

Earth System Science

Data

The Data Publishing Journal

NEWS NEWS

Oceanographers publish new global plankton atlas in "Earth System Science Data"

An international team of researchers from more than 80 oceanographic institutions and marine laboratories across 19 countries has produced the first global atlas of marine plankton. **They have made the atlas freely available through the open access "Earth System Science Data" journal.**

The new **MAREDAT** (Marine Ecosystem Data, an essential element of the Marine Ecosystem Model Inter-comparison Project, MAREMIP) atlas covers 11 types of plankton, ranging in size from bacteria to jellyfish. Together, these plankton groups determine the health and productivity of the global ocean and play a vital role in the global carbon cycle. Working within a uniform and consistent spatial and depth grid (map) of the global ocean, the researchers compiled thousands and tens of thousands of data points to identify regions of plankton abundance and scarcity as well as areas of data abundance and scarcity. At many of the grid points, the MAREDAT team accomplished the difficult conversion from abundance (numbers of organisms) to biomass (carbon mass of organisms). The MAREDAT atlas provides an unprecedented global data set for ecological and biochemical analysis and modeling as well as a clear mandate for compiling additional existing data and for focusing future data gathering efforts on key groups in key areas of the ocean.

The MAREDAT team has made their global atlas publicly and freely available through the "Earth System Science Data" (ESSD) journal. (All the actual plankton data reside on the **PANGAEA** information system.)

ESSD engaged two special editors and dozens of expert reviewers to evaluate and process separate data descriptions for each type of plankton and an overview and summary of the MAREDAT effort. The timely release of the atlas depended on skillful efforts by the teams at Copernicus Publications, the ESSD publisher.

Dr. Hans Pfeiffenberger, one of the co-founders and chief editors of ESSD, said that "The MAREDAT product is in many ways an outstanding example for what we intend ESSD to provide: recognition and credit to the data providers and open access for future data users."

Dr. David Carlson, the other founder and chief editor for ESSD, added that "The MAREDAT team put a huge effort into this atlas, and so did ESSD. ESSD has now published a remarkable series of global data sets, including several major ocean data sets. If MAREDAT decides to attempt an improved version in a year or two, we would feel happy to work with them."

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