Indicators provided for modelling of changing pressure responses and testing integration

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Aarhus University

AUTHORS

Dorte Krause-Jensen, Annette Bruhn, Jacob Carstensen (Aarhus University, Denmark), Ana M. Queirós, John Bruun, Paul Somerfield, (Plymouth Marine Laboratory, United Kingdom), Krysia Mazik, James A. Strong, Sally Little, Mike Elliot (University of Hull, United Kingdom), Jordi Camp, Isabel Ferrera, Eva Flo, Esther Garcés, Josep M. Gasol, Ramon Massana, Albert Reñé (Consejo Superior de Investigaciones Científicas, CSIC, Spain), Nihayet Bizsel, Murat Özaydinl, Kemal Can Bizsel (Dokuz Eylül University, Institute of Marine Science and Technology, Turkey), Romualda Chuševė, Anastasija Zaiko, Martynas Bučas (Klaipėda University, Lithuania), Iñigo Muxika, Maria C. Uyarra, Germán Rodríguez, Angel Borja, Guillem Chust, Ibon Galparsoro, Marta Pascual (AZTI-Tecnalia, Spain), Laura Uusitalo, Henrik Nygård, Susanna Jernberg (Finnish Environment Institute, Finland), Nadia Papadopoulou, Maria Pantazi, (Hellenic Centre for Marine Research, Greece), Karin Fürhaupter, Torsten Berg, Henrike Wilken, Tanja Kuhlmann (Marilim, Germany), Olivier Beauchard, Peter Herman (Netherlands Institute for Sea Research, NIOZ, Netherlands), Christopher Lyham, Georg Engelhard (Centre for Environment, Fisheries and Aquaculture Science, CEFAS, United Kingdom), Arianna Azzellino (Politecnico di Milano, Italy)

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1. Introduction

This milestone provides an overview of the data sets available among DEVOTES partners for conducting quality analyses of indicators to be used in biodiversity assessment, food-webs or seafloor integrity. The data overview will also form part of Deliverable D3.2 due in January 2015 in which selected data sets from this overview are applied in indicator quality analysis to evaluate the responses of indicators to pressures. They form the basis for the integration of biodiversity indicators in WP6 of the DEVOTES project, and these indicators and data are available for testing the integration scheme in WP6.

2. Available data for quality analysis of indicators

The data overview summarizes the data sets available among DEVOTES partners for analyses of ecosystem status for each of the following descriptors of the Marine Strategy Framework Directive (MSFD): 'Biodiversity (1)', 'Seafloor integrity (6)' and 'Food webs (4)' through the identification of indicators that respond to pressures.

The data sets cover the four regional seas: The NE Atlantic Sea, the Baltic Sea, the Mediterranean Sea and the Black Sea. It includes biological components ranging from microbes, pelagic primary producers i.e. phytoplankton, seagrasses and macroalgae, over secondary producers extending from zooplankton and benthic fauna to fish, birds and mammals.

For each biological component, data are organized according to MSFD criteria ("e.g. 1.1. Species distribution") and MSFD indicators (e.g. 1.1.1. "Distributional range"). As an additional level of detail we listed the specific parameters represented by the data (e.g. "macrofauna biomass").

The overview further indicates which coupled pressure data are available for inclusion in pressure-response analysis of the various biological data. Pressures range from eutrophication (nutrient/organic) pressure over fishery pressure, sand extraction and habitat destruction to hazardous substances.

We provide overviews with two levels of detail (a rough, overall data overview, as well as a more detailed overview) as specified below. The overviews are attached as excel files.

2.1. Overall data overview (Annex 1)

The data overview contains a spread sheet on available data sets for each descriptor and a spread sheet of prioritized data sets for analysis of each descriptor.

The prioritized data sets are selected for quality analysis because they are deemed promising based on indicator criteria (to be presented in Deliverable 3.2). The criterion on data availability plays a major role here, as coupled data on indicators and pressures is the basis for quality analysis in DEVOTES.

Moreover, we prioritized data sets that optimize the possibility for comparative analysis of indicator responses between different types of indicators (in the same area and for the same pressure), between different pressures (preferably in the same area) and between different coastal areas (same indicator and pressure).

2.2. Detailed data overview (Annex 2)

More detailed overviews of data sets are also provided. These are organized in a common spread sheet containing a sheet for each of the biological components (e.g. plankton, macroalgae/ seagrasses, fish, fauna) indicating the type of biological data (e.g. biomass), pressure and length of time series that the data sets represent.

3. List of annexes

Annex 1 – **Overall data overview (.xls)**

Annex 2 – **Detailed data overview (.xls)**