EuroGOOS conference

Abstract on Theme A. In-situ and remote sensing observations: towards a European Ocean Observing System (EOOS) in the framework of the Ocean Decade. Topic 'Coordination of ocean observing capacities at regional and global scale'

Title - 300 characters max

Investigating the capability of Argo floats to monitor shallow coastal areas of the Mediterranean Sea

Abstract - 1600 characters max

Introduction

The extension of Argo float coverage to the European marginal seas is one of the strategic targets of the Euro-Argo European Research Infrastructure Consortium (ERIC). Under this general framework, the Argo capability to monitor the shallow coastal shelf remains an open question. In Euro-Argo RISE H2020 project, targeted deployments have been undertaken to investigate this potential. In this study, we present the experience and outcomes from several deployments the Mediterranean Sea. We discuss technical and scientific outcomes and provide recommendations regarding future operations.

Methods

We focused on the configuration settings of 4 standard CTD floats that were deployed in test areas with intrigue coastlines and complex bathymetry (north Aegean, north Adriatic, south Palma, and Gulf of Lions). Existing and new monitoring tools/software have been utilized to follow the floats' performance.

Results

All floats have performed adequate number of cycles, and acquired data showing important hydrographic features. In all cases it is shown that certain configuration parameters such as the drifting depth, and the sampling frequency, play a significant role on the floats' performance.

Conclusion

Argo float operations in targeted coastal areas seem to be a complementary part of an integrated oceanographic monitoring system in the Mediterranean Sea. Certain technological advances both on the floats' characteristics and on the monitoring-controlling tools can lead to significant improvements of similar missions in the near future. This will lead to enhanced monitoring and can act as a valuable source of information regarding the hydrography and ecosystem functioning of important variables, and transitional areas. Such evolution will also strengthen the contribution of Argo to both the description of the Good Environmental Status (GES) and to the European Ocean Observing System (EOOS).