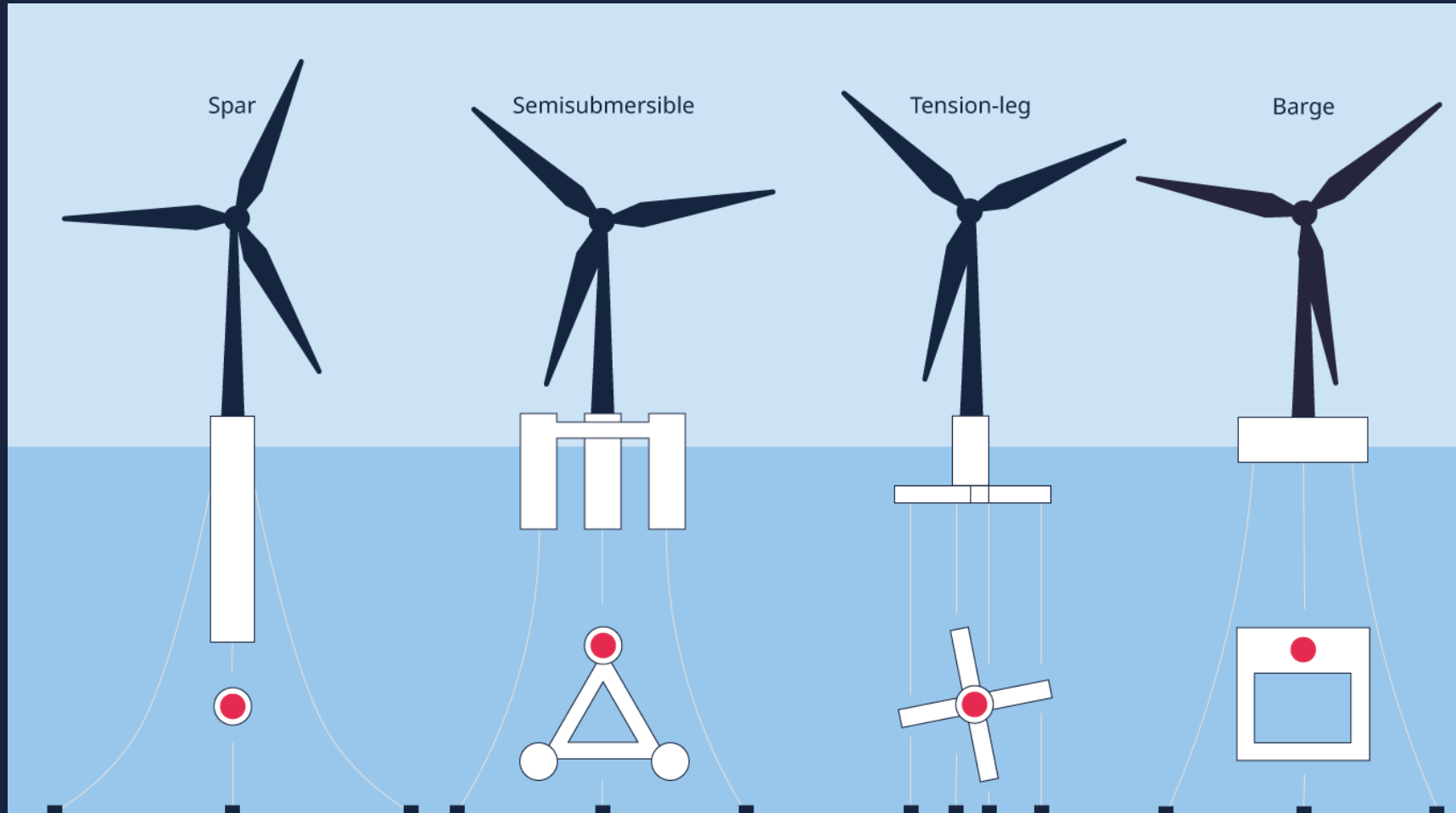
Credit: HydePoint AS and Vergia AS

Floating Measurement Units



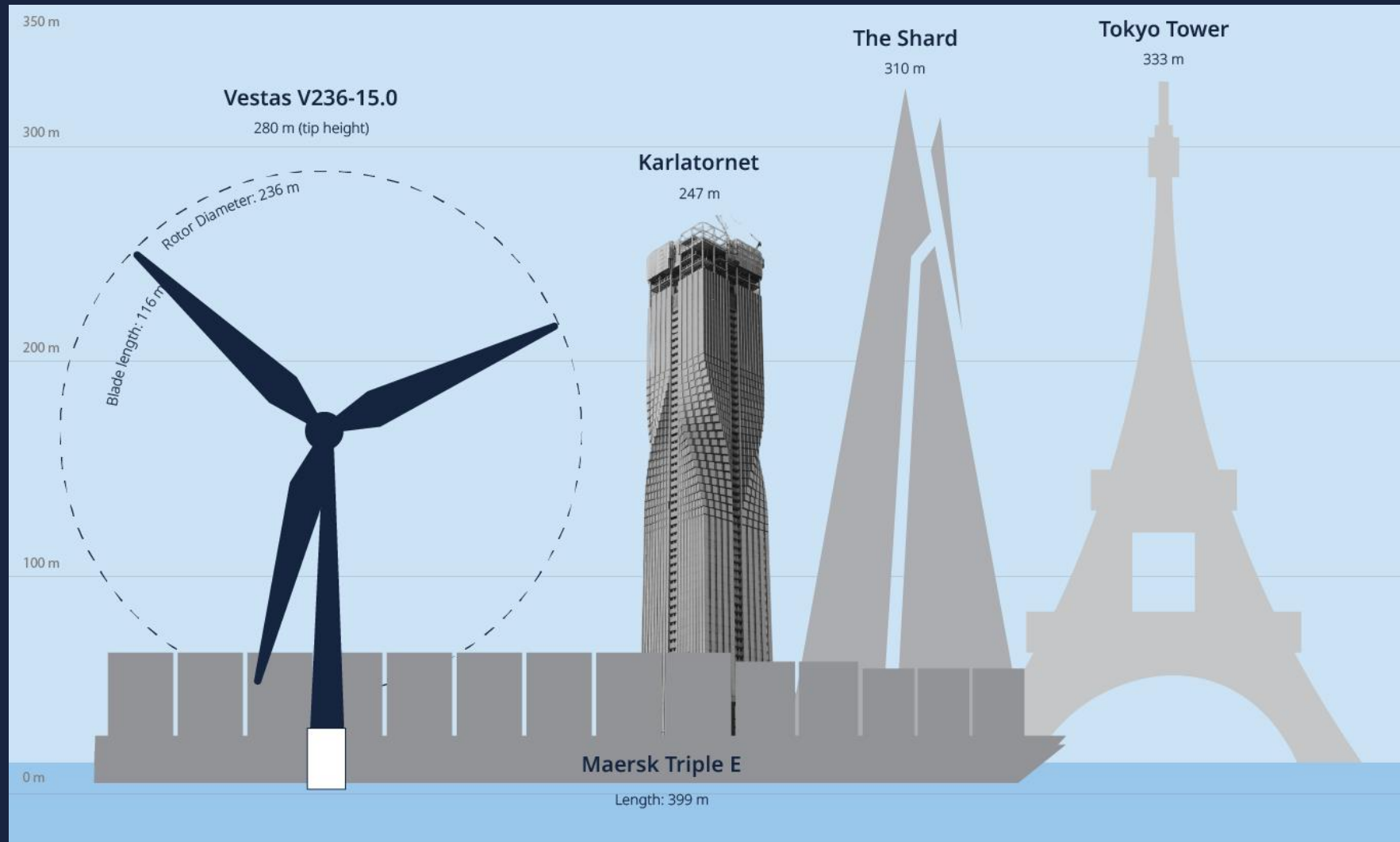
Credit: Floating Power Plant

Most floating wind turbines fit within a few common archetypes, derived from offshore oil and gas technology



Credit: DLA Piper Denmark 2023

How Big Are Floating Wind Turbines?

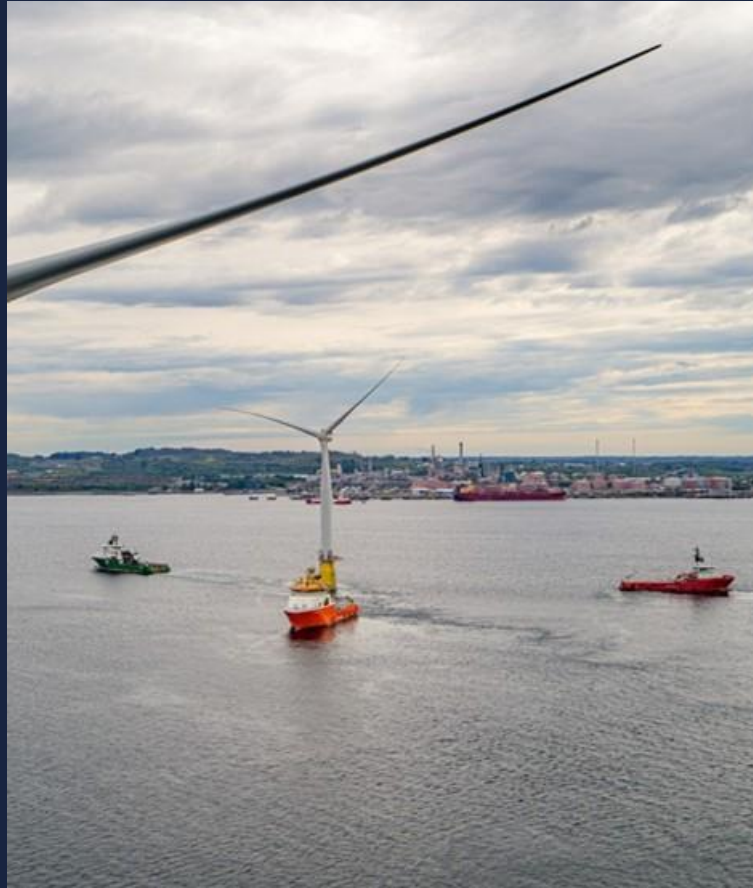


DLA Piper Denmark 2025

Unlike Fixed-bottom Turbines, Floating Wind Turbines is assembled in Harbour and towed to the offshore site.



Credit: Ole Jørgen Bratland / © Equinor



Credit: Jan Arne Wold / © Equinor



Credit: Photo of the Kincardine Offshore Wind Farm project courtesy of Principle Power



Credit: Odfjell Oceanwind 2023

A floating wind farm might have 50...100...or 150 FWTs.
1,5 GW wind farm = 100 x 15 MW FWTs, over $\sim 500\text{km}^2$

Three Distinct Floating Wind subsectors evolving...

Large Arrays connected to onshore grids



Credit: Odfjell Oceanwind 2023

Small Arrays connected to offshore O&G Installations



Credit: Odfjell Oceanwind 2023

Offshore Power-to-X



Credit: HydePoint AS and Vergia AS

Floating Wind Market Update

Courtesy of World Forum Offshore Wind



Government targets 2030-2040 (fixed & floating)

Installed capacity projections
(fixed-bottom & floating wind)

256,9 GW by 2030
Westwood

Reminder TODAY: 78,5 GW
WFO

Installed offshore wind capacity targets by countries (fixed and floating)

United Kingdom: 43-50 GW by 2030, **5 of which is floating**

Ireland: 37 GW by 2050

France: 2,4 GW by 2024; 5-6.2 GW by 2028; 18 GW by 2035; 40 GW by 2050

Portugal: 2 GW by 2030

Spain: 3 GW to be installed by 2030

Italy: 10 GW by 2035; 20 GW by 2050, **2 of which is floating**

Norway: 30 GW by 2040, ports able to facilitate 5 GW by 2030

Germany: 30 GW by 2030, 40 GW by 2035, 70 GW by 2045

Greece: 4.9 GW by 2032 **mainly floating**

Türkiye: 5 GW by 2035, 7 GW by 2040

South Korea: 14.3 GW by 2030, **half of which is floating**

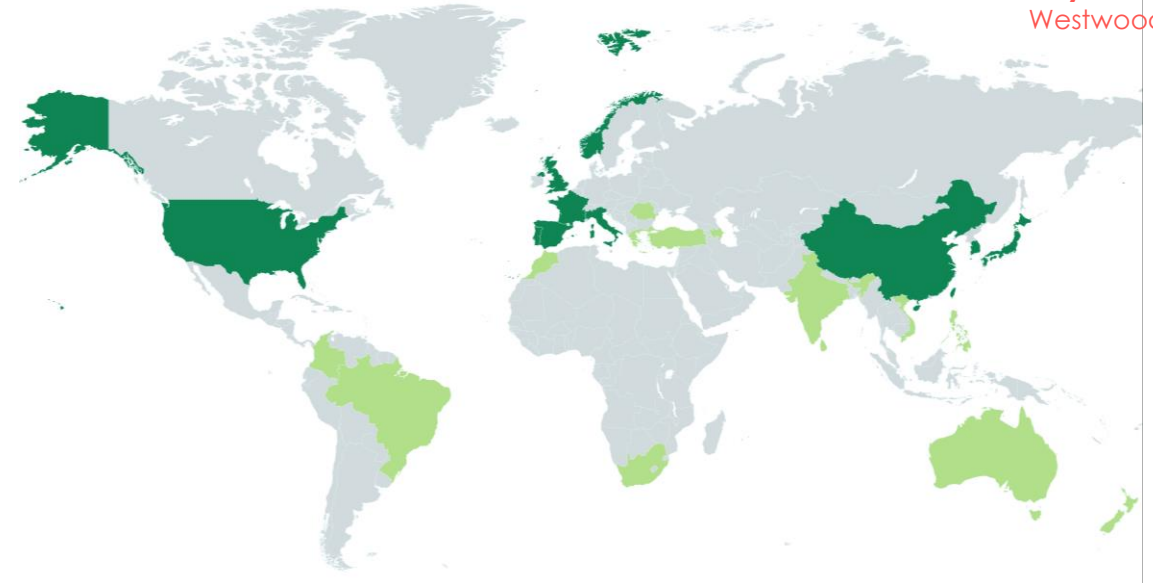
Japan: 10 GW by 2030, 30-45 GW by 2040; 4 sea areas identified for next auction of FOW demos; bill to build OW in EEZ

Taiwan: 13 GW by 2030; 55 GW by 2050

Victoria State (Australia): 2 GW by 2032, 4 GW by 2035, 9 GW by 2040

United States: on pause for now

Floating wind installed capacity projection
= 4,5 GW by 2030
Westwood



More markets: Large projects announced in **Italy**; demos and first commercial-scale projects underway in **China**; 2-3 GW of projects announced in **New Zealand**; 5 offshore wind areas announced in **Canada**

Emerging markets: World Bank/ESMAP published offshore wind roadmaps for **Vietnam, The Philippines, Sri Lanka, Azerbaijan, Colombia, Türkiye**; **Colombia** is preparing offshore wind tender; **Brazil** environmental licensing agency evaluating projects; **Romania** published draft law for offshore wind framework...

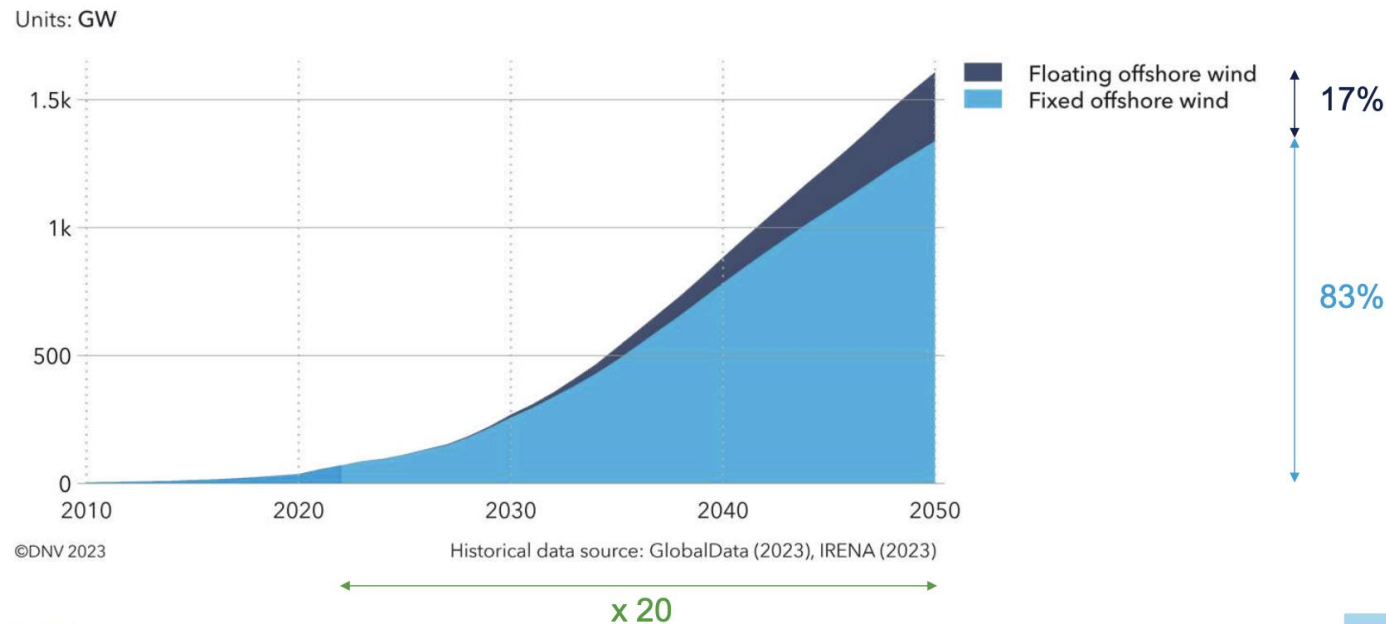
Contextualising figures

WFO 2024 – Global Offshore Wind Report

2024: largest offshore wind farm commissioned is 1 GW. For floating wind, it is 25 MW.

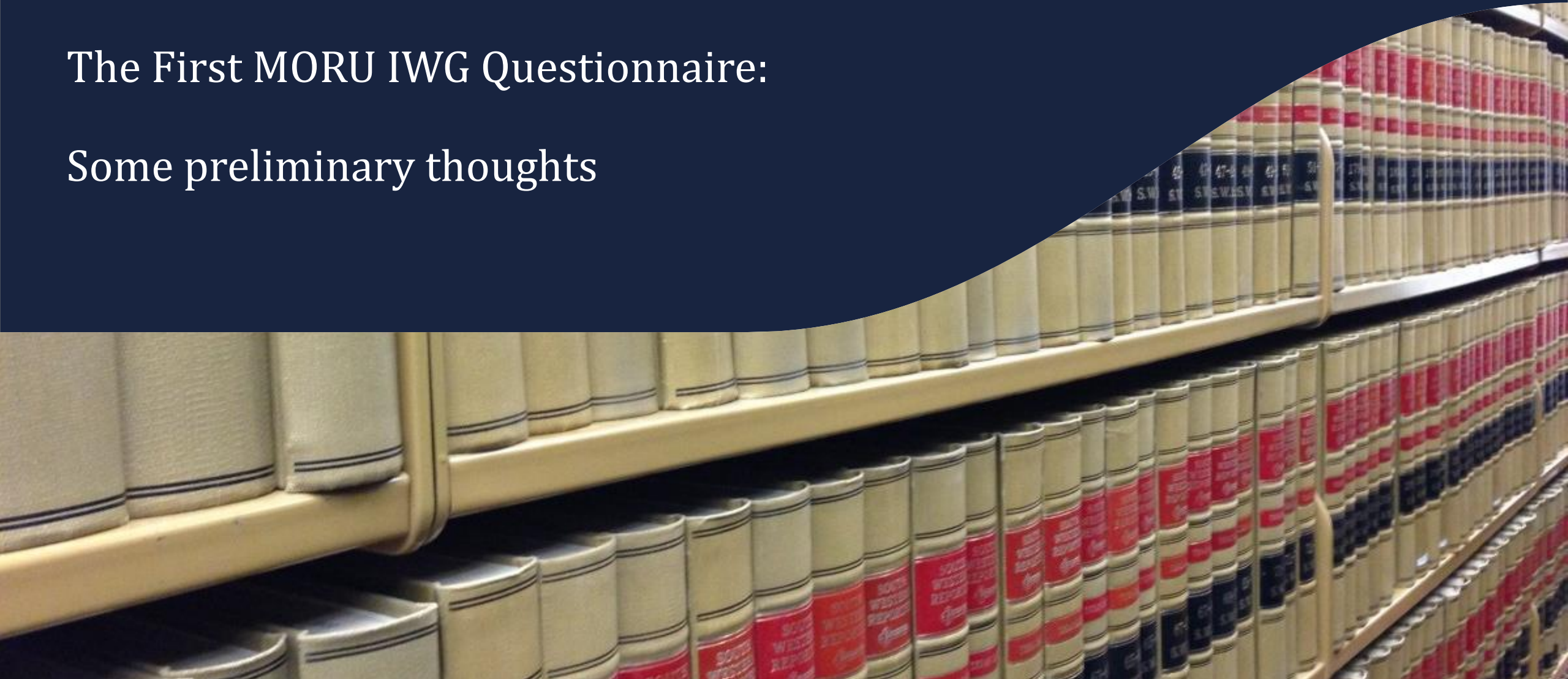
As of 2024: There are 78,5 GW of offshore wind capacity in operation. 270 MW of it is floating wind, which is **less than 1% of the total**.

Reminder estimation by DNV for 2050: Floating wind reaches a global installed capacity of 289 GW equivalent to **17% of offshore wind capacity in operation** (=1700 GW).



IRENA 2021: The world needs 2000 GW offshore wind by 2050 to achieve carbon neutrality and a 1.5°-compliant pathway.

The First MORU IWG Questionnaire: Some preliminary thoughts



Some basic assumptions behind the Questionnaire

- There is increasing demand for sustainable energy and a desire to deploy greater numbers of MORU in coastal waters going forward.
- Most MORU projects in the future will depend on some form of debt finance, and will not be balance sheet financed.
- Legal uncertainties in relation to MORU and their status could limit the amount of debt available and/or cause unacceptably high finance costs.

Some underlying questions behind the Questionnaire

- What can be done to improve MORU finance / bankability?
 - Do the tools of maritime law provide a way forward?
 - Legally, can a MORU be seen as (or treated as if it is) a vessel or ship?
 - ...at least for certain purposes? e.g. to obtain a "ship mortgage"?
 - ...arrest and release? ...innocent passage? ...to limit liability?
- Can the CMI create an acceptable legal framework for MORUs, which resolves specific legal uncertainties and improves their bankability?

17 MLA responses to the Questionnaire to date

- Responses have been received from:
 - Argentina, Brazil, China, Denmark, Germany, Hong Kong, Ireland, Italy, Japan, Malta, Norway, Poland, Singapore, South Africa, South Korea, Spain, & the United States.

Thank you!

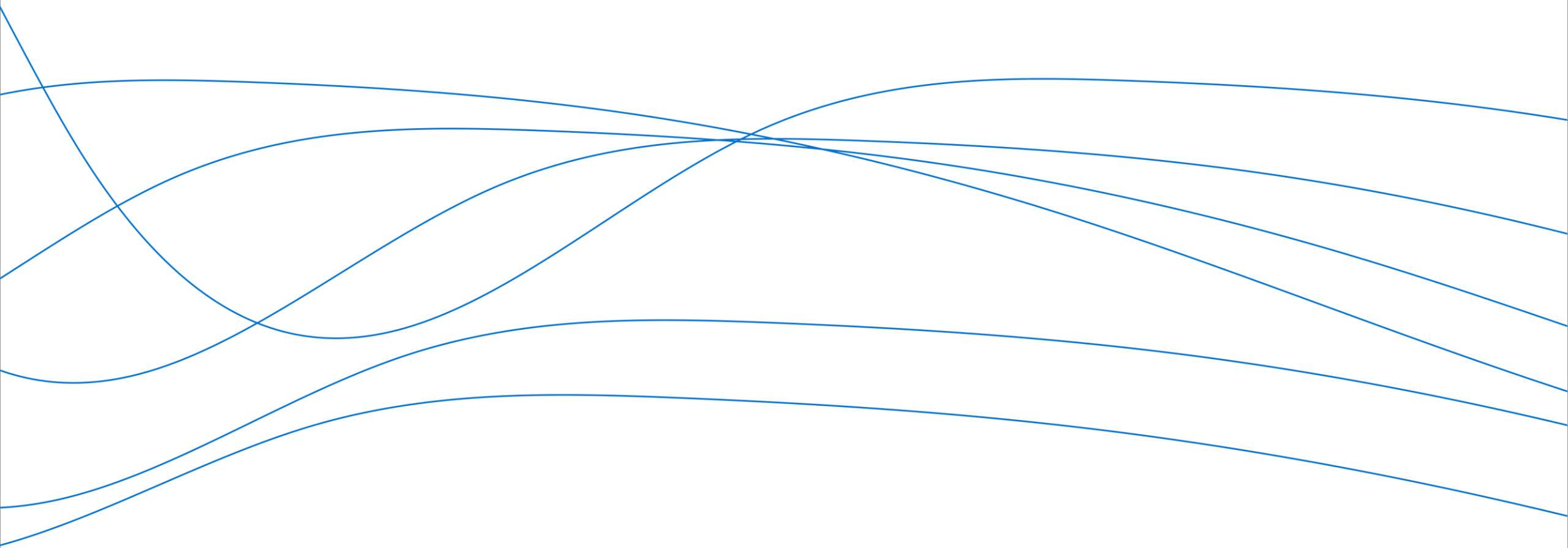
- We welcome further participation! If your NMLA has not responded, we encourage you to do so.
- You can find the responses on the CMI MORU webpage:

comitemaritime.org/work/moru/

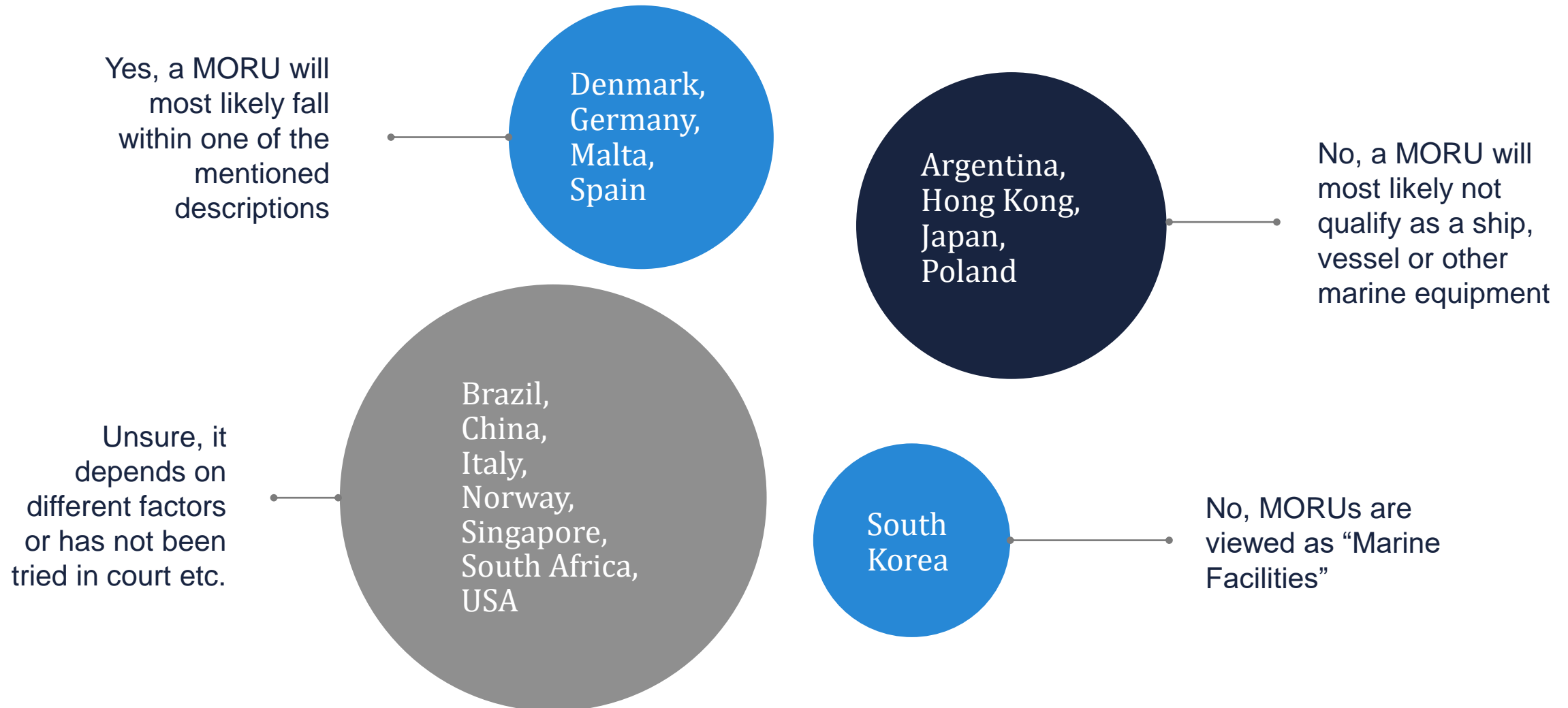
Questions related to ownership and other property interests



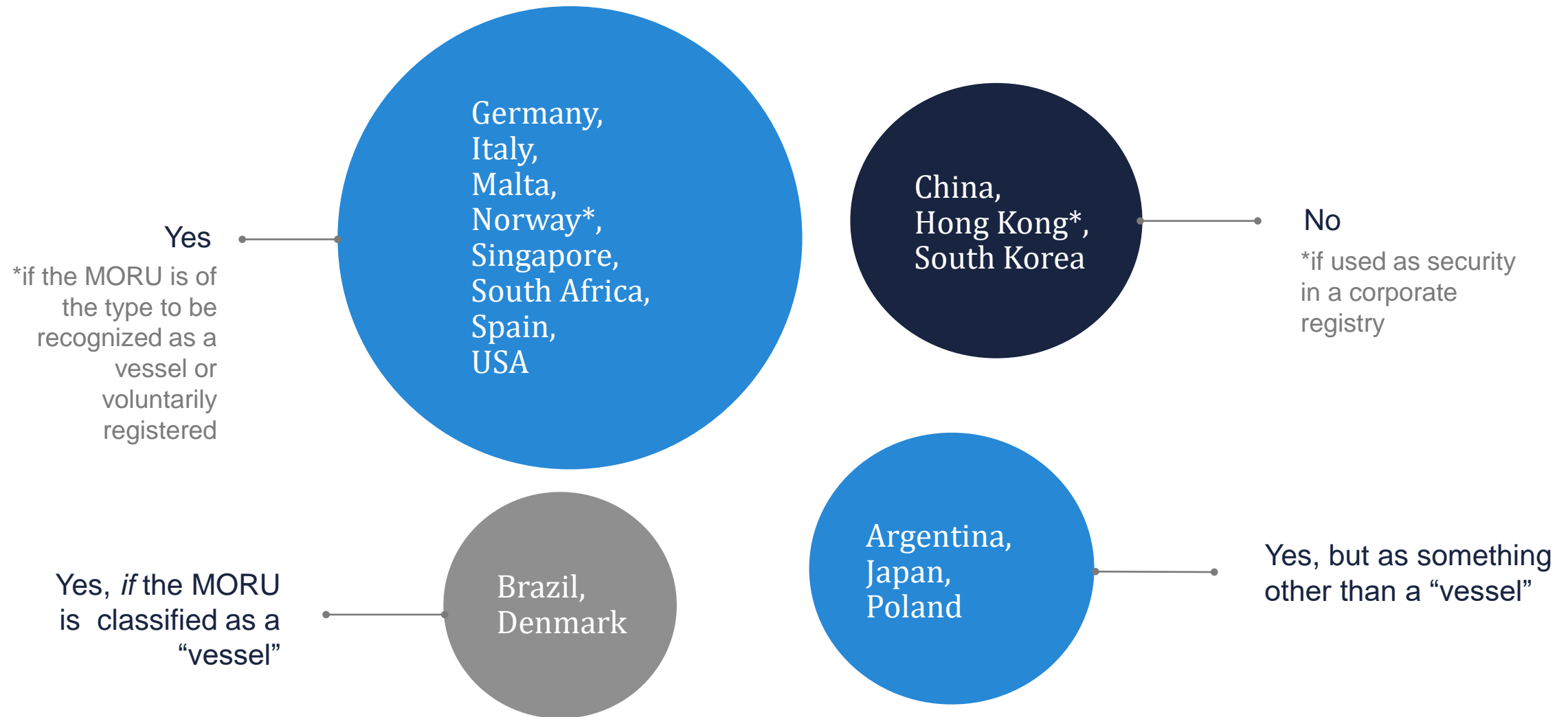
Treatment of Domestic MORUs as Property



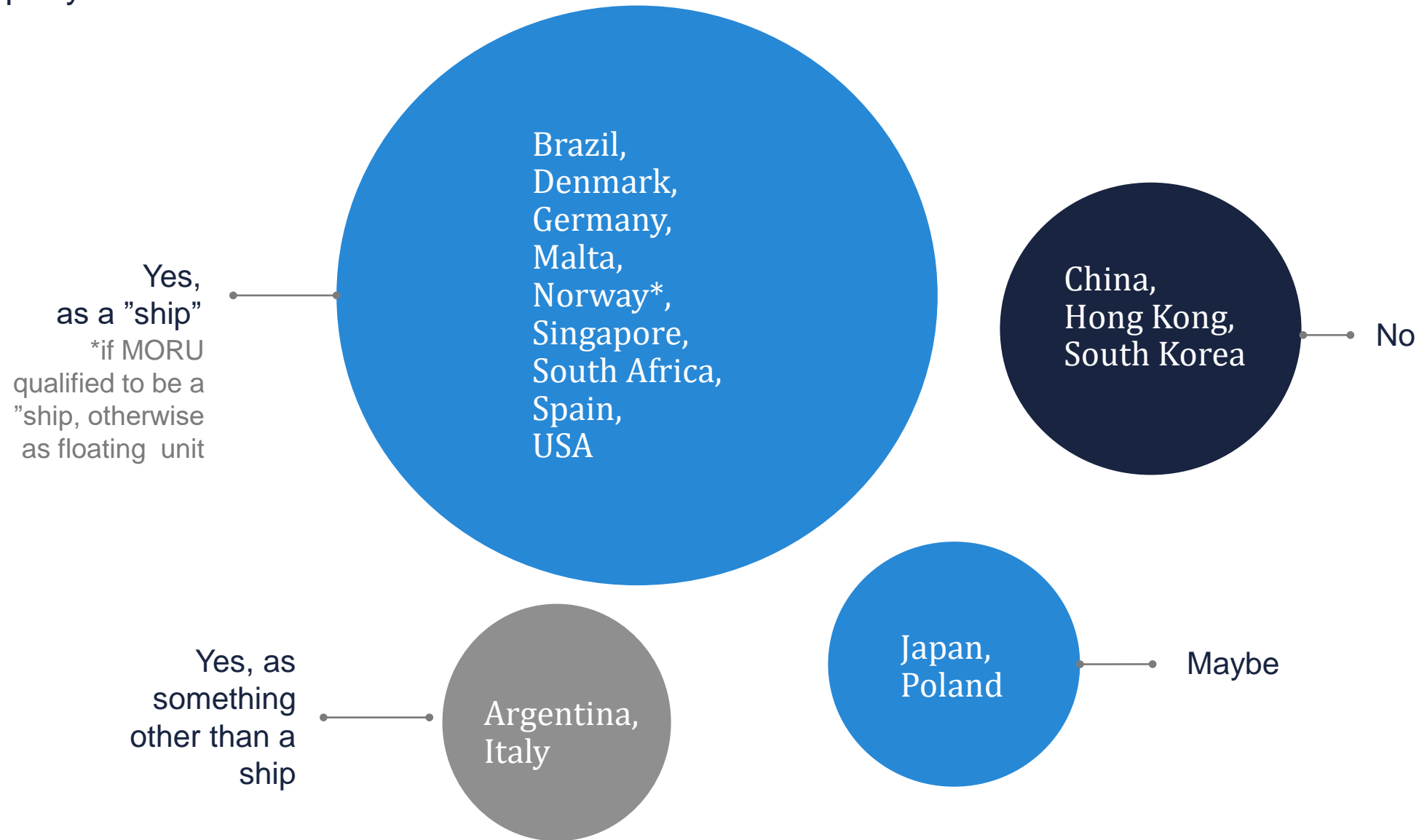
1. Would the courts in your jurisdiction, recognize any (or all) of the categories of MORU as a “vessel” or “ship” or other “marine equipment” or other special type of property?



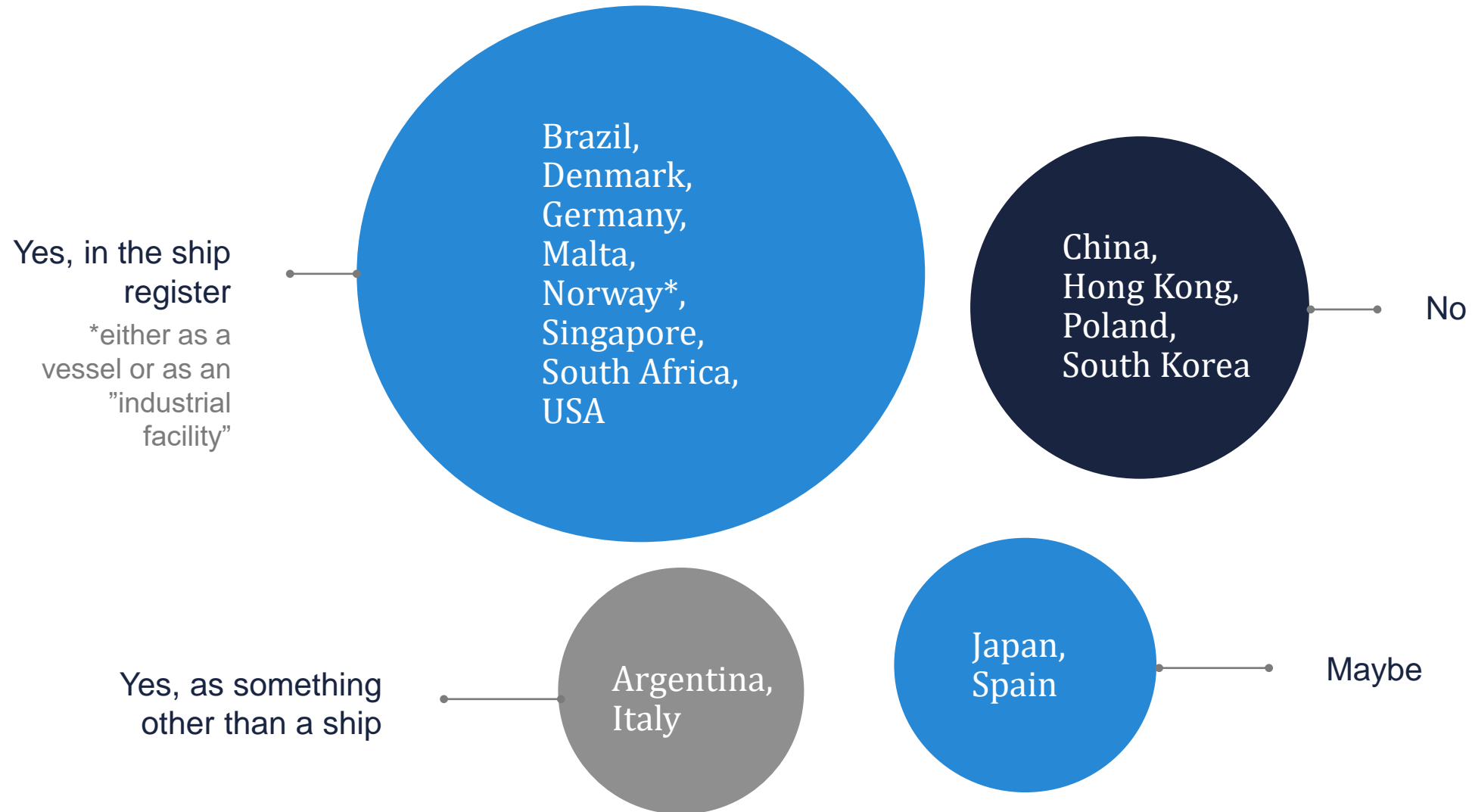
2. Is it possible in your jurisdiction to record ownership interests in any (or all) of the categories of MORU in a public register?



2.a. If so, would it be registered as a “vessel” or “ship” or other “marine equipment” or other special type of property?



2.b. If so, would it be registered in your jurisdiction's public register of ships, or in another public register?



4. In your jurisdiction, is the acceptance by a registrar or other governmental body of a MORU (or type of MORU) as a “ship” or “vessel” or equivalent term dispositive of its legal status as a “ship” or “vessel” or equivalent term under your law for purposes other than registration under domestic law?

Yes, if the vessel is qualified as a ship or mobile craft, the vessel is given the corresponding legal status for all aspects and the relevant specific legislation

Italy,
Malta

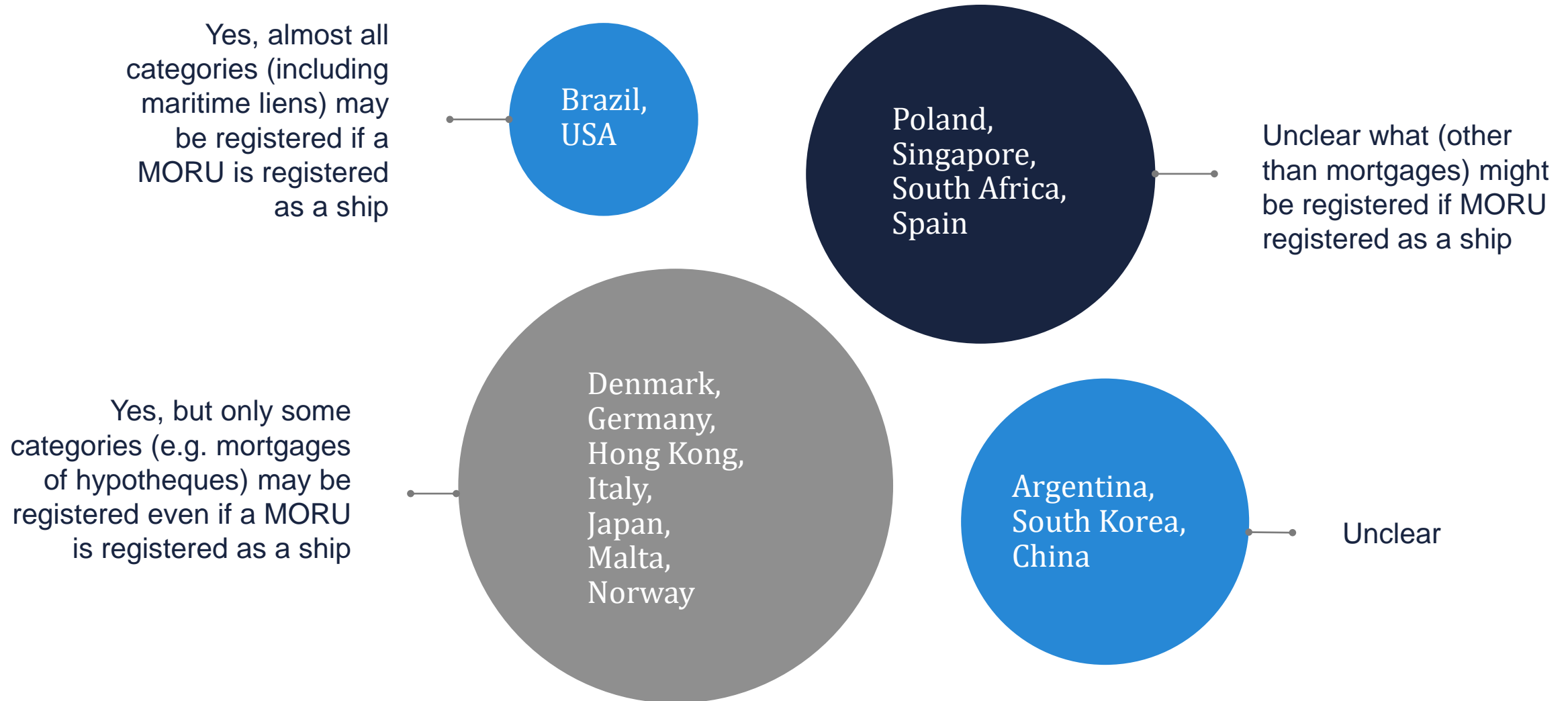
Not clear

Argentina,
China

Brazil,
Denmark,
Germany,
Hong Kong,
Japan,
Norway,
Singapore,
South Africa,
South Korea,
Spain,
USA

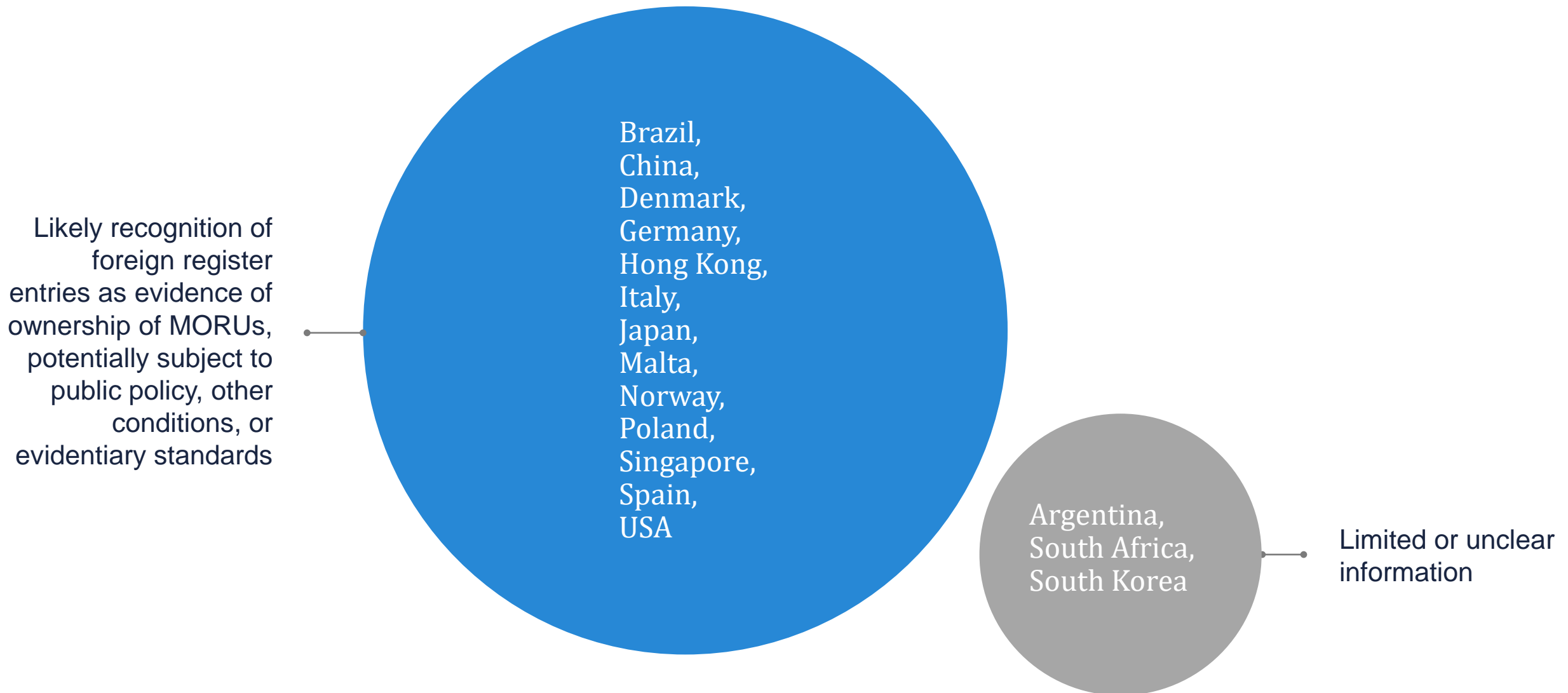
No, acceptance by a registrar is not dispositive of its legal status for purposes other than registration

5. Is it possible in your jurisdiction to record liens, maritime liens, claims, encumbrances (e.g. mortgages or hypothèques) against any such category of MORU in a public register?

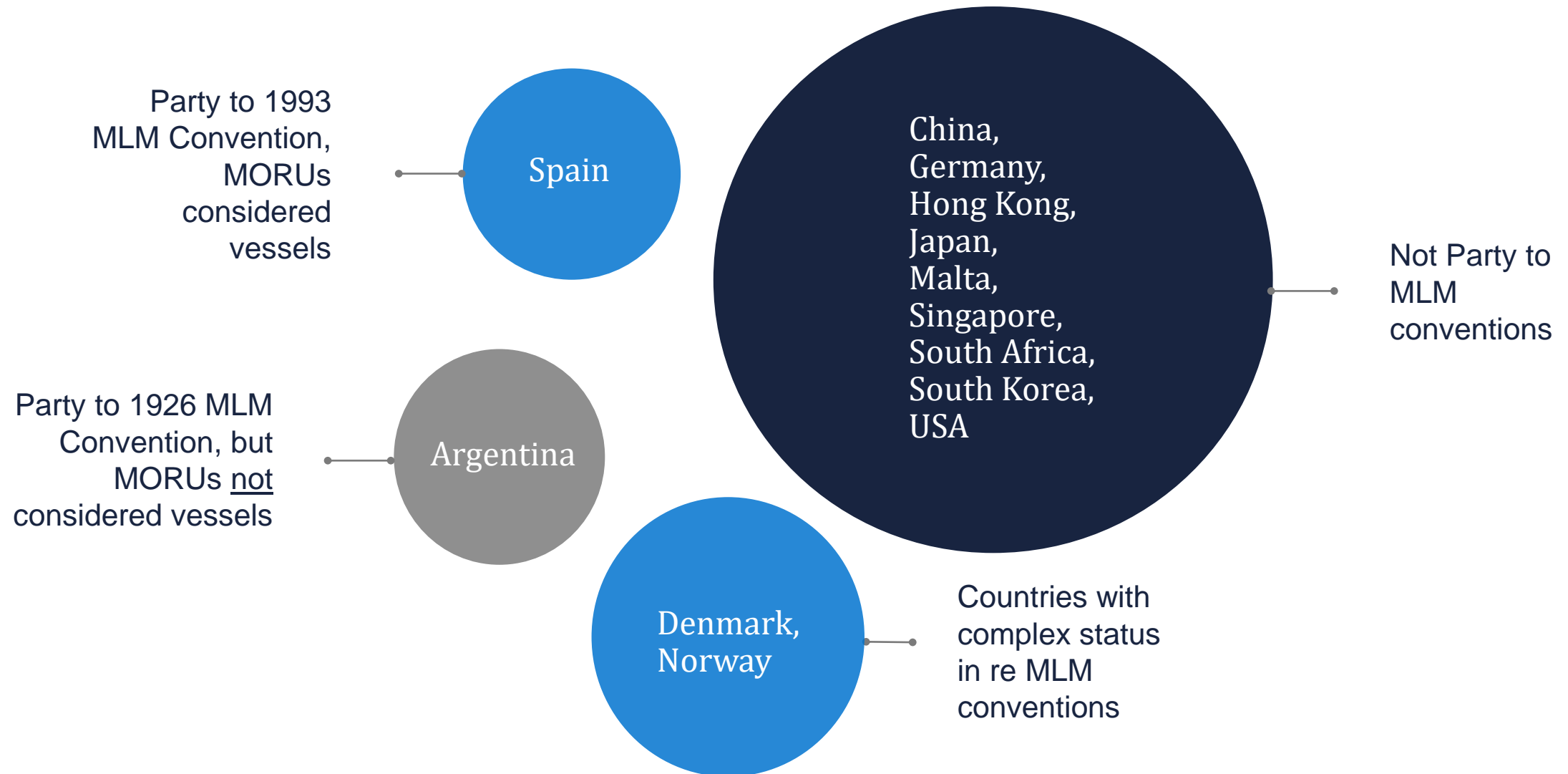


Treatment of Foreign MORUs as Property

7. Does your jurisdiction recognize ownership of any such property (i.e. any category of MORU) as evidenced by an entry in a public register of another jurisdiction?

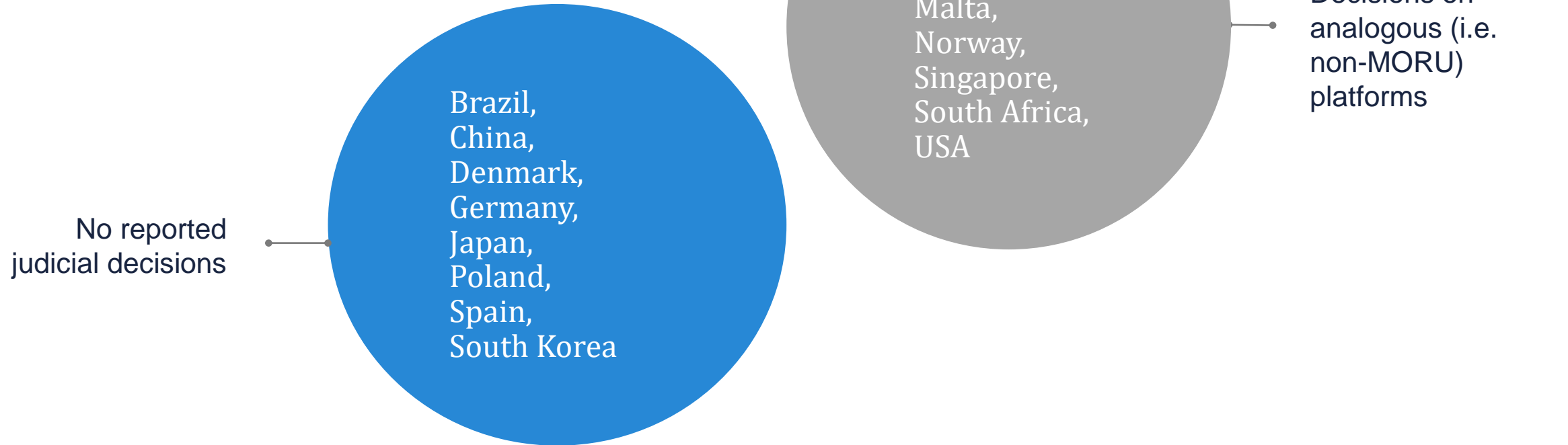


9.1 If the jurisdiction is a party to the 1926 or 1993 International Conventions on Maritime Liens and Mortgages, would it recognize a MORU as a "vessel" or "sea-going vessel" under those conventions?



11. Are there any reported decisions in your jurisdiction which address the legal classification (as “ship”, “vessel” or other “marine equipment” or other special type of property) of:

- a) MORUs (of any type)*;
- b) Offshore wind turbines (fixed or floating);
- c) Mobile Offshore Drilling Units (“MODUs”);
- d) FSUs and FPSOs?

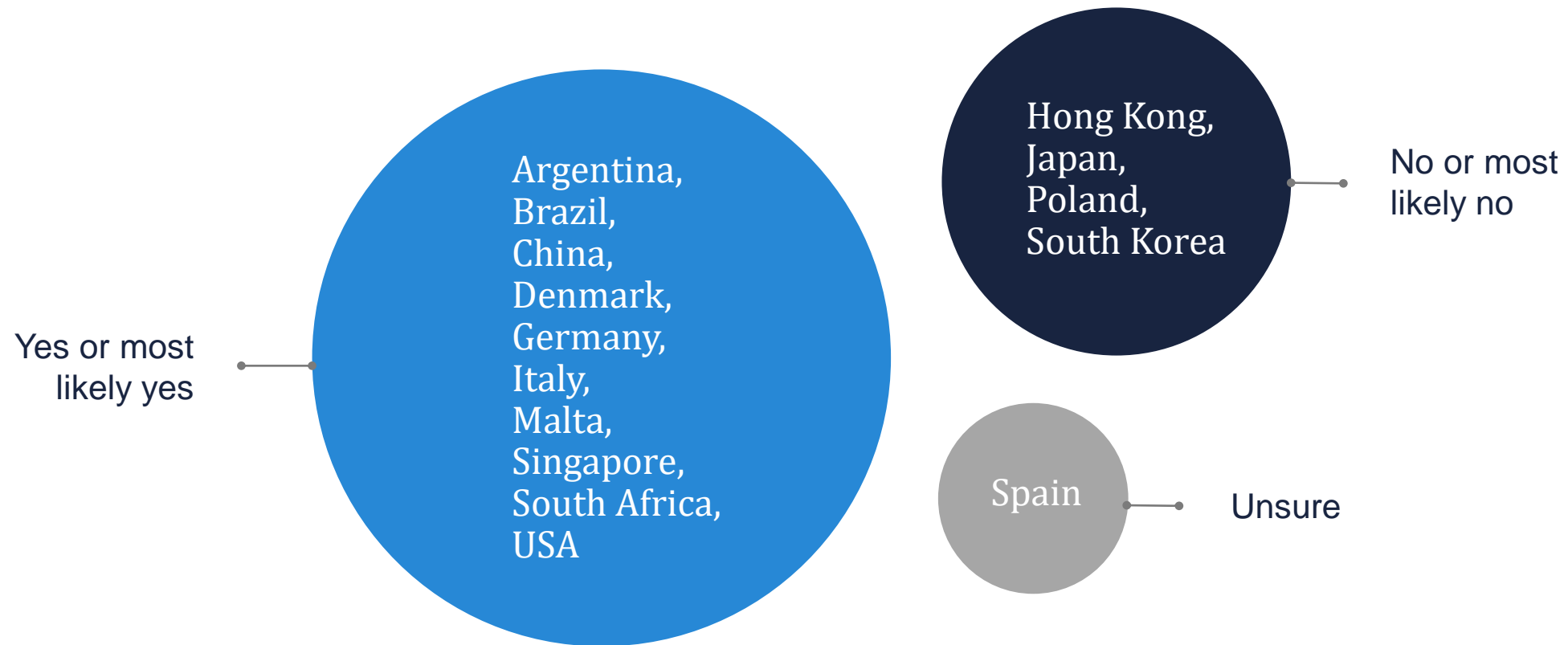


*No NMLA responding to the questionnaire reported any decisions directly addressing classification of any form of MORU

Questions related to arrest

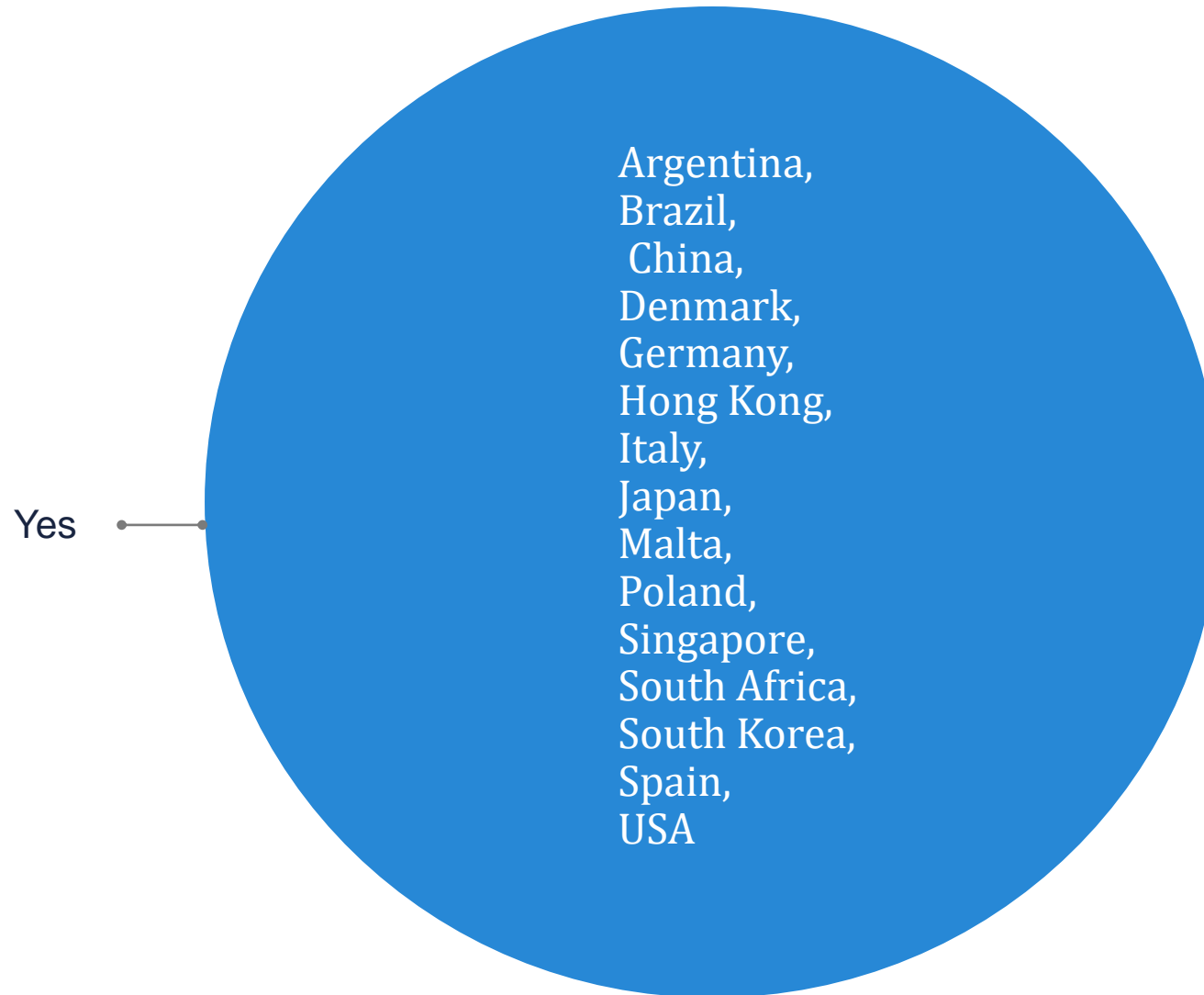


Would it be possible to arrest, seize, detain, or otherwise proceed in rem or otherwise against a MORU for a maritime claim in your jurisdiction (whether under domestic law or binding convention)?



*The answers greatly relies on whether MORUs qualifies as ships or vessels in the given jurisdictions. Furthermore, the categorisation proceeds on the basis that a “maritime claim” is of the type recognised in Article 1(1) of the Arrest Conventions, but also gives rise to arrest type relief. As such, where a cause of action gives rise to provisional relief under general civil procedural rules, it is not included.

If a MORU were arrested, seized, detained, etc. in your jurisdiction, would it be possible to obtain a release of the MORU from such arrest/detention on posting of an adequate security?



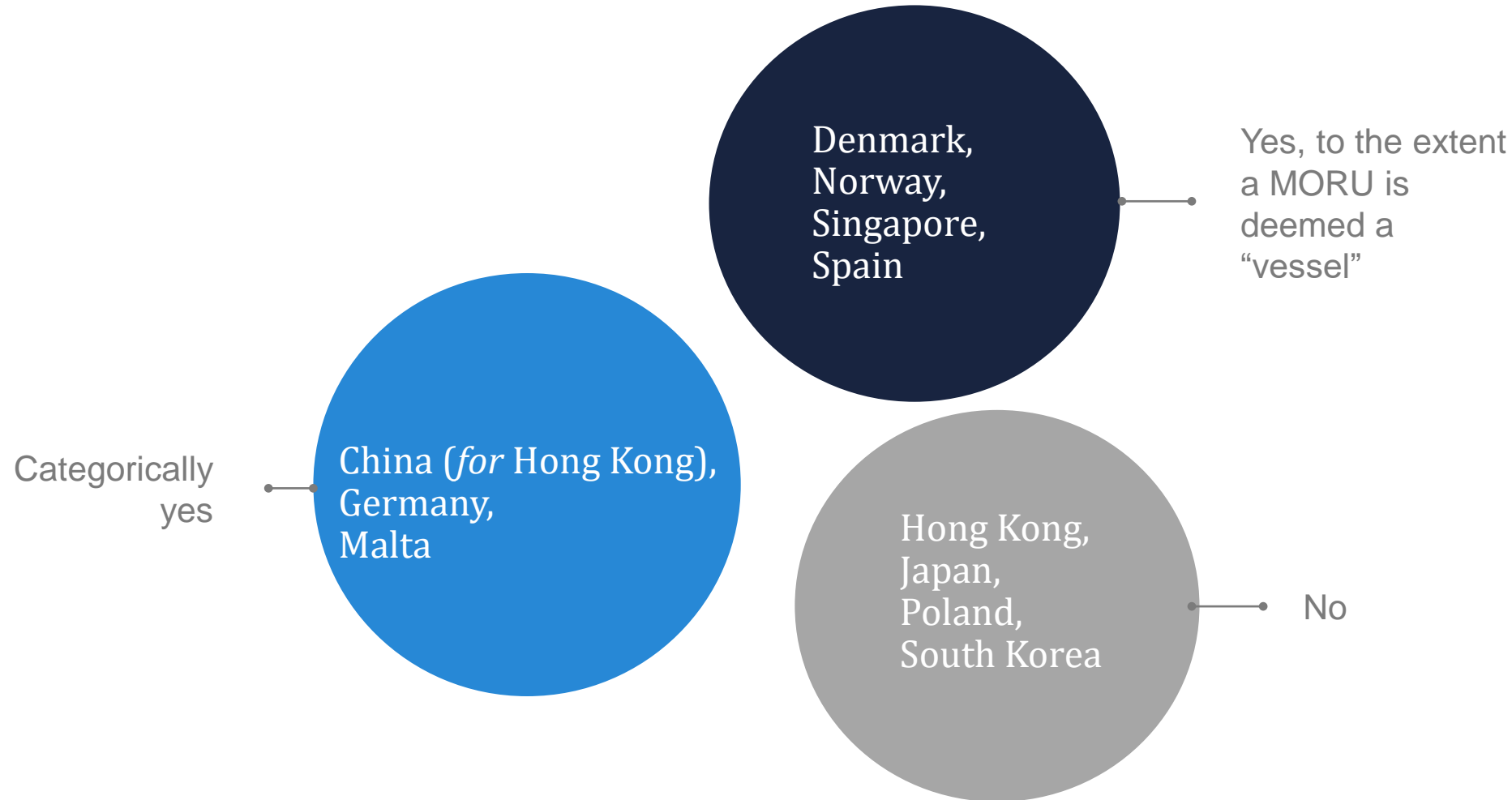
Questions related to limitations of liability



With more MORUs, more collisions / allisions



1. Assuming that a MORU was not used for the purpose of exploring or exploiting the natural resources of the sea-bed or the subsoil thereof (cf. Art 15(5) of Convention on Limitations of Liability for Maritime Claims, 1976), would the owner or salvor of a MORU benefit in your jurisdiction from the limitations of liability found in the Limitations of Liability for Maritime Claims, 1976 and/or its Protocols (“LLMC 1976/1996/2012”)?



3. Would a MORU benefit from any other (non-LLMC based) forms of limitations of liability under the domestic law of your jurisdiction? If so, please explain with reference to authorities

Yes, other non-LLMC based regimes might be applicable under certain (limited) circumstances

Italy,
Singapore,
South Africa,
Spain,
USA

Brazil,
China,
Denmark,
Germany,
Hong Kong,
Japan,
Malta,
Norway,
Poland,
South Korea

No non LLMC- based limitation regimes available for MORUs (or otherwise)

What is to be done?



The CMI's prior work on Oil & Gas Mobile Offshore Units directly relates to MORU

Topic		Rio 1977 ¹	Norwegian Alternative 1977 ²	Sydney 1994 ³	Vancouver 2001 ⁴	Relevant to MORUs?
Nationality/Registration		Yes	Yes	Yes	Yes	Yes
Liens		Yes	Yes	Yes	Yes	Yes
Mortgages		Yes	Yes	Yes	Yes	Yes
Vessels under construction		Yes		Yes		Yes
Arrest		Yes	Yes	Yes	Yes	Yes
Other creditors' remedies					Yes	Yes
Judicial Sales						Yes
Collisions		Yes	Yes	Yes	Yes	Yes
Civil jurisdiction					Yes	Yes
Penal jurisdiction					Yes	Yes
Removal					Yes	Yes
Salvage		Yes	Yes	Yes	Yes	Yes
Safety					Yes	Yes
Limitations of Liability		Yes	Yes	Yes	Yes	Yes
Liability for pollution		Yes	Yes	Yes	Yes	Maybe?
Limitation Fund					Yes	Maybe?
Apportionment of liability					Yes	Yes
Financial responsibility / maintenance of Insurance					Yes	Yes

1 Under the Rio draft, Convention parties which were also parties to certain maritime topical conventions would agree amongst themselves to apply those referenced conventions to "craft" as well.

2 Under the Norwegian alternative, "craft" shall be "subject to the rules applicable to sea-going ships under the law of a State Party to this Convention", (i.e. the parties would treat MOUs as vessels as they would under their own law (including international obligations)).

3 Under the Sydney draft, Convention parties which were also parties to certain maritime topical conventions would agree amongst themselves to apply those referenced conventions to "craft" as well, and if not a party to those conventions, apply State Party law applicable to vessels generally.

4 The Vancouver draft ended the incorporation of topical convention by reference approach as unworkable, and provided stand-alone substantive provisions governing Offshore Units on selected topics.

Discussion with the Panel



This publication is intended as a general overview and discussion of the subjects dealt with, and does not create a lawyer-client relationship. It is not intended to be, and should not be used as, a substitute for taking legal advice in any specific situation. The authors will accept no responsibility for any actions taken or not taken on the basis of this publication. Prior results do not guarantee a similar outcome.