Session 01

Clinging to life in the southern Senegal upwelling sector

Xavier CAPET[1,*], Siny NDOYE[2,1], Eric MACHU[3], Philippe ESTRADE[2], Bamol Ali SOW[4] and Patrice BREHMER[5,6]

[1]Centre National de la Recherche Scientifique (CNRS), Laboratoire d'Océanographie et du Climat: Expérimentations et Approches Numériques (UMR LOCEAN), Paris, France
[2]Université Cheick Anta Diop (UCAD), Laboratoire de Physique de l'Atmosphère et de l'Océan Siméon (LPAO-SF) BP 5085, Dakar–Fann, Senegal
[3]Institut de Recherche pour le Développement (IRD), UMR LOPS, BP 1386, Dakar, Sénégal
[4]Université Assane Seck de Ziguinchor (UASZ), Laboratoire d'Océanographie, des Sciences de l'Environnement et du Climat (LOSEC), Ziguinchor, Senegal
[5]Institut de Recherche pour le Développement (IRD), UMR 195 Lemar, BP 1386, Dakar, Sénégal
[6]Insitut Sénégalais de Recherches Agricoles (ISRA), Centre de Recherche Océanographique de Dakar-Thiaroye (CRODT), BP 2241, Centre PRH, Dakar, Senegal

*Correspondance: Tél: (+221) 77 488 61 55; Courriel: xclod@locean-ipsl.upmc.fr (X. CAPET)

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Abstract

The classical tradeoff between positive effects (enrichment of the euphotic layer) and negative effects (losses of biological material through offshore advection) of upwelling dynamics is examined in the southern Senegal upwelling sector. The southern Senegal upwelling sector (SSUC) is a well-known spawning and nursery area for several small pelagic fish species. Recent findings will be presented that offer 1) additional insight into the reasons underlying the SSUC ecosystemic importance and 2) the ways to make progress on resource management in the SSUC. The position of the SSUC at the southern tip of the Canary current system and its geomorphologic characteristics create peculiar conditions in which the simplified 2D view of upwelling systems does not apply. As a consequence, retention of upwelling waters over the shelf is enhanced in the SSUC. Other upwelling sectors where retention is enhanced will be briefly discussed. These upwelling sectors are generally known as "upwelling shadows" but their dynamical functioning present's important differences with that of the SSUC. Due to its unique dynamics specific, observations in the SSUC are needed in a coastal strip ~ 10-20 km wide where we presently lack observational truth.

Keywords: upwelling, nursery area, Canary current system, retention, lack observational truth.

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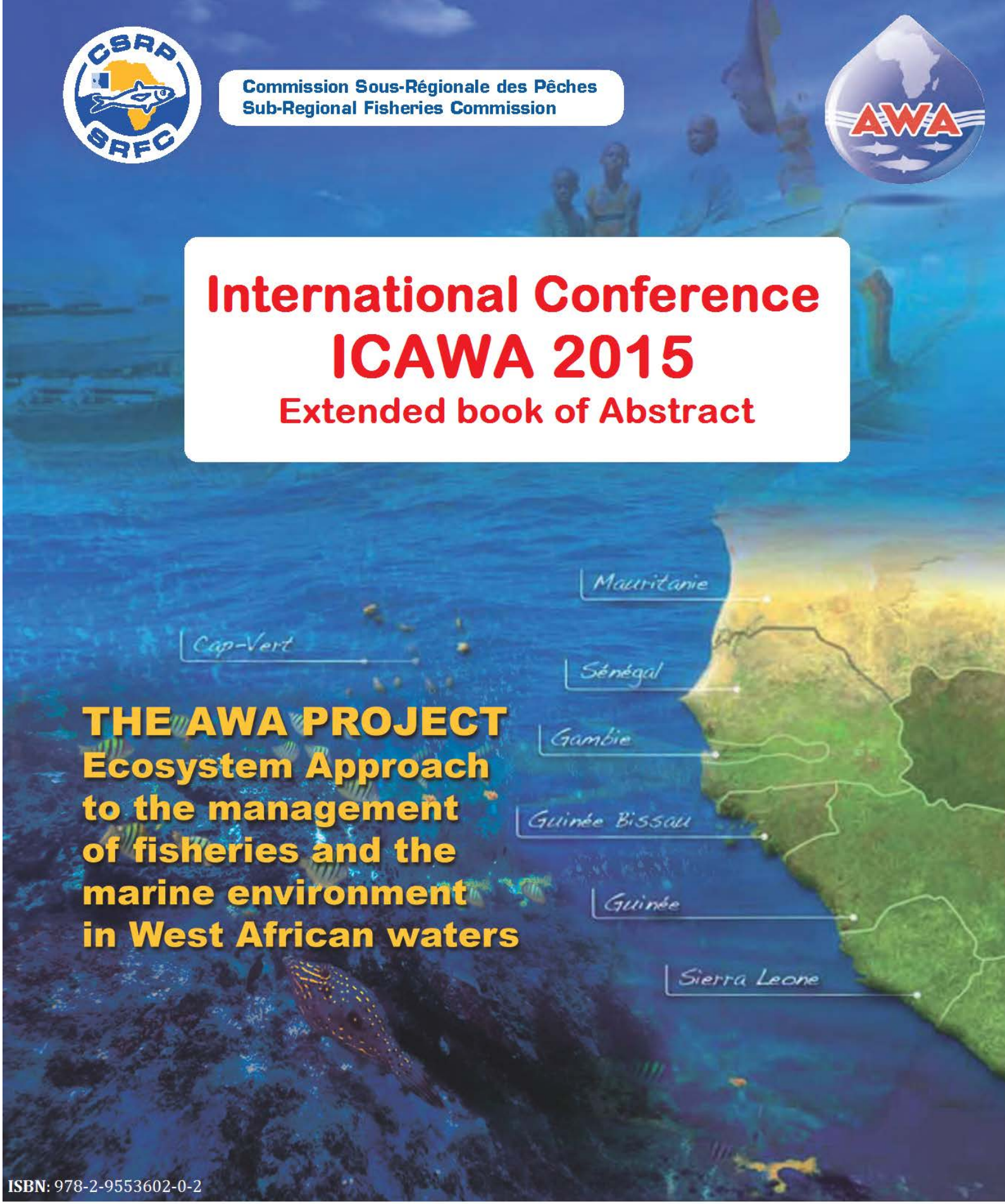

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