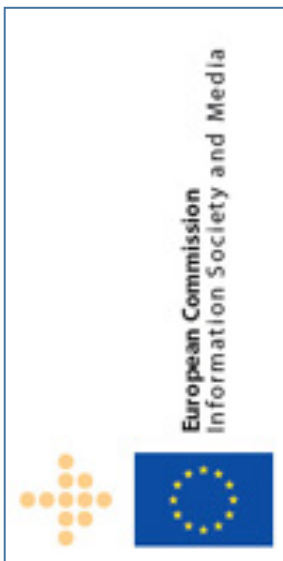|	
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DISCLAIMER

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The goal of BlueBRIDGE*, Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth*, is to support capacity building in interdisciplinary research communities actively involved in increasing the scientific knowledge of the marine environment, its living resources, and its economy with the aim of providing a better ground for informed advice to competent authorities and to enlarge the spectrum of growth opportunities as addressed by the Blue Growth societal challenge.

This document contains information on BlueBRIDGE core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as BlueBRIDGE Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

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GLOSSARY

ABBREVIATION	DEFINITION
BlueBRIDGE	Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue groth
BFT	Bluefin Tuna Stock Assessment
EwE	Ecopath with Ecosim
FIRMS	Fisheries and Resources Monitoring System
GRSF	Global Record of Stocks and Fisheries
ICCAT	International Commission for the Conservation of Atlantic Tunas
OSCAR	Ocean Surface Current Analyses Real-time
R	R is a programming language and software environment for statistic computing and graphics
RAM	RAM (Dr. Ransom A. Myers') Legacy Stock Assessment Database
SDMX	Statistical Data and Metadata eXchange
VRE	Virtual Research Environment
WoRMS	World Register of Marine Species

DELIVERABLE SUMMARY

The deliverable D5.2-Blue Assessment VRE Integrated Resources aims at providing a detailed description of the resources that are going to be exploited or reused in Blue Assessment VREs. With the term resources, we refer to data sources, policies, guidelines, software and tools, etc. in the context of the Blue Assessment VREs; in particular the Stock Assessment VREs and the Global Record of Stocks and Fisheries VRE.

The stock assessment VREs will deliver experts an environment where they can select the data sources they are interested into, exploit the appropriate models and perform complex computations and validations of the selected resources using the integrated set of software components and algorithms. Similarly, the global record of stocks and fisheries VRE will offer a unique place where experts can retrieve particular information on stocks and fisheries, by exploiting information coming from different data sources. All these resources will be offered through the aforementioned customizable VREs.

We use a generic interpretation for the term resources. More specifically we refer to data sources, data collections, algorithms and models, software components and services, etc. These resources are the main pillars of the Blue Assessment VREs and they are integrated and exposed through the VREs infrastructure for serving particular needs; just indicatively, for the case of stock assessment VRE these resources are available to the experts through the customizable VREs in a single portal – to enable users to exploit them and combine them for carrying out their activities – while for the global record of stocks and fisheries VRE the resources are integrated to offer new functionalities (i.e. producing unique identifiers for stocks and fisheries, connecting heterogeneous information about the same stocks, etc.). A set of resources has already been integrated for reaching the first milestone – the initial set-up and deployment of the Blue Assessment VREs- however more resources will be integrated during the VREs lifetime. In this deliverable we report all the integrated resources; including the ones that have already been integrated and the ones to be integrated. To this end we provide a detailed description of a potential exploitation plan of these resources in the BlueBRIDGE project wiki.

This deliverable is of type "Other" and it consists of a set of wiki pages, hosted by the BlueBRIDGE wiki [1]. The detailed and full version of the deliverable is available at

https://support.d4science.org/projects/bluebridge/wiki/Blue_Assessment_VRE_Integrated_Resources

For ease the reading and maintenance of the full version of the deliverable we classify resources in the following categories

- Data sources and data collections; about stocks and fisheries (i.e. FIRMS, RAM legacy stock assessment database, FishSource, Sardara), marine species information (i.e. FishBase, WoRMS), ocean and sea surface measurements (i.e. OSCAR data), and several data collections from fisheries related products (i.e. FAO, Eurostat, and RFB capture statistics, SDMX datasets, etc.). The data sources have been integrated in the infrastructure, either by replicating them (and periodically refresh them) from their original sources, or by fetching and transforming them using particular software components (i.e. MatWare for the case of GRSF). Most data are not static, and modifications can be ingested. A process for registering and ingesting entirely new data sources based on typologies of existing data is put in place.

- Models and algorithms; e.g. describing the steps and processes for ICCAT BFT stock assessment, the Tuna Atlas algorithms (for manipulating, accessing and visualizing tropical tuna data), EwE models and taxonomic data, models for supporting stock assessment, and for analyzing and visualizing stock assessment data (i.e. Ichthyop) and MSY-related models. The majority of these resources are processes and codes implemented in R and their implementations can be ingested into the infrastructure through a manager processed by users.
- Software components; that contains tools that will facilitate the construction and maintenance of semantic web knowledge bases (i.e. MatWare and X3ML engine, Grade, GRSF-services-core), Master Data Management tools including code lists management and mapping tools (COMET, COTRIX, etc.), as well as for statistical data. The integrated software components are either libraries or services that are ingested in the infrastructure and will be exploited from the VREs with other components for delivering the desired VRE functionalities.
- Documentation and user guides; to manage the above resources, as well as for the corresponding processes and functionalities are provided.

Most of the resources in the categories above can already be integrated in the infrastructure, however for some of them integration activities are still pending. For each resource we provide a detailed description about how it has been integrated (or will be integrated). After the resources have been integrated they can be exploited and combined with other integrated resources. This is the main advantage, because through the integration of resources, Blue Assessment VREs deliver high quality products that fulfil users' requirements related to stock and fisheries activities. A detailed description of the above resources, as well as more information about their integration and exploitation details (and plans) can be found at the VRE wiki pages [2][3].

https://support.d4science.org/projects/bluebridge/wiki/Stock_Assessment_VRE_Work_plan

https://support.d4science.org/projects/bluebridge/wiki/GRSF_VRE_plan

The deliverable covers the first eleven months of the project. An update to this deliverable will be D5.4 (Blue Assessment VRE Integrated Resources: Revised Version) which is due for M27.

REFERENCES

[1]. https://support.d4science.org/projects/bluebridge/wiki/Blue_Assessment_VRE_Integrated_Resources

[2]. https://support.d4science.org/projects/bluebridge/wiki/Stock_Assessment_VRE_Work_plan

[3]. https://support.d4science.org/projects/bluebridge/wiki/GRSF_VRE_plan