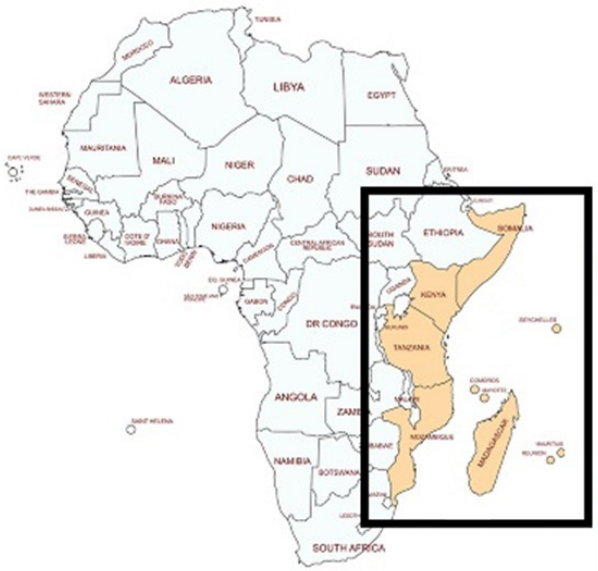
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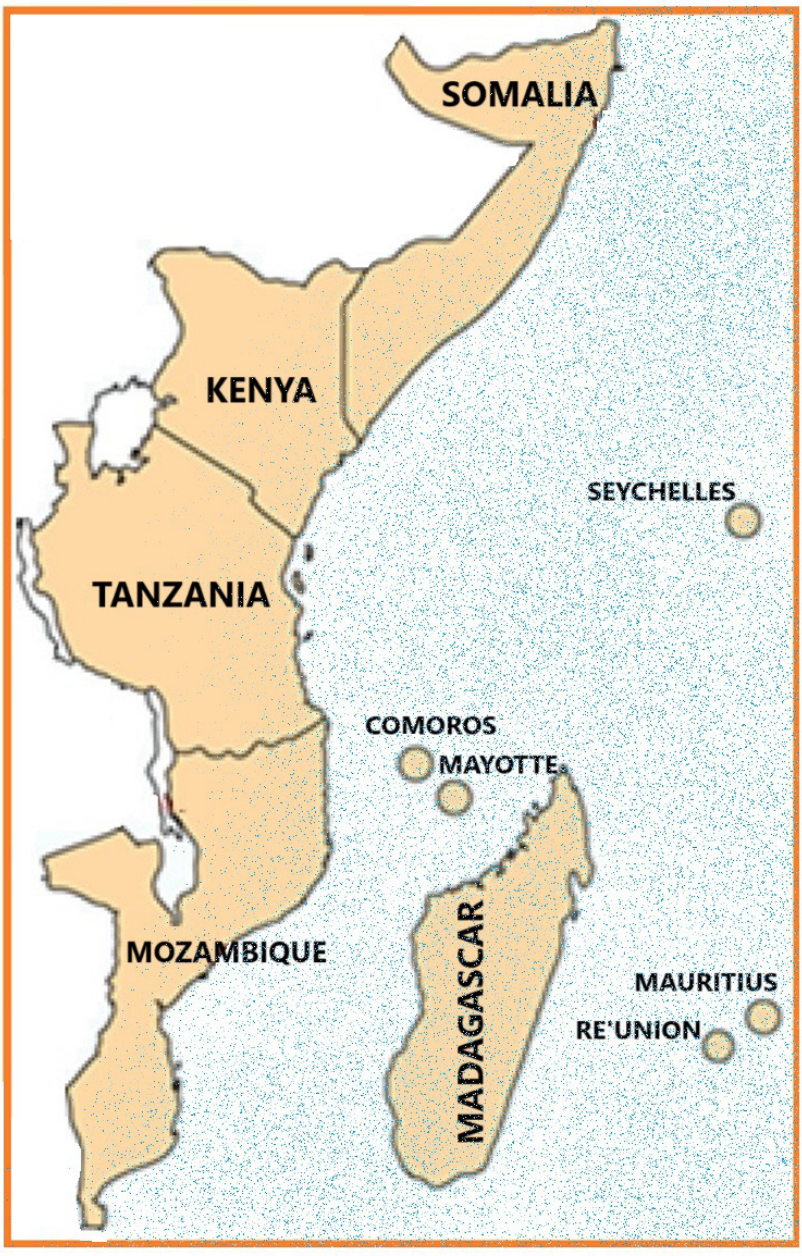
WIO-SOF
WESTERN INDIAN OCEAN
NETWORK OF SMALL-SCALE
OCTOPUS FISHERIES

Sweden
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POLICY BRIEF
SMALL-SCALE OCTOPUS FISHERIES IN THE WESTERN INDIAN OCEAN:

Strengthening Gender Inclusivity, Climate Resilience and Sustainable Blue Value Chains





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Disclaimer: The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the African Union InterAfrican Bureau for Animal Resources.

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Executive Summary

Small-scale octopus fisheries and blue value chains in the Western Indian Ocean (WIO) region, spanning Kenya, Tanzania, Somalia, Mozambique, Madagascar, Comoros, Seychelles, and Mauritius, are vital sources of food, income, and cultural identity for coastal communities. Women play central roles in harvesting, processing, and trading octopus, yet remain underrepresented in formal fisheries governance structures. These fisheries face intersecting challenges, including overfishing, climate impacts (e.g., coral bleaching, habitat degradation), weak infrastructure, and lack of inclusive policies.

To address these challenges, the AU-IBAR, with support from SIDA implemented the project "Conserving Aquatic Biodiversity in African Blue Economy". This initiative supports the African Blue Economy Strategy (ABES 2020) and the AU Continental Gender Strategy (2024), both of which emphasize gender-responsive, climate-smart management of aquatic ecosystems. Under this framework, octopus fisheries were identified as resilient, nature-based solutions critical to biodiversity conservation and coastal livelihoods.

This policy brief draws field surveys, stakeholder consultations and related sources to synthesize current status, challenges and recommendations for sustainable, gender-equitable small-scale octopus fisheries in the region. Field assessments across the WIO highlighted major gaps: lack of octopus fishery-specific regulations (except in Madagascar), exclusion of women from decision-making, poor post-harvest value chains, and absence of climate-adaptive planning. However, several best practices have emerged. These include community-led closures, women-led savings groups in Zanzibar, Fishery Improvement Projects (FIPs) in Madagascar, and value-added innovations like solar drying racks and eco-certification. These examples show that when women are empowered and ecosystems protected, both livelihoods and sustainability improve.

In June 2025, AU-IBAR launched the WIO Network of Small-Scale Octopus Fishers (WION-SOF) to coordinate regional strategies, amplify local voices, and support knowledge exchange. This aligns with global and continental goals, including the SDGs, ABES, and Agenda 2063.

To achieve sustainable octopus value chains, the policy brief recommends:

1. Enacting gender quotas in fisheries governance and supporting women-led cooperatives.
2. Integrating climate risk into octopus management plans and ecosystem protection.
3. Upgrading infrastructure (cold chains, storage), enhancing market access, and enabling finance and certification.
4. Strengthening legal frameworks and regional coordination via WION-SOF, WIOMSA, SWIOFC, and the Indian Ocean Commission.

By aligning national policies with regional mechanisms, WIO countries can transform the small-scale octopus fisheries in the Western Indian Ocean into a model for gender-equitable, climate-resilient blue economy development. The time to act is now!

Background

Aquatic biodiversity conservation in blue economy are critical aspects of sustainable development, encompassing the protection and management of aquatic ecosystems and the responsible use of aquatic resources. However, achieving sustainable outcomes in these areas requires the active involvement and empowerment of women. Women have long played essential roles in coastal communities and possess a deep understanding of the aquatic environment. Yet, they often face numerous barriers and challenges that hinder their participation and contributions.

In this regard, the project on "Conserving Aquatic Biodiversity in African Blue Economy", with support from the Swedish International Development Agency (SIDA). is supporting the implementation of the African Blue Economy Strategy (ABES) which was endorsed by the African Heads of States and Governments at a Summit held in Addis Ababa-Ethiopia, in February 2020. The Project was designed to enhance the policy environment, regulatory frameworks and institutional capacities of African Union member states and Regional Economic Communities to sustainably utilize and conserve aquatic biodiversity and ecosystems.

An important area addressed by the project is strengthening gender inclusivity and particularly enhance the role of women and youth in biodiversity conservation and environmental governance in aquatic ecosystems, which support economic activities and livelihoods of women and youth in AU member states. In this regard, within the framework of SIDA project, AU-IBAR identified priority issues and developed a continental strategy to guide gender mainstreaming in conservation programmes and initiatives; The Continental Gender Strategy on Aquatic Biodiversity Conservation, endorsed by the Summit of the African Heads of States and Governments in February 2024. The Summit recommended to facilitate the operationalization of the strategy. Under this strategy, small-scale octopus were identified as climate-change resilient blue economies, and their sustainable exploitation, as key nature-based solutions calling for biodiversity conservation and enhanced management of coastal ecosystems. Therefore, the assessment of the small-scale Octopus blue value chains is step in the right direction, in the effort to explore mechanisms for strengthening gender dimensions and climate change resilience and, environmental considerations in the Western Indian Ocean Coastal and Island- African Union member States in order to minimize impact on the livelihoods of communities dependent on the fisheries.

Octopus (especially Octopus cyanea are a high-value invertebrate resource for coastal communities. Globally, small-scale octopus fisheries produce ~88,000 tonnes/year (WIO countries export ~3,000 t worth US$12.2 M/year). Octopus provide crucial protein and income, often filling gaps left by declining fish stocks. In the WIO, Kenya, Tanzania and Madagascar lead octopus exports to EU markets (Portugal, Italy, Spain). Artisanal octopus fishing has been practiced for centuries across East Africa and islands (e.g. Rodrigues, Mozambique).

Despite this importance, policy attention has been limited. Recent continental initiatives – notably the African Blue Economy Strategy (ABES, 2020) and the AU Continental Gender Strategy (2024) – call for inclusive, ecosystem-based fisheries management. These frameworks emphasize gender-responsive, climate-adaptive approaches in small-scale fisheries. In line with AU Agenda 2063, a SIDA-supported AU-IBAR project ("Conserving Aquatic Biodiversity in African Blue Economy") supported the assessment small-scale octopus fisheries blue

value chains in four selected countries: Kenya, UR Tanzania, Union of the Comoros and Madagascar. The small-scale octopus fisheries in Western Indian Ocean presented an interesting case study to explore gender roles in costal and marine resource management. Though largely ignored, small-scale octopus fisheries are a vital economic and nutritional lifeline for coastal communities across the Western Indian Ocean (WIO) region, spanning eight countries: Kenya, United Republic of Tanzania, Madagascar, the Union of the Comoros, Mozambique, Seychelles, Mauritius, and Somalia. These fisheries are particularly important for women, who play central roles in harvesting, processing, trading, and sustaining household incomes. In many communities, women dominate reef gleaning and post-harvest activities, yet their presence is underrecognized and structurally excluded from formal fisheries governance mechanisms such as Beach Management Units (BMUs), Village Fisheries Committees (VFCs) and co-management committees.

Despite their ecological and socioeconomic importance, octopus fisheries in the WIO face multiple, intersecting challenges. Overfishing and destructive harvesting practices have led to localized stock declines. Weak fisheries infrastructure, limited access to formal markets, lack of value-addition facilities, and uncoordinated supply chains reduce profitability and resilience. Furthermore, octopus fisheries are highly sensitive to environmental change: climate-related threats such as coral bleaching, rising sea temperatures, and ocean acidification are degrading the shallow coral reef and seagrass ecosystems where Octopus cyanea thrives. As these habitats decline, so too do catch rates, jeopardizing community livelihoods and national fishery revenues.

Despite these challenges, there are promising examples of resilience and innovation emerging across the region. Community-based conservation initiatives, particularly locally-managed marine closures, have demonstrated significant ecological and economic benefits—often resulting in temporary catch increases of 50–100% after reopening. Countries like Zanzibar have pioneered women-led savings and loan groups linked to octopus closure cycles, allowing women to save and invest during seasonal no-take periods. In Madagascar, the Octopus Fishery Improvement Project (FIP) links local conservation to international trade by aligning community-managed closures with export certification, offering a model of how sustainable practices can unlock premium markets. These innovations highlight the value of integrating social equity, gender inclusion, and ecosystem-based management into octopus value chains.

Recognizing the need for cross-border collaboration, a regional network on octopus fisheries—WIO Network of Small-Scale Octopus Fishers (WIONSOF)—was formally launched in June 2025 under the auspices of the African Union InterAfrican Bureau for Animal Resources (AU-IBAR). This platform will bring together stakeholders from coastal states of Kenya, UR Tanzania, Mozambique, and Somalia, and island states of Union of the Comoros, Madagascar, Mauritius and Seychelles to share best practices, coordinate management strategies, and amplify local voices. The network aligns with continental frameworks such as the African Blue Economy Strategy (ABES 2020) and the AU Continental Gender Strategy (2024), which call for gender-responsive, climate-smart approaches to aquatic resource governance.

Therefore, to build a resilient, inclusive and sustainable octopus fishery sector, policy interventions must be decisive and coordinated. National governments should embed gender quotas and affirmative mechanisms in fisheries laws and co-

management systems, ensuring women are equitably represented in decision-making. Investments are needed in cold chain infrastructure, post-harvest handling, processing technologies, and marketing platforms tailored to small-scale operators, especially women. Climate risk assessments should be mainstreamed into octopus management plans, including habitat protection and dynamic closure regimes. Furthermore, legal frameworks should be updated to formally recognize community rights and ecological indicators relevant to octopus fisheries.

Regional Status of Small-Scale Octopus Fisheries

Kenya. Kenya's octopus fishery runs along its entire coast, notably in the Lamu Archipelago (~1,600 mainly local fishers). Octopus (O. cyanea) are caught by gleaning and skin-diving at low tide. Women play a central role in these activities. However, the sector remains informal with weak post-harvest infrastructure and market structure. Key needs include better cold storage, value-chain organization and fisher registration. The 2016 Fisheries Act provides for co-management and includes gender-sensitive language, but in practice women are underrepresented in Beach Management Units (BMUs) and decision-making.

Tanzania. East African octopus fishing hotspots include Mafia, Lindi and Pangani. Tanzania's 2003 Fisheries Act (amended 2020) establishes co-management through BMUs. O. cyanea closures (e.g. Mafia Archipelago) have demonstrated biological and economic benefits (catch per unit effort rises after closures). The FishPath tool (participatory, data-limited management) is being piloted to enhance climate-smart planning. However, BMUs often lack funding and technical support, and women's participation in BMUs is minimal. Fishermen still dominate licenses, so many women remain informal (no access to formal benefits). In Zanzibar, which is semi-autonomous, manages its fishery under the 2010 Fisheries Act. Locally-Managed Marine Areas (LMMAs) and voluntary closures are common and have shown success in stock recovery and community income. Zanzibar also pioneered women-led savings and loan groups tied to closure regimes, boosting women's economic resilience. These innovations make Zanzibar a model for gender-inclusive co-management. Nonetheless, climate adaptation is still ad hoc and enforcement relies heavily on NGOs.

Madagascar. Madagascar has one of the WIO's largest artisanal octopus fisheries. It stands out for its integrated approach: government-legalized LMMAs, mandated gender inclusion, and a successful Octopus Fishery Improvement Project (FIP). The FIP links community closures to export certification (e.g. USA/EU markets), aligning conservation with livelihoods. Women in Madagascar actively manage cooperatives and benefit from savings groups and training. Ecosystem-based climate resilience is embedded in Malagasy policy, enabling adaptive responses (though sustaining NGO-driven programs and national coordination remain challenges).

Comoros. Octopus fishing in the Union of the Comoros is primarily subsistence-oriented on the islands of Grande Comore, Anjouan and Mohéli. Governance is informal: there are no octopus-specific regulations and almost no gender quotas. Women perform much of the gleaning and processing, but their roles are unrecognized in policy. Climate adaptation measures are absent, leaving reefs and fisheries highly vulnerable.

Mozambique. Data are scarcer, but artisanal octopus fishing occurs along Mozambique's coasts (notably Inhaca Island). As across the region, women engage in reef gleaning (clams, oysters, octopus) while men fish offshore. Evidence suggests women

compose ~46% of the fisheries workforce in Mozambique, largely as gleaners and traders, yet their catches and needs are underreported. Mozambique has experimented with periodic octopus closures (e.g. Vamizi, Coelacanth Island), with external support, but national policy integration is limited.

Seychelles and Mauritius. These island nations have small-scale octopus fisheries. In Mauritius (including Rodrigues), women's dependence on octopus gleaning is high. On Rodrigues, 32% of registered lagoon fishers are women, reflecting state support (boats, gear) in past decades. Greater female participation has given women more legitimacy in management discussions. However, on Mauritius Island (and Seychelles), many women gleaners are not formally registered, limiting access to aid and training. Seychelles has recently launched an octopus baseline study; early indications are that O. cyanea dominates catches, but comprehensive management planning is pending.

Somalia. Conflict and weak governance have hindered marine resource management. Some artisanal octopus fishing occurs along Somalia's long coast, but formal data and institutional support are minimal. Regional coordination (via IOC, EAC) could help extend best practices to Somali fishers in future.

Gender Roles and Gaps

Women's contributions are critical but undervalued. Across the WIO, women dominate octopus-related activities: gleaning at low tide, cleaning, processing (drying/salting), and local trading. For example, the regional study found "high female participation" in harvest and post-harvest stages. In many communities, octopus catches from reef flats are women's domain. However, governance structures lag: women are seldom included in BMUs or fisheries committees. Reports note women are "largely absent from decision-making bodies except for some few notable cases in Kenya, Zanzibar and Madagascar among others. This exclusion means women lack voices in setting size limits, closures and market policies that directly affect their livelihoods.

Economic gaps compound this exclusion with women fish-workers often remain unregistered as "fishers", denying them formal support. In Mauritius, for instance, only registered fishers (mostly men) qualified for government schemes (bad-weather pay, disaster compensation), so many women missed out. Likewise, women in Mozambique account for ~46% of the fisheries workforce but their contributions are unrecorded in official data, limiting resource allocation. Limited access to credit, ice or storage facilities also hampers women. Conversely, where women are empowered, benefits follow: in Rodrigues (Mauritius), government-issued boats and credit helped women (32% of local fishers) gain management legitimacy.

Noting the evolving dynamics, as octopus enters higher-value export chains, more men have joined the fishery to capture profits. This trend is shifting traditional gender roles and can squeeze women's incomes. Without intervention, women risk being marginalized despite their central roles. Evidence-based gender analysis (e.g. quota policies, gender audits of BMUs) is needed to close these gaps.

Climate and Environmental Challenges

Octopus fisheries are closely tied to coastal ecosystems and thus vulnerable to environmental change. O. cyanea relies on healthy coral reefs and lagoons. Rising sea temperatures and coral bleaching (as seen in WIO bleaching events) degrade octopus habitat. The regional workshop highlighted

these risks: participants noted "growing risks from climate change – such as coral bleaching, rising sea temperatures, and habitat degradation". In practical terms, bleached reefs support fewer octopuses, and extreme weather (cyclones, heavy rains) can disrupt spawning and post-larval recruitment.

Octopus are also directly stressed by climate-driven changes. A recent review notes octopus fisheries face "multiple stressors including climate change, overfishing, illegal fishing and habitat destruction". Interestingly, some studies suggest octopuses may mature faster in warmer waters, potentially offsetting mild warming. However, this resilience is limited: ecosystem degradation (e.g. mangrove loss, sedimentation) and ocean acidification likely undermine long-term productivity. For example, a multi-country study found significant declines in octopus catch per unit effort over 17 years in southwest Madagascar despite periodic closures, implying broader environmental decline.

Coastal communities also face climate change impacts on livelihoods: sea-level rise, changing monsoon patterns, and intensified storms threaten infrastructure (e.g. landing sites) and markets. Climate-induced migration may increase fishing pressure on octopus grounds. Climate-smart management including dynamic closures, early warning, diversified livelihoods like seaweed farming etc. has been recommended, but is still nascent in policy. Integrating climate risk assessments into octopus fishery plans is therefore urgent.

Legal and Institutional Frameworks

Octopus fishing is governed by a patchwork of national laws and regional bodies:

- **Kenya -** The Fisheries Management & Development Act (2016) provides a robust co-management framework and explicitly mentions gender-sensitive governance. BMUs and Marine Protected Areas are legal tools. However, enforcement is uneven and no octopus-specific plan exists.
- **Tanzania (Mainland) -** The 2003 Fisheries Act (amended 2020) established BMUs for local co-management. It does not legally require gender quotas, so BMUs have few women. Octopus closures (in Mafia, Pangani) have been adopted in practice, but except in pilot communities these are not formalized in law. There is no species-specific octopus regulation (as in most WIO countries).
- **Zanzibar (UR Tanzania) -** Governed under its 2010 Fisheries Act, Zanzibar has legally embraced community closures and LMMAs. It is notable for institutionalized gender inclusion: women's savings groups are formally linked to closures, enhancing women's roles. The Act provides mechanisms for community management, but nationwide climate adaptation measures are limited.
- **Madagascar -** Fishery law explicitly recognizes octopus and community rights. LMMAs are legalized governance units, and Madagascar requires women's representation in fisher associations (BMUs). The National Institute for Halieutic and Marine Science actively co-manages the Octopus FIP. Madagascar has also incorporated ecosystem-based adaptation into policy (e.g. reef management plans).

- **Comoros -** There are no national octopus-specific laws or management plans. Fisheries are centrally regulated, but co-management structures are minimal or informal. Gender is not addressed in fisheries legislation, and there is no coral reef monitoring or closure policy.
- **Mozambique -** It has general fisheries law, but no direct focus on octopus.
- **Seychelles -** It has general fisheries law, but no direct focus on octopus. Seychelles' Fisheries Laws (2014) allow for fisheries regulations but octopus was historically low priority; a recent baseline survey (2023) is identifying species and stocks.
- **Mauritius -** It has general fisheries law, but no direct focus on octopus. However, Mauritius's Outer Islands (Rodrigues) have local co-management with women's participation.
- **Somalia -** It has general fisheries law, but no direct focus on octopus. Somalia's legal framework (2019 Fisheries policy) is hindered by conflict and has yet to implement co-management.

At the regional level, several bodies and agreements exist, including the South West Indian Ocean Fisheries Commission (SWIOFC), the Nairobi Convention (Indian Ocean Commission partner), and Eastern African Blue Economy initiatives. However, implementation of joint octopus policies is weak. A 2025 report notes "no WIO country (except Madagascar) has species-specific octopus management", so most rely on broad fisheries laws that inadequately protect critical life stages. Therefore, the formation of the new network: The Western Indian Ocean Network for Small-scale Octopus Fishers (WION-SOF) and AU strategies calling for harmonized, gender-sensitive guidelines present a new future for the regional octopus fisheries blue value chains in the WIO. Scientific and research associations such as the WIOMSA should support the new WIO Octopus Fisheries Network to help align national frameworks. Nonetheless, gaps remain in legal mandates for gender and climate. For example, only Kenya's Act contains explicit gender-language (the two-thirds gender rule)- other countries can amend their laws to require women's seats in BMUs or closure committees.

Best Practices and Lessons Learned:

Across the region, innovative community and value-chain models have emerged:

- **Enactment of periodic fishery closures -** community-enforced no-take periods (often 6–16 weeks) have repeatedly shown immediate gains in octopus catch rates and stock recovery. Studies in Comoros and Madagascar demonstrated significant increases in catch per effort post-closure (e.g. >50% CPUE gains). Kenya's Kuruwitu closure (Lamu) and Tanzania's Mafia closures likewise boosted local incomes. These closures depend on community buy-in; integrating them into national policy (with monitoring support) is a proven strategy.
- **Embracing co-management and LMMAs -** empowering fishers to manage reef areas has yielded conservation and social benefits. Zanzibar's Jozani-Chwaka Bay LMMA and Madagascar's Velondriake LMMA (with octopus and lobsters) showed ecological improvements while providing revenue via ecotourism. Inclusive co-management bodies increase compliance. The lesson: formalize and fund co-management and learn from strong cases (e.g. Madagascar, Zanzibar) to replicate regionally.
- **Supporting women-led financial initiatives -** Zanzibar's fisheries closure program is accompanied by voluntary savings groups (merry-go-rounds), giving women capital when fishing is closed. This buffers livelihoods

and strengthens women's leadership. Replicating this (as recommended in the 2025 report) can empower women in other countries. For example, a savings group of 100 women can finance ice boxes, drying racks or small loans.

- **Strengthening value-chain innovations -** like in other small-scale fisheries, post-harvest losses are high in the octopus fisheries, due to lack of ice/cold storage and long transport. Pilot solar-drying racks e.g. in Madagascar) and mini-freezers e.g. in Kenya have been introduced by NGOs. Other initiatives, e.g. labelling initiatives (octopus "eco-certification" in Madagascar) linked to Fishery improvement projects have opened premium markets. Evidently, such innovations adding value and, increase women's profits, since many women only trade octopus locally). These demonstrate that targeted interventions (with gender-design in mind) can upgrade the fishery.
- **Adopting tested cooperative and network models -** exchange visits and training have spread best practices. For instance, Zanzibar women have mentored fishers in Kenyan BMUs, and Mauritian women's groups have learned from Uganda's fishing women cooperatives (TAWFA). The newly formed WIO Octopus fishers Network (WION-SOF) itself is a best practice – providing a forum for fishers, researchers, governments and NGOs to share lessons, as is the case with the older African Women Fish Processors Network, AWFishNet).
- **Adopt emerging data and planning tools and technology -** participatory fisheries tools like FishPath (adopted in Tanzania) incorporate fisher knowledge and climate scenarios into management decisions. The WIO study found such tools helpful for adaptive planning. Investing in simple tech (mobile catch monitoring, satellite coral surveys) can fill data gaps.

The overarching lesson is that combining social inclusion with conservation ("People+Planet") works best. Women's engagement has led to more sustainable outcomes (e.g. women's groups in Madagascar pushing for enforcement of closures). When projects integrate gender (e.g. women as stewards in LMMAs), compliance and equity is radically improved thus securing biodiversity conservation and ecosystems management. Conversely, ignoring gender perpetuates inefficiency: e.g. post-harvest investments remain underutilized or unused if women (the processors) are not consulted or actively engaged in the value chain.

Strategic Policy Recommendations for Resilient Small-scale Octopus Fisheries Value Chains

The following policy actions, at both regional and national levels, can strengthen gender-inclusive, climate-resilient octopus value chains:

1. Formalize regional coordination of networks

- Institutionalize the WIO Octopus Network (WION-SOF) and support its anchoring under SWIOFC/AU-IBAR to provide a formal platform for policy dialogue. Establish national chapters with designated fisheries focal points to feed local issues into the network.
- Harmonize Regional Policy by developing a regional octopus management strategy, including a voluntary regional guideline on octopus SSF. This should integrate gender equity and climate adaptation. Bodies like SWIOFC, WIOMSA, and Indian Ocean Commission should endorse it. Regional strategy could mirror FAO's SSF guidelines, specifying minimum standards (e.g. women's representation quotas, closure criteria).

- Leverage Continental Frameworks and align national fishery policies with AU agendas (e.g. Agenda 2063, ABES, Gender Strategy). For example, countries should report on octopus management in APRM reviews. SWIO countries can use the Nairobi Convention's work on biodiversity to justify protecting octopus habitat.

2. *Strengthen gender inclusion in governance*

- Enact legal gender quotas/provisions- Amend fisheries laws or regulations to reserve seats for women (and youth) in BMUs and local committees. For example, make it mandatory that 30–50% of BMU committee seats are held by women, and BMUs hold elections accordingly. This ensures women's voice in closures and gear regulations.
- Strengthen institutional support and fund women's cooperatives and associations (e.g. expand Mauritius/Rodrigues model), provide grants or microloans specifically for women-led processing ventures. Further, national fishery authorities should designate gender officers to liaise with women's groups (e.g. via AWFishNet and local NGOs).
- Conduct capacity building and train women and men in gender-aware management. Disseminate best practice toolkits (e.g. multilingual guides on octopus biology, closure enforcement, market business) through the network's digital hub. Promote technical training (e.g. ecologically sustainable fishing techniques, processing skills) targeting women in coastal villages.

3. *Enhance climate resilience and ecosystem management*

- Ecosystem-based planning - integrating coral reef and seagrass conservation into fisheries management and designation of critical octopus habitats as protected zones or no-take areas outside of harvest seasons. The use of climate data (e.g. bleaching forecasts) to plan adaptive closures can go a long way in supporting blue octopus fisheries value chains in the WIO.
- Climate risk assessments - all octopus fishery management plans must include climate risk analysis (marine heatwaves, storms, acidification) and adaptation strategies e.g. assessment of how a bleaching event would affect octopus productivity can help develop contingency plans such as longer closure periods for full recovery of the reef systems.
- There is a need strengthen sustainable practices and enforcement of size limits and gear restrictions e.g. ban poison or destructive diving through community awareness and regulation. Supporting alternative livelihoods e.g. like seaweed or crab farming for lean seasons to reduce fishing pressure can also go a long way in driving octopus fisheries sustainability.

4. *Invest in value-chain development:*

- Infrastructure is a key component of value-chains- improving landing and cold-chain facilities, especially in remote areas can go a long way in enhancing quality and profitability of the small-scale octopus fisheries e.g. solar-powered cold rooms or ice plants can drastically cut losses. Public–private partnerships can also be motivated to build small harbors or jetties serving octopus fishers thus greatly improving the value chain infrastructure.
- Emerging technologies have opened huge opportunities for post-harvest innovation- e.g. member states can expand technology hubs for women fishers (as piloted in Kenya/Madagascar) through provision of equipment (solar dryers, iceboxes) and packaging materials. Further, support product diversification (canned/processed octopus) to reach new markets is critical in the value chain development.

- There is a need to facilitate access and women's entry into formal markets by helping them obtain necessary certifications (e.g. HACCP, MSC where feasible). Formation of women's marketing cooperatives to demand fair prices from bulk supply buyers or export agents is also strategic, while leveraging regional trade agreements (AGOA, etc.) to boost exports from WIO.
- Certification and Finance - Member states must promote eco-labeling or fair-trade certification for sustainably caught octopus, which can command premium prices that benefit local communities. Additionally, they should create gender-sensitive credit lines including low-interest loans for female fishers and explore results-based financing e.g. payments for stock recovery outcomes.

5. ***Support research and monitoring:***

- Conduct octopus stock assessments and social surveys in all countries, disaggregated by gender, to inform policy, and involve women fishers in data collection e.g. mobile surveys of gleaned catch can hugely support monitoring initiatives, since the fishery is women dominated many countries of the WIO.
- Research must monitor climate impacts on reefs by e.g. partner with coral reef programs such as CORDIO. Monitoring of fishery performance e.g. catch, CPUE trends and use of these data in an early-warning system for authorities and communities can create a resilient small-scale octopus fishery within this region.

6. ***Funding and Investment Mechanisms:***

- Funding has always been a huge hinderance to fisheries improvement programmes. Therefore, establish a pooled blue finance mechanism for women-led fisheries projects with support of e.g. UN Women, GEF, Adaptation Fund, etc. and encouraging blended finance that ties climate and biodiversity funds e.g. a project that funds both coral restoration and women's octopus cooperatives are key avenues available for sustainable finance mechanisms for the small-scale octopus fisheries in the WIO.
- There is a need to advocate for donor programs e.g. EU, SIDA, USAID, AfDB to prioritize small-scale octopus fishery sustainability under Blue Economy portfolios. For example, member states can push for linkages with the GLOFISH or Blue Growth projects to support sustainable small-scale octopus fisheries in the region.
- Lastly, leveraging on results-based models: e.g. pay-for-success for conservation outcomes e.g. more biomass after closures) or social inclusion e.g. more women in leadership roles can incentivize measurable progress in sustainability and equity, and help drive resilience in the WIO small-scale octopus fisheries.

Mechanisms for Regional Coordination & Gender Inclusion in Small-scale Octopus Fisheries Value Chains

The effective implementation of the regional network for small scale octopus fisheries (WION-SOF) and ensuring that it plays a key role as a driver of sustainable small-scale octopus fisheries blue value chains, gender equity, climate resilience and ecosystem conservations requires collaborative institutions. Therefore; -

- The WIO Octopus fisheries network (WION-SOF) formed in June 2025 during the stakeholder meeting held Kenya (03rd to 05th June, 2025, Mombasa, Kenya) supported by the AU-IBAR Aquatic Biodiversity Project should be formally recognized by SWIOFC and AU. It will serve as a regional platform for stakeholders (governments, fishers, NGOs, researchers) to

exchange data, harmonize policies, and plan joint actions. AU-IBAR can appoint a liaison to integrate WION-SOF inputs into AU fisheries agendas.

- Secondly, linkages with existing platforms is key to the establishment of WION-SOF, and its growth. Therefore, the Network should engage AU and continental initiatives: e.g. the African Women Fish Processors Network (AWFishNet) and the Policy Research Network for Fisheries and Aquaculture in Africa (PRNFAA) among others. Collaboration with regional bodies e.g. EAC, Indian Ocean Commission, SWIOFC, WIOMSA is also key in supporting resolutions by the WION-SOF network- e.g. SWIOFC could adopt model octopus regulations, and WIOMSA could fund applied research.
- The Network should develop a regional knowledge hub comprising of an online, multilingual Octopus Fishery Knowledge Hub (as recommended by stakeholders). This portal would share success stories (videos, toolkits), market information, training modules (including on gender and climate), and networking opportunities. It could link with AWFishNet's and AU-IBAR digital resources, ensuring cross-country learning where women fishers learn from any other country, both within and outside the WIO.
- The need for South–South learning exchanges cannot be over-emphasized - the network must therefore endeavor to facilitate fisher-to-fisher exchanges e.g. visits of Kenya's BMUs to Zanzibar, or of Comoros fishers to Madagascar's FIP villages under WION-SOF auspices. Hosting annual or biennial "WIO Octopus Symposium" for practitioners and policymakers, as standalone meetings, or as special sessions within the WIOMSA scientific symposia. The Network can use these forums to review progress, revise guidelines, and set new targets for the next season.
- Gender issues (equality and equity) are key cross-cutting priorities in the region, and should form a priority action for the WIO-SOF network. The Network should push for all regional coordination bodies (WION-SOF, SWIOFC, AU-IBAR) to institutionalize a gender focal point who ensures women's issues are addressed in octopus and wider fisheries programs. For instance, the institutions can mandate that any new project proposal includes a gender plan, and regularly publish a "WIO Octopus Gender Scorecard" with indicators e.g. % women BMU members, % women in cooperatives, % funding for women's initiatives in the push to ensure gender inclusivity.

Evidently, by aligning national actions with these regional mechanisms, governments and stakeholders can create synergies rather than duplicating efforts e.g. adopting a common octopus fisheries survey protocol (through WIOMSA guidance) would allow stock assessments to be comparable across borders. Furthermore, coordinated policies can prevent "tragedies of the commons" e.g. only closing Kenyan markets to ensure recovery of stocks would drive fishers to sell in Comoros thus watering down the efforts made by the countries without a regional approach.

In summary, an integrated approach, combining legal reforms, investments in women's economic empowerment, ecosystem-based management, and strong regional institutions, is essential. Evidence from the WIO shows that when women lead and climate risks were better addressed, and octopus fisheries can become more sustainable and equitable. Policymakers should also leverage these lessons to secure the future of coastal livelihoods and biodiversity in the Western Indian Ocean region.

Advocacy for Reforms and Policy Development in Small-scale Fisheries in the WIO

Effective advocacy must target national governments, regional economic communities, fisheries authorities, and development partners to accelerate the adoption of inclusive, climate-resilient fisheries reforms. Key advocacy messages should encompass:

- Women's rights and representation, highlighting the economic and social contributions of women in octopus fisheries and advocate for their inclusion in legal, regulatory, and financial systems.
- Ecological urgency and the need to present scientific evidence and community observations on octopus stock declines, linking these to unsustainable harvesting practices and climate impacts.
- Economic opportunity framing octopus value chain upgrading as an untapped opportunity for development the coastal villages, export growth, and local entrepreneurship.
- Global and regional commitments, leveraging on existing frameworks—AU Agenda 2063, the African Blue Economy Strategy, FAO SSF Guidelines, and SDG 14—to press for coherent national action plans and policy integration.
- Championing sustainability while using success stories from Kenya, Zanzibar, Madagascar, and Rodrigues (Mauritius) to demonstrate that policy reforms yield measurable environmental and socio-economic benefits.
- Policy alignment while updating national fisheries laws and regulations to include octopus-specific provisions, integrate gender and climate criteria, and formalize co-management arrangements.
- Participatory governance while establish and strengthening inclusivity in BMUs, women's fisheries committees, and local management structures that link traditional knowledge with scientific data.
- Ecosystem protection with designation of essential octopus habitats as managed zones, while embedding periodic closures into community agreements backed by national authority.
- Climate-smart planning and mainstreaming of vulnerability assessments, early-warning systems, and adaptive strategies into fisheries management plans.
- Financial access and innovation with creation of dedicated funding schemes for women and youth, including microfinance, grants, and results-based investment for cooperatives and processors.
- Digital and Data Systems: Develop mobile applications for data collection, fisher registration, closure enforcement, and price transparency, ensuring accessibility to all genders and literacy levels.

Strategic advocacy should also engage parliamentarians, local government officials, donor agencies, civil society, and private sector players to build a coalition for inclusive small-scale octopus blue value chains and marine governance. Secondly, the strategic pathway to sustainable octopus fisheries requires a coordinated blend of legal reforms, community empowerment, infrastructure investment, ecosystem restoration, and knowledge transfer. Key elements of the strategic approach should include:

In Summary

Small-scale octopus fisheries in the WIO represent a frontier of opportunity for integrated development: food security, women's empowerment, biodiversity conservation, and climate resilience. However, realizing this promise requires bold leadership, inclusive governance, coordinated reforms, and investment in local capacity and infrastructure. The transition toward a sustainable and resilient octopus blue value chain in the WIO must be built on six mutually reinforcing pillars:

1. ***Gender Equality and Women's Empowerment:***
- Establish legal gender quotas in all fisheries governance bodies.
- Support training, entrepreneurship, and leadership development for women fishers.
- Ensure equitable access to fishing rights, inputs, services, and finance.

2. ***Ecosystem Integrity and Biodiversity Conservation:***
- Promote ecosystem-based management approaches.
- Monitor reef health and mitigate local stressors (e.g., sedimentation, pollution).
- Integrate reef conservation and octopus fisheries into Marine Spatial Planning.

3. ***Inclusive Market Access and Value Addition:***
- Develop cold storage, transportation, and drying facilities in remote coastal areas.
- Promote certification schemes (e.g. Fair Trade, MSC) for octopus products.
- Strengthen women-led market cooperatives and digital sales platforms.

4. ***Climate Resilience and Risk Reduction:***
- Map climate hazards affecting octopus habitats and harvest timing.
- Fund community adaptation plans with flexible closure calendars.
- Promote diversified income strategies such as seaweed farming, ecotourism, or mariculture.

5. ***Knowledge, Innovation and Technology:***
- Establish regional research hubs focused on octopus biology and gendered value chains.
- Introduce ICT tools for monitoring, education, and networking.
- Support youth engagement in marine science and fisheries entrepreneurship.

6. ***Regional Collaboration and Networking:***
- Institutionalize WION-SOF with regular forums, policy dialogues, and knowledge exchange.
- Harmonize octopus fisheries guidelines, closure protocols, and enforcement practices across borders.
- Embed octopus sustainability into IOC, WIOMSA, and AU-IBAR programming.

Furthermore, networking provides the essential glue for collaboration, innovation, and advocacy. The formation of the WIO Network of Small-Scale Octopus Fishers (WION-SOF) marks a major step forward in uniting diverse actors across geography, language, and practice. Through structured exchanges, joint training, community dialogues, and digital platforms, WION-SOF can accelerate uptake of best practices in closures, processing, and climate adaptation, strengthen grassroots leadership and peer mentorship (especially among women), and provide a coordinated voice to influence AU, SWIOFC, IOC, and donor policies. Therefore, national governments should formally recognize and fund WION-SOF country chapters, while partners (e.g. WIOMSA, FAO, World Bank, USAID) should support its operational sustainability and strategic outreach within the region.

With the right policies, partnerships, and platforms, the octopus sector can be transformed into a model for gender-equitable, climate-smart blue growth. The strategic pillars outlined in this brief offer a practical roadmap. Now is the time for policymakers, development partners, and communities to act decisively, so that octopus fisheries continue to sustain people and ecosystems for generations to come.



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