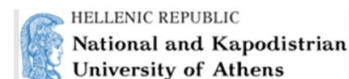




CINEA/EMFAF/2021/3.1.2/03/SC04/SI2.881222

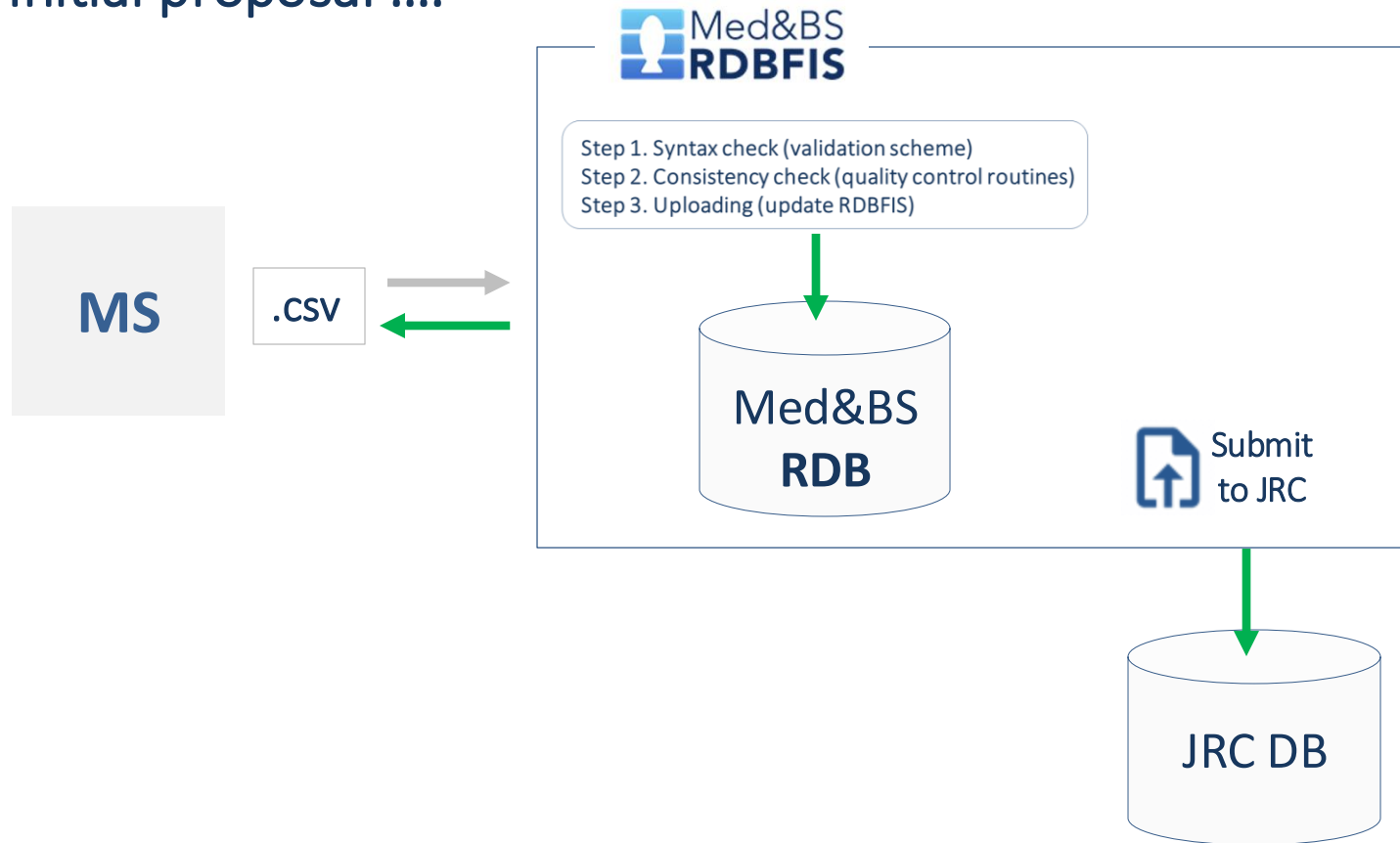
Specific Contract 2021/3.1.2/03/SC04

**“HOSTING, MAINTENANCE AND FURTHER DEVELOPMENT OF THE REGIONAL DATABASE FOR THE
MEDITERRANEAN AND BLACK SEAS”**
(implementation period: 01/04/2023 – 31/03/2025)



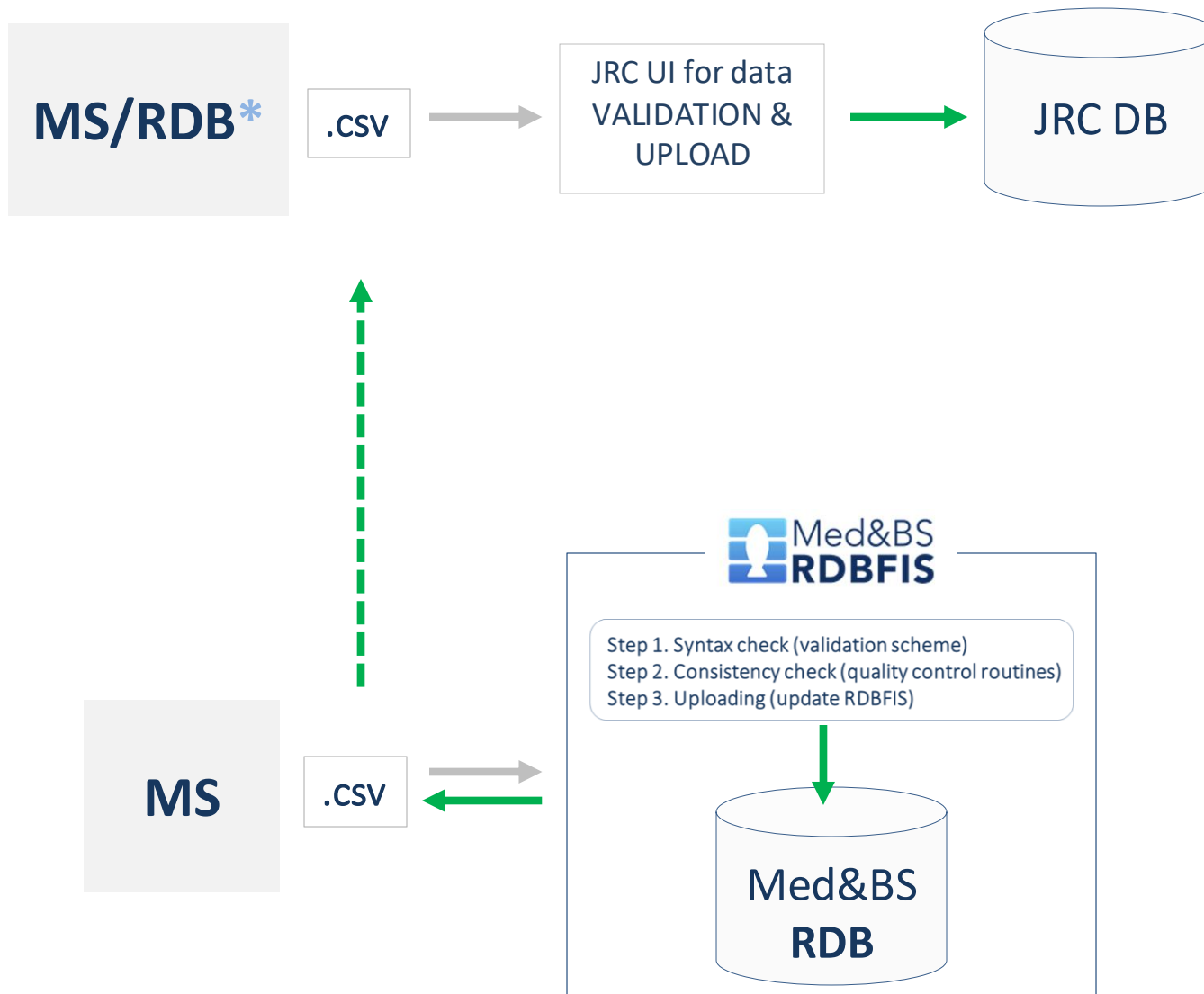
STEERING COMMITTEE FOR THE MED&BS REGIONAL DATABASE
16, 17 DECEMBER 2024

Initial proposal



... **but:** a) there are commission policy issues regarding data,
b) is a much bigger task to alter the stringent institutional security bureaucracy

The plan for the 2025 data call



*The RDB super user can export from RDBFIS the 2024 data sets from all MS and submit them through JRC upload tool

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
7. The MEDIAS data call is in progress,
Four workshops have been conducted



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)



RDBFIS progress work -> Estimating the spatial FE & landings for SSF (FDI Tables H, I) -> integration within RDBFIS

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 R package has been 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**.*

The screenshot shows the 'Fleet Analysis' interface within the RDBFIS application. The left sidebar contains a navigation menu with options like 'Data Calls', 'Surveys', 'Stomach Contents', 'HCTS', 'Alien/Invasive Species', 'Recreational Fisheries', 'Litter', 'EU Fleet Data' (highlighted), 'Fleet Vessels', 'Spatial Analysis', 'Environmental', 'Codification System', and 'User Settings'. The main panel is titled 'VESSELS' and has a 'Fleet Analysis' tab selected. It features a 'Fleet Analysis - Query Parameters' section with a 'Query on' dropdown set to 'Active Fleet'. Below this, there are filters for 'Type of Query' (By Year, Between), 'Vessel Length Segmentation' (Med&BS, GFCM, Baltic Sea, Other waters), 'Filter on vessel characteristics' (Yes, No), 'Filter Results Geographically' (Yes, No), and 'Group Results' (Yes, No). An 'Execute Fleet Analysis' button is at the bottom. The footer indicates 'RDBFIS: Financed by EMFF (2021-2023) and CINEA/EMFAF (2023-2025)'.

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):

Has 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 was to review the existing statistical systems and the raising procedures currently implemented by the Med&BS MS for biological data. Bilateral meetings intended to gather relevant information, have been completed. A statistical workshop has been scheduled for January 16, 2025.



Med&BS RDB

- Med&BS dc
- FDI dc
- GFCM/DCRF dc
- Detailed bio data
- MEDITS, MEDIAS, Eggs&Larvae
- EU Fleet
- Stomach content
- PETS
- Alien species
- Recreational
- Coding
- Environmental
- Spatial data

Components

- ✓ UI
- ✓ Validation schemes
- ✓ RDBqc
- ✓ RDBprocessing
- ✓ RoME, RoMEBS
- ✓ BioIndex
- ✓ EU fleet analysis
- ✓ MCDA for SSF
- ✓ FDI spatial checks
- ✓ Mapping
- ✓ Stomach content data entry form
- ✓ PETS, Alien species data entry form

*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 has 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.

- MEDIAS workshop ✓ and datacall ✓
- Integration of MCDA-SSF package ✓;
- AER consistency checks and processing routines ✓ ;
- Bilateral meeting for the detailed biological data ✓;
- Bilateral meeting for the statistical system and raising methods applied from the Med&BS MS ✓, workshop;
- Eggs&Larvae database ✓, PETS ✓, recreational fisheries ✓ and alien species ✓;
- RDBFIS 2nd training (hybrid, 20-24 January 2025)
- keep open the channel with ICES and RCG LP
- Generation of predefined queries for MSFD purposes
- Optimization of R code

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.

A second hybrid five-day meeting will be held from January 20 to 24, 2025.

Future bilateral meetings of RDBFIS, specificities at national level that need to be addressed by RDBFIS

Bilateral meetings

1. Finalize the detailed biological data
2. MEDIAS data upload
3. Support the MS to prepare the 2025 data call
4. Upload MEDITS data for the period 1994-2001
5. Upload 2023 data

Specificities at national level that need to be addressed by RDBFIS

??

Annual estimated cost of hosting the RDBFIS infrastructure across various cloud providers, human resources

Cloud annual estimated cost **€18000 - €20000**

1. Compute Resources

- PostgreSQL Database Server
- Spring Boot Application Server with GeoServer
- Jenkins Server
- R Docker Instances (6 instances)

2. Storage Requirements

- PostgreSQL Storage
- Docker Instances Storage
- Backup Storage

3. Networking Costs

4. Monitoring Services

- AWS CloudWatch / Azure Monitor / Google Cloud Monitoring

Human resources annual estimated cost **€56000 - €80000**

Database expert (1): 4-6 months/year = €16000 - €24000

Programming experts (6): total 10-14 months for one year = €40000 - €56000

Total annual estimated cost €74000 - €100000

Establishment of the Regional Database for the Mediterranean and Black Seas

Acronym: Med&BS RDBFIS-III

Under FRAMEWORK CONTRACT – EASME/EMFF/2020/OP/0021

Framework Contract for the provision of scientific advice
for the Mediterranean and the Black Seas

Specific Contract CINEA/EMFAF/2024/3.1/01/SC08

Contractor: Hellenic Centre for Marine Research (HCMR)

Specific Contract Project Coordinator: Dr. Irida Maina (HCMR)

Scientific Information Technology Coordinator: Stefanos Kavadas

Duration: 13 months and 21 days

Project Start: April 1st 2025

During the project implementation, twelve activities will be carried out to support the following eight objectives:

O1. database maintenance and restructuring

O2. enhancement and optimization of the existing programming code (Update/revision of existing data quality tools, tools4MCDA, spatial visualization, Improvement and further development of the existing validation scheme and consistency checks)

O3. common raising procedures for the Med&BS biological data

O4. development of new software packages (Development of data quality tools: MEDIAS, stat4RDBFIS software Package development)

O5. integration within RDBFIS of the existing sampling optimization package

O6. fleet analysis updates and improvements on FDI spatial checks

O7. integration within RDBFIS of the outcomes of MAPAFISH project

O8. Fine-tuning



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

<https://rdbfis.eu>



Significant contribution by

Executive Agency for Fisheries and Aquaculture, Bulgaria (Simona Vasileva NICHENA)

Ministry of Agriculture, Directorate of Fisheries, Croatia (Ivana VUCOV)

Fisheries Research Unit, Department of Fisheries and Aquaculture, Malta (Jurgen Mifsud)

Maurizio GIBIN, Maciej ADAMOWICZ, Maksims KOVSARS

Tarek Hattab (Ifremer)

- 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.
- In the period leading up to the end of this year, we need to strengthen our collaboration (MS and RDBFIS) to ensure the completion of detailed biological data uploads. Furthermore, the Med&BS MS are invited to indicate their availability at the statistical bilateral meetings.