

An Roinn Aeráide,
Fuinnimh agus Comhshaoil
Department of Climate,
Energy and the Environment



Marine Strategy Framework Directive

An Introduction

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17th October 2025

MARINE STRATEGY FRAMEWORK DIRECTIVE

What's it all about ?



Photo credit: Maja Stanovski Love your Coast Photography Competition

Policy background

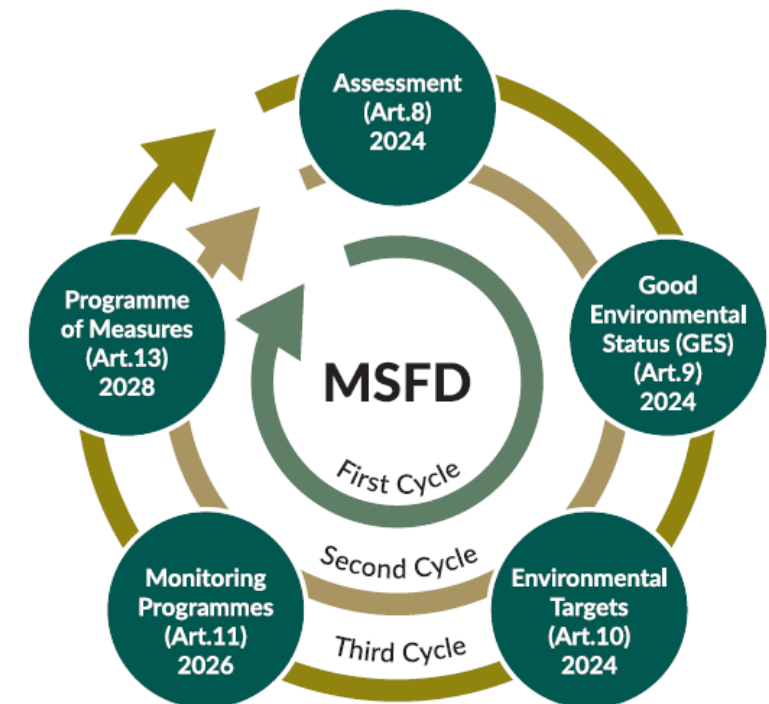


- Our marine and coastal waters are subject to a number of Directives – for example, Maritime Spatial Planning Directive, but also the Birds and Habitats Directives, Water Framework Directive, and others.
- The National Marine Planning Framework (NMPF) was developed as Ireland's national marine spatial plan and establishes a blueprint for the development of Ireland's maritime area up to 2040. The Maritime Area Planning (MAP) Act 2021 was enacted to ensure the proper implementation of the NMPF.
- The Nature Restoration Regulation requires EU Member States to restore at least 20% of degraded habitats at land and sea by 2030 – with additional progress to be made by 2040 and 2050 – covers our coastal (Groups 1-6 habitats) and offshore waters (Group 7 habitats).
- Ireland is a Contracting Party to the OSPAR Convention which has a strategy for protecting the marine environment (2020-2030) – facilitates cooperation at regional level and with non-EU jurisdictions (such as the UK).

MARINE STRATEGY FRAMEWORK DIRECTIVE

Aim: Clean, healthy, biologically diverse and sustainably used marine environment

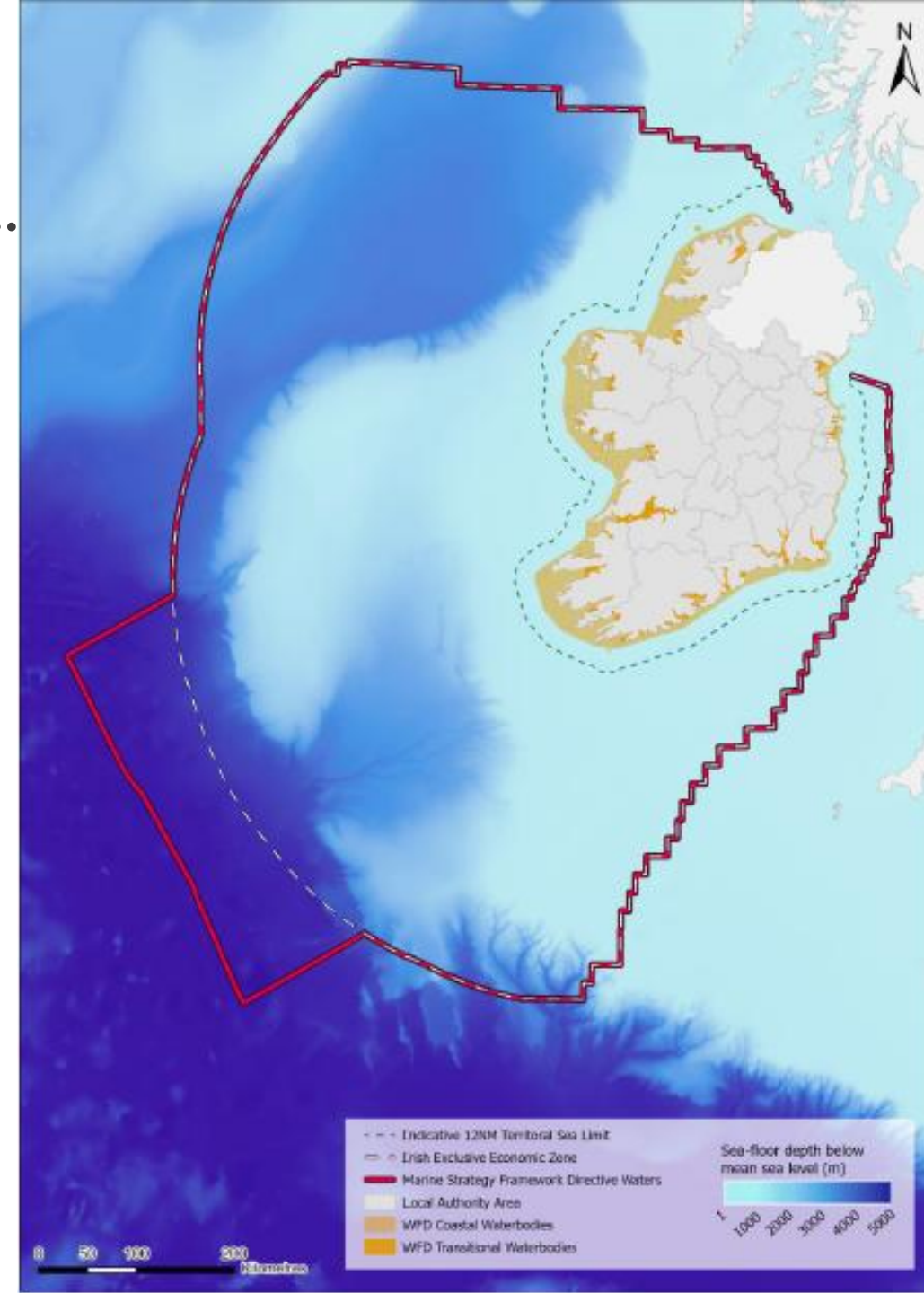
How EU Member States develop marine strategies



IRELAND HAS AN EXTENSIVE MARINE AREA...

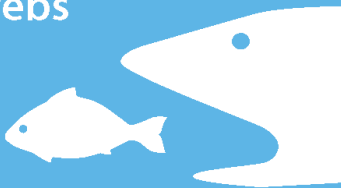
Ireland's MSFD area spans from the inner most delineation of the Water Framework Directive coastal waterbodies out to Ireland EEZ and includes the benthos of the rectangle to the South West.

We assess this area in sections called Marine Reporting Units (currently we have 25).



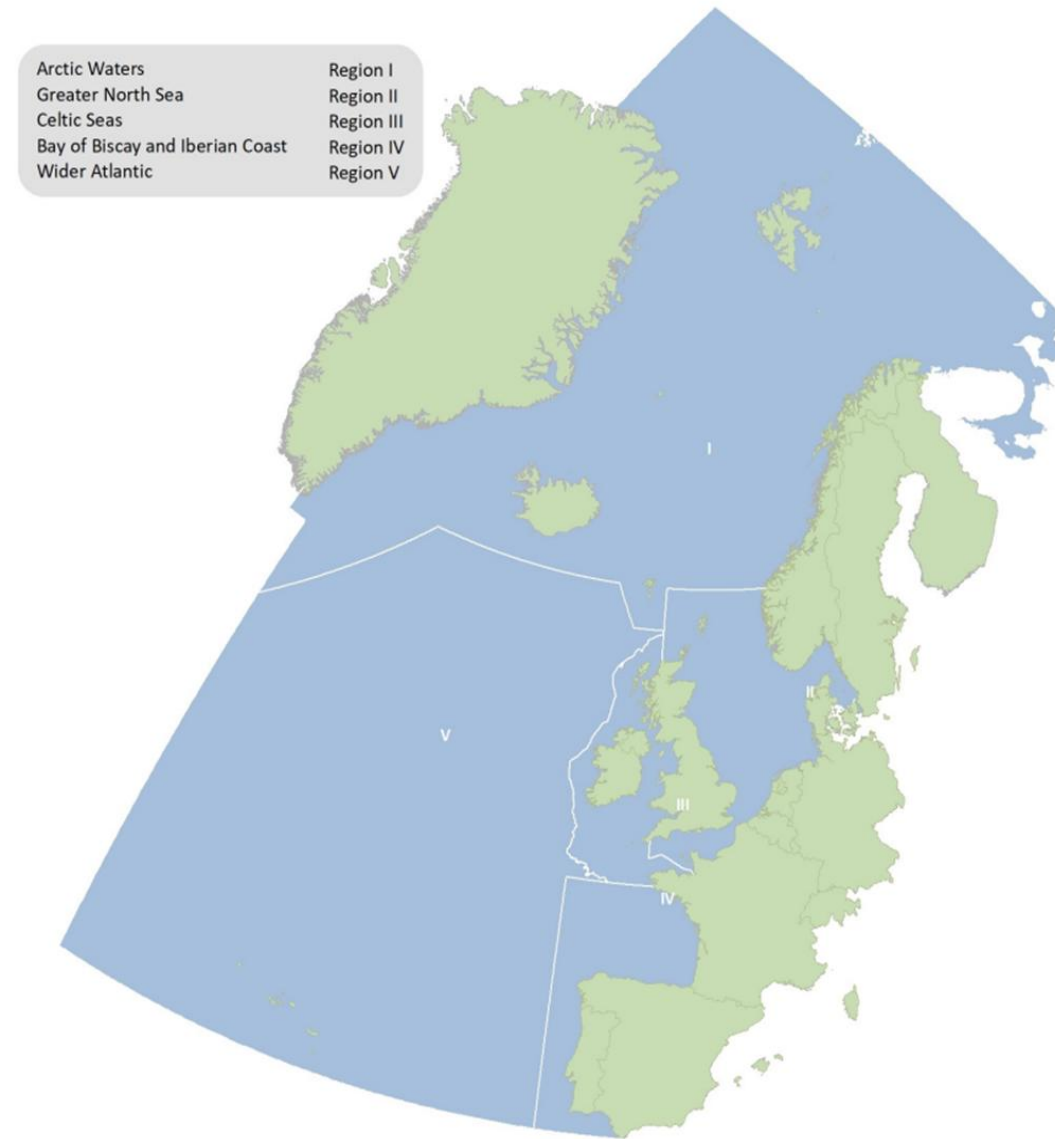
MARINE STRATEGY FRAMEWORK DIRECTIVE - DESCRIPTORS

To determine GES Member States must assess the status of their marine waters against 11 qualitative descriptors and associated national environmental targets.

Biological diversity 1. 	Non-indigenous species 2. 	Population of commercial fish/shellfish 3. 	Elements of marine food webs 4. 
Eutrophication 5. 	Sea floor integrity 6. 	Alteration of hydrographical conditions 7. 	Concentrations of contaminants 8. 
Good Environmental Status	Contaminants in fish/seafood for human consumption 9. 	Marine litter 10. 	Introduction of energy including underwater noise 11. 

THEY INCLUDE BOTH NATIONAL AND REGIONAL ASSESSMENTS.....

- Some assessments developed for Ireland's Marine Strategy rely on data collected through national work streams or under other Directives (e.g. Common Fisheries Policy, Natura Directives, Water Framework Directive)
- Other assessments use data specifically collected for the MSFD (e.g. Beach Litter, Noise).
- In many cases the assessments have been undertaken through collaboration with other countries of the North East Atlantic or using assessment methodologies agreed at a regional (OSPAR) or EU level.



OSPAR MARITIME AREA

Relationship between MSFD Descriptors and Coastal / Marine Development



Biological diversity

1.



- Potential for increased vectors of introduction through coastal development.
- New hard substrates used for foundations and coastal protection may provide habitat for new or introduced non-invasive species.

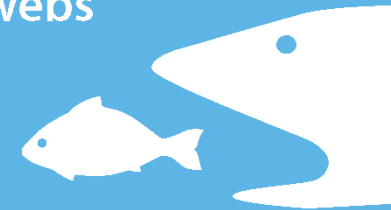
Population of commercial fish/shellfish

3.



Elements of marine food webs

4.



- Land based sources of pollution.
- Demands of water treatment services and infrastructure.
- Urban run-off.

- Seabed scour.
- Temporary habitat loss and disturbance (due to construction activities).
- Permanent habitat loss and disturbance from structures on the seabed and regular maintenance activities.

- Downstream turbulence, alterations to surface wave energy and localised scour. The presence of the infrastructure may lead to changes to tidal currents, wave climate, sediment transport; water column mixing/stratification and seabed morphology.

Concentrations of contaminants

8.



Good Environmental Status

Contaminants in fish/seafood for human consumption

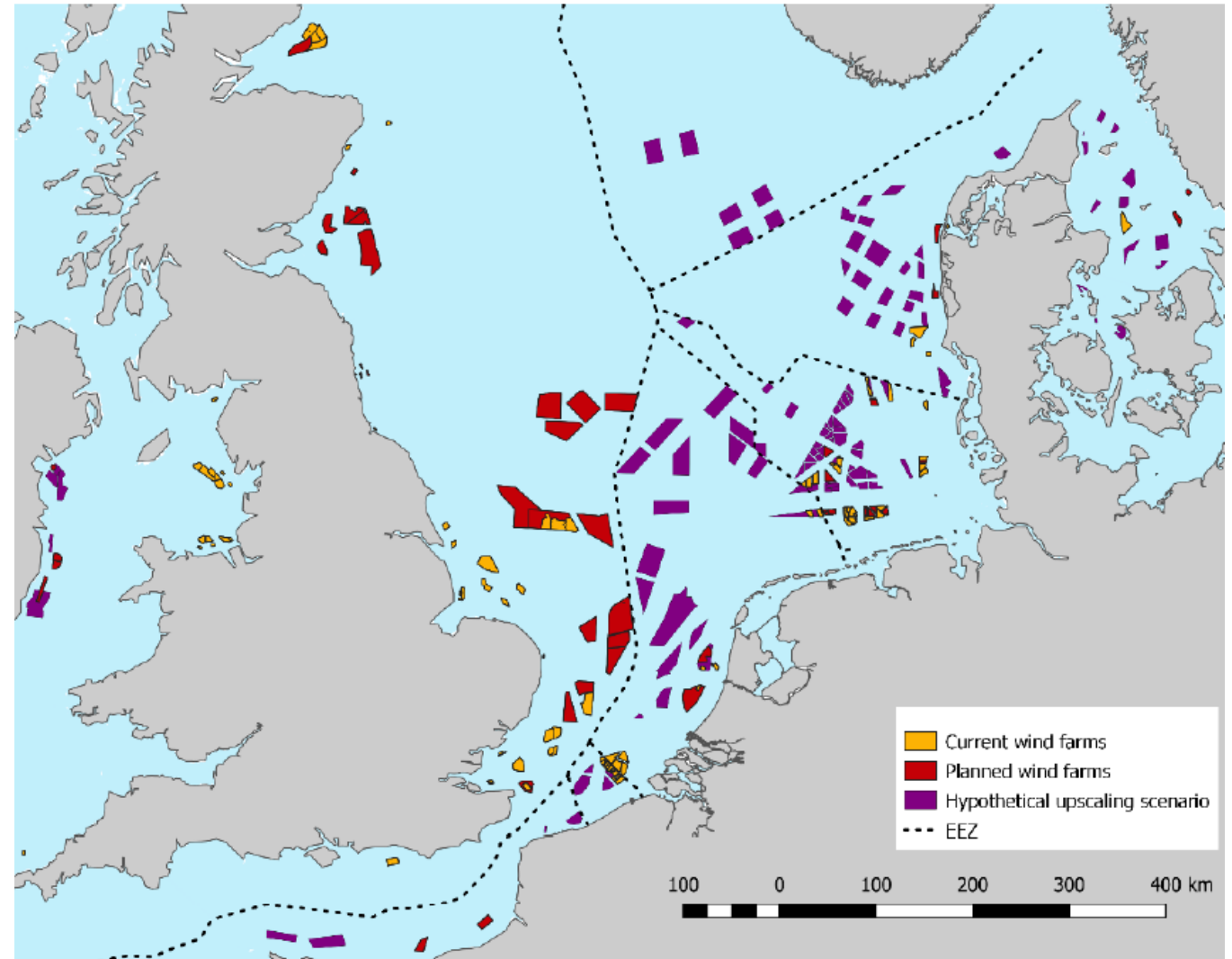
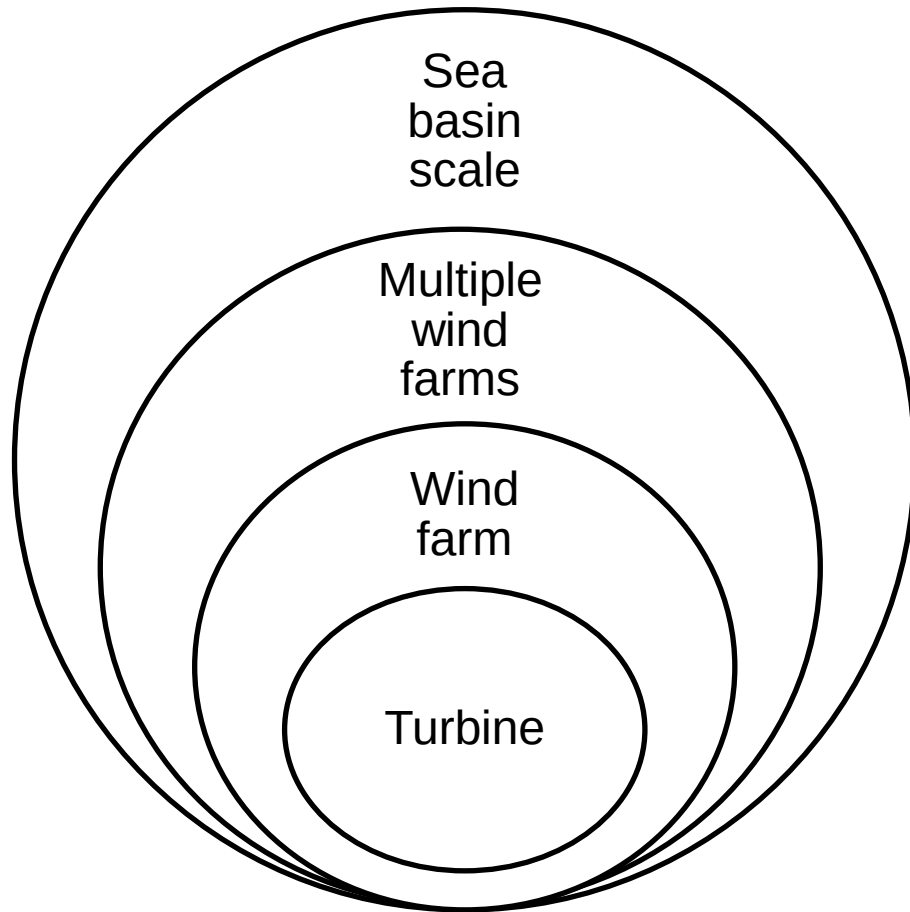
9.



- Plastics and microplastics may enter marine environment from land based sources, and hot-spots (e.g. tourism intensity)
- Microplastics can be released from substances used in the maintenance / treatment of vessels and to cover structures placed at sea.

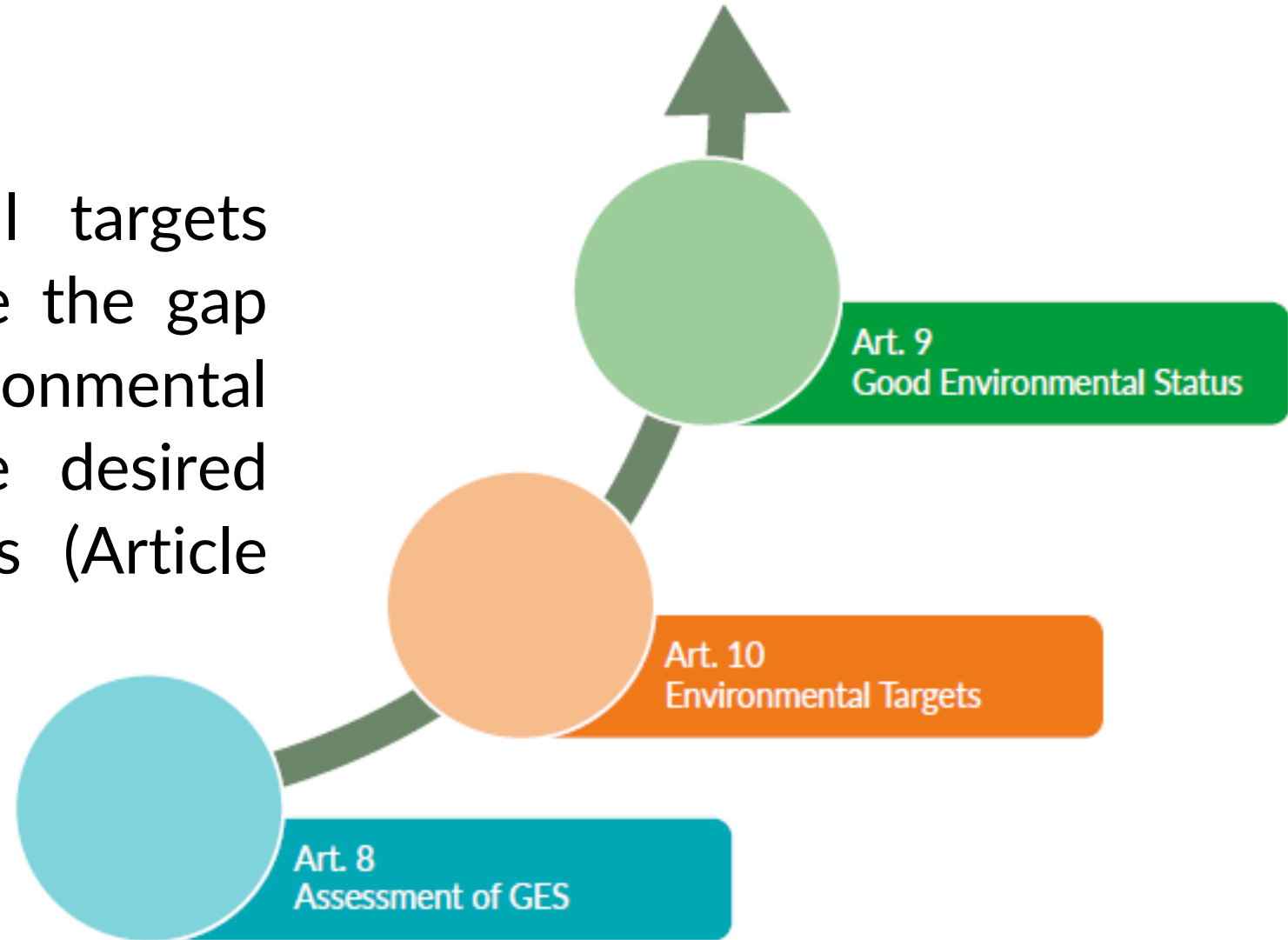
- Impulsive noise include pile driving for inshore and offshore construction works, use of sound waves during seismic surveys.
- Continuous noise can occur from vessels used during intense periods of development / operations.

Assessment Scales



Environmental targets

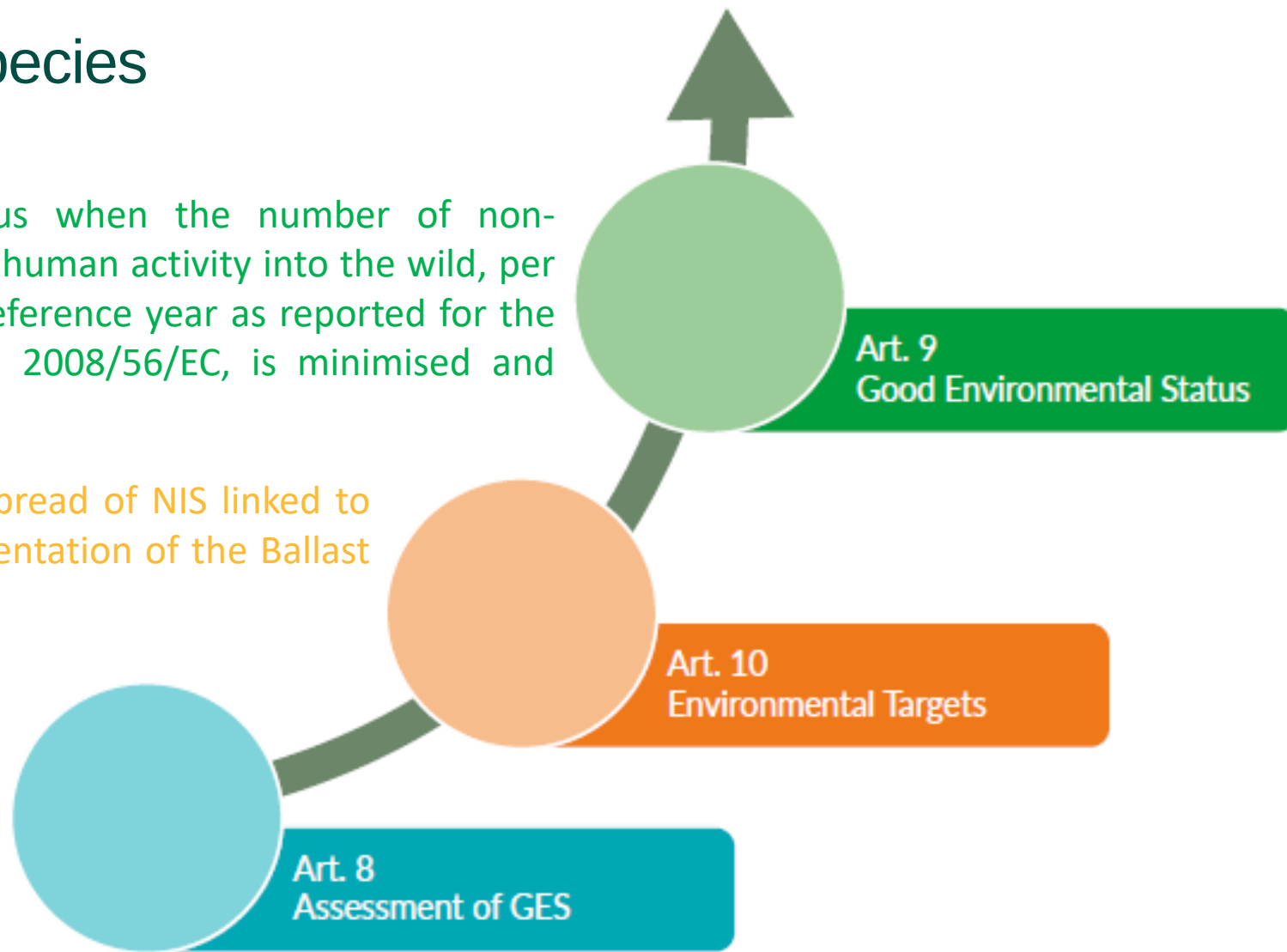
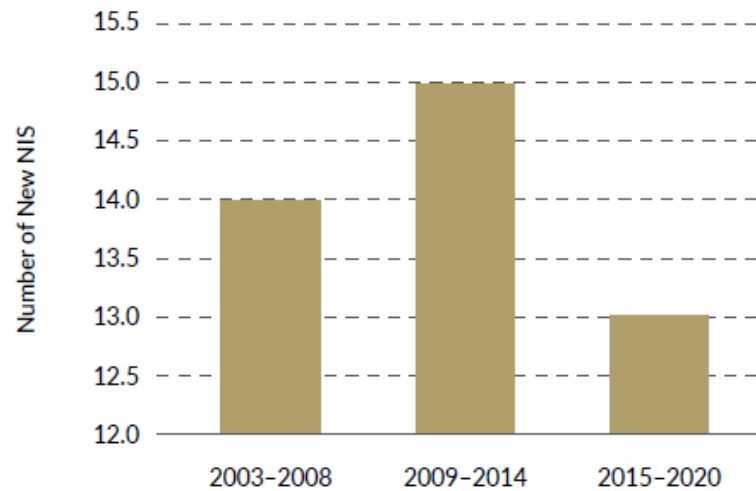
The aim of environmental targets (and indicators) is to bridge the gap between the current environmental status (Article 8) and the desired Good Environmental Status (Article 9).



Descriptor 2 Non-Indigenous Species

Ireland has achieved Good Environmental Status when the number of non-indigenous species which are newly introduced via human activity into the wild, per assessment period (6 years), measured from the reference year as reported for the initial assessment under Article 8(1) of Directive 2008/56/EC, is minimised and where possible reduced to zero.

Continue to reduce the risk of introduction and spread of NIS linked to ballast water and hull fouling through the implementation of the Ballast Water Convention

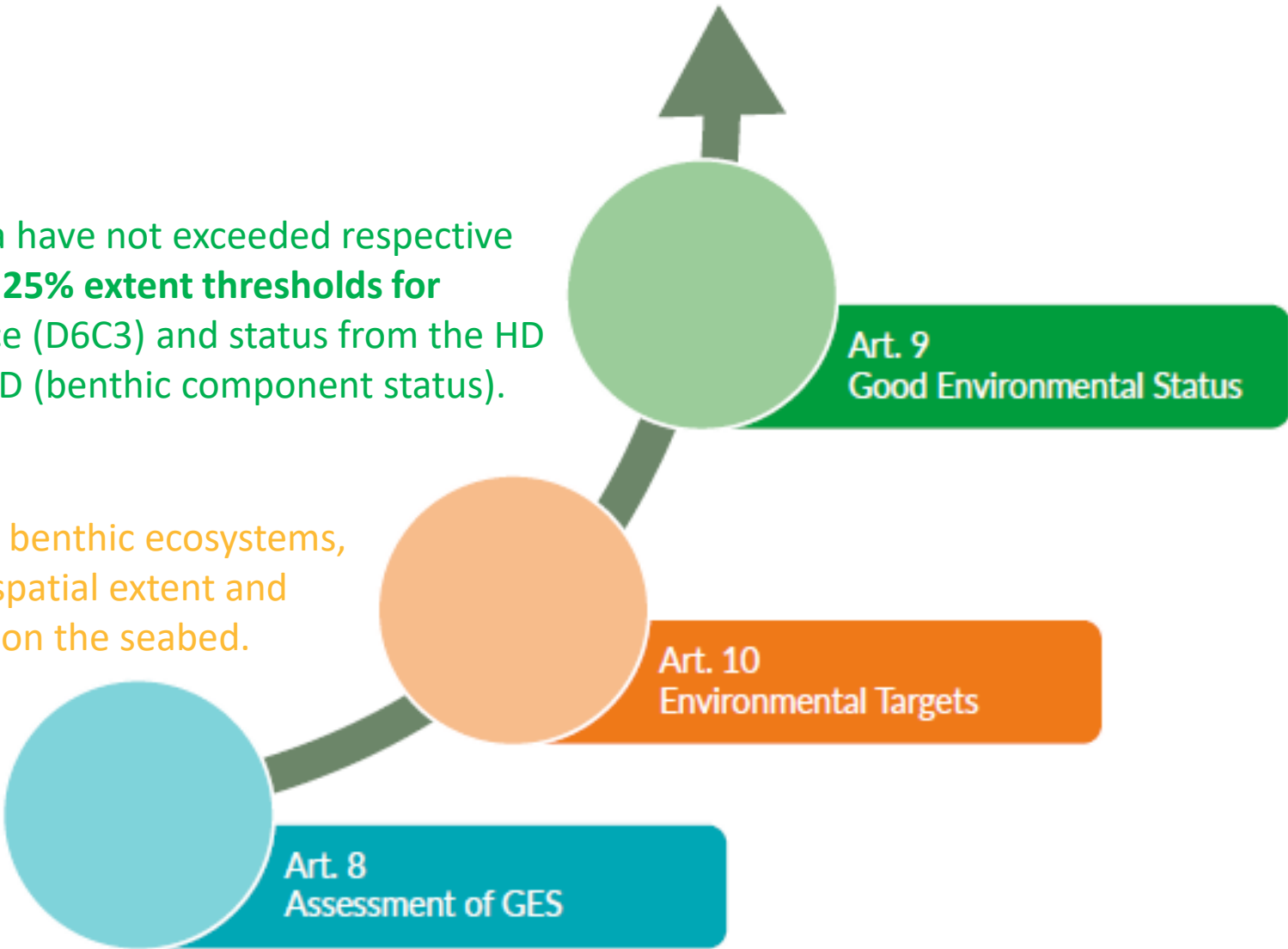
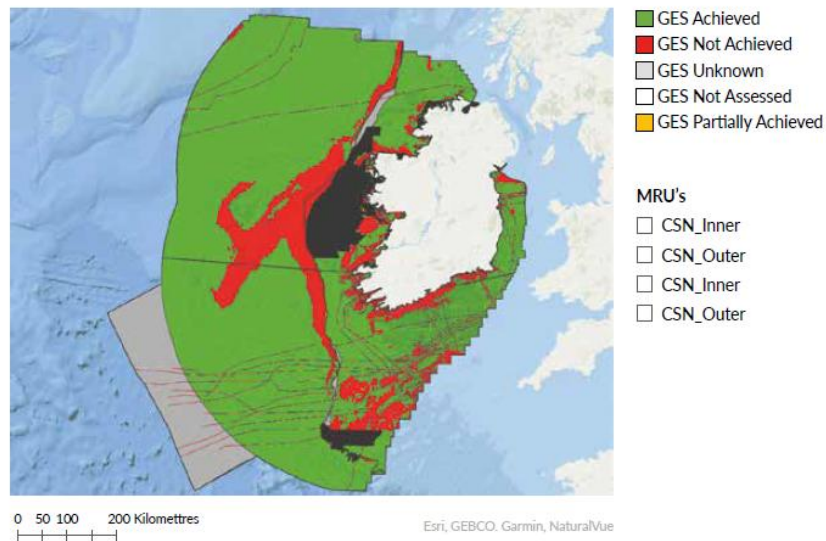


Good environmental status has been achieved for non-indigenous species within Ireland’s marine environment

Descriptor 6 Seafloor Integrity

Good Environmental Status is achieved when criteria have not exceeded respective threshold values (**2% extent threshold of D6C4**, and **25% extent thresholds for D6C5**), the extent of adverse effects from disturbance (D6C3) and status from the HD (structure and function conservation status) and WFD (benthic component status).

The structure and functions of the ecosystems, and benthic ecosystems, in particular, are not adversely affected due to the spatial extent and distribution of physical disturbance or physical loss on the seabed.

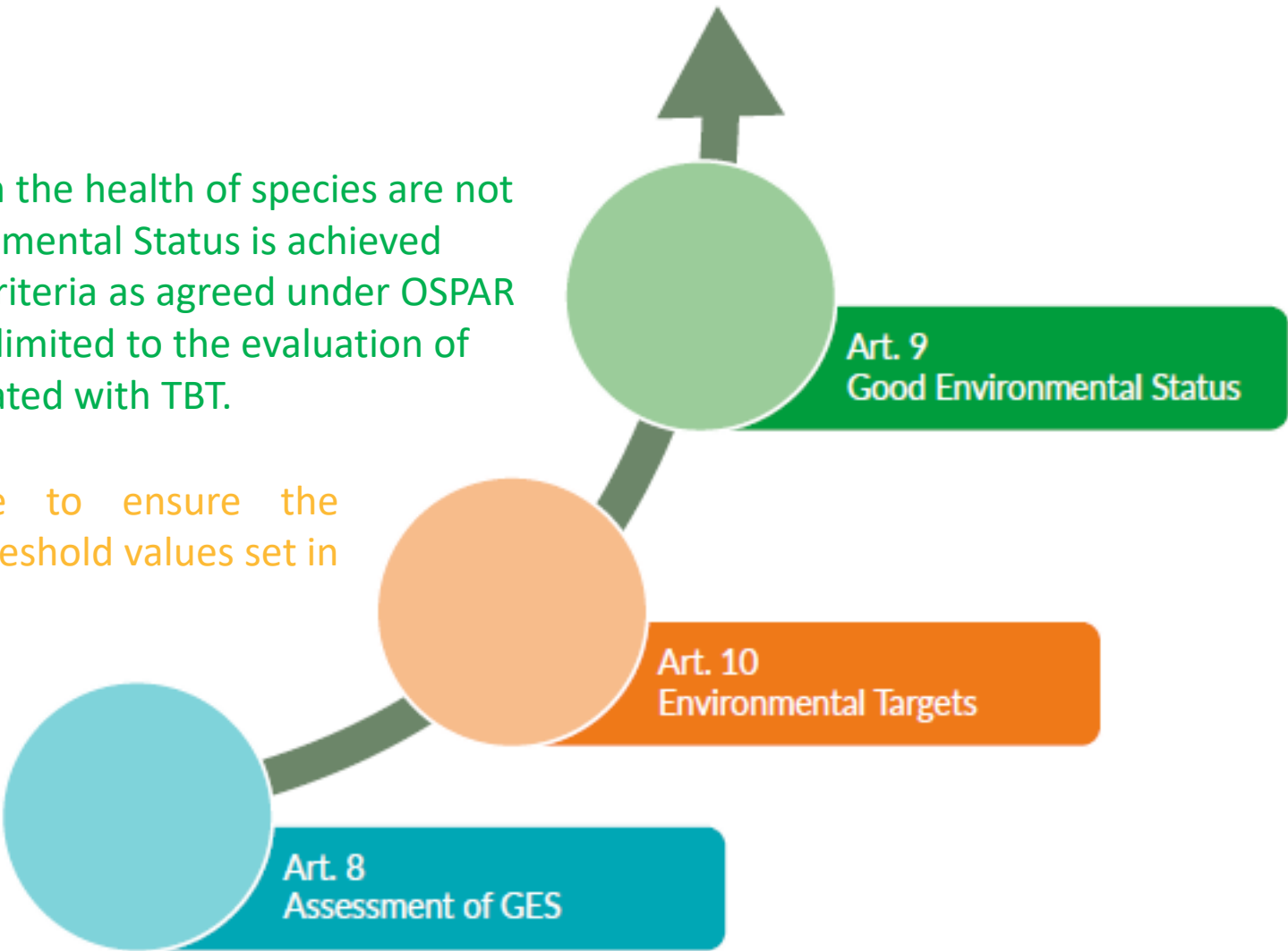


Good environmental status for seafloor integrity has been achieved in 74% of Ireland's overall assessment area, however, 15% remains either not assessed or unknown, while 11 % is not in good status.

Descriptor 8 Contaminants

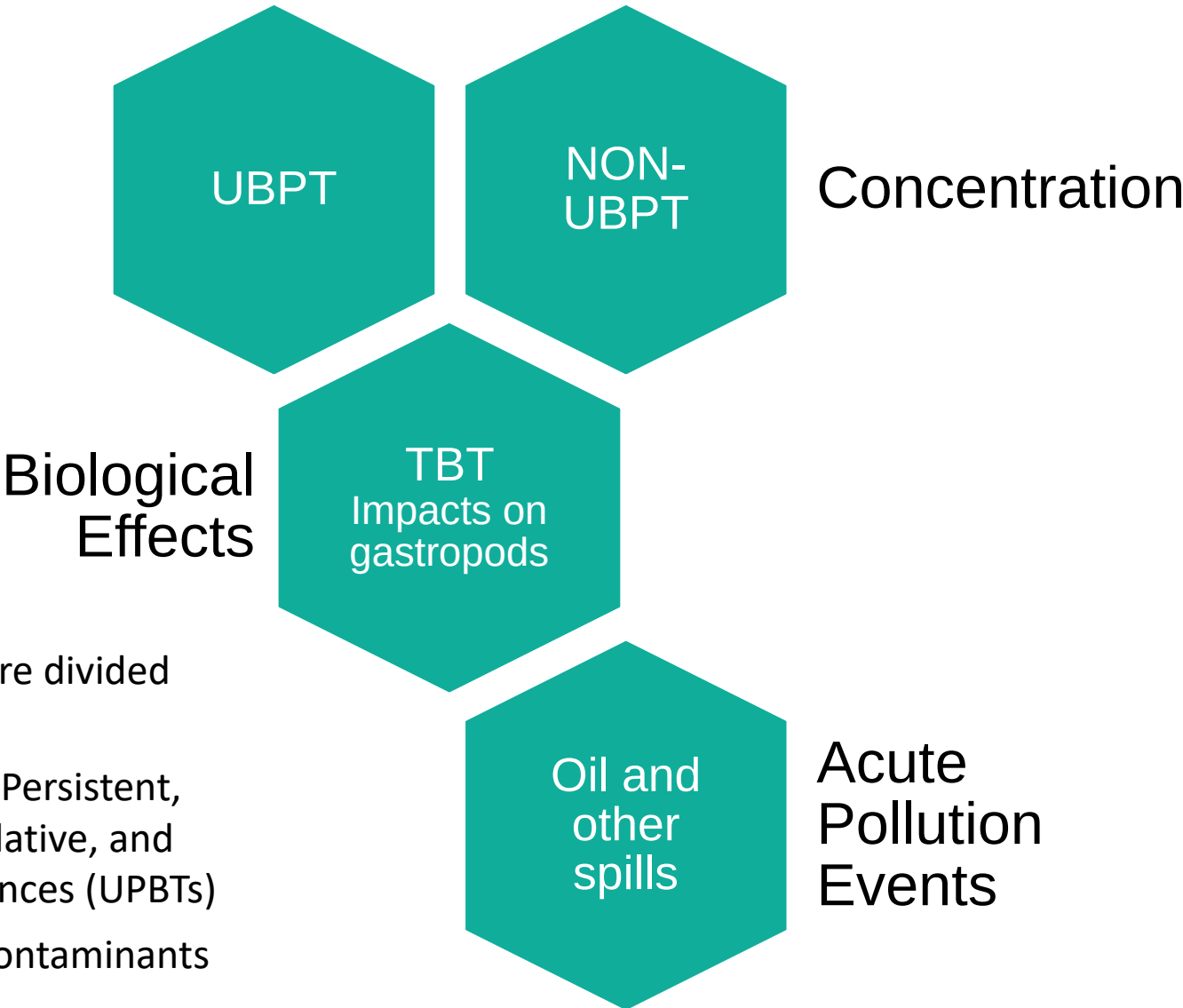
Ireland has achieved Good Environmental Status when the health of species are not adversely affected due to contaminants. Good Environmental Status is achieved when biological and ecological effects are below the criteria as agreed under OSPAR Environmental Assessment Criteria. At present, this is limited to the evaluation of reproductive impairment in marine gastropods associated with TBT.

Within coastal and territorial waters, continue to ensure the concentrations of contaminants do not exceed the threshold values set in accordance with Directive 2000/60/EC.



Good Environmental Status (GES) has been largely achieved for concentrations of most contaminants in seawater, sediments and biota in Irish coastal and marine waters.

D8. Contaminants



Contaminants are divided into:

- 1. Ubiquitous, Persistent, Bio-accumulative, and Toxic substances (UPBTs)
- 2. non-UBPT contaminants

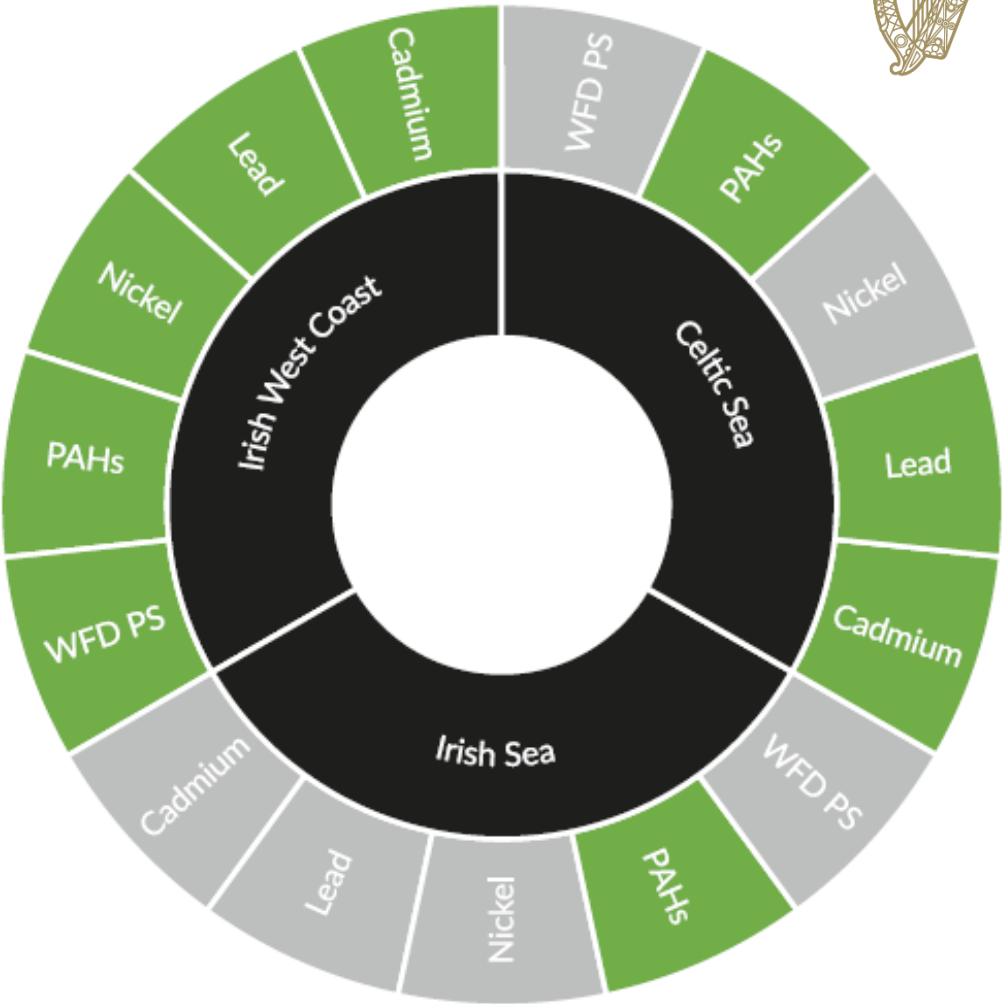
Good Environmental Status (GES) has been largely achieved for concentrations of most contaminants in seawater, sediments and biota in Irish coastal and marine waters. Concentrations of most parameters assessed are at levels that ensure the protection of the marine environment.



Contaminants

UPBT

NON-UPBT





D5. Eutrophication



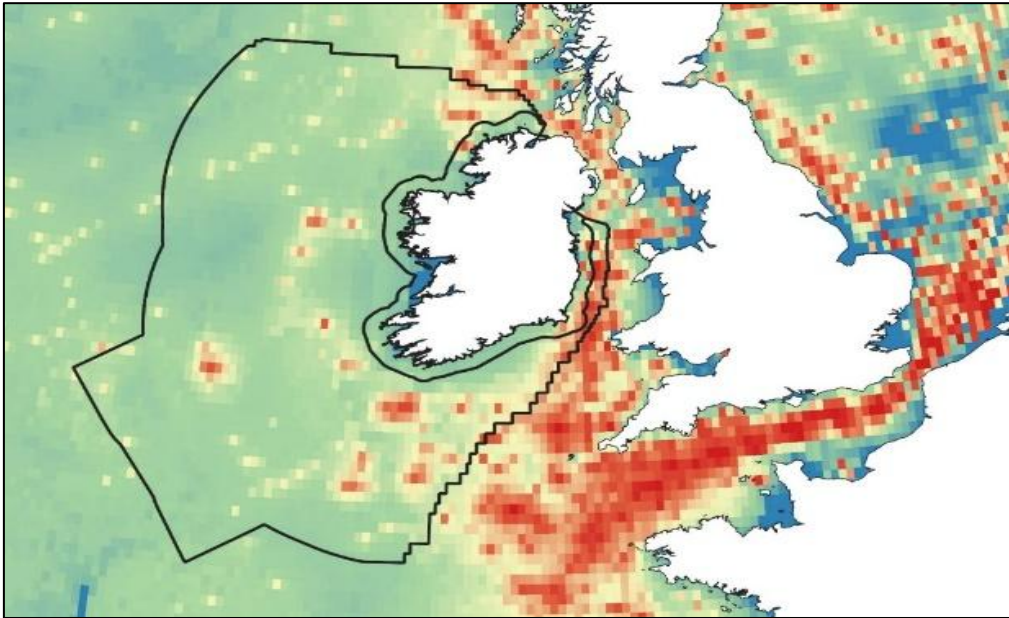
■ GES Achieved ■ GES Not Achieved ■ GES Unknown

Area	MRU	Percentage of Area
Outer Marine	Atlantic	66.60%
	Atlantic SS	23.53%
	Intermit Strat	4.32%
	Coast IRL 3	2.12%
	Scottish Sea	0.43%
	Irish Sea	0.03%
Coastal	Exposed	2.32%
	Moderate Exposed	0.61%
	Sheltered	0.04%

Good environmental status has been achieved for eutrophication within Ireland's marine environment

D11. underwater noise → existing baseline

CONTINUOUS NOISE

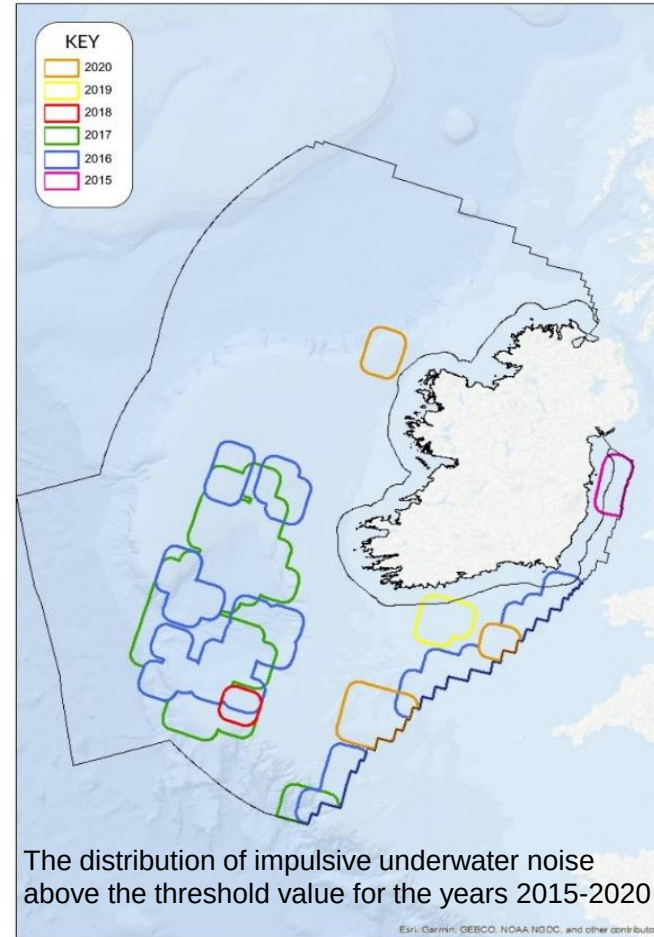


Daily snapshot of continuous Sound Pressure Levels in the Irish EEZ (February 01-2019) data provided by the JONAS project generated by the model of Le Courtois et al 2016.

No more than 20% of a given marine area, can be exposed to [continuous underwater noise](#) over a year.

Similarly, no more than 20% of a marine habitat can be exposed to [impulsive noise](#) over a given day, and no more than 10% over a year

IMPULSIVE



*Good
environmental
status has
been achieved
for
continuous
and impulsive
noise in
Ireland's
marine
environment*

Some takeaways....



- The spatial dimension is an important aspect of the MSFD - **spatial planning (both terrestrial and marine) can support the implementation of the Marine Strategy Framework Directive** – identification and reduction of pressures and impacts, managing land-sea interactions, data and information to inform our understanding of Good Environmental Status.
- **There is alignment between the MSFD and other Directives** – challenge is to ensure coherency is identified and optimised – many Directives and instruments have objectives that support GES – and ultimately sustainable use is a core shared objective.
- Planning and environmental protection share **common elements** within processes – engaging stakeholders, determining cumulative impacts, cyclical and iterative nature.
- One cross-cutting element of importance to consider is **climate change** – current efforts are being taken to understand how better to incorporate climate change into the MSFD.
- **The MSFD is due to undergo a revision** in the coming years, so watch this space.



Photo credit: Ryan Murray Love your Coast Photography Competition

QUESTIONS OR COMMENTS ?