

RDBFIS 2nd training

Information about MCDA practical session

The MCDA can be run in two procedures:

Procedure 1: Estimate a proxy of spatial fishing pressure based on MCDA and include species distribution – This part can run locally in your PC using R under the tools4MCDA rpackage;

Procedure 2: The estimated proxy of spatial fishing pressure and/or species distribution, produced by the *procedure 1* can be combined with the tables A and G of FDI to estimate spatial effort and/or landings in the format of the tables H and I of FDI – This part can be run through the RDBFIS

For the purposes of this training workshop, examples were created for each country using processed data based on open repositories. In particular the following datasets were created and shared with participants through email:

-The outcomes of each example and the rscripts used in a country level. These datasets are stored in the first link send by email to each participant. The csv files can be used to run the *procedure 2* through the RDBFIS.

-The “tools4MCDA” R package and some example datasets that can be useful for executing the *procedure 1*. The above datasets can be considered as the basis and the user can run the tools with more refined data.

Requirements for the tools4MCDA rpackage used in *procedure 1*

R and R-Studio are needed

R-version: latest version (or > R-4.3.2 (64bit) preferably)

Install the tools4MCDA R package. Instructions of installing all the required R packages are included in the folder: tools4MCDA/library/packages_required.R

General instructions for running the MCDA procedures:

- Please download the compressed files “tools4MCDA.zip” and the information send in a country level e.g. “COUNTRY.zip” and store them in a path locally to your PC. It is proposed to store them in a short path e.g. “C:\MCDA”. Then uncompress the two folders.
- Install R, Rstudio and the required R packages.
- Open Rstudio
- Open the rscripts stored in the first link send by email to each participant revise the `general$path` and run in this order:
 - `tools4MCDA_prep_script_a_COUNTRY.R*`
 - `tools4MCDA_prep_script_b_COUNTRY.R`
 - `tools4MCDA_prep_script_c_COUNTRY.R`
 - `tools4MCDA_part1_COUNTRY.R`
 - *In case that your country is located in a part of a GSA (e.g. GSA 17, GSA 29) run the rscript: `create_reference_grid_COUNTRY.R` before running the previous rscripts
- Several outcomes will be created in the folder “outcomes 1”. Only the files:
 - `FPIq_COUNTRY.csv`,
 - `sample_FPIq_sp_COUNTRY.csv` (not mandatory)**

can be used as input for the *procedure 2* running through the RDBFIS in the tab MCDA under FDI.

Note: **The `sample_FPIq_sp_COUNTRY.csv` generated by *procedure 1* might generated empty. This is due to absence of information on species distribution for a certain example case study. This table is not mandatory for the *procedure 2* that is executed from RDBFIS. In that case, please leave the box “Select FPI species distribution CSV file” empty.