

SUSTAINING LIVELIHOODS AND ECOSYSTEMS: GENDER-RESPONSIVE AND CLIMATE-SMART APPROACHES IN WIO OCTOPUS FISHERIES

Nuru Said Salum*

Regional Coordinator, Mwambao Coastal Community Network Tanzania

*nuru.salum@mwambao.or.tz

Small-scale octopus fisheries sustain coastal livelihoods across East Africa and the Western Indian Ocean (WIO), yet they face intersecting pressures from gender inequality, climate variability, and resource exploitation. In Zanzibar, studies show that only ~30% of the estimated 7,313 octopus fishers are female, with women historically focused on gleaning—an activity threatened as male spear diving gains dominance and tourism demand now exceeds 90% of market share (Benbow et al., 2014; Msuya et al., 2023). Periodic closures have proven effective; in Madagascar’s Velondriake Locally Managed Marine Area (LMMA), local closures covering ~20–25% of fishing grounds for 2–3 months increased octopus landings by over 700% in the month following re-opening, with catch per fisher nearly doubling within the same period (Oliver et al., 2015).

In coastal Kenya, a COMRED-supported initiative in Munje Beach Management Unit (BMU) demarcated a 0.4 km² closure in late 2023. Following three openings, approximately 308 kg of octopus were harvested, generating significant income and restoring ecosystem health—but successive openings saw declines attributed to heavy rainfall and elevated sea temperatures (COMRED, 2024). Qualitative research in Zanzibar confirms ecosystem recovery post-closure, with fisherwomen accessing larger, healthier octopus nearer shore, enhancing nutrition, income, and food security—evidenced by increased household budgets for school uniforms and healthier diets (Msuya et al., 2023).

Furthermore, the African Union Inter-African Bureau for Animal Resources (AU-IBAR) and SIDA convened over 30 stakeholders in Mombasa, Kenya (June 2025) to validate a regional study and form the Western Indian Ocean Network for Small-Scale Octopus Fisheries (WION-SOF), prioritizing gender equity, climate resilience, improved market access, and value chain strengthening (AU-IBAR, 2025).

However, climate variability remains an emerging threat: coastal researchers in Zanzibar link fluctuating sea-surface temperatures and coral degradation to decreased catch per unit effort (CPUE), highlighting the need for climate-smart closures, habitat restoration, and adaptive governance (Benbow et al., 2014; Oliver et al., 2015).

This presentation synthesizes empirical data from Kenya, Tanzania, Zanzibar, Madagascar, and NGO and academic sources to demonstrate how periodic closures—when combined with gender-responsive co-management, digital monitoring (e.g., FishPath), and climate-resilient policies - enhance ecological recovery, empower women, and bolster socio-economic resilience. We recommend scaling these integrated interventions to support equitable, sustainable blue economies across the WIO region.