

Condition assessment, thresholds of change and Favourable Reference Areas: the key challenges for the NRR

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Decades of intensive human exploitation and inadequate management have led to the widespread degradation of marine habitats across European seas. In response to the ongoing biodiversity and climate crises, the European Union has recently adopted in 2024 the Nature Restoration Regulation (NRR), which sets ambitious, time-bound targets for ecosystem restoration by 2030, 2040 and 2050. Achieving these targets requires robust and harmonized approaches to assess habitat condition, thresholds of change and Favourable Reference Areas (FRAs). Despite existing frameworks (Marine Strategy Framework Directive, MSFD and the Habitats Directive, HD), significant gaps persist in the definition of criteria for addressing these issues, limiting the development of standardized assessments.

We address these gaps by eliciting expert knowledge through structured questionnaires distributed across European scientific and policy networks. These questionnaires gather insights on existing practices, unresolved challenges and region-specific approaches to condition assessment. The expert-based approach adopted here contributes to consolidating dispersed knowledge, supporting the transition from qualitative to more quantitative and standardized assessment frameworks. Ultimately, this work provides guidance for implementing EU restoration targets and enhances the effectiveness of marine ecosystem restoration efforts.