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**Title:**

Linkage matrix of marine ecosystem services and ecosystem components, Version 1.0

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**Background**

These data were collected from 2014-2018 as part of a project for the European Environment Agency under a European Topic Centre grant agreement with the University of Liverpool, UK (Negotiated Procedure EEA/NSV/14/002) (2014) and as part of ongoing work with the European Environment Agency's Inland, Coastal and Marine Waters Topic Centre (2015-2018), developing an operational European Union (EU) policy-based marine ecosystem (services) assessment framework. The data were analysed as part of the EU Horizon 2020 AQUACROSS project (642317) and published in the journal Ecological Applications (Culhane et al., 2018).

**Methods**

A typology of ecosystem services relevant for the marine environment was developed, based on the Common International Classification for Ecosystem Services (CICES, version 4.3) (Haines-Young and Potschin, 2013). A typology of ecosystem components was developed. Marine ecosystem components were made up of any plausible association between a habitat and a biotic group. The typology of habitats was derived from the EU Marine Strategy Framework Directive (MSFD) predominant habitats and biotic groups were adapted from the functional groups of the Commission Staff Working Paper on the ‘Relationship between the initial assessment of marine waters and the criteria for good environmental status’ (EC, 2011). Associations of habitats and taxa were then identified through literature searches and expert knowledge. Links between ecosystem components and ecosystem services, wherever a component can supply an ecosystem service, were then identified. These data were collected through a combination of literature, other information sources (e.g. websites) and expert knowledge. Details of interactions and more information on the typologies can be found in Culhane et al. (2014) (Sections 2-4, Annex I) and descriptions of the typologies can be found in the supplementary material in Culhane et al. (2018).

**Description of dataset**

The dataset consists of a matrix of ecosystem components and marine ecosystem services. A link is given wherever an ecosystem component can supply a service. Only links relevant for an EU context have been identified thus, this dataset is specific to the following regions as defined under the MSFD: the North East Atlantic Ocean, the Baltic Sea, the Black Sea and the Mediterranean Sea. Links are also representative of current conditions i.e. they take into account current cultural practices, current legislation that may prevent certain activities from occurring (e.g. whaling in EU waters) and current technological limitations (e.g. on deep sea fishing). Links are represented by either an 'x' (direct link) or an 'o' (indirect link). Direct links are given where a biotic group supplies a service in the habitat where it is present. Indirect links are given where a biotic group is supported by a habitat but supplies the service in a different habitat.

**References**

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