

## Session 4

**Spatial Environmental trends in the three Atlantic African Large Marine Ecosystems in a context of global warming**

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**Abstract**

In Atlantic Africa there is a crucial need to better assess the effect of climate change on marine ecosystems, particularly over the continental shelf and inside the national exclusive economic zones. Nevertheless there is a lack of observation carried out in the African ecosystems and the times series are often short or disrupted. Space-based observations allow precise synoptic observation of marine ecosystem and is often use to monitor, *e.g.*, Eastern boundary upwelling ecosystems, from 36 years of constant monitoring from some major parameters as Sea Surface Temperature and more than twenty years for Ocean-Colour related parameters as surface primary productivity. The spatially heterogeneous trends observed show that these systems are highly variable, at temporal scales decades) that potentially impact some of their marine resources at rates that compete with the decline of human activities, beyond over-fishing. In this work we will present the effect of global warming at regional level for the three large marine ecosystems of Atlantic Africa on the sea surface temperature, wind stress and chlorophyll concentration as a proxy of primary production. The Canary and the Benguela systems are particularly impacted by the global warming, especially in their tropical parts, while Pacific systems show a more stable trend, due to their constantly high activity that partly counteracts some effects of the global warming.

**Keywords:** remote sensing, tropical Atlantic, climate change, staelitte, MODIS, LME, CCLME, BCLME, GCLME.



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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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