Nature restoration law and MPAs

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for the Atlantic and Macaronesian marine regions

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Biodiversity strategy for 2030 - targets

PROTECT NATURE

Coherent trans-European nature network by 2030

- Legally protect **at least 30% of the European Union's sea area**.
- **Strictly protect at least a third** of the EU's marine protected areas (10% of EU MS sea area).
- **Effectively manage all protected areas,** defining clear conservation objectives and measures, and monitoring them appropriately.
- **Fisheries management measures must be established in all MPAs** according to clearly defined conservation objectives and on the basis of the best available scientific advice.

RESTORE NATURE

EU nature restoration plan

- **Nature Restoration Law** with **legally binding restoration targets**, including for the marine environment.
- Achieving good environmental status of marine ecosystems, including through strictly protected areas, must involve the **restoration of carbon-rich ecosystems** as well as important **fish spawning and nursery areas**.
- **Reduce bycatch** of sensitive species and the impact of bottom fishing **on the seabed.**

Nature restoration law

Pioneering new legislation

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Proposal for a nature restoration law

A key initiative of the **European Green Deal** and the **Biodiversity Strategy for 2030:**

- **Protection** needs to be strengthened but **is not enough**
- Need for **large scale restoration effort**
- Complement and **build on existing policy framework** (BHD, MSFD, WFD)
- Focus on the **synergies between climate and nature policy**

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Regulation on nature restoration: structure

Overarching objective

Restoration targets

Implementation framework

National Restoration Plans | **Monitoring and Reporting**

By 2030 restoration measures cover 20% of EU's land and sea

By 2050 – all ecosystems in need of restoration

https://environment.ec.europa.eu/publications/nature-restoration-law_en

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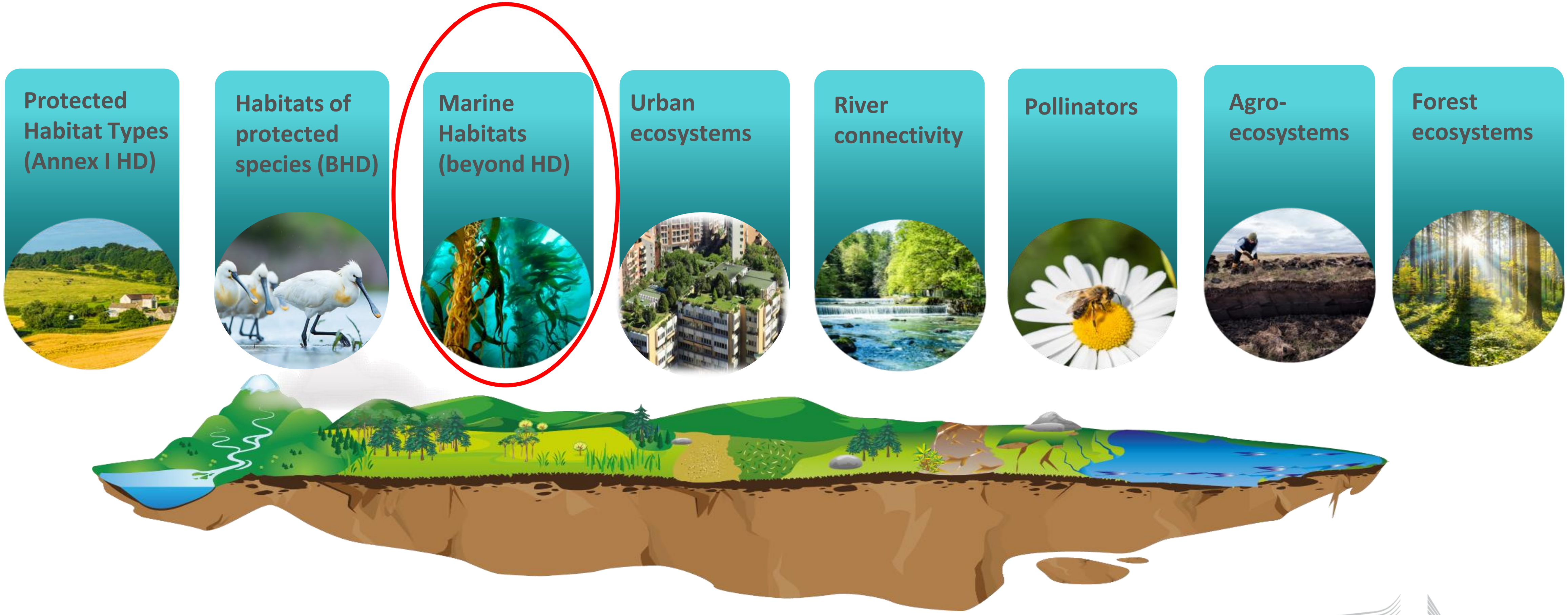
Specific restoration targets



Marine restoration targets

- **Put in place the restoration measures necessary to improve to good condition** areas of habitats in not-good condition
  - ✓ …for **groups of habitat types**: on at least **30%** by 2030, **60%** by 2040, **90%** by 2050;

- **Put in place the restoration measures necessary to re-establish the habitat** to reach the favourable reference area
  - ✓ …for **groups of habitat types**: on at least **30%** by 2030, **60%** by 2040, **100%** by 2050;

- **Put in place the restoration measures necessary to improve the quality and quantity of habitats of species listed in** Art. II, IV, V HD and wild birds + Annex III of regulation (including re-establishing them) and **enhance connectivity** until sufficient quality & quantity is achieved

Marine habitat types (Annex II)

1. **Seagrass beds**
2. **Macroalgal forests**
3. **Shellfish beds**
4. **Maerl beds**
5. **Sponge, coral and coralligenous beds**
6. **Vents and seeps**
7. **Soft sediments (above 1000 meters of depth)**

2. GROUP 2: MACROALGAL FORESTS

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
Atlantic		
MA123	Seaweed communities on full salinity Atlantic littoral rock	1160; 1170; 1130
MA125	Fucoids on variable salinity Atlantic littoral rock	1170; 1130
MB121	Kelp and seaweed communities on Atlantic infralittoral rock	1170; 1160
MB123	Kelp and seaweed communities on sediment-affected or disturbed Atlantic infralittoral rock	1170; 1160
MB124	Kelp communities on variable salinity Atlantic infralittoral rock	1170; 1130; 1160
MB321	Kelp and seaweed communities on Atlantic infralittoral coarse sediment	1160
MB521	Kelp and seaweed communities on Atlantic infralittoral sand	1160
MB621	Vegetated communities on Atlantic infralittoral mud	1160
Baltic Sea		
MA131	Baltic hydrolittoral rock and boulders characterised by perennial algae	1160; 1170; 1130; 1610; 1620
MB131	Perennial algae on Baltic infralittoral rock and boulders	1170; 1160
MB232	Baltic infralittoral bottoms characterised by shell gravel	1160; 1110
MB333	Baltic infralittoral coarse sediment characterised by perennial algae	1110; 1160
MB433	Baltic infralittoral mixed sediment characterised by perennial algae	1110; 1130; 1160; 1170
Black Sea		
MB144	Mytilid-dominated Black Sea exposed upper infralittoral rock with fucales	1170; 1160

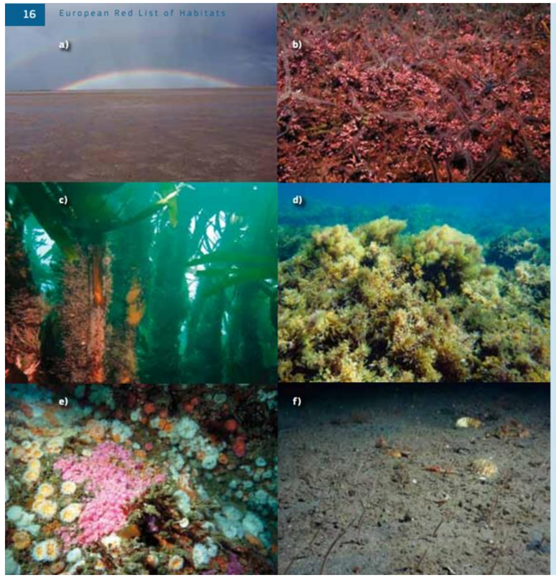


Figure 3.3.2 Examples of benthic habitats in the North-East Atlantic Region.
a) Extensive intertidal mudflats in the Bay of Mont Saint-Michel, France. © S. Gubbay
b) A bed of maerl (a calcareous alga) *Lithothamnion glaciale* surrounded by brittlestars in Loch Sween, Scotland. © G. Saunders
c) Infralittoral rock habitat with understory of *Laminaria hyperborea* kelp forest and red seaweeds, Orkney, Scotland. © C. Wood/MCS
d) Belt of the fucoid alga *Cystoseira abies-marina* forming a dense cover of wave-exposed infralittoral rock. Alegranza, Lanzarote, Spain. © R. Haroun
e) Upper circalittoral tide-swept rock colonised by a carpet of anemones including the jewel anemone *Corynactis viridis*, the plumose anemone *Metridium senile* and *Sagartia elegans*, Isle of Man, UK. © C. Wood/MCS
f) Upper circalittoral sandy mud habitat with arms of brittlestars *Amphiuria* spp. visible, extended into the water column to filter feed. Plymouth, UK. © K. Hiscock

Source: https://ec.europa.eu/environment/nature/knowledge/pdf/Marine_EU_red_list_report.pdf

What next for NRL?

- **Commission proposal** June 2022
- **Council general approach and EP report**
- **Ongoing trilogues**, ambition to agree on the law by end 2023
- Preparations for the implementation are ongoing with Member States and the European Environment Agency
- The first **deadlines** for putting in place **restoration measures** would (approximately) coincide with **protected area targets** of the Biodiversity strategy for 2030

Restoration and protection

Role of MPAs in restoration

- Areas under restoration **do not have to be protected areas,** however…
- If they comply with the relevant criteria, these areas should also contribute towards protected area targets.
- Conservation objectives and measures in many **Natura 2000 sites and other MPAs already require restoration** of habitats.
- Protected areas provide: the **conditions for successful restoration** and **no deterioration**.
- **Strictly protected areas have a key role in marine restoration**.

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Strictly protected areas

- **Strictly protected areas will enable ecosystems to thrive** because they will create the close to pristine conditions without pressures.
- **Passive restoration – let the nature recover**. However, sometimes active restoration will be necessary (**re-establishment** of habitats).
- Live laboratory for showing what **good condition** actually means and which **restoration methods** work best.
- Success will depend on their proper **monitoring, surveillance and enforcement**.
- Demonstrate the **benefits nature can provide to society and economic sectors**, such as fisheries.

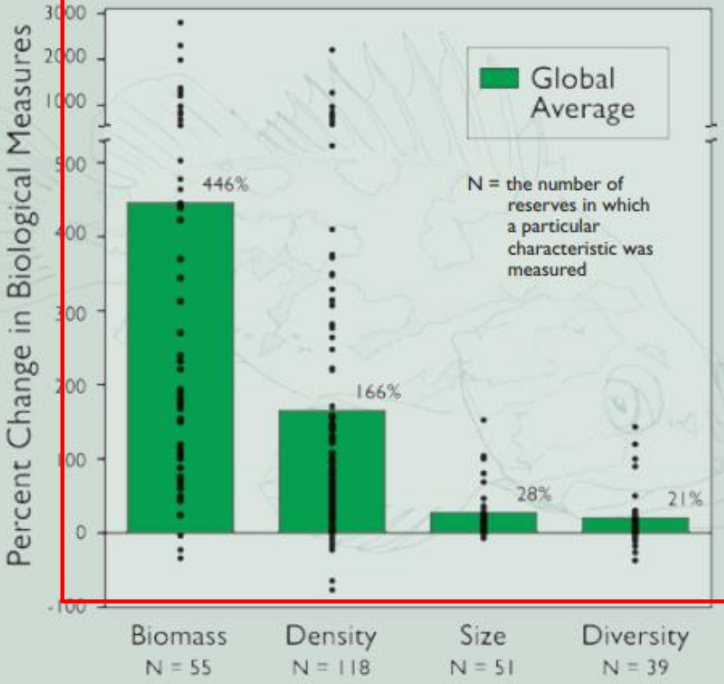
It is already happening…

Typically when a marine reserve is established, the goal is to increase the abundance and diversity of marine life inside. Scientific research shows that marine reserves consistently accomplish this goal.

More Fishes, Shellfish, and Other Marine Life

Considerable scientific documentation—published in peer-reviewed journals—provides a clear picture of what has happened after the establishment of marine reserves.

Scientists have studied more than 150 marine reserves around the world and monitored biological changes inside the reserves. In 2006, a global review of many of these studies (see top graph) revealed that fishes, invertebrates and seaweeds have shown average increases in biomass, density, size and diversity inside marine reserves.



Average changes (green bars) in fishes, invertebrates and seaweeds within marine reserves around the world. Although changes varied among reserves (black dots), most reserves had positive changes. *Data: Ref. 8*

Case Study: Bradda Inshore Fishing Ground, Isle of Man

The great scallop in its natural habitat. *Photo: Port Erin Marine Laboratory, University of Liverpool*

Experimental scallop dredging off the coast of the Isle of Man. *Photo: Bryce Beukers-Stewart*

Bradda Inshore fishing exclusion zone, Isle of Man

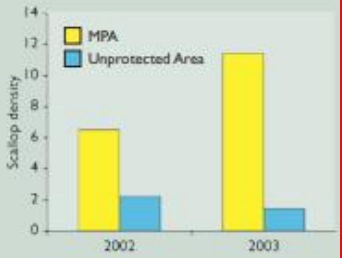
Long-Term Benefits of Seabed Protection

The Bradda Inshore fishing ground off the Isle of Man has supported a major scallop fishery since the 1930s. After 50 years of heavy dredging in the soft sediment habitat, the Bradda Inshore fishing exclusion zone was established in 1989 to protect declining scallop populations and other seabed species by banning trawling and dredging within 2 km² of the fishing ground. In 2003, fishermen supported an expansion of the MPA 700 m north of the original boundary.

This area is not a marine reserve because it allows some types of fishing for other species. However, because trawling and dredging—the fishing methods that most impact the seabed—have been banned for over 20 years, it offers an opportunity to study how long-term protection of the seabed benefits resident species and habitats.

Scientists monitored scallops and other seabed species from 1989-2003. Areas protected from dredging supported a more complex and diverse seabed community. Recovery following protection, however, was slow; it took over a decade to see significant increases in scallops within the closed area. After that, scallop numbers increased rapidly, and local fishermen became more supportive of the exclusion zone as scallops rebounded. By 2002, the density of legal-sized scallops had risen to 2.9 times higher and scallop biomass was 4.7 times higher than in nearby fished areas. A year later, density and biomass were 7.8 and 11 times higher, respectively. This pattern of increasing biomass and density over time illustrates the importance of long-term protection.

Scallops within the fishing closure are much larger than those outside, which is significant because larger scallops can produce more offspring, potentially helping to enhance surrounding scallop populations. In 2003, over 50% of scallops in the closed area exceeded 130 mm, compared to only about 12% of scallops in nearby fished areas.



Average densities of legal-sized scallops per 100m both inside the Bradda Inshore fishing exclusion zone and outside in adjacent fully fished areas during the years 2002 and 2003. *Data: Ref. 31*

Lessons Learned

- MPAs that prohibit trawling and dredging can have positive effects on target species and habitats.
- After 14 years of protection, scallop density was 8 times greater and biomass was 11 times higher inside a fishing closure than in nearby fished areas.

At left: Scallop sizes within the Bradda Inshore fishing exclusion zone (left) and in surrounding fully fished areas (right) in 2003. *Data: Ref. 31*

References: 30, 31

Source: Partnership for Interdisciplinary Studies of Coastal Oceans. 2011. The Science of Marine Reserves (2nd Edition, Europe).
www.piscoweb.org. 22 pages

Horizon Mission: Restore our Ocean, seas and waters by 2030

European Blue Parks call: Protection and restoration of marine habitats

- **Effectively managed marine protected areas with clear science-based conservation objectives and conservation measures that contribute to the restoration and protection** of marine ecosystems and support a shift towards strictly protected areas;

- Protection and restoration of marine habitats and species **through strictly protected areas, in particular of seabed habitats, including to preserve their carbon sequestration capacity, ensure spill-over of fish, provide ecosystem functionality and maintain connectivity;**

- **Enhanced resilience and adaptation potential** of coastal and marine ecosystems and improved provision of their ecosystem services, in particular in relation to **climate change mitigation/adaptation and to fisheries**;

- **A blueprint for the designation and management of marine protected areas and/or for shifting their status from "protected" to "strictly protected"** including criteria and tools for quantifying their success/ effectiveness in terms of conservation outcomes/results; a blueprint for the identification of ecological corridors as part of a blue Trans-European Nature Network;

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Thank you