

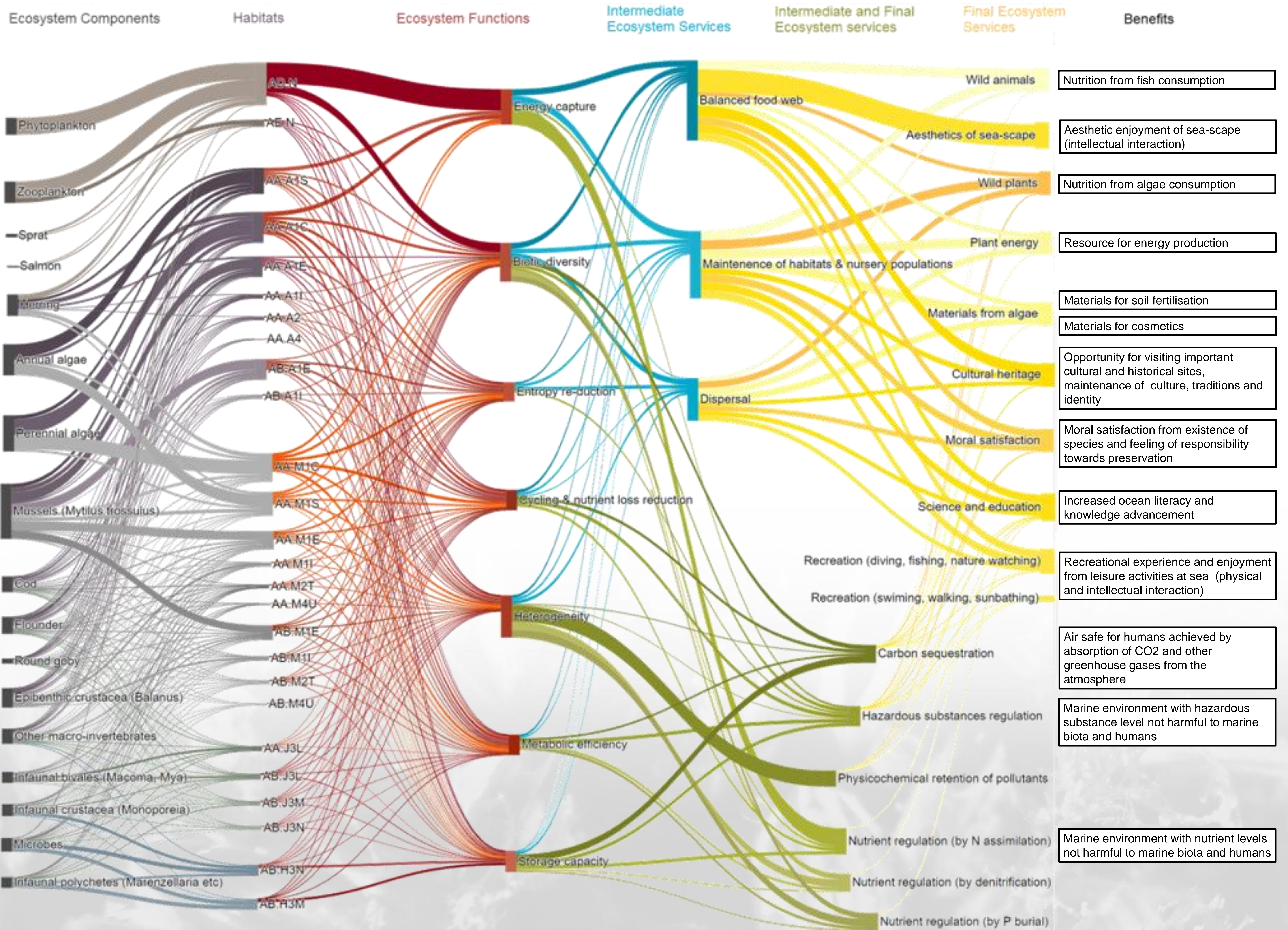


BONUS BASMATI

Baltic Sea Maritime Spatial Planning
for Sustainable Ecosystem Services

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Establishing the links between ecosystem components, functions, services and benefits: An assessment and communication support tool.



The Ecosystem services perspective and the Latvian Case study

The ES perspective can play an instrumental role in policy making and a conceptual one in increasing our awareness of human dependence on the wellbeing of the environment.¹ Albeit increasingly popular, ES assessments to this day are largely done to a conceptual level.²

The diagram above depicts the results of an assessment of ES provided by the Latvian coastal water benthic habitats featured in the BONUS BASMATI project. It is based on the cascade model, CICES v5.1 typology revised during the project and adopts the idea of final and intermediate services to ease economic valuation of benefits which relies on a clear quantitative assessment of the natural assets.³ The method aims to operationalise the ES concept for better integration in ecosystem-based marine management.

Expert knowledge elicitation and assessment visualisation

The assessment is conducted via an expert elicitation matrix whereby experts identify and weigh the relative contribution of each element of the Cascade in the provision of the forthcoming set of elements. The data is used to create chains of links between ecosystem components and services. The end value indicating the over all relative significance of the component in provision of the set of ES is worked out with reference to all preceding values featured in the chain of links.

The end result allows ranking of components, enables us to see how changes in them are reflected in the provision levels of ES thus providing a means for scenario analysis. Further, the clear network of links reduces the risk of double counting during economic valuation of benefits. The interactive version of the diagram can also be used to for stakeholder engagement and to promote ocean literacy.

¹ Ainscough J, de Vries Lentsch A, Metzger M, Rounsevell M, Schröter M, Delbaere B, de Groot R, Staes J (2019) Navigating pluralism: Understanding perceptions of the ecosystem services Concept, vol.36, pp.1-13
² Hummel C, Poursanidis D, Orestein D, Elliot M, Adamescu M.C, Cazacu C, Ziv G, Chrysoulakis N, van der Meer J, Hummel Herman (2019) Protected Area management: Fusion and Confusion with ecosystem services approach, Science of the Total Environment vol.651, pp.2432-2443
³ Bateman I.J, Mace G.M, Fezzi C, Atkinson G, Turner K (2011) Economic Analysis for Ecosystem Service Assessments, Environ. Resource Econ vol.48, pp.177-218

