Regional Database for the Mediterranean and Black Seas
"Developing a fisheries information system for the Med&BS"

Progress Work

WGRDBES-EST meeting in Lisbon (14th-18th October)

MARE/2020/08 - SI2.839444

DEVELOPMENT OF THE REGIONAL DATABASE FOR THE MEDITERRANEAN & BLACK SEAS (Med&BS RDBFIS)

This project has financed under the European Maritime and Fisheries Fund (EMFF)
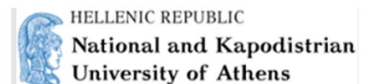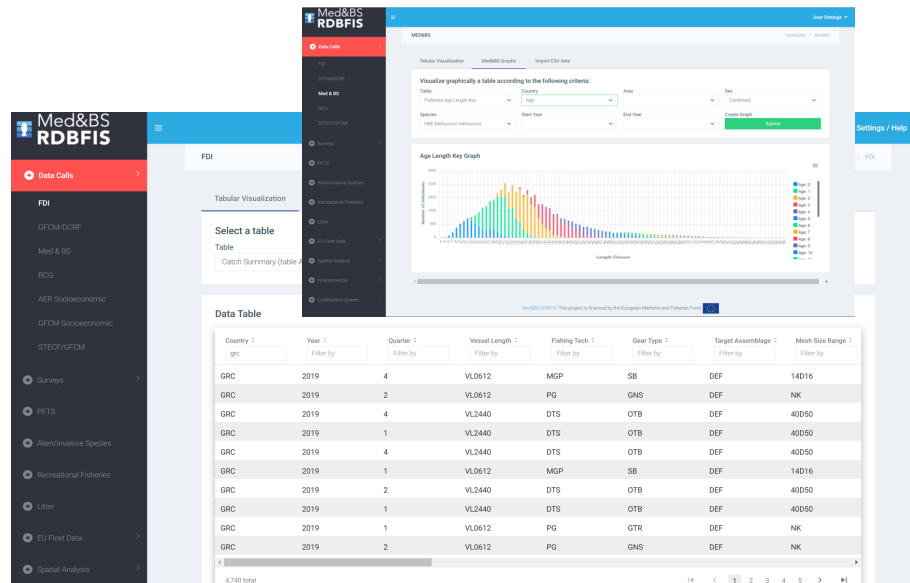*(period: 01/01/2021 – 28/02/2023)*

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
(period: 01/04/2023 – 31/03/2025)

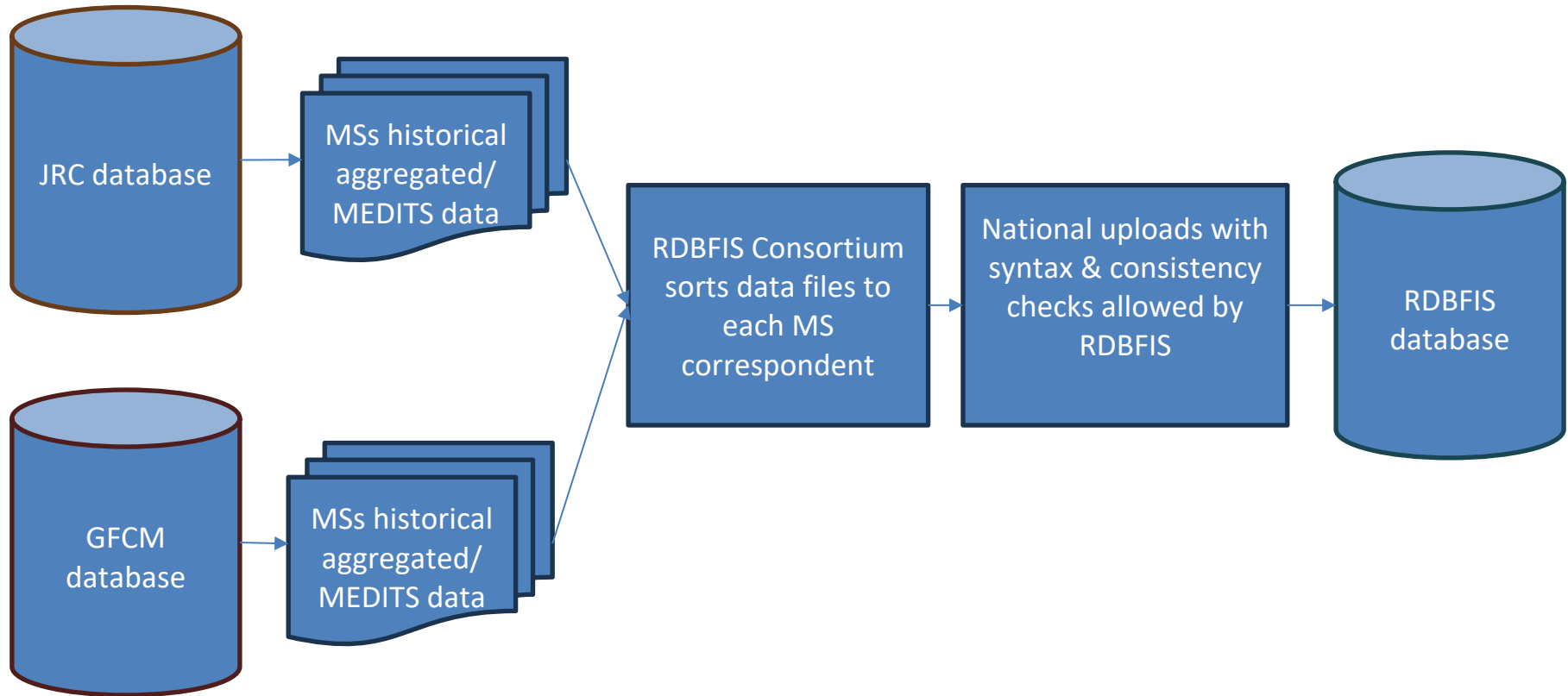RDBFIS: *a web-based integrated fisheries information system for the Med&BS*

- Centralized database system hosting aggregated DCR/DCF data sets including MEDITS, MEDIAS & BS surveys as well as detailed biological data
- common syntax and consistency procedures ensures the quality of data
- The MS can visualize and manipulate their data
- A "Processing" package support the creation of the data for the data calls
- Other tools are included in the system (spatial effort & landings for SSF, fleet analysis, data entry forms for stomach contents, alien species, …)

Roadmap to make RDBFIS ready for full-scale usage and testing by MEDBS Member States
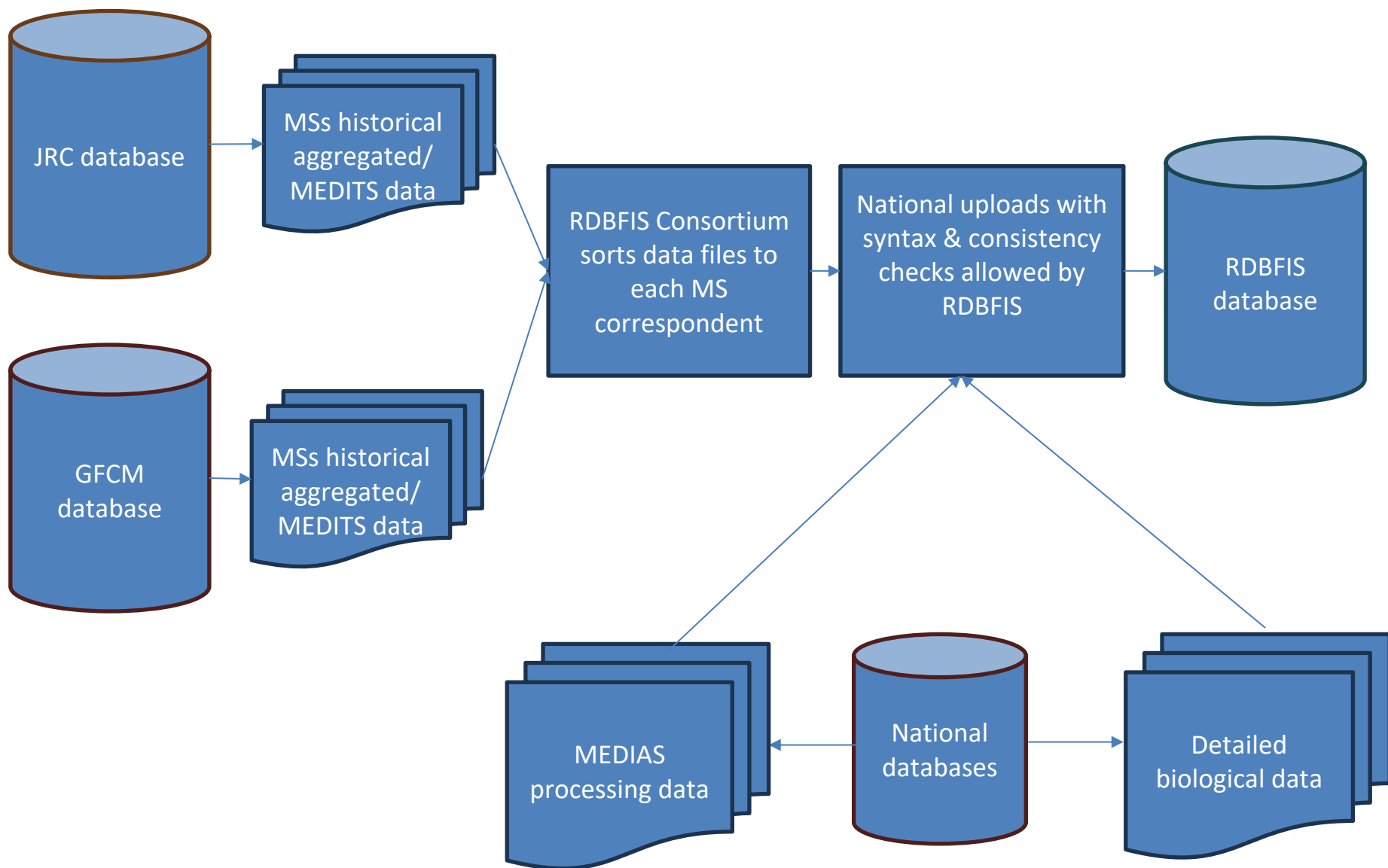
1. **Bilateral meetings/contacts** between the MSs and a dedicated RDBFIS core team

2. **Trainings** ensuring national staff is competent in the use of RDBFIS (Task 4):
    1. RDBFIS 1st training 17-19 September 2024 (online): the training was highly successful, with many participants expressing strong interest in learning on the system, including new scientists who did not participated in the bilateral meetings that started in December 2023.
    2. RDBFIS 2nd training in-person (in person): five-days meeting is planned for January 2025

3. **Gathering feedbacks from users** (Task 5)

2-step RDBFIS data request: 1st step

2-step RDBFIS data request: 1st step

2-step RDBFIS data request: 2nd step

Aggregated data
- Med&BS
- FDI (Tables A, B, G, H, I, J)
- AER
- GFCM/DCRF

MEDITS (TA, TB, TC)

Detailed biological & landings data

A straight-forward process to upload data

csv/xlsx →

Step 1. Syntax check (validation scheme)

Step 2. Consistency check (quality control routines)

Step 3. Upload (update RDBFIS)

MEDITS & MEDIAS integration within RDBFIS

1. MEDIAS database structure
Acoustics, Pelagic trawl, CTDs

2. Integration with RDBFIS

3. Validation scheme (*acoustics, pelagic trawl*)

4. Consistency check (*R*)

5. Processing (SQL)
Abundance, Biomass, Abundance-Biomass

6. Eggs & Larvae database structure

The MEDIAS data call is in progress, a workshop is scheduled for the end of October

Updated versions
RoME
RoMEBS

BioIndex
integration

In the framework of the projects **Qualitrain** and RDBFIS, improvements were made on the R packages supporting the data quality and processing.

Within RDBFIS, the packages have been updated, replacing the older versions.

- The aim is to support the MS to perform syntax and consistency checks before submitting data to the JRC. This results in a reduction of discrepancies between the AER and FDI datacalls (cross checking between AER & FDI is a goal for the project)

- Specific economic performance indicators for STECF EWG purposes are currently under construction (NISEA&HCMR)

Member States → *Syntax & Consistency Upload* → Med&BS **RDBFIS** → *Clean data ready for submission* → **JRC**

This innovative R package is designed to estimate the spatial effort, weight, and value of landings in small-scale fisheries (SSF) for data-limited scenarios, specifically for vessels under 12 meters in length. The tool will be integrated into RDBFIS, facilitating the estimation of fishing effort and landings in the format of Tables H and I. The package enables users to apply the MCDA-derived proxy for fishing effort, combine it with Tables A and G (as submitted in the data call), integrate results from species distribution models, and estimate spatial effort, landings, and value by fishing rectangle or at finer resolutions. The tool also generates maps to visualize these estimations.

Fleet analysis: an open access dynamic tool has developed to illustrate the evolution of the fleet dynamics in Europe; potential links with the landings, discards and value (FDI Table A);

Data from the professional fishing fleet, spanning the period from 1991 to 2023, was downloaded from the official EU Fleet Register portal. GIS techniques were employed to spatially join the fishing ports with various geographical entities, including NUTS2 and NUTS3, FDI subregions, Geographical areas (GFCM, ICES). The fishing ports were match to LOCODE from the CIRCAMB Master Data Register. The accuracy of the fishing port locations was validated using information available from the IFREMER Sextant portal.

Reports can be generated based on user-defined queries about active or decommissioned fishing vessels

RDBFIS progress work -> quality checks on FDI spatial data, Table H & I -> Stomach contents data entry form, how RDBFIS can contribute to MSFD, common estimation system

Quality checks on FDI spatial data* (Table H & I):

Have been integrated, run on MS level (optional)

Maps & error reports are produced

*Maurizio GIBIN, Maciej ADAMOWICZ, Maksims KOVSARS

Stomach contents
- Med&BS and ICES structures were adopted
- User friendly data entry form

RDBFIS → MSFD
- Predefined queries to mine data from RDBFIS and deliver to MSFD experts

The activity has been completed in terms of gathering information from MSFD experts

Common estimation system for the Med&BS - raising procedures: The aim is to consider the existing statistical systems and the raising procedures that are currently being implemented by the MSs of the Med&BS for transparency purposes. Bilateral meetings with the MS have been started to gather relevant information and a statistical workshop is foreseen to be on November.

Synergies between *QualiTrain* and RDBFIS have been established (improvements made for RDBQc, RoME & RoMEBS R packages are incorporated into the RDBFIS);

Communication and cooperation with ICES have been established aiming to investigate compatibilities between RDBFIS and RDBES

The RDBFIS consortium is open to collaboration with RCG ECON and experts to improve the AER component. Suggestions are welcome.

- With the support of National Correspondents and DCF experts, the system is evolving into a highly effective tool for the Med&BS RCG, Member States, users authorized by the National Correspondents and other potential end users (e.g. STECF).

- Furthermore, new features are set to be integrated, highlighting it as a state-of-the-art fisheries information system for the Med&BS. As the system will continue to operate in the future, is a major achievement for Member States to encourage its use and support the further development.

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We thank you for your attention

Significant contribution by
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

Maurizio GIBIN, Maciej ADAMOWICZ, Maksims KOVSARS
(quality checks on spatial information and mapping for the FDI EWG)

https://rdbfis.eu/