Text S1. Seasonal trends in salinity. We calculated the seasonal trends of salinity for the two study areas from an open-source ocean model (https://www.hycom.org/). The Hybrid Coordinate Ocean Model (HYCOM, v 2.2.), a 3-D Ocean model that predicts ocean salinity at 1 h resolution, was used to calculated the monthly water salinity (at the surface) for Banc d'Arguin and Bijagós. The model was run for 5 years (1 Jan 2011 to 31 Dec 2015), and the median value was computed per site per month (Fig. S1). The data were spatially averaged for the two sites using a spatial reducer in Google Earth Engine.
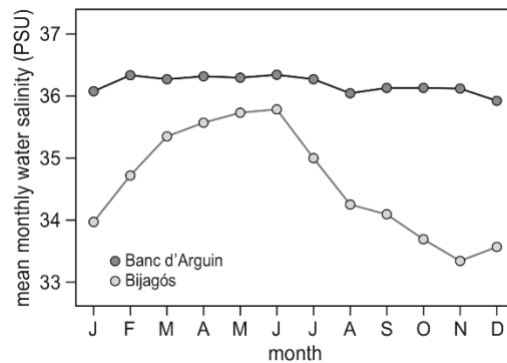

Figure S1. Seasonal trends in water salinity in Bijagós (Guinea Bissau) and Banc d'Arguin (Mauritania) based on the Hybrid Coordinate Ocean Model (HYCOM, v 2.2.).
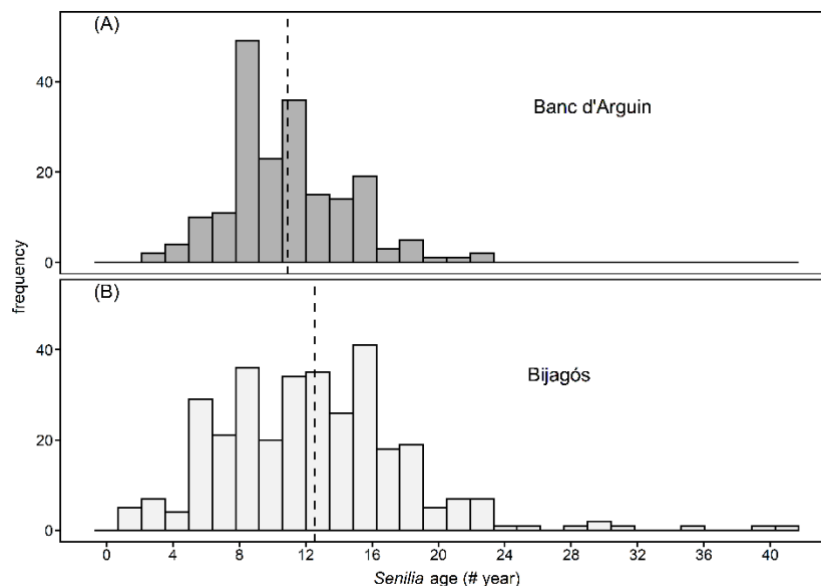

Figure S2. Age-class frequency distributions of the populations of African bloody cockle (*Senilia senilis*) from Parc National du Banc d'Arguin, Mauritania (A) and Bijagós Biosphere Reserve in Guinea-Bissau (B). Vertical dashed lines represent the mean age of the two populations.
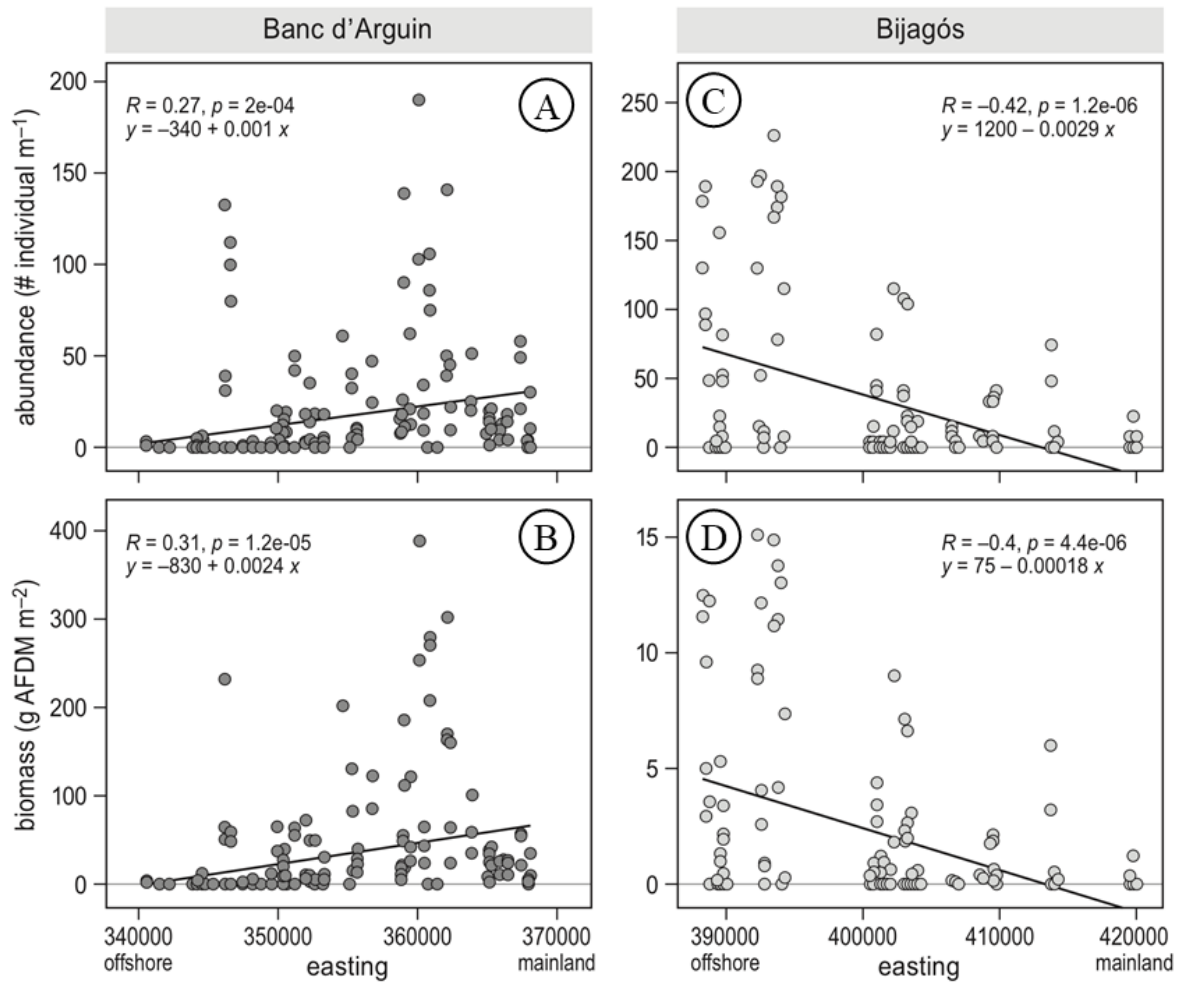
Figure S3. Relationship between the density and biomass (AFDM) of African bloody cockle (*Senilia senilis*) and the geographical location in Banc d'Arguin (A, B) and Bijagós intertidal flats (C, D). Easting represents moving from west (offshore) toward the east (mainland).