

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 January – December 2024

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

1. Statistical analyses of the present and future climate in the marine system.
 - 1.1 Comparisons present vs. future wave climate, evaluation of the climate change impact.
 - 1.2 Evaluation of the uncertainties, comparisons to identify the drivers of uncertainty.
 - 1.3 Application of three-factor ANOVA based variance decomposition to quantify the dominant drivers.
 - 1.4 Corrections applied to the sea state conditions marine system.
2. Development of the WAVE Climate Assessment - WACA platform that will be used for statistical analyzes
The database will contain all wave simulation results and the wind fields to provide as output quick information about the sea state conditions (annual, seasonal and monthly statistics, trends, bivariate distribution of the wave parameters), average wave power and wind energy, analyses of the extreme events, etc.
3. Final analyses and conclusions.
4. Updating the web page (bilingual Ro-Eng) of the CLIMEWAR project
5. Dissemination of the results:

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

- Realization of the future projections database under various scenarios – **result achieved**
- Evaluation of the wave dynamics in the future – **result achieved**
- Maps with statistical analysis of the sea state conditions (annual, seasonal and monthly statistics, trends, etc) – **result achieved**
- Evaluation of the climate change impact on the wave power potential – **result achieved**
- Evaluation of the sea state condition along the main maritime routes of the marine system – **result achieved**
- Workshop organisation - **result achieved and even exceeded, two workshops have been organised**
- Publication of articles in WoS indexed journals (3 articles) - **result achieved and even exceeded, 7 articles have been published in WoS indexed journals, and 4 BDI journals.**
- Participation at 6 conferences – **result achieved and even exceeded; the team members participated at 14 conferences**
- Final report - **result achieved**
- Updating the web page (Ro-En) for the dissemination of the CLIMEWAR project results (continuous updating) - **result achieved**

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