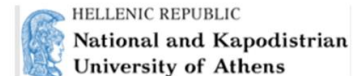CINEA/EMFAF/2021/3.1.2/03/SC04/SI2.881222
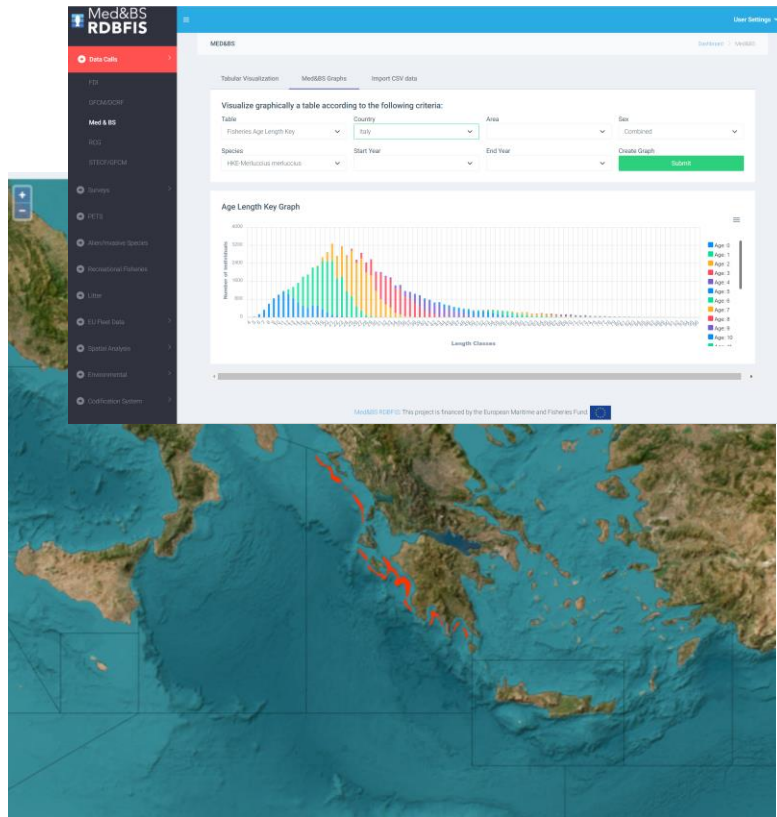
Specific Contract 2021/3.1.2/03/SC04

Hosting, maintenance and further development of the Regional Database for the Mediterranean and Black Seas

Liaison Meeting
September 2023
Brussels

RDBFIS: a web-based integrated fisheries information system for the Med&BS

main features and advantages:

- Centralize RDB for DCF data;

- A power full tool for Med&BS RCG, Med&BS MS, end users;

- A security subsystem ensures data access and protection;

- Support common quality data checks, processing, reporting;

- Surveys are included;

- Spatial information has been integrated

Open source in information technologies were fully adopted (2020-2023 EC strategy ''**Think Open**'')[1]

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[1]

RDBMS: **PostgreSQL**
Spatial and geographic objects: **PostGIS, Geoserver, Map objects**
Graphical interface for the front end of the platform: **Angular Web Application Framework**
Back end of the platform: **Spring Framework**
Authentication & Authorization: **Spring Security OAuth2 & JSON Web Token**
Web Application Server: **Apache Tomcat**
Persistence: **Hibernate Object Relational Mapping library**
Programming: **R and Python programming languages**
Libraries/Packages: **R libraries for statistical computing and graphics**

The RDBFIS was developed in the Hellenic Centre for Marine Research (HCMR);

Hosting*, maintenance and further development of the Regional Database for the Mediterranean and Black Seas

Under FRAMEWORK CONTRACT – EASME/EMFF/2020/OP/0021
Duration: 24months, Project Start: April 1st 2023

Purpose of the project
The main aim of the study is to work on the hosting, maintenance, fine-tuning and further development of the end product of regional grant RDBFIS and to provide support to the users of the end product.

As a follow up to the RDBFIS grant and taking into account that a solution for permanent hosting is currently lacking -COM proposes a temporary solution for hosting for the next two years.

* Three options have been elaborated so far: JRC, GFCM and ICES. The MS and the RCG Med & BS expressed preferences for JRC and GFCM, whereas ICES was not favoured. COM later announced that JRC is no longer an option for hosting.

[Partners (12)](#)
Hellenic Centre for Marine Research (HCMR)
Coispa Tecnologia & Ricerca Scarl (COISPA)
Consorzio per il Centro Interuniversitario di Biologia Marina ed Ecologia Applicata G. Bacci (CIBM)
Italian National Research Council (CNR) (Istituto per le Risorse Biologiche e le Biotecnologie Marine (CNR-IRBIM) and Istituto per il Rilevamento Elettromagnetico dell'Ambiente (CNR-IREA))
Nisea società cooperativa (NISEA)
University of Athens (UOA)
University of Thessaly (UTH)
Hellenic Agricultural Organization Demeter (HAO Demete)
Ministry of Agriculture, Rural Development and Environment of Cyprus - Department of Fisheries and Marine Research, Republic of Cyprus (DFMR)
National Institute for Marine Research and Development "Grigore Antipa" (INCDM)
Institute of Oceanography and Fisheries (IOF)
Institute of Oceanology BAS (IO-BAS)

Non-partners with a significant contribution

Executive Agency for Fisheries and Aquaculture, Bulgaria (Simona Vasileva NICHEVA)
Ministry of Agriculture, Directorate of Fisheries, Croatia (Ivana VUKOV)
Fisheries Research Unit, Department of Fisheries and Aquaculture, Malta (Jurgen Mifsud

To populate the system with data: To this end, the technical elements of a data call/ data request to be addressed to the relevant Member States and actors of the region, such as RFMOs will be drafted. DG MARE will assist in this process and follow up to ensure provision of the data. DG MARE will equally assist, if there is a need to access data from existing sources/databases. The requested datasets to be stored in the RDBFIS will refer to the period:

- ✓ *2002-2022 for Med&BS datacall,*
- ✓ *2013-2022 for FDI datacall,*
- ✓ *2017-2022 for GFCM/DCRF datacall,*
- ✓ *Med&BS RCG data (DCR & DCF: fishing intensity, landings).*
- ✓ *Detailed biological data*
- ✓ *MEDIAS data*

As the RDBFIS is fully operational, the Member States are invited to use the application to execute syntax and data quality control procedures and store the clean data into the system. A dedicated RDBFIS team will support this process through bilateral contacts and working jointly with Member States.

Further development:

A further improvement is concerning the consistency of data quality checks. Specifically, particular attention will be paid to enhancement of the quality checks considering the **RDBES formats***, focusing on the hierarchies applied in the Mediterranean for the biological samplings;*

Concerning the **MEDITS survey data***, another improvement to be included in the RDBFIS is represented by the embedding of an upgraded* **BioIndex** *R package that provides relevant statistics on survey data, as biomass and density indices by year, length-frequency distributions, recruitment/spawner indices and maps;*

The **integration of MEDIAS survey into RDBFIS** *will be implemented with the assistance of MEDIAS chair and scientists;*

Further development:

Data elaboration routines as well as data entry forms *for stomach content, PETS, alien species, Eggs&Larvae and recreational fisheries is foreseen to be developed;*

Fleet analysis: *Considering that: (i) several components of the application will have open access and (ii) the usefulness of disseminating information about Europe's commercial fishing fleet, a dynamic tool will be developed portraying the evolution of fleet dynamics in Europe;*

FDI spatial checks: *R routines already implemented in JRC supporting the FDI EWG works, will be incorporated into RDBFIS. Discussions have started with the developers of R routines, a meeting was held discussed technical integration issues to RDBFIS;*

Work Plan and Annual Reports: *An effort will be made to enable Member States to send the Work Plan and Annual Reports online through a web based form. Syntax and consistency checks are foreseen to be implemented;*

Further development:

Integration of fleet economic data;

The goal is to include as much as possible information collected in the FW of DCF into RDBFIS.

One of the advantage of including fleet economic data into RDBFIS is that quality checking and processing routines could be performed on the DCF data submitted in four datacalls (FDI, Med&BS, ECON, GFCM/DCRF) with the aim to decrease discrepancies.

1. 16th **MEDIAS** Coordination Meeting (April, participation)

2. **MEDIAS** Working Group meeting (May, participation)

3. **RCG ECON** Technical Meeting (May, participation)

4. **MEDITS** Coordination Group (May, participation)

5. **EU fleet register** data (May)

6. Improvement of the method **to estimate FDI spatial fishing effort for SSF** (based on fishing pressure index and MCDA) (August, Irida-Stefanos)

7. RDBFIS & **FDI mapping group** meeting (September)

8. Technical works related to hosting RDBFIS on HCMR (April -)

9. Preparation work for the 2nd MEDIAS WG

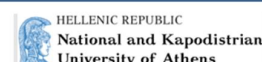10. Internal meetings

11. Preparation of the datacall

CINEA/EMFAF/2021/3.1.2/03/SC04/SI2.881222
Specific Contract 2021/3.1.2/03/SC04
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Regional Database for the Mediterranean and Black Seas

We thank you for your attention

http://rdbfis.eu/

Significant contribution by
Executive Agency for Fisheries and Aquaculture, Bulgaria (Simona Vasileva NICHEVA)
Ministry of Agriculture, Directorate of Fisheries, Croatia (Ivana VUKOV)
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