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Abstract: *This deliverable describes the novelties within the iMarine Data Management Software up to M6 (Apr. '12), which include: Data Access, Data Transfer, Assessment, Harmonization and Certification facilities*

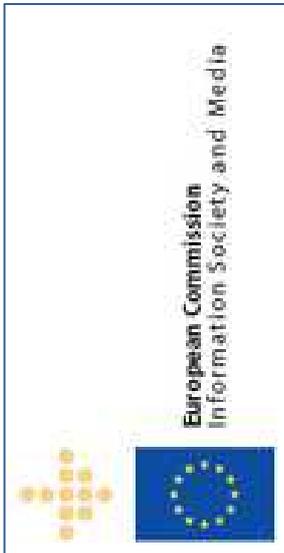
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DISCLAIMER



iMarine (RI – 283644) is a Research Infrastructures Combination of Collaborative Project and Coordination and Support Action (CP-CSA) co-funded by the European Commission under the Capacities Programme, Framework Programme Seven (FP7).

The goal of iMarine, *Data e-Infrastructure Initiative for Fisheries Management and Conservation of Marine Living Resources*, is to establish and operate a data infrastructure supporting the principles of the Ecosystem Approach to Fisheries Management and Conservation of Marine Living Resources and to facilitate the emergence of a unified Ecosystem Approach Community of Practice (EA-CoP).

This document contains information on iMarine core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as iMarine 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
iMarine	Data e-Infrastructure Initiative for Fisheries Management and Conservation of Marine Living Resources
WCS	Web Coverage Service
WMS	Web Map Service
WFS	Web Feature Service
SOAP	Simple Object Access Protocol
HTTP	HyperText Transfer Protocol
FTP	File Transfer Protocol
SDMX	Statistical Data and Metadata Exchange
DARWIN CORE	A standard designed to facilitate the exchange of information about the geographic occurrence of species and the existence of specimens in collections

DELIVERABLE SUMMARY

1. INTRODUCTION

This deliverable describes the novelties within the iMarine Data Management Software up to M6 (Apr.'12).

2. TARGET RELEASE(S)

The releases connected to D9.1 are:

- gCube 2.9.0.

3. OBJECTIVES

The new version of components belonging the Data Management Software released as part of gCube 2.9.0 covers the following objectives:

- Data Access Facilities:

WP9 offers facilities for standard and uniform network access to datasets of varying semantics hosted in multiple and heterogeneous repositories, including content management systems, databases, and file storage systems. Furthermore an access to biodiversity data sources is managed through a variety of protocols. Distribution maps can be reached by WCS, WFS and WMS protocols, while information about species can be exported in Darwin Core format. External sources are accessible via SOAP, HTTP or database protocols.

- Data Transfer Facilities:

WP9 offers facilities for integrating and enhancing a set of facilities for reliable data transfer mechanisms between the nodes of the Data e-Infrastructure. Multi-type datasets distributed across different repositories are managed. The aim is to promote an efficient and optimized consumption of these data resources by means of a secure, reliable, and efficient solution for other deployed services to move different data types between remote infrastructure nodes under different transfer protocols and the combination/optimization of state-of-the-art technologies. Supported formats for data transfer are currently FTP and HTTP.

- Data Assessment, Harmonization and Certification Facilities:

WP9 offers facilities to assist users members in the assessment, harmonization, and certification of data. The harmonization of time-series data, for example, requires the exploitation of reference data, code lists, and taxonomies to identify syntactic errors, missing information and erroneous observations. Among all possible formats, some are more important than others: SDMX and Darwin Core (for interoperability reasons) are the most used.

4. COMPONENTS

In the target releases, the following components have been updated or newly introduced:

- to support the **Data Access Facilities**:
 - streams-1.0.0
 - trees-1.0.0
 - tree-manager-1.0.0

- tree-manager-stubs-1.0.0
 - tree-manager-library-1.0.0
 - tree-manager-framework-1.0.0
 - tree-manager-sample-plugin-1.0.0
 - tree-repository-1.0.0
 - catalogueoflife-spd-plugin.1-0-0
 - obis-spd-plugin.1-0-0
 - gbif-spd-plugin.1-0-0
 - species-products-discovery.1-0-0
 - species-products-discovery-stubs.1-0-0
 - worms-spd-plugin.1-0-0
 - brazilianflora-spd-plugin.1-0-0
 - specieslink-spd-plugin.1-0-0
 - species-discovery.1-0-0
 - species-discovery-servicearchive.1-0-0
 - org.gcube.content-management.storage-manager-core.1-0-0
 - org.gcube.content-management.storage-manager-wrapper.1-0-0
- to support the **Data Transfer Facilities**:
 - org.gcube.data-transfer.agent-library.1-0-0
 - org.gcube.data-transfer.agent-service.1-0-0
 - org.gcube.data-transfer.agent-stubs.1-0-0
 - org.gcube.data-transfer.common.1-0-0
 - org.gcube.execution.gRS2.1-3-0
 - org.gcube.execution.gRS2-servicearchive.1-3-0
 - org.gcube.execution.gRSBridge.1-2-0
 - org.gcube.execution.gRS2Broker.1-0-0
 - org.gcube.execution.gRS2Broker-servicearchive.1-0-0
 - to support the **Data Assessment, Harmonization and Certification Facilities**:
 - org.gcube.content-management.time-series-geo-tools.1-4-0
 - org.gcube.content-management.time-series-geo-tools-servicearchive.1-4-0
 - org.gcube.content-management.geo-utils-custom.1.2.0
 - org.gcube.content-management.geo-utils-custom-servicearchive.1.2.0
 - org.gcube.content-management.content-manager.2-5-0
 - org.gcube.content-management.content-manager-servicearchive.2-5-0
 - org.gcube.content-management.time-series-servicearchive.2-3-0
 - org.gcube.content-management.time-series.2-3-0
 - org.gcube.content-management.codelist-manager.1-2-0
 - org.gcube.data-analysis.ruserservice.1.0.0
 - org.gcube.data-analysis.ecological-engine-servicearchive.1-1-0
 - org.gcube.portlets-user.codelist-management-portlet.1-1-0
 - org.gcube.portlets-user.codelist-management-portlet-servicearchive.1-1-0
 - org.gcube.portlets-user.time-series-portlet.3-3-0
 - org.gcube.portlets-user.time-series-portlet-servicearchive.3-3-0

5. DOCUMENTATION

A comprehensive overview of the subsystems the described components belong to is available in [6][7][8]. Technical documentation covering all the aspects of the software is available at:

- Admin's Guide [3]
- Developer's Guide [4]
- User's Guide [5]

Finally, for development purpose, Javadoc documentation for each component, along with a direct link to The associated section in Developer's Guide, is available at [9].

6. DOWLOAD

The components described in this deliverable are available for download at [1] or at [2]

REFERENCES

- [1] gCube Maven Repository RELEASES:
<http://maven.research-infrastructures.eu/nexus/index.html#view-repositories;gcube-releases~browsestorage>
- [2] gCube Etics Repository RELEASES:
<https://grids16.eng.it/BuildReport/>
- [3] Administrator's Guide:
https://gcube.wiki.gcube-system.org/gcube/index.php/Administrator%27s_Guide
- [4] Developer's Guide:
https://gcube.wiki.gcube-system.org/gcube/index.php/Developer%27s_Guide
- [5] User's Guide:
https://gcube.wiki.gcube-system.org/gcube/index.php/User%27s_Guide
- [6] Milestone 37: Data Access and Storage Facilities:
https://gcube.wiki.gcube-system.org/gcube/index.php/Data_Access_and_Storage_Facilities
- [7] Milestone 38: Data Transfer Facilities Specification:
https://gcube.wiki.gcube-system.org/gcube/index.php/Data_Transfer_Facilities
- [8] Milestone 39: Data Assessment, Harmonisation, and Certification Facilities:
https://gcube.wiki.gcube-system.org/gcube/index.php/Data_Assessment,_Harmonisation,_and_Certification_Facilities
- [9] gCube Distribution Site:
https://www.gcubesystem.org/index.php?option=com_distribution&view=distribution&Itemid=23