1. Marine cadastre

A marine cadastre is different to the traditional land-based cadastres. This traditional land-based cadastre can be explained as a parcel based and up to date land information system consisting of a record of interests in land; these interests encompass issues such as rights, restrictions, responsibilities and jurisdictions; these records of interests also encompass the nature and extents of these interests. A traditional land-based cadastre consists of two parts – registers and maps¹.

A marine cadastre is also different to a maritime spatial plan as referred to in directive 2014/89; a maritime spatial plan is intended to regulate the use of the marine area/areas it covers; a marine cadastre is intended to describe and delimit distinct marine cadastre parcels and to indicate all relevant public and private rights, restrictions (including inter alia the restrictions resulting from maritime spatial plans!) and charges on those parcels.

A marine cadastre is a system to enable the boundaries of maritime rights and interests to be recorded, spatially managed and physically defined in relationship to the boundaries of other neighbouring or underlying rights and interests².

Another definition of a marine cadastre would be: a marine information system, encompassing both the nature and spatial extent of the interests and property rights, with respect to ownership and various rights and responsibilities in the marine jurisdiction³.

2. UNCLOS

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) has established the following distinct marine areas or zones, each with its own legal status and the rights (assigned to the coastal state, other states and other stakeholders involved) and restrictions that go with them:

a. territorial sea – encompassing air space & sea surface & water column superjacent to the seabed & soil or seabed & subsoil
b. contiguous zone – encompassing the sea surface & water column & soil & subsoil
c. exclusive economic zone (EEZ) – encompassing the sea surface & water column & soil & subsoil
d. continental shelf – encompassing only the seabed and its subsoil
e. High Seas – consisting only of the sea surface and the watercolumn subjacent to the surface

² Robertson et al., 1999
³ Nichols et al., 2000
e. the Area - encompassing only the seabed and its subsoil under the High Seas.
In this summary, a more detailed proposal of what kind of rights, restrictions and charges
a marine cadastre parcel might actually contain will only be presented with regard to the
territorial sea and the EEZ.

3. European spatial data systems

The general principles, techniques and terminology of the INSPIRE directive 2007/2/EC may
be put to good use.
The experience gained, and the data collected within the EMODnet (seabed mapping) and
Copernicus Marine Service programmes, may also be valuable (cf. Marine Knowledge 2020
documents COM(2010)461 & COM(2012)473, as well as Blue Growth and Blue Economy

4. Registration of patrimonial rights and charges

Registration is the recording of deeds relating to the creation or transfer of rights in rem in
immovable goods (or ships) or relating to charges or restrictions encumbering immovable
goods (or ships) on specific registers kept at public land or ship registries.
This registration is effected for the sake of publicity and legal certainty.
Official ‘registration’ makes the deeds concerned effective erga omnes (deed system, as is the
case in France and Belgium), or guarantees the absolute validity and unquestionable reliability
of the rights in rem, charges or restrictions created or transferred by the deeds (title system, as
is the case in Germany, Spain or England).
Registration is proof that the rights of the registered owner, beneficiary, transferee, mortgagee
etc., are protected against third parties (deed system) or that the registered person is really
duly entitled to the right (title system)4.

Public registration and the legal certainty resulting from registration are of paramount
importance and a conditio sine qua non for a sound real estate market and a performing credit
sector, and ultimately for a thriving economy as such5.
This means that the establishment of a marine cadastre that identifies and describes the
physical parcel and its boundaries, is not sufficient in itself.
It will have to be flanked by registration in the land registers (or ship registers) of the deed
creating or transferring the rights, charges or restrictions with respect to the marine cadastral
parcel.

5. Marine cadastre parcel

Any marine cadastre unit or parcel will have to take into account:
1. the tridimensional and volumetric reality of every distinct marine zone (sea surface &
   water column & seabed or soil & subsoil) with:
   a) the rights and charges under Unclos
   b) the patrimonial rights

   pages 908 & 909

5 Cf. Javier Gómez Gálligo, Registration systems in the real estate and mortgage market, in ELRA Annual
   Publication 2009, pages 8 to 32
2. a fourth dimension, meaning the temporary nature of many particular rights because of the time aspect of most sea-linked activities (fixed terms licences, concessions and leases for mining, production of energy, aquaculture, fishing, etc…).

6. Rights and restrictions to be taken into account for the marine cadastre of the territorial sea

The actual spatial data regarding location, description and boundaries (the basic cadastre information) might by completed by the following information:

A. the sovereignty exercised by the coastal state

B. the following public rights, responsibilities and restrictions the sovereignty of the coastal state is subject to under Unclos:
   B.1. the paramount right of innocent passage
   B.2. the fishing rights in favour of other states (as a result of European or international or bilateral law);
   B.3. the general marine spatial planning restrictions (shipping routes & protected sandbanks & special fishing and aquaculture zones & areas for sand and gravel exploitation & energy atolls & areas for wind farms & corridors for cables and pipelines & disposal sites for dredged material & extension zones for ports & sites for coastal protection & zones for military exercises & protected wrecks and underground cultural heritage)\(^6\)
   B.4. protection and preservation of the marine environment and the prevention, reduction and control of pollution thereof;
   B.5. conservation of living and non-living resources
   B.6. marine scientific research
   B.7. protection of archaeological and historical objects found at sea
   B.8. private rights in personam based on licences, concessions or leases granted by the coastal state to companies for exploration and exploitation of the territorial sea (e.g. sand and gravel extraction, crude oil and natural gas extraction, mining, fishing, aquaculture, energy production, dumping of dredging material etc.) – these rights are temporary in that they only last for the duration of the licences, concessions or leases;

C. public and private rights in rem:
   C.1. the overall public property of the soil and subsoil and its resources, owned by the coastal state and being part of its ‘public domain’ (in the case of Belgium and other EU member states)
   C.2. the private property rights and other rights in rem owned by the holders of licences and concessions with regard to:
   C.2.1. immovable goods (offshore units fixed to the seabed & pipelines and cables if fixed to the seabed or embedded in the subsoil) – the property rights to these goods are temporary in that they only last for the duration of the licences, concessions or leases; the deeds regarding these immovables should also be registered at the land registry!

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\(^6\) See: the marine spatial plan for the Belgian part of the North Sea, established by royal decree of 20 March 2014
See also: the European Union instruments relating to: common fisheries policy & marine environmental policy & marine and maritime sustainable growth policy
C.2.2. movable goods (mobile offshore units & pipelines and cables lying on the seabed without being fixed to it & living and non-living resources appropriated pursuant to the licences, concessions or leases but only for the duration of these licences, concessions or leases);
!the deeds regarding these movables should also be registered at the ship registry!

7. Rights and restrictions to be taken into account for the marine cadastre of the exclusive economic zone (EEZ)

The actual spatial data regarding location, description and boundaries (the basic cadastre information) might by completed by the following information:

A. the sovereign economic rights granted under Unclos to the coastal state;

B. the following public rights, responsibilities and restrictions the sovereign rights of the coastal state are subject to:
   B.1. the paramount right of free navigation and overflight
   B.2. the right of other states to lay and maintain cables and pipelines
   B.3. the fishing rights in favour of other states (pursuant to European or international law or bilateral agreements);
   B.4. general marine spatial planning restrictions (shipping routes & protected sandbanks & special fishing and aquaculture zones & areas for sand and gravel exploitation & energy atolls & areas for wind farms & corridors for cables and pipelines & disposal sites for dredged material & extension zones for ports & sites for coastal protection & zones for military exercises & protected wrecks and underground cultural heritage)\(^7\)
   B.5. protection and preservation of the marine environment and the prevention, reduction and control of pollution thereof
   B.6. conservation of living and non-living resources;
   B.7. marine scientific research
   B.8. protection of archaeological and historical objects found at sea
   B.9. private rights *in personam* based on licences, concessions or leases granted by the coastal state to companies for exploration and exploitation of the EEZ (e.g. sand and gravel extraction, crude oil and natural gas extraction mining, fishing, aquaculture, energy production, dumping of dredging material etc.) - these rights are temporary in that they only last for the duration of the licences, concessions or leases;

C. private rights *in rem*
Meant are the private property rights and other rights *in rem* owned by the holders of licences, concessions or leases.

Those property rights and rights *in rem* exist with regard to following goods which are to be considered as ‘movables’:

C.1. fixed and mobile offshore units (artificial islands, installations and structures) – the rights to fixed offshore units are temporary in that they only last for the duration of the licences, concessions or leases having allowed for their construction;
C.2. pipelines and cables lying on the seabed or embedded into the seabed;
C.3. living and non-living resources appropriated pursuant to the licences, concessions

\(^7\) See: footnote 6
or leases but only for the duration of the licences, concessions or leases involved. !Ideally, the deeds concerned should be registered at the ship registry!

8. De lege ferenda

There is an urgent need for substantial new legislation – implementing EU orientations, communications and/or directives (?) - to urgently address and regulate the following issues:

1. the establishment of basic principles, semantics, rules and procedures relating to the creation of a marine cadastre (in Belgium and all other member states);
2. the description and delimitation of the marine public domain including the soil and subsoil of the territorial sea– in Belgium and probably in many other member states;
3. the possibility to create private rights in rem and ‘hypothece’/mortgages on ‘conceded’ parts of this public domain;
4. the assimilation of fixed offshore units in the waters beyond the territorial sea to seagoing vessels for the purpose of registration, attachment/arrest/seizure and mortgage8; a uniform status of the fixed offshore units would ideally be determined by an international convention prepared by the International Maritime Organisation (IMO) and the Comité Maritime International (CMI).

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8 De Latte, Guido. Can offshore wind farms be mortgaged under Belgian law, in ELRA Annual Publication No3 2010, pages 33 to 44