CCB´s Guiding recommendations for Source-to-Sea restoration

in Riverine, Coastal and Marine ecosystems

Swedish Agency for Marine and Water Management

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA or NCM. Neither the European Union nor the granting authority can be held responsible for them.

IC BIODIV WG 6-2025

Coalition Clean Baltic

Andrea Cervantes, CCB Biodiversity Officer

Development of CCB´s restoration guidelines

- An effort of CCB´s NGO network: Member Organisations (WA BIO, EUTRO and MARITIME), led by CCB Secretariat
- Bring key points for consideration for Member States for NRPs development (deadline: September 2026)
- Source-to-sea restoration (Baltic Sea catchment area) – various HELCOM WGs


Credit: Camille Fraizy, 2024

CCB´s main guiding recommendations for source-to-sea restoration

1. Source-to-sea approach and ecological connectivity must be considered.
2. NRPs must include measures for all ecosystems and be site-, habitat-, and species-specific (multiple benefits prioritized)
3. Restoration efforts should be linked and contribute to EU and Baltic Sea policy goals and legal obligations (BSAP, MSFD, etc.)
4. Need for active and passive restoration with effective management, securing long-term outcomes (marine protection to be prioritized)
5. Implement firm monitoring practices to follow the state of both passive and active restoration areas (incl. effects of wider stressors)

6. Implement continuous genetic and biome mapping and sampling, and refine restoration practices

7. Follow a coherent approach at the regional level and generate synergies among MS and NRPs.

8. Set ambitious, clear, and achievable targets, ensuring effective use of resources and coordination

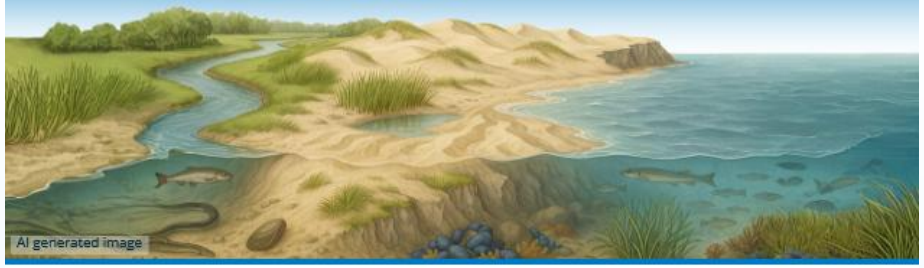
9. Source-to-sea restoration to be seen as a climate-related policy (carbon stocks and sink capacity)

10. Secure long-term financing for NRR implementation at national and regional levels to support conservation and restoration actions.

11. Involve civil society through citizen science and engagement actions in monitoring and restoration practices.

Ecosystem-specific recommendations

CCB's Guiding Recommendations for Source-to-Sea Restoration



Riverine *	Coastal	Marine
Natural water courses, incl. rivers, streams, floodplains*	Inlets, transitional waters, coastal beaches, dunes, wetlands*	Coastal water (low tide level), shelf, open ocean, column and seabed*

Passive Restoration

Riverine *	Coastal	Marine
• **No intervention**, allow natural fluvial processes (*e.g.* river bank erosion, migration of riverbeds)	• **Limit recreational use of threatened areas**, to reduce beach / dune erosion, pollution	• **Designate and effectively manage strictly protected areas**, limit human intervention (see CCB's MPA position paper)[25]
• **Allow development of native vegetation** in river bank zones, forming complex buffer zones	• **Allow natural processes** (*e.g.* beach and dune accumulation / erosion, natural cliff erosion)	• **Regulate boating, anchoring and recreational fishing** in restoration / sensitive areas (*e.g.* seagrass meadows, biogenic or stone reefs, blue mussel beds)
• **Designate riverine protected areas**	• **Protect vulnerable habitats**, MPA designation & management	

Active Restoration

Riverine *	Coastal	Marine
• **Ensure river connectivity and continuity** (longitudinal, lateral, and four-dimensional), with clear barrier removal goals (5-10 yrs)	• **Reed and dune management** (e.g. removal of invasive and overgrown species threatening native plant communities in Baltic coastal dunes)	• **Increase CO_2 reservoirs, sequestration rates and biodiversity** through restoration of macroalgae and seagrass meadows, incl. identifying suitable locations and methods
• **Remove bank reinforcements** to allow fluvial processes (*e.g.* bank erosion)	• **Restore or recreate coastal wetlands and lagoons** by increasing water retention to prolong flooding	• **Restore native stony reefs** with natural rocks to re-establish native hard-bottom communities
• **Restore woody debris, stones / gravel in riverbeds**, incl. riffle-pool sequences in gravel rivers	• **Re-wet peat soils**, necessary for carbon storage and for decreasing nutrients outflow towards the sea	• **Restore biogenic reefs** to improve habitat function and coverage & **restoration of shellfish beds**, particularly blue mussel reefs (*Mytilus edulis / trossulus*) by adding recruitment sites (e.g. shells), or transplanting material post-recruitment or adult mussels
• **Ensure safe fish migration, and restore spawning / nursery grounds, and river morphology**		
• **Establish continuous natural buffer zones** along rivers, tributaries and water bodies		
• **Reduce nutrient input**		

* Appendix I. Complementary information for riverine restoration

Considerations for successful restoration

Challenges and solutions:

- Lack of financial support, best-available techniques, harmonised data, Member States ambitions and introduction of new ecosystems

Considerations for long-term restoration

- Coherence of NRPs and clear regional approach is key
- MSP to support securing long-term outcomes and reducing conflicts
- MPA and strictly protected areas (prevent degradation, maintain connectivity, improve adaptability, sustain restoration success)
- NRPs to address reporting needs and monitoring mechanisms
- Stakeholder engagement and long-term funding

Other appendixes

- NRR timeline matching with BSAP targets (2025-2050)
- List of NRR habitats and species in the Baltic Sea catchment area (riverine, coastal and marine ecosystems)

NRR TIMELINE		
Date	**Event, Target, or Deadline**	**NRR ref.**
1st Sep., 2027	**Final NRP submission** (within 6 month of Commission's feedback)	Art. 17(6), p. 35
	Preventing significant habitat deterioration: MS to endeavour to have implemented measures aiming to prevent significant deterioration in NRR's Annexes 1 and 2* habitats that are in good condition, or areas needed to meet overall targets.	Art. 4(12), p. 22, Art. 5(10), p.24
19th Feb., 2028	**Monitoring of habitats** that have significantly deteriorated or are subject to compensatory measures	Art. 20(1.j, 5, 6), p.37
30th Jun., 2028	**1st data reporting deadline** on restoration progress (every 3 yrs)	Art. 21(1), p. 38
2030	**Effective and area-based restoration**: overarching NRR target for measures to cover at least 20% of land and 20% of sea areas.	Art. 1(2), p. 18
	Restoration measures for habitats 'not in good condition': should cover 30% of total area of habitats in NRR Annexes 1 and 2* (specifically marine habitats 1-6). MS to implement these. Notably: from 2030, terrestrial, coastal, and freshwater Natura 2000 are no longer priority sites.	Art. 4(1 & 1.a), 5(1.a), p. 20, 21, 23
	Reaching favourable habitat reference areas: restoration measures by MS should cover 30% of the total additional surface area needed per overarching habitat group (Annex 1 and 2 habitats* (only marine habitats 1-6)) to reach this target.	Art. 4(4), 5(2), p. 21, 23

MATCHING BSAP TARGETS		
Actions	**year**	**BSAP ref.**
Specific protection by HELCOM MPAs for regionally / near threatened biotopes.	2030	B7, p. 15
Contributions to passive restoration:		
• **Underwater noise** (impulsive & ambient) through Regional Action Plan on Underwater Noise.	2025-2029	S55-58, 60, 62, p. 46
• **MPA and conservation plan effectiveness** through MPA management guidelines & plans being legally binding and enforced.	2025-2028	B3, 4, 23, 29, pp. 14, 16, 17 & S64, p. 47
• **Reducing eutrophication, emissions and air pollution.**	2027-2028	E13,14 & S24, pp. 24, 43
• **Sustainable boat / shipping** practices (incentives to use port facilities, grey water assessment).	2025, 27-29	S12, 14, 15, 17, 18, p. 42
• **Minimal seabed disturbance.**	2026	S65, p. 47
• **Coastal fish** restoration actions.	2026	S53, p. 45
• **Incentive correction** (more beneficial and less harmful ones).	2025, 2030	HT21, 22, p. 54 S10, p. 42
• **Reduced introduction of invasive spp.**	2026	HL12, 19-21, 29-32 & HT23-25, & S1, 10, 16, 22, pp. 34, 35, 41-43, 55
• **Reducing pollution** (marine litter, biofouling, mercury, PFAs, chlorinated paraffins, offshore platforms)	2025-2028	

The Session is invited to:

- Note CCB´s Guiding Recommendations on source-to-sea restoration and reflect on their contribution to the development of a HELCOM Restoration Action Plan and HELCOM´s role in aiding NRR implementation;
- Share progress on the development on NRPs, including considerations for source-to-sea restoration;
- Consider and discuss the need for collaboration with other relevant HELCOM WGs for riverine, coastal and marine restoration, as well as how a potential regional common understanding on restoration will consider the entire catchment area.

Coalition Clean Baltic

Thank you!

Credit: Maria Basova