



Upwelling at the Senegalese coast: A suitable spawning area of small pelagic fish species

Maik TIEDEMANN^{1,*}, Heino FOCK¹ and Patrice BREHMER²

¹Thünen Institute for Sea Fisheries Palmaille 9 22767, Hamburg, Germany

²Institut de Recherche pour le Développement (IRD), ISRA/Centre de Recherche Océanographique de Dakar-Thiaroye (CRODT), UMR 195 LEMAR, BP 1386 Dakar, Senegal

*Correspondance: Tél: (+49) 040 38905 268; Courriel: maik.tiedemann@ti.bund.de (M. TIEDMANN)

Reçu le 09/12/2014; publié le 15/05/2015
AWA © MS WP2_S2_2_38

Abstract

The Canary Current Ecosystem (CUE) is known to be one of the most productive marine regions of the world ocean heavily exploited by regional and international fisheries. Small pelagic fish species migrate long distances to find suitable spawning areas along the CUE. A suitable spawning area has been suggested south of Senegalese Cap Vert peninsula (15°N). Here, hydrographic and ichthyoplankton sampling were performed during the upwelling season in April 2013. Larval fish distribution patterns show that the inshore area (between the upwelling core and the coast) is characterized by an enhanced spawning activity. The further offshore the lower the larval fish abundances and the higher the difference in larval assemblages. The inshore assemblages are dominated by small pelagic species like sardinella and anchovies, further offshore horse mackerels and four-eyed sole occur in high densities, while in oceanic regions low larval densities and higher proportions of mesopelagic species occur. In accordance to sustainability and ecosystem protection there is a need in investigating recruitment processes representing an important basis for regions which are under high exploitation. Variability in recruitment of populations is often less the spawning stock all the more the variability of ecosystem drivers in early stages of fishes.

Keywords: ichthyoplankton, spawning, recruitment, small pelagic, sardinella, CCLME; Senegal



Commission Sous-Régionale des Pêches
Sub-Regional Fisheries Commission



Book of Abstract International Conference ICAWA 2014

THE AWA PROJECT
Ecosystem Approach
to the management
of fisheries and the
marine environment
in West African waters

Cap-Vert

Mauritanie

Sénégal

Gambie

Guinée Bissau

Guinée

Sierra Leone



Bundesministerium
für Bildung
und Forschung



Institut de recherche
pour le développement



Liberté - Égalité - Fraternité
RÉPUBLIQUE FRANÇAISE
Ministère des Affaires étrangères
et du Développement international
Ministère de l'Enseignement
Supérieur et de la Recherche

Trilateral German-French-African research initiative

ISBN :978-2-9553602-0-1

Edited by:

Patrice Brehmer (IRD) & Hamady Diop (SRFC/CSRP)

With the collaboration of:

Marie Madeleine Gomez, Ndague Diogoul, Viviane Koutob, Peter Brandt, Bamol Ali Sow, Alban Lazar, Xavier Capet, Heino Fock, Carlos F. Santos, Eric Machu, Hamet Diadihou, Didier Jouffre, Ibrahima Diallo, Joern Schmidt, Amadou Gaye, Mahfoudhould Taleb Sidi, Yves Gouriou, Rafael Almar, Moussa Sall, Dominique Duval Diop, Modou Thiow, Ross Wanless, Jacob Gonzales-Solis Bou, Ibrahima Ly, Dienaba Beye Traoré, Marie Bonnin, Werner Ekau.

ISBN: 978-2-9553602-0-0

SRFC/CSRP – IRD ©2015

Cover design: AWA (BMBF – IRD) project

Logo and flyers: Laurent Corsini (IRD)

Sponsors ICAWA 2014

