

Session 1

Benguela Niño and Niña events from 1958 to 2015**Rodrigue Anicet Imbol KOUNGUE^{1,2,*}, Serena ILLIG^{1,3}, and Mathieu ROUAULT^{1,2}**¹Department of Oceanography, MARE institute, University of Cape Town, South Africa²Nansen-Tutu Centre for Marine Environmental Research, University of Cape Town, South Africa³Laboratoire d'Etudes en Géophysique et Océanographie Spatiales (LEGOS), Université de Toulouse, CNES, CNRS, IRD, UPS, part of the International Mixed Laboratory ICMASA, Toulouse, France*Correspondance: courriel Mathieu.Rouault@uct.ac.za (M ROUAULT)

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Abstract

Benguela Niños and Niñas are intermittent, extreme warm and cold events that develop near the border between Angola and Namibia. These extreme events have been intensively studied these past years because of their significant impacts on the regional rainfall and the local marine ecosystem. Recently, Imbol Koungue et al. [2017], evidenced the role played by the Interannual Equatorial Kelvin waves during the onset of Benguela Niños and Niñas over 15 years (1997-2012). The present study is an update of the recent paper by Imbol Koungue et al. [2017]. We aim to revisit most of the Benguela Niños and Niñas developing before 1998 along the Angolan and Namibian coastlines using monthly averaged from an Ocean General Circulation Model (OGCM) for the period 1958 - 2015 which has been validated using available observation datasets. Preliminary results show the occurrences of 55 anomalous coastal events (29 warm and 26 cold) over the period 1958 – 2015. In agreement with recent studies, most of these anomalous coastal events are remotely forced via Interannual Equatorial Kelvin Wave (IEKW) propagations at interannual timescales with equatorial variability leading coastal SST variability by 1 month. Meridional transport anomalies across the ABF seem to contribute to the development of these anomalous coastal warm events. We show that October to April appears to be the favourable season in which anomalously warm or cold coastal events in the South-east Atlantic Ocean peak and are also linked to the remote oceanic forcing (IEKW).



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