

SHORT SCIENTIFIC REPORT

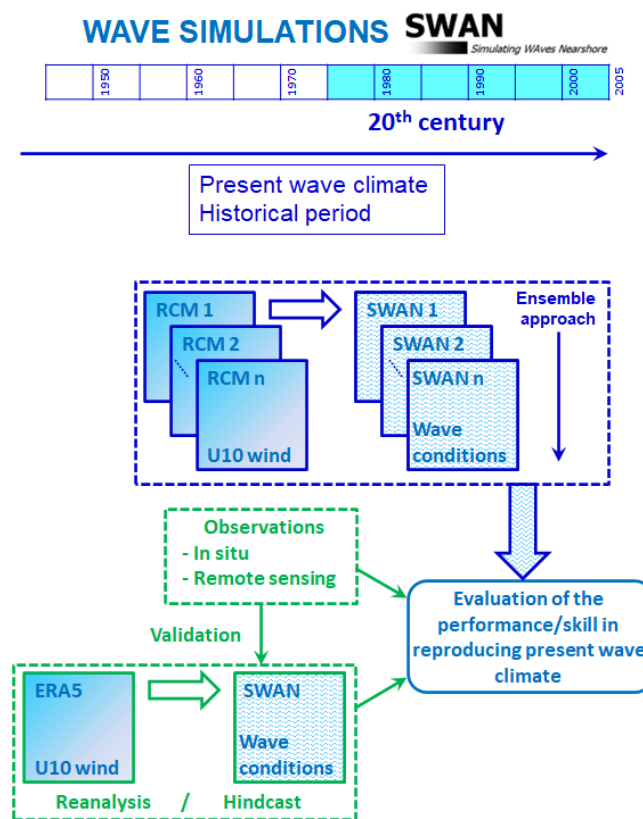
concerning the implementation of the project

CLimate change IMPact Evaluation on future WAVE conditions at Regional scale for the Black and Mediterranean seas marine system - CLIMEWAR

in the period May – December 2022

In the first stage of the project implementation carried out in the period above mentioned, the specific objectives of the project were pursued:

- Design RCMs wind field ensemble.
- Building the present (historical period) wave climate ensemble for the marine system (to be continued in second stage)



Diagrammatic scheme for the methodology considered in the wave simulations and analysis of the results of the historical period

1. Design of the RCMs wind field ensemble.

1.1 Selection of the RCMs from the databases following established criteria; The wind fields cover the time slices: historical period (1976-2005) and future period (2041-2100).

1.2 Wind data processing to be used by the tools designed to prepare the wind fields for the wave simulations.

1.3 Assessments of RCM performances during the historical period by comparing with reanalysis (ERA5 and NCEP) wind fields and observations.

2. Building the present (historical period) wave climate ensemble for the marine system (to be continued in second stage)

- 2.1 Wave simulations for the historical period considering various RCMs to drive the SWAN model.
- 2.2 Hindcast wave simulations considering ERA5 reanalysis wind forcing for the SWAN model.
3. Designing the web page (Ro-En) for the dissemination of the CLIMEAWR project results (continuous updating)
4. Dissemination of the results: A. Publications in international journals (5), B. Publications/presentations at international conferences and workshops (9)

The expected results in the project implementation plan for this first stage are:

- Building the database of wind fields that will be used to force the SWAN model – **result achieved**
- Quality analysis of RCM CMPI5 wind data from the historical period – **result achieved**
- Analysis of the quality of simulated wave data over the historical period – **result achieved**
- Participation at two conferences – **result achieved and even exceeded**
- Designing the web page (Ro-En) for the dissemination of the CLIMEWAR project results (continuous updating) – **result achieved**
- Annual report – **result achieved**

We can conclude that we succeeded to achieve all the objectives proposed for the first stage of the CLIMEWAR project. All the activities included in the plan of achievement were accomplished.

There are therefore all the prerequisites for the CLIMEWAR project to continue in very good conditions and to produce valuable results with great international visibility.

Budget (2022) 227.738 lei

Project director

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