

Science and policy needs for effective ecosystem protection and restoration in Europe to build climate resilience

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The protection and restoration of marine and coastal ecosystems are critical Nature-based Solutions (NbS) to build climate resilience by protecting coastlines from the impacts of extreme weather and for storing carbon.

Recommendations to scale-up their deployment include:

- **Effective planning and management** so ecosystems can withstand sea-level rise and storms and have enough space to thrive.
- **Fill critical knowledge gaps**, including site-specific research on which coastal habitats and species provide coastal protection and under which conditions, research to reduce uncertainties about the amount of Blue Carbon removed and stored, and technological improvements to scale-up restoration.
- **Advance understanding, promotion and monetisation of co-benefits**, including for biodiversity, and the creation of space for recreation and tourism.
- **Advance understanding of the cost-effectiveness of restoration** compared to taking no action and the future costs of losing natural resources from overexploitation to help justify investments.

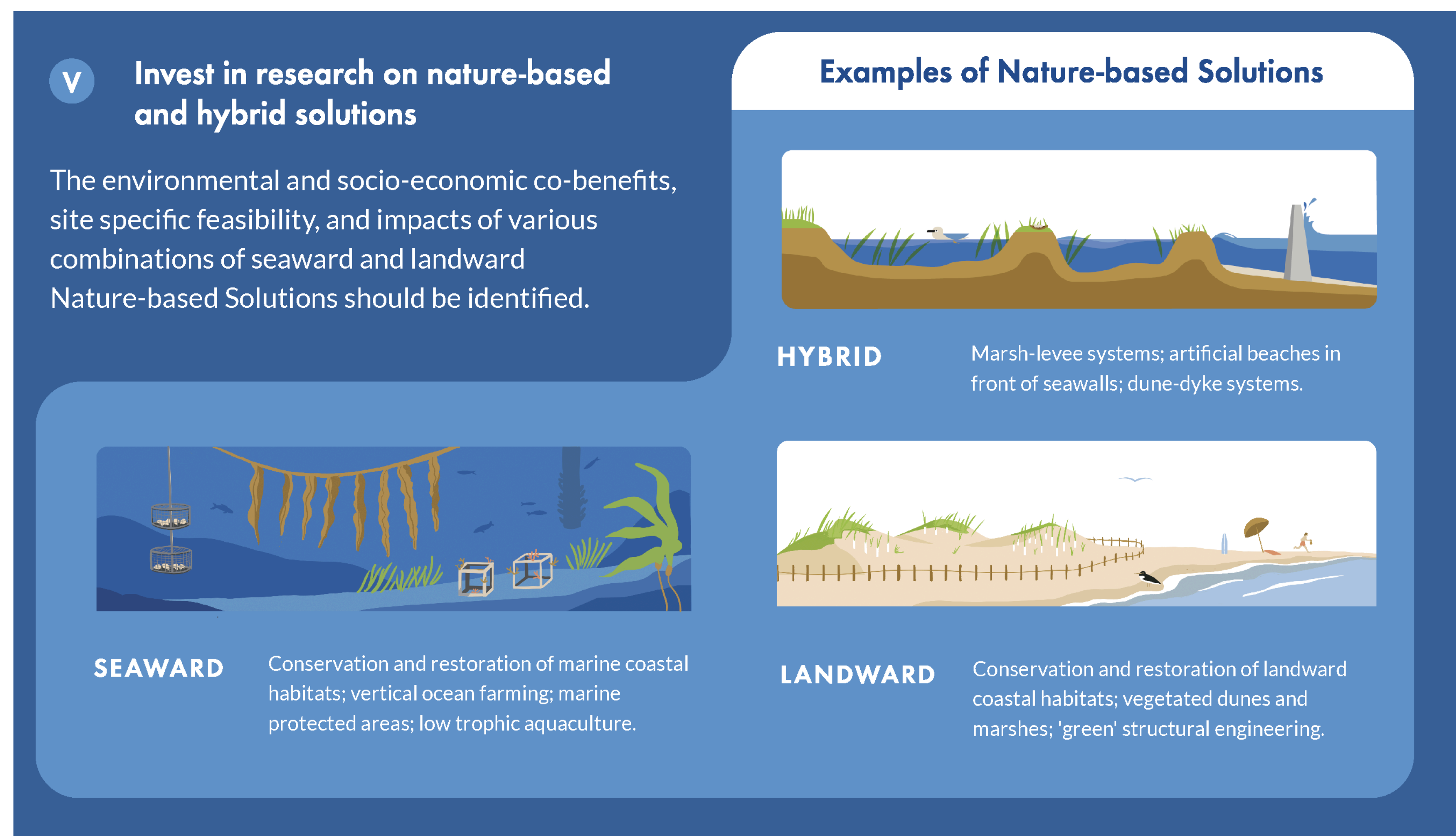


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- **Adopt a holistic approach to marine spatial planning** that considers the land and sea as a single, dynamic socio-ecological system.
- **Develop and adopt holistic and adaptive coastal management plans** that consider future liveability of coastal areas in the face of ongoing changes.
- Promote the **participation of local communities** in coastal management.
- **Improve coverage of marine habitat maps and include more information on biodiversity** so they can be more effective in representing ecological processes for to aid in the design of protection and restoration initiatives.

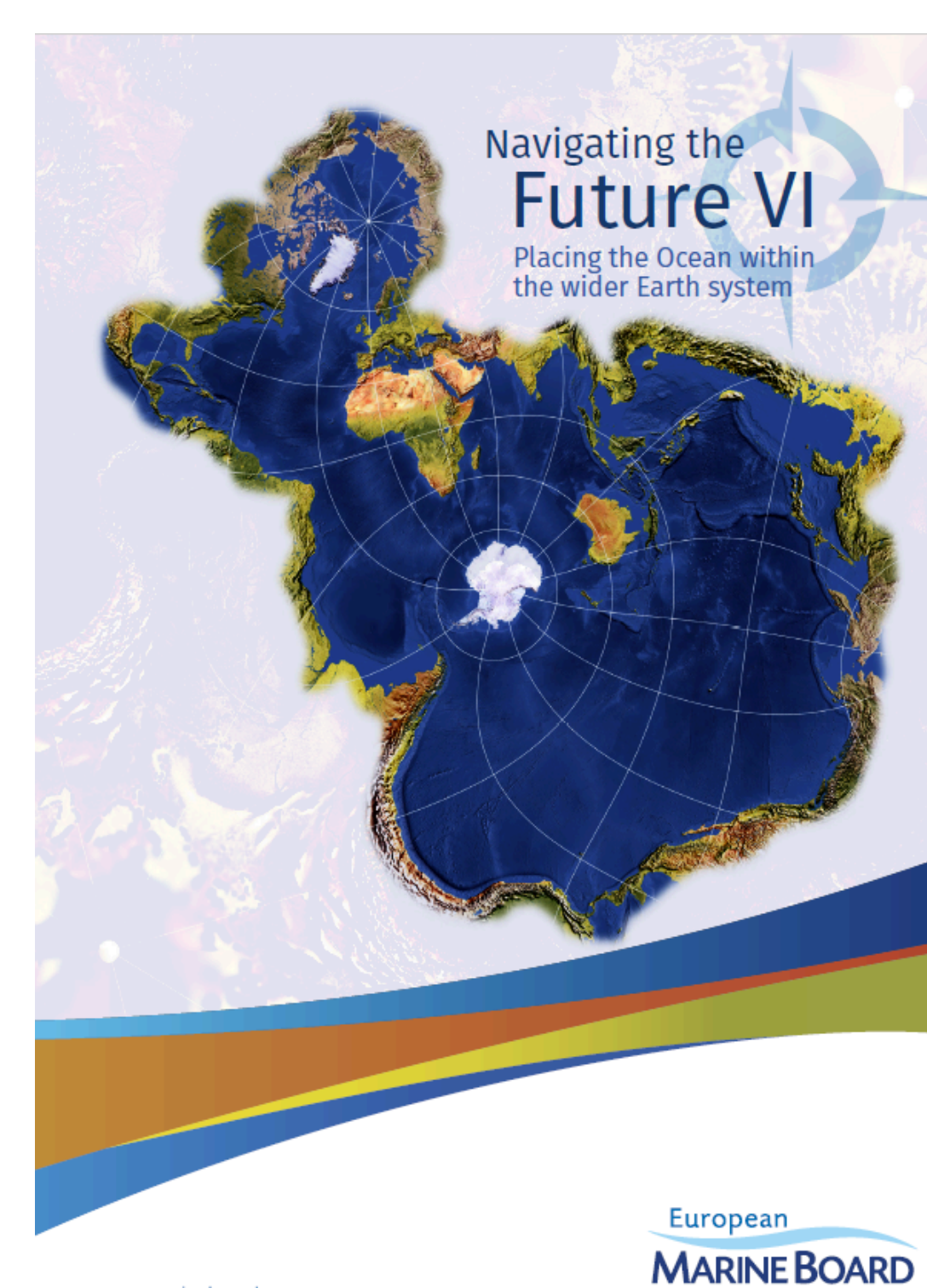
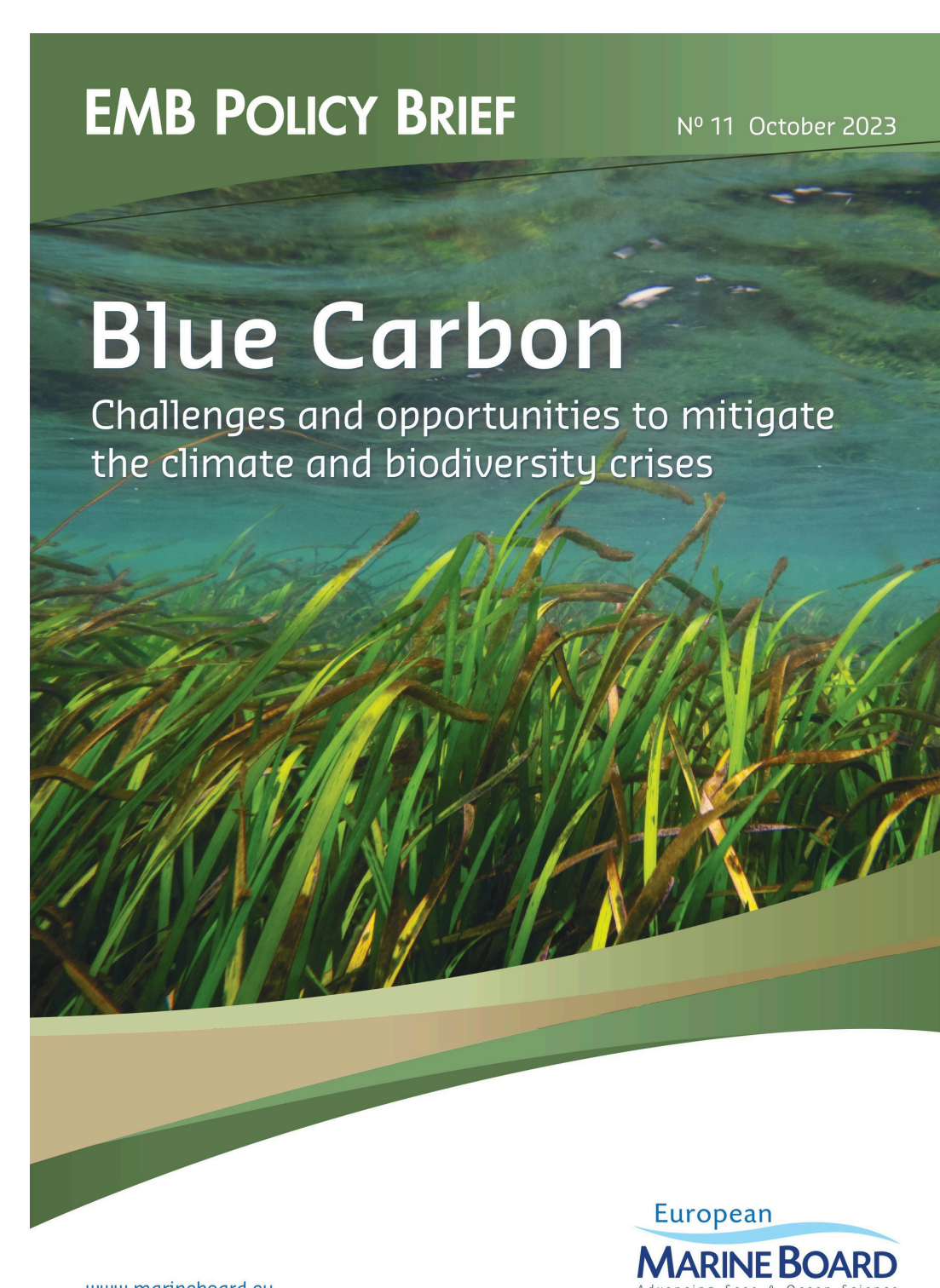
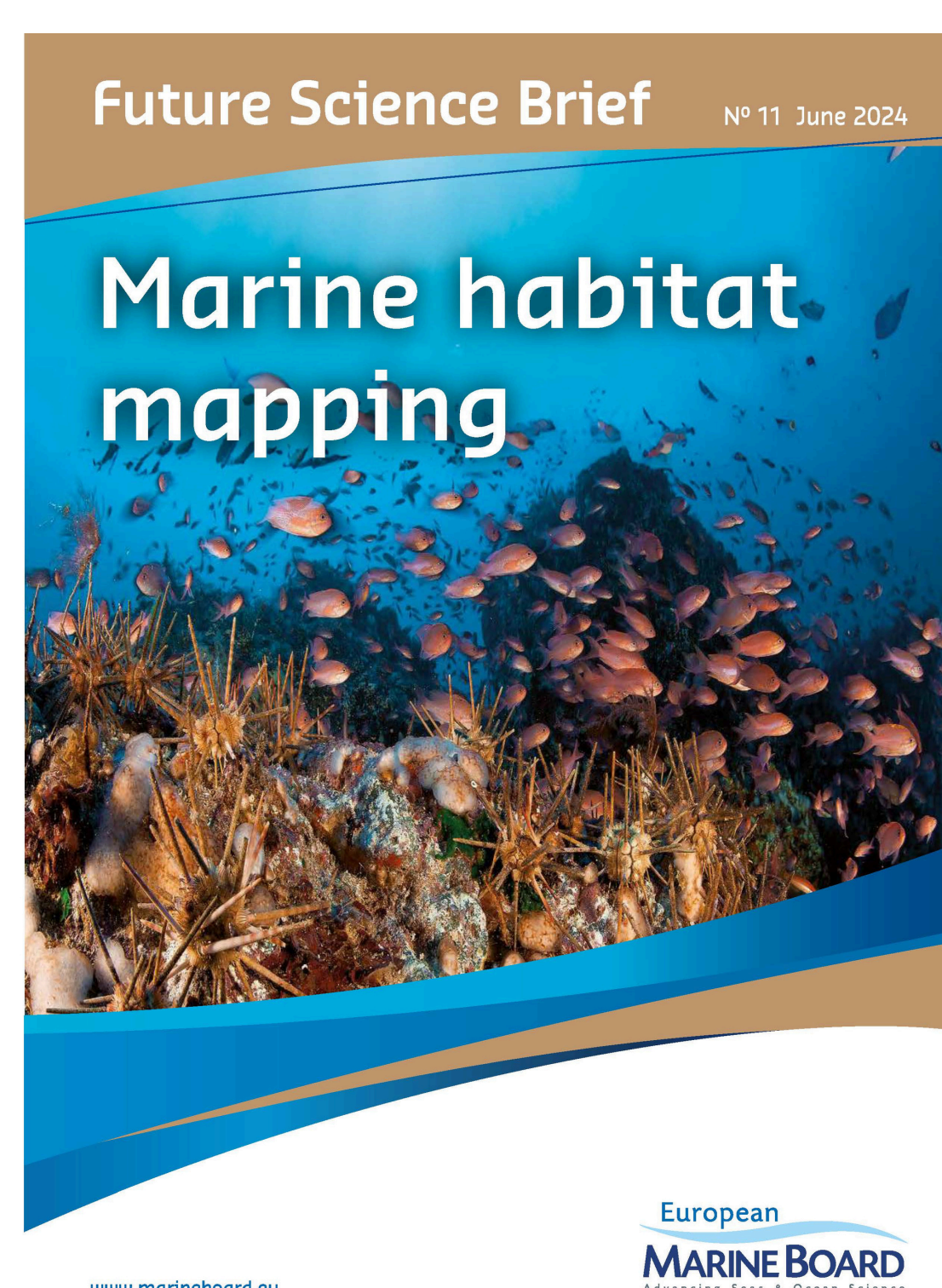
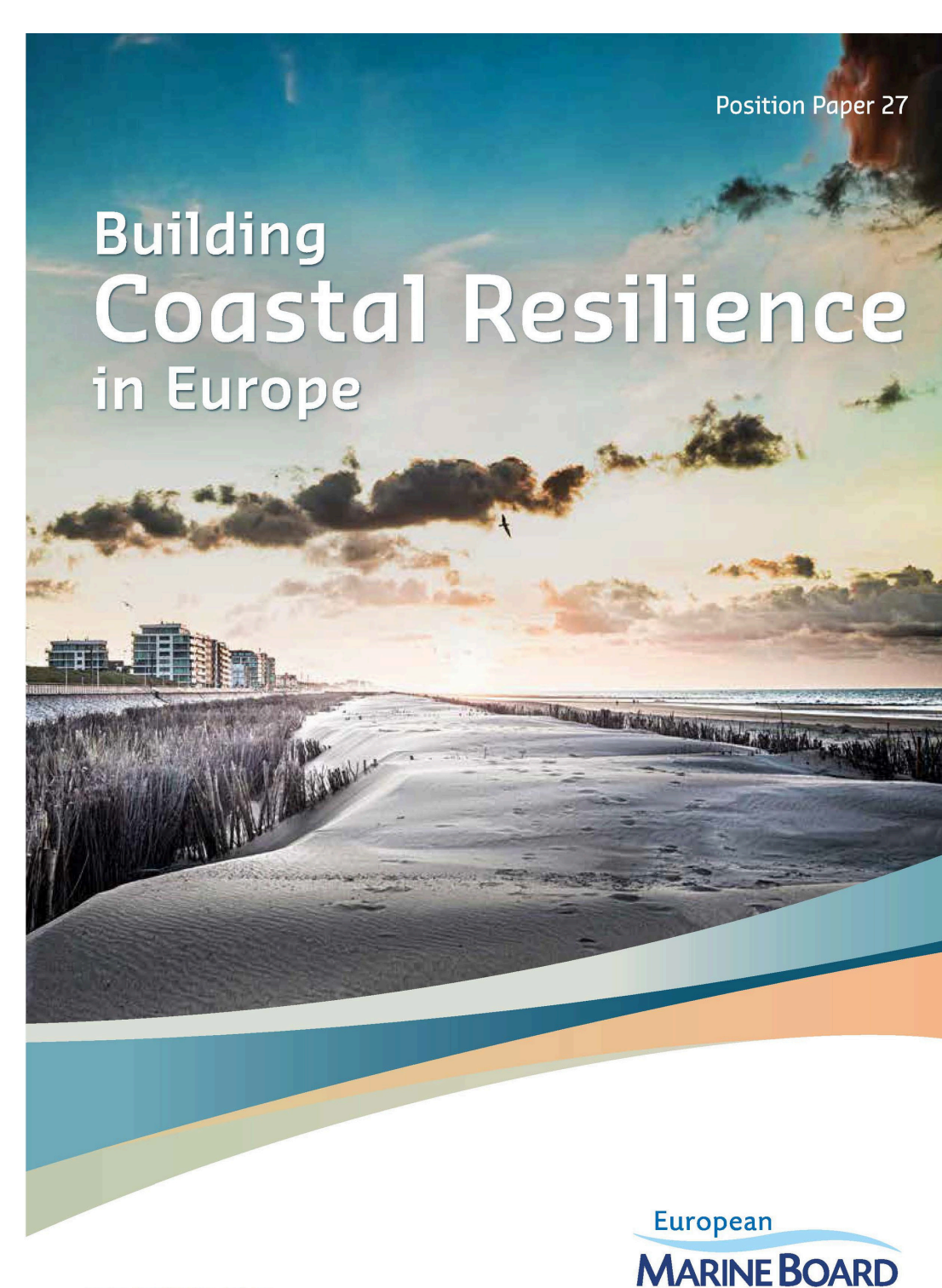


Image credit: PlanBlue

Adopt a systems approach to coastal management

This should be based on adaptive, cross-sectoral and coherent policies. All aspects of the land-sea interface should be included in the Integrated Maritime Policy and links between marine- and land-based policies should be improved.

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These recommendations are based on EMB's strategic foresight documents 'Building Coastal Resilience in Europe', 'Marine Habitat Mapping', 'Blue Carbon' and 'Navigating the Future VI'

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