



Towards improved climate prediction for West Africa

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Abstract

The project “Enhancing Prediction of Tropical Atlantic Climate and its Impacts – PREFACE» (www.preface-project.eu) is a 4.5 year research project funded by the European Union under FP7- Environment. The project gathers 28 partners from 18 countries across Africa and Europe, with expertise in oceanography, climate modelling and prediction, and fisheries science, targeting climate prediction and marine-ecosystem changes in the eastern boundary and equatorial upwelling regions of the tropical Atlantic. Since 2013 and in a spirit of strong international cooperation, PREFACE has made important contributions towards improving the Atlantic observational network and climate prediction models – whilst enhancing local capacity and harvesting the synergy from inter-projects collaboration – such that we can now usefully forecast climate from a season to a decade in advance over large regions of the tropical Atlantic Ocean, and over parts of continental South America and Africa. A particular example is the skill in predictions of ocean surface temperature and Sahel rainfall a season to several years ahead. There is also a potential to predict stock biomass from a season to years in advance. We showed that the upwelling intensity in North West Africa and consequent marine productivity are redistributed due to warming trends, and we report a northern spatial shift of round sardinella. In the southeast Atlantic, a similar shift is reported on the same species. Such potentially predictable changes impact food security management and demand adequate policy measures. However, more work is required to make the most use of these predictions. Climate model errors and modelling of biophysical relations continue to be a major challenge. These introduce uncertainties in future projections of climate change and its impacts in this region. They also limit shorter-term climate prediction. Thus much more work is needed to improve models. Collaborative climate research on the Atlantic remains a key priority.



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to the management
of fisheries and the
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in West African waters

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The both last ICAWA edition, 2017 and 2018, was done as a joint event with other closely related meeting. In 2017 with the inauguration of the OSCM in Cabo Verde underlining AWA cooperation with INDP and UNICV as well as Geomar and collaborators. In 2018 ICAWA was join to Preface final meeting following the memorandum of understanding signed a couples of years before between the two consortium and which have led at the end to a common policy session followed by the redaction of a policy brief taking advantage of the results of the both projects. Some abstract aside ICAWA joint session are missing see the orgniser to get more information.

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These two edition of ICAWA were joint with OSCM inauguration and the final meeting of the European preface project, respectively in 2017 and 2018.



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