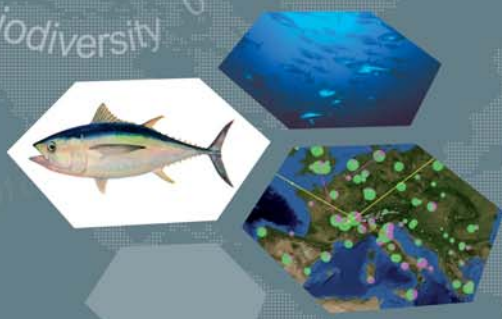




d4SCIENCE

D4Science AquaMaps VRE

A Virtual Research Environment for predictive species and biodiversity mapping in aquatic environments



■ Introduction

Information about species occurrence and biodiversity patterns is urgently needed. This information can be provided by predictive models, which are, however, currently limited by high computational demands. The AquaMaps Virtual Research Environment (VRE) is the grid implementation of the AquaMaps project (www.aquamaps.org) and uses the data and algorithms developed by that project.

AquaMaps VRE vision

The AquaMaps VRE addresses important fisheries management and conservation issues by using species distribution models to generate complex biodiversity maps. The grid implementation allows to:

- shorten map creation time;
- increase flexibility in selection of input data, model parameterisation and output;
- access a wide diversity of data sources and heterogeneous data formats;
- ease incorporation of alternative environmental data sets; and
- store and share information in a collaboration suite.

AquaMaps VRE objectives

- Provide a dedicated environment for fisheries biologists and conservation managers.
- Enhance algorithms used for predictive species mapping to simulate impacts of environmental perturbations, such as climate change.
- Enable real-time generation of biodiversity maps based on complex selection criteria including spatial, taxonomic and ecological filters.
- Increase speed and performance for the generation of composite biodiversity maps.
- Share information with other collaborators using the D4Science workspace.
- Provide an infrastructure for on-the-fly incorporation of environmental monitoring data.

www.d4science.eu
www.aquamaps.org

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