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A BLUE ECONOMY FOR WOMEN'S ECONOMIC EMPOWERMENT

REPORT PREPARED FOR THE INDIAN OCEAN
RIM ASSOCIATION

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EXECUTIVE SUMMARY

The Indian Ocean Rim Association (IORA) committed itself to a framework of gender equality through advancing women's economic empowerment through the Blue Economy, and as such, Women's Economic Empowerment and Blue Economy are cross-cutting issues across IORA's Priority Areas (IORA, 2016, IORA 2018b). The vehicle through which to facilitate women's economic empowerment in IORA is through the key sectors of the Blue Economy, as well as IORA's key priority areas. To this effect, the notions of both the Blue Economy and Women's Economic Empowerment are cross-cutting issues that inform IORA's 2017 – 2021 Action Plan. Although women have played an important economic role in the Indian Ocean for generations, they face a multitude of barriers to full economic inclusion in the Indian Ocean's Blue Economy. It is in this context that this report was commissioned by the United Kingdom Foreign and Commonwealth Office.

This report presents the findings of a study on the Blue Economy as a vehicle for women's economic empowerment. Drawing on a three-pronged approach – incorporating a policy and literature review; elite interviews; and secondary data analysis of available data – the study highlights the necessity for sufficient data from all member states to understand the participation rate of women in key Blue Economy sectors in order to facilitate women's economic empowerment through the Blue Economy. The Foreign and Commonwealth Office has supported this research to provide IORA member states with technical assistance on the topic "Strengthening women's economic empowerment in the Blue Economy, specifically in the Indian Ocean". Specifically, the primary objective was to provide an outcome report that provides technical support on realising the cross-cutting themes of the Blue Economy and Women's Economic Empowerment as per IORA's Action Plan 2017 – 2021.

It is expected that the state of women's economic empowerment in the Blue Economy in IORA countries cannot be any better than the state of women's empowerment in general globally. This is especially with regards to the emergence of the Blue Economy (including traditional and emergent sectors) as a vehicle to facilitate women's economic empowerment in IORA. It was thus imperative to provide an overview of the state of gender in IORA's Blue Economy. The inclusion criterion of countries was simply determined by data availability for the variables of analysis. Four key dimensions were explored, namely economic, socio-cultural, access to education and access to healthcare for women in these countries; and how these compare with their male counterparts. All variables were drawn from the World Development Indicators of the World Bank. A comparison is made between the year 2000 (the beginning of the new millennium) and 2017, to capture trends over approximately two decades, as permitted by data availability.

The data demonstrates that women in IORA generally lag behind their counterparts when these four key dimensions are analysed. It can be observed from secondary data analysis that women's empowerment presents a mixed picture and different levels of progress in IORA member states along the four dimensions used in this study. In each of these dimensions, women are less empowered than their male counterparts. Fewer females as a percentage of the female population above 15 years of age are economically active in all the IORA countries, as per the World Bank indicators, compared to their male counterparts. In spite of significant increases in the female labour force participation rate (LFPR) over the past two decades, their

levels are still below male LFPR. More women work in vulnerable employment, except in Australia and Singapore. Yemen stands out as the country with the least level of economic empowerment for women. This implies that significant effort will be required to avoid the repetition of the status quo with respect to women's economic empowerment in the Blue Economy. Targeted measures are required to identify which aspects of the value chains of the six Blue Economy sectors women could work in; the level of capacity required for them to work in these areas; other resources needed, such as access to technology, finance and markets; and what legal and policy interventions need to be implemented to address these challenges, and to empower and increase the economic participation of women in the Blue Economy.

Findings from the elite stakeholder interviews confirmed the challenges identified by the secondary quantitative data analysis and literature and policy review. The key findings from the elite stakeholder interviews demonstrate a number of areas where the IORA Secretariat will need to strengthen its coordination capacity in order to generate the necessary data needed to measure the extent of women's economic empowerment through the Blue Economy. Thus, member states may be required to capture gendered data on who participates in the Blue Economy in order to assist the IORA Secretariat in coordinating a centralised database to track women's economic empowerment through the Blue Economy within the Indian Ocean Rim Association. We noted that the conceptualisation of the Blue Economy draws on the narratives of inclusivity, sustainability, and a space to move beyond traditional approaches; and the development and empowerment of marginalised groups, including women. Thus, interviewees highlighted the opportunity for a new form of thinking around facilitating women's economic empowerment. However, there was also a warning against romanticising the notion of Blue Economy as an alternative developmental paradigm. Capacity-building programmes were seen as an essential step, as well as engaging with women's organisations active in advancing women's economic empowerment in the Blue Economy.

Interviewees concurred that there are many opportunities for women's economic empowerment through the Blue Economy, but that this would require a gendered policy approach in facilitating the full inclusion of women in Blue Economy sectors and economic activity. This, however, would require an enabling environment and creative policy thinking and development. Specific interventions the IORA Secretariat should consider, according to the interviewees, relate to better quality data disaggregated by gender, as well as campaigns through traditional workshops and social media to highlight the valuable contribution women can make. Specific interventions could relate to working with NGOs to teach women life skills and engaging in capacity-building initiatives to facilitate women's economic empowerment.

To this effect, we propose the following key recommendations to facilitate women's economic empowerment through the Blue Economy for inclusive and sustainable economic development and growth:

1. IORA's future work should emphasise capacity-building initiatives on women's economic empowerment for officials. What would be particularly relevant is to host a workshop, with key officials within the Blue Economy sectors, on gender mainstreaming within policymaking. Given that different member states will require

policies unique to their specific context, such a workshop will facilitate capacity-building by introducing a gendered perspective on policymaking for individual member states. This will, however, require a policy analysis of women's economic empowerment in each member state of IORA. Thus, a future study should focus on engaging with Ministries of Oceans, Ministries of Women, Ministries of Social Development and Ministries of Labour to facilitate a policy status quo and framework for women's economic empowerment through the Blue Economy.

2. Women within IORA member states should be educated about what the Blue Economy is and how it can benefit them. A regional awareness campaign could be launched through the Women's Economic Empowerment Workign Group, using traditional and social media in member states. Such an initiative should ideally be supported by the Secretary-General of the Secretariat using traditional and social media. Focus should be placed on sectors of the Blue Economy where women are under-represented or discriminated against. This would include traditionally male-dominated sectors such as Renewable Ocean Energy, Seabed Exploraion and Minerals and Seaports and Shipping.
3. A critical element in advancing women's economic empowerment in the Indian Ocean's Blue Economy is the need for evidence-based policymaking. To this effect, IORA has stressed this as a priority in looking towards the future to achieve its long-term vision on women's economic empowerment through the Blue Economy. Research support is an essential component to advance evidence-based policymaking. It is essential to fill data gaps and, as demonstrated in this report, IORA needs more data disaggregated by gender, especially in the sectors of the Blue Economy. Given that in future IORA wishes to support women entrepreneurs, this data will be needed in determining strategies that advance women's economic empowerment through the Blue Economy in the Indian Ocean Rim Association. The Secretariat therefore needs to engage member states' Ministries of Labour to start capturing data disaggregated by gender in the key Blue Economy sectors. It will also be essential for the Secretariat to engage Business and Economic Development Ministries to conduct an audit of key companies in the emergent technology-driven sectors of the Blue Economy to ascertain the level of participation of women in those sectors. Another alternative would be to place the necessity of gendered disaggregated data on key sectors of the Blue Economy on the agenda for the next Council of Ministers' meeting. This would facilitate a baseline from which to facilitate and assess who participates in which sectors of the Indian Ocean's Blue Economy for the realization of IORA's 2017-2021 Action Plan goals on Women's Economic Empowerment through the Blue Economy.
4. In order to facilitate research support for evidence-based policymaking, academic collaborations are strongly encouraged. Member states need to consider investing

more in research and academic collaborations – assisted by better resourced dialogue partners – in order to generate the necessary data needed for evidence-based policymaking. This could be facilitated through the IORA Academic Group’s initiatives, such as increased mobility within the region, especially for researchers and post-graduate students, coordinated by the Chair of Indian Ocean Studies (CIOS). Collaborative research, especially amongst women in the sectors of the Blue Economy, could be encouraged by the IORA Special Fund, and through funding provided to high quality impactful research initiatives that focus on gender equality and the empowerment of women. Further to this, the Secretariat could engage member states’ Ministries of Higher Education to ascertain the level of participation of women in STEM-related fields at universities. This is a necessary process to facilitate a sense of women’s inclusion in these academic areas, as this will impact on women’s economic empowerment in emergent science and technology-driven areas of the Blue Economy. Alternatively, it is recommended that the IORA Secretariat issue a call for research funding to facilitate the creation of the necessary database on women’s participation in STEM-related disciplines at universities as this will impact on women’s economic empowerment in the key sectors of the Blue Economy with a strong science and technology focus.

5. There is a need to map and engage with non-governmental organisations within IORA member states to determine the key issues around which women within the Indian Ocean’s Blue Economy are mobilising and prioritising to advance women’s economic empowerment. This exercise could build on already strong links between IORA and Women, including through a three year research and capacity building project currently underway in Australia.
6. Key to integrating women’s economic empowerment in the Blue Economy will be to facilitate stronger cross-collaboration between the Working Group on Women’s Economic Empowerment (WGWEE) and the Working Group on Blue Economy (WGBE). Members of each group need to be represented in both the working groups to streamline and facilitate strategies for women’s economic empowerment through the Blue Economy. This would also bring an element of gender-mainstreaming to IORA as a regional entity in working towards the long-term vision of the Blue Economy and women’s economic empowerment in its Action Plan 2017 – 2021. It is proposed that the Chair and Vice-Chair of each WG serve on the other to enable ease of decision-making.
7. Women need to be better represented at all IORA conferences, workshops, seminars, and training programmes, and female participation should not be limited to what are often constructed as women’s workshops. It is essential for women to be represented across the six priority and two focus areas within IORA, including traditionally male-

dominated areas such as, seabed exploration, renewable ocean energy, and seaports and shipping.

8. IORA needs to ensure that interventions are monitored and evaluated in such a way as to measure the impact of new initiatives and ensure that there is no duplication in effort and thus wastage of funding. This could be done by the Secretariat, IORAG and the CIOS working together to develop indicators and how to measure them. We propose a matrix for input and further refinement to monitor women's economic empowerment through the Blue Economy in IORA, given the heterogeneity of the region.

1. INTRODUCTION AND BACKGROUND

The Indian Ocean Rim Association (IORA) is a regional organisation of 22 member states¹ that border the Indian Ocean and nine dialogue partners, namely China, France, Japan, the United States of America, Germany, the United Kingdom, Egypt, Turkey and South Korea (IORA 2018a). IORA's main objectives, captured in its charter, are cooperation for sustained growth and balanced development through regional economic cooperation (IOR-ARC, 1997; IORA, 2014).² The IORA charter sets the overall purpose of IORA as "to build and expand understanding and mutually beneficial cooperation through a consensus-based, evolutionary and non-intrusive approach" (IORA, 2014). Six priority areas were earmarked in 2018 to achieve this purpose:

1. Maritime Safety & Security
2. Trade & Investment Facilitation
3. Fisheries Management
4. Disaster Risk Management
5. Tourism and Cultural Exchange
6. Academic, Science and Technology

The Blue Economy is the vehicle through which member states look to address mutual development aspirations such as inclusive growth and sustainable development. Thus, Blue Economy forms a cross cutting issue across the six priority along with women's economic empowerment. Key sectors of the Blue Economy are Fisheries and Aquaculture, Renewable Ocean Energy, Seaports and Shipping, Offshore Hydrocarbons and Seabed Mining, Marine Biotechnology, Research and Development, and, Tourism. The guiding principles of cooperation between IORA member states across the six priority areas are sovereign equality, territorial integrity, political independence, non-interference in internal state affairs, mutual benefit and peaceful coexistence (IORA, 2014).

¹ Commonwealth of Australia, People's Republic of Bangladesh, Union of Comoros, Republic of India, Republic of Indonesia, Islamic Republic of Iran, Republic of Kenya, Republic of Madagascar, Malaysia, Republic of Mauritius, Republic of Mozambique, Sultanate of Oman, Republic of Seychelles, Republic of Singapore, Federal Republic of Somalia, Republic of South Africa, Democratic Socialist Republic of Sri Lanka, United Republic of Tanzania, Kingdom of Thailand, United Arab Emirates and Republic of Yemen.

² IOR-ARC changed its name to IORA in 2013. See <https://www.iora.int/en/about/milestones>.

Although IORA was established in 1997, the first Leadership Summit was held by the Chair, Indonesia, in Jakarta in 2017, just before South Africa took over as Chair. At this historic summit, the Jakarta Concord and Action Plan 2017 - 2021 were adopted to celebrate the 20th anniversary of the association; a clear sign that IORA had become a far more unified and cohesive regional organisation with common interests and concerns despite local political, social, economic and cultural diversities. Cross-cutting the priority areas are women’s economic empowerment and the Blue Economy. This project focuses on the intersections of between the Blue Economy (and its key sectors) and women’s economic empowerment.

Over the past five years – under the leadership of Australia, Indonesia and South Africa – there has been a concerted effort within IORA to foreground women’s economic empowerment (WEE) in the Blue Economy (BE). In 2014, Australia suggested that WEE be formally introduced as a cross-cutting IORA priority issue. At the same time, Blue Economy was also suggested as a cross-cutting issue for IORA’s priority areas. In 2015, the first of three workshops on the BE was hosted in Durban, South Africa, through the Blue Economy Core Group, leading to the BE also being recognised as a focus area within IORA.

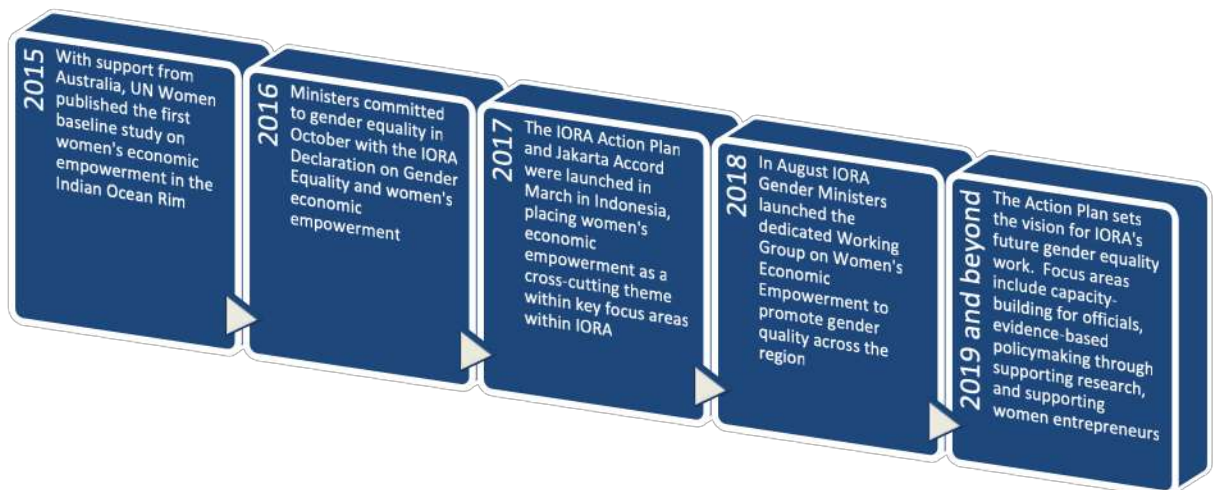


Figure 1: Policy Evolution of Women's Economic Empowerment within IORA (adapted from <https://www.iora.int/en/priorities-focus-areas/womens-economic-empowerment>)

Figure 1 demonstrates that women’s economic empowerment is a relatively new policy priority within IORA as a regional entity. Indeed, Harris-Rimmer (2017: 6) noted that, with the adoption of women’s economic empowerment as a crosscutting priority issue, it had brought IORA within the gender empowerment framework: an area where the association had looked “decidedly old-fashioned with its lack of female representation and neglect of gender policy”. Further to this, IORA member states recognised the centrality of women’s economic empowerment as the foundation for advancing gender equality, and as such, highlighted the necessity for full and equal participation of women in the Blue Economy (IORA, 2016). The Blue Economy is seen as one of the vehicles through which to advance women’s economic empowerment within the Indian Ocean Rim region.



Figure 2: Policy Evolution of Blue Economy as a priority area for IORA (adapted from <https://www.iora.int/en/priorities-focus-areas/blue-economy>)

Figure 2 demonstrates that the timeline of recognising and prioritising the Blue Economy coincided with the recognition of women’s economic empowerment as a central component to sustainable development and prosperity within the Indian Ocean region. Between 2015 and 2017, three Blue Economy Core Group (BECG) workshops were held, of which the key outcome was the establishment of the Working Group on Blue Economy. These workshops were:

1. IORA Blue Economy Core Group Workshop on *Promoting Fisheries and Aquaculture & Maritime Safety and Security Cooperation in the Indian Ocean Region* from 4 - 5 May 2015 in Durban, South Africa.
2. The Second Blue Economy Workshop on *Maritime Connectivity and Financing for Development in the Indian Ocean Rim* from 13 - 14 July 2016 in China.
3. The Third IORA Blue Economy Core Group Workshop on *Environmental Sustainability and the Blue Economy in the Indian Ocean Region* from 10 - 11 April 2017 in Mauritius.
4. In 2018, from 12 – 13 September, the first preparatory meeting for establishing a Working Group on Blue Economy took place.

Subsequent to the activities outlined above, it was agreed that two new working groups would be established. These are the Working Group on Women Economic Empowerment (WGWE) to be coordinated by Australia and Mauritius; and the Working Group on the Blue Economy (WGBE) to be coordinated by South Africa. The terms of reference of these two working groups have been approved and are now established as part of IORA’s new machinery, outlined in the Action Plan 2017 - 2021 agreed to at the Leadership Summit hosted by Indonesia in 2017. Since taking over as chair of IORA, South Africa has managed to facilitate the establishment of these two working groups, as well as the Working Group on Maritime

Safety and Security (WGMSS) (to be coordinated by Sri Lanka) and a Core Group on Tourism (to be coordinated by the UAE).

Table 1: IORA Action Plan 2017 - 2021 on Blue Economy and Women’s Economic Empowerment

Priority Area	Flagship initiatives		
	Short term	Medium term	Long term
Blue Economy	Establish an IORA Working Group on Blue Economy. Implement the outcomes of the Blue Economy Core Working Group Workshops as well as Ministerial and High-Level Expert Meetings.	Develop appropriate mechanisms of cooperation for sustainable development of Blue Economy sectors, including training and capacity-building programmes.	Improve livelihoods of coastal communities through capacity-building programmes.
Women’s Economic Empowerment	Establish an IORA Working Group on Women’s Economic Empowerment. Establish a women’s business forum in the Indian Ocean Rim Business Forum.	Establish cooperation with UN Women and relevant organisations for capacity-building and information exchange. Champion initiatives to increase women’s economic empowerment such as the Women’s Empowerment Principles. Implement training and capacity-building programmes.	Organise activities to strengthen women’s economic capacity and participation in businesses.

Although these developments occurred in parallel with one another since 2014, there has not been much research conducted in terms of interrogating the linkages that exist between the focus of the Working Group on Women Economic Empowerment (WGWE) and the Working Group on the Blue Economy (WGBE). Specific questions that should be addressed include (1) how to enhance and empower women through the Blue Economy; and (2) how women could play a crucial role in the Blue Economy for sustainable development and future prosperity in the region. This project aims to address these two priorities.

1.1. Project assignment: Women's economic empowerment in The Indian Ocean's Blue Economy

The Human Sciences Research Council (HSRC) of South Africa, a statutory science council, responded to a call for proposals in October 2018 and was awarded funding from the United Kingdom Foreign and Commonwealth Office to address the following as per the stated objectives of the call:

The Foreign and Commonwealth Office requires technical assistance on the topic “Strengthening women’s economic empowerment in the Blue Economy, specifically in the Indian Ocean”. Specific objectives of the project were:

1. Delivering an outcome report that contributes to the crosscutting themes of Blue Economy and women’s economic empowerment, based on the IORA Action Plan 2017 - 2021.
2. Provide technical advice and support on women’s economic empowerment issues in the Indian Ocean’s Blue Economy to the IORA Secretariat and Academic Group, acting as subject matter expert.
3. Attend selected meetings and visits to the IORA Secretariat to provide technical input on women’s economic empowerment issues in the Indian Ocean’s Blue Economy.

The first project presentation was held as part of the IORA Workshop on Financial Inclusion for Women Entrepreneurs in Abu Dhabi from 10 – 11 December 2018. The workshop brought together experts from the private sector; policymakers and senior government officials; representatives from the banking sector and financial service providers; regulatory bodies; consumers; civil society; and women entrepreneurs. The workshop aimed to provide a platform for IORA member states to discuss and create awareness on the challenges that women entrepreneurs face in accessing financial support.

Professors Joleen Steyn-Kotze and Narnia Bohler-Muller attended the event and delivered a presentation on *A Blue Economy for Women’s Economic Empowerment: A Glance at the State of Affairs*. The presentation was well received by the participants, with a number of comments offered to improve the project work, specifically: how can we use the Blue Economy to enhance women’s increased involvement in business and entrepreneurship within IORA? The Chair of the IORA Business Forum, who was present, was interested in exploring implementable options and finding practical solutions.

It was recognised that this could not be done without the evidence generated by research to identify where the gaps and opportunities exist, and thus what kind of interventions are necessary in which places. Case studies and the mapping of women’s movements in the region would be important in determining best practices.

Two other gender-related projects were announced at this event in the UAE: UN Women’s three-year project to update the 2015 baseline report on women in IORA, and a second project on women in fisheries and aquaculture in the region. These two projects are funded by the Australian Commonwealth. The United States of America is also embarking on a funded effort to support women entrepreneurs in IORA through training, upskilling and providing opportunities. It is clear from these financial commitments by dialogue partners (UK and US in this instance) that there is a growing awareness of the importance of the Indian Ocean region, and of IORA as a regional association. The importance of the role of member states and dialogue partners was emphasised by the Council of Ministers (COM) in the annual

meeting held from 31 October to 2 November 2018 in Durban. In the *Declaration on Guidelines for Enhancing Interaction with Dialogue Partners in IORA*, it is stated *inter alia* that dialogue partners are encouraged to:

1. Collaborate in at least one of IORA's agreed priority areas or crosscutting issues.
2. Facilitate provision of expert assistance from their public and private sectors in the implementation of/progress on specific IORA projects and activities identified in priority area work plans, including sourcing regional and local expertise where possible.
3. Share research work/studies relevant to the priority areas and projects with member states.

The second project workshop was held via webinar on 24 January 2019, the first ever in the history of IORA. The focus of this second engagement was on setting a gendered policy agenda for IORA with a focus on gender mainstreaming in developing policy interventions and strategies. The primary aim was to link gender empowerment and Blue Economy activities within the Indian Ocean Rim within the policy-making realm. A number of insights were offered by the participants, namely:

1. To ensure an inclusive approach where communities are participants in the research and not merely objects thereof.
2. To ensure that the work on women's economic empowerment does not stop at the policy-making level, but continues through policy monitoring and evaluation on the implementation of policy recommendations.
3. To make an effort to learn from other regions that may be more advanced in linking policy-making to implementation of women's economic empowerment, and to include case studies from those regions.
4. To keep in mind the diversity of the region, but to also find ways to cross-pollinate ideas on gender mainstreaming in the policy-making of member states.

It was also mentioned that not only public servants should be part of such conversations, but that academics, civil society, communities and practitioners should be actively encouraged to participate. An interesting discussion also emerged regarding whether a women's business forum was a good idea, and there seemed to be a strong consensus that men should also walk this proverbial path of transformation towards women's economic empowerment with women.

Feedback from both workshops was used to refine the research and as a guide to the final recommendations contained in this report. This was supplemented with literature and document reviews, including selected case studies from IORA member states; analysis of secondary data; and key informant elite interviews, as discussed in more detail in the methodology section below.

The next section of the report outlines the methodology used in this study. This is followed by the literature review, analysis of secondary data, and the results from the elite interviews. Finally, we present the conclusion and recommendations.

1.2. Methodology

The overall purpose and guiding objectives of this project required a three-pronged approach: a desktop literature and document review drawing on policy analysis; qualitative key informant elite interviews; and quantitative analysis of existing databases (such as the World Bank’s Gender Data Portal) to mine and analyse relevant data that speak to factors that are likely to impact on women’s economic empowerment within the Blue Economy. Key documentation also included the UN Women’s baseline reports, as well as previous scholarly works that interrogate women’s economic empowerment in the Indian Ocean’s Blue Economy.

Disaggregated data by gender relating to issues of agency, economic and social context, economic opportunities, education, health, and public participation and decision-making are explored in this report. This is an important baseline, given the priorities of inclusive and sustainable growth that inform the conceptual construction³ of the notion of Blue Economy, as well as its emergent sectors.⁴

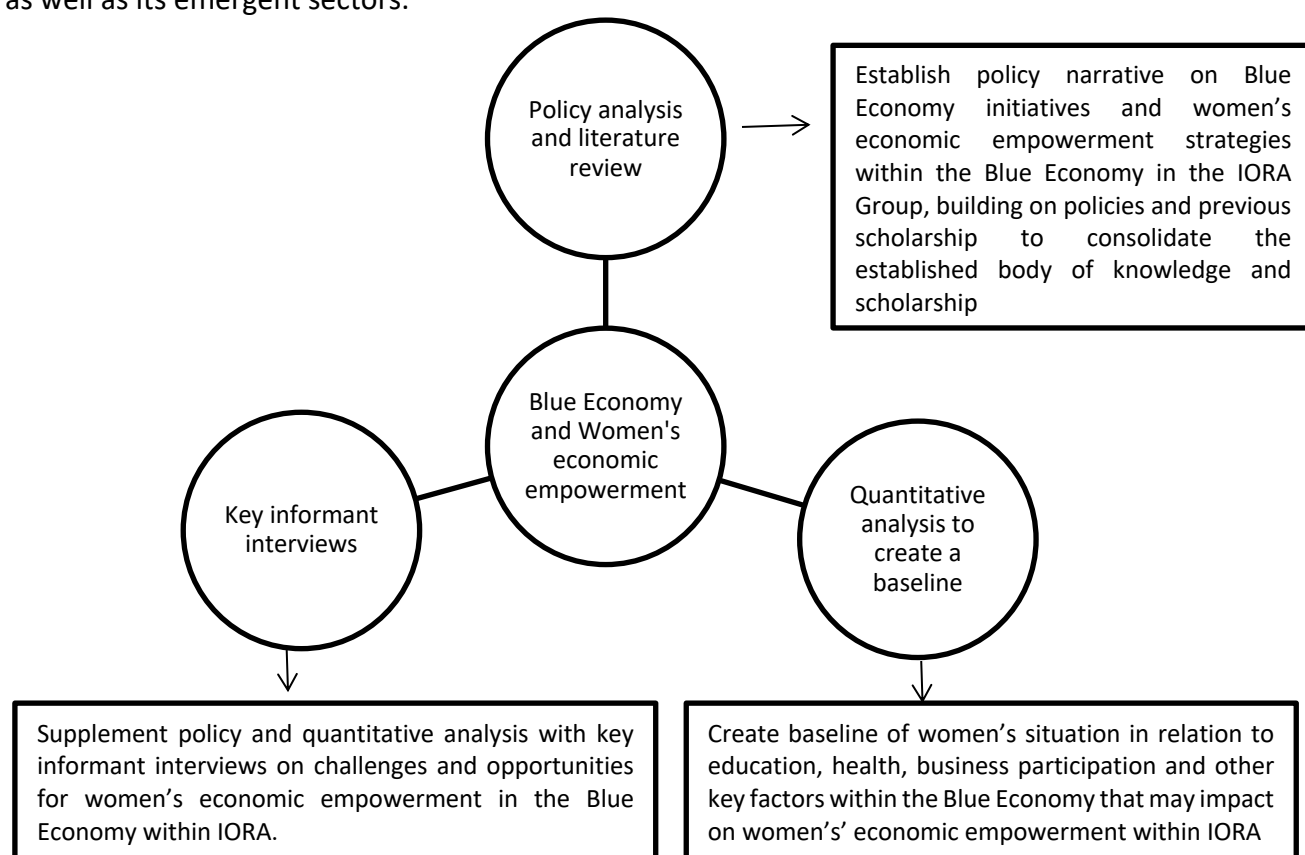


Figure 3: Three-pronged research approach: Technical support for women's economic empowerment through the Blue Economy in the Indian Ocean

³ See, for example, Attri, V.N. 2018. The Blue Economy and the theory of paradigm shift. In: Attri, V.N. and Bohler-Muller, N. eds. 2018. *The Blue Economy handbook of the Indian Ocean Region*. Pretoria: Africa Institute of South Africa Press: 15 – 37.

⁴ See, for example, Colgan, C.S. 2018. The Blue Economy: Theory and strategy. In Attri, V.N. and Bohler-Muller, N. eds. 2018. *The Blue Economy handbook of the Indian Ocean region*. Pretoria: Africa Institute of South Africa Press, 38-63.

2. POLICY ANALYSIS AND LITERATURE REVIEW

This section presents the policy and literature review. We first present an overview of the concept of the Blue Economy and its relationship to women's economic empowerment in the Indian Ocean. This is followed by anchoring the linkage between the Blue Economy and women's economic empowerment by presenting gender mainstreaming in the policy realm, to use the Blue Economy as a vehicle for women's economic empowerment.

2.1. THE CONCEPT OF THE BLUE ECONOMY AND WOMEN'S ECONOMIC EMPOWERMENT

The Blue Economy is a concept that looks to advance economic development and social inclusion, and to enhance livelihoods while working to ensure the environmental sustainability of the oceans and coastal territories (World Bank, 2017: vi). At its core lies the commitment "to decouple socioeconomic development from environmental degradation, by the incorporation of the real value of the natural capital (ocean values and services) into all aspects of economic activity" (World Bank, 2017: vi).

A key component of the Blue Economy is its emphasis on recognising that the ecosystem services provided by the ocean are essential global priorities, and have both intrinsic and fiscal qualities that support well-being and development (Rumbaitis del Rio, 2014). This is a considerable shift from the "traditional 'brown – high energy, low employment and industrialized development' model, which considers seas and oceans as a free resource extraction and waste dumping, where environmental costs are externalized from economic calculations" (Blue Economy Project, 2016: 4). However, it has also been noted that there is a need to ensure "equitable access to marine resources even as we put in place measures to better manage that access to reduce unsustainable use" (Rumbaitis del Rio, 2014).

As an alternative model of development – what has been termed a "paradigm shift" by some economists – the idea that the Blue Economy may generate employment and facilitate inclusive and sustainable growth dominates international policy discourse (Attri and Bohler-Muller, 2018: 1). Thus, it is not surprising that many countries within IORA are in the process of developing various policy documents and strategies related to the Blue Economy (Colgan, 2018: 38). And, for Colgan:

All these documents draw attention to the unique resources and features of each country or region, but there is a common set of themes in all these discussions focussing on economic opportunities to be seized while acknowledging the environmental limitations within which development must take place. These documents may be best described as efforts of awareness building. They are likely to be effective in encouraging leaders in the public, private and non-governmental sectors to pay attention to the opportunities and challenges of the Blue Economy, but there are relatively few papers on the Blue Economy that speak to the practicalities of what specific strategies will be needed to direct actions. Persuading people to act is not the same thing as deciding what action to take (2018, 38).

The notion of the Blue Economy is built on common pillars, as demonstrated in *Figure 4*. The conceptualisation of the Blue Economy encompasses a strong empowerment element towards social justice. It is also regarded as the vehicle through which to advance women’s economic empowerment in the Indian Ocean Rim.

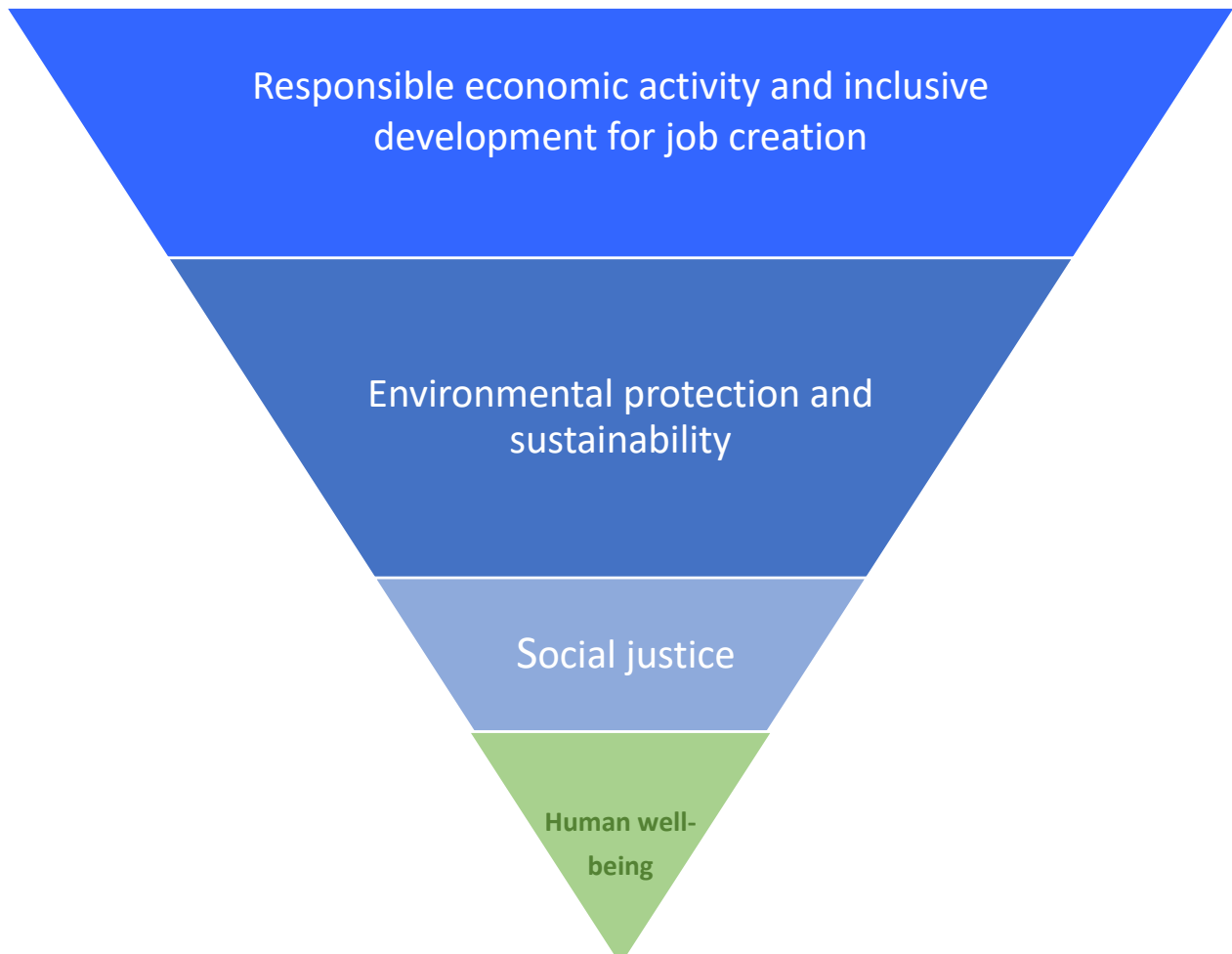


Figure 4: Common conceptual pillars of the concept of the Blue Economy

In advancing women’s economic empowerment through the Blue Economy, IORA states have committed to the Women’s Economic Principles. These principles “offer a seven-step guide” for women’s empowerment under the banner of *Equality Means Business*. Essentially, Women’s Economic Principles⁵ “emphasise the business case for corporate action to promote gender equality and women’s empowerment are informed by real-life business practices and input gathered from across the globe” (EmpowerWomen, 2017).

⁵ There are seven Women’s Empowerment Principles. These are (1) establish high-level corporate leadership for gender equality; (2) treat all men and women fairly at work – respect and support human rights and non-discrimination; (3) ensure the health, safety and well-being of all women and men workers; (4) promote education, training and professional development for women; (5) implement enterprise development, supply chain and marketing practices that empower women; (6) promote equality through community initiatives and advocacy; and, (7) measure and report on progress to achieve gender equality.

These principles thus create the foundation on which the policy directives and developmental strategies of member states for women's economic empowerment through the Blue Economy must be considered. This would require a gender mainstreaming policymaking lens, which requires one to pay attention to "criteria of genderedness, structural and intersectional understanding in relation to content, and empowerment and incremental transformation in relation to process" (Krizsan & Lombardo, 2013: 78). Given the focus of women's economic empowerment through the Blue Economy, where member states advance the Women's Empowerment Principles, Melinda Gates (2018) notes:

One of the most profound ways a woman can make life better for herself and her family is to take control of her economic future ... When women have money in their hands and the authority to choose how to spend it, they grow in confidence and power. They change the unwritten rules that say women are lesser than men.

Although women have played an important economic role in the Indian Ocean for generations, patriarchal, social and economic structures have prevented their full inclusion into IORA's Blue Economy. There is an established body of work detailing exclusion, over-concentration of women in the informal economy of the Blue Economy, and lack of education and cultural attitudes to gender equality, as barriers to women's economic empowerment (Steyn-Kotze, 2017). In order for IORA to fulfil its policy promise in the Jakarta Declaration, member states must open the Blue Economy space to facilitate equal participation of women, as per the Women's Empowerment Principles.

As earmarked in the IORA Action Plan 2017 – 2021, this can be done through gender focused capacity-building and business development initiatives, targeted at enhancing the participation of women in the Blue Economy, translating the Women's Empowerment Principles into actionable programmes and projects that address the social, cultural, financial, educational and health barriers that impede the empowerment of women in the Blue Economy in IORA member states. One will also need to analyse women's representation within the policymaking realm to facilitate gender mainstreaming in creating a Blue Economy for women's economic empowerment through the Women's Empowerment Principles.

We now turn to the state of women in the Blue Economy in IORA in order to determine what the barriers, gaps, opportunities and enablers are to women's full economic participation in this economy, as envisaged through the Women's Empowerment Principles.

3. STATE OF WOMEN IN THE BLUE ECONOMY

The Indian Ocean has been identified as a vital resource IORA member states can use to transform their economies and the region. In the 2017 Jakarta Declaration on Blue Economy, IORA members recognised the essential role that the Blue Economy plays in human well-being, and in social and economic development. The leaders at Jakarta pledged to promote the Blue Economy "as a key source of inclusive economic growth, job creation and education, based on the evidence-based sustainable management of marine resources". This commitment recognised the integral part that women should and can play in the Blue Economy.

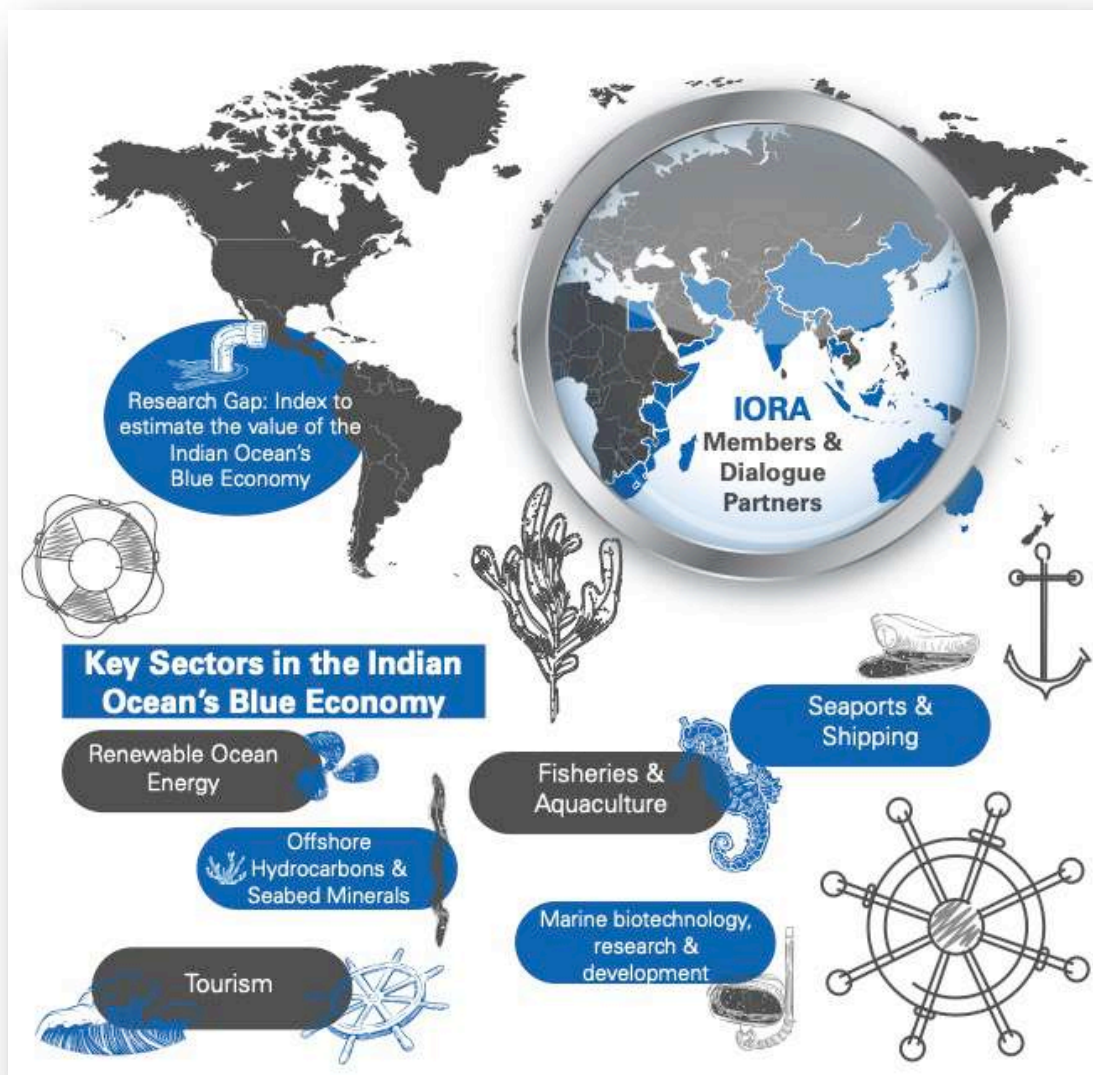


Figure 5: Key Sectors of the Indian Ocean's Blue Economy

If we accept that the Blue Economy is the vehicle through which to advance women’s economic empowerment as a goal for IORA, we need to be able to adequately measure the participation of women in the member states’ coastal and ocean economies. To help policymakers, business leaders and other stakeholders prioritise action in a regional effort to promote women’s economic empowerment, the team looked at female participation in the six pillars of the Blue Economy. One of the central issues facing this particular project is the lack of adequate data in many of the member states. Accurate data on women’s participation is an indispensable tool for understanding what affects women’s economic participation in any sector.

The Blue Economy is not an industry in the traditional sense of the word, and historically has not been treated by statistics agencies as a distinct, segmented economic sector.

Consequently, sourcing data on participation in this sector is complex. Any worthwhile analysis of labour participation in the Blue Economy must meet three criteria: (i) direct employment in the Blue Economy; (ii) indirect employment in the sectors supplying inputs to the Blue Economy; and (iii) induced effect on employment as a result of subsequent rounds of spending. Following these criteria is essential if we wish to understand gender participation in this context. If we ignore the last two in favour of the first, then we marginalise women in data analysis and ignore the many important indirect contributions women make to the Blue Economy sectors.

Data on Blue Economy-related employment is still fragmented, lacking quality and cross-national comparability within IORA. Data is often not gender-segregated (when it is available at all) and, consequently, it is difficult to draw an accurate picture of women's involvement in key Blue Economy sectors. This is the case not only in IORA member states with weak central governments or in conflict states, but also in more developed states, where different methods and sources often result in different figures and results.

Measuring the contribution of women to the Blue Economy is challenging for numerous reasons, including the fact that it is difficult to gauge the apportioning of any region's economic activity into ocean and non-ocean parts. The danger is in over-estimating ocean-related economic activities. According to Hosking *et al.* (2014) the most apt approach is to identify ocean and non-ocean segments of economic activities, and then to divide the value added per sub-sector (and sub-set) into ocean and non-ocean portions. These researchers followed this approach with South African data for the 2010 year and used the standard industrial classification code list. The success of this approach provides a blueprint for future researchers (with appropriate sex-segregated data) to identify the economic contribution of women to the Blue Economy sectors in IORA's member states. However, as this section stressed, there is a substantial lack of suitable data to outline the contribution of women to the Blue Economy sectors of the Indian Ocean.

It is in this context that one can build on what Mohanty (2018: 65 – 68) conceptualises as the 'blue innovation' whereby the

cornerstone for growth prospects of the ocean sector (blue innovation) ... a 'blue voice' should be promoted at domestic and international levels ... to raise awareness of the Blue Economy as a dominant developmental strategy and also to help define and classify this strategy.

To this effect, Mohanty argues that a new accounting framework for the global estimation of the Blue Economy is essential, most notably around emerging sectors, such as new ocean's technologies, but also to raise awareness of the possibility of the inclusive and sustainable developmental opportunities the Blue Economy offers. Inclusivity would relate to women's economic empowerment within the Blue Economy as well. We therefore propose, given the cross-cutting nature of the Blue Economy and women's economic empowerment that such a framework should also include data disaggregated by gender in order to enhance the knowledge capacity of member states on how the Blue Economy fares in facilitating women's economic empowerment.

This section of the report will look at six components of the Blue Economy: (1) fisheries and aquaculture; (2) seaports and shipping; (3) marine biotechnology, research, and development; (4) renewable ocean energy, (5) seabed exploration and minerals; and (6) ocean and coastal tourism. Statistics on oil and gas exploration are virtually non-existent, possibly because women do not participate much in these largely male-dominated sectors. This section discusses gender participation in each of these sub-components in IORA and the challenges to measuring the contribution of women in these sub-components.

3.1. Fisheries and aquaculture

The most labour intensive of these four components is the first. This sub-sector of the Blue Economy has seen substantial growth in the Indian Ocean over the last few years. Aquaculture production in IORA was 26.5 million metric tons in 2016. According to the World Bank, this presents a significant increase from 2006 when aquaculture production was only 9.1 million metric tons. It is the organisation's Asian members who contribute the most to overall output, and Asian member states' share of aquaculture production in IORA grew from 72% in 2006 to 87% in 2016. The country responsible for the bulk of the observed upsurge in production is Indonesia, whose contribution to IORA's aquaculture output grew from 30% in 2006 to 63% in 2016 of the total (World Bank, no date). As aquaculture production surges in the Indian Ocean, more and more women are entering this profession. However, it is difficult to gauge the precise contribution of women to fisheries and aquaculture in IORA.

The Food and Agriculture Organization (FAO) of the United Nations began gathering employment data on female involvement in aquaculture and fisheries in 1970. FAO has been working over the last few decades on improving the quality of sex-disaggregated employment data in the sector. However, while the organisation has been successful in obtaining quality data in some regions (such as Europe), in others it has struggled. FAO gathers data on fisheries and aquaculture from member states' own statistical offices. Some offices report only men, and it cannot always be determined whether these figures truly indicate that no women are employed in fisheries and aquaculture.

The quality of data also varies greatly between countries and, interestingly enough, this variation is not always linked to the level of economic development. India, for instance, offers rather good records, which seems to be due to the attention given to this issue by gender-sensitive development aid agencies. In contrast, the participation of women in the industry is still poorly documented and researched in most of IORA's member states. This lack of comprehensive and timely data is one reason why women are mostly invisible in aquaculture policy (Biswas, 2017).

The poor quality of employment data in the fisheries and aquaculture sector notwithstanding, it would seem that women in most of the Indian Ocean region are strongly associated with the post-harvest (e.g. processing) segment of the sector (Weeratunge, Snyder & Sze, 2010). Women also play a prominent role in the marketing and sale of fish in many parts of the Indian Ocean. For instance, Matsue, Daw, and Garrett's study on *Women fish traders on the Kenyan coast: Livelihoods, bargaining power, and participation in management* highlights the role of

*Mama Karanga*⁶. Matsue *et al* (2014: 531) stress that “Mama karanga provide a link between the fishery and poor fish consumers, but remain vulnerable to changes in the fishery due to a lack of education, alternative livelihoods, and capital”. And, more importantly for *mama karanga*, while fish trading may not be the ideal occupation, it is “one that was accessible to women lacking education, skills or access to capital” (Matsue *et al*, 2014: 537). While Matsue *et al* demonstrated that *mama karanga*’s participation in fisheries’ management is low, they also highlight the “centrality of social networks and social capital ... in influencing fishing livelihood strategies” (2014: 551).

The proportion of women participating depends on the production mode and the type of occupation. It would appear that most of the women are involved in small-scale, low capital, intensive operations, in charge of all tasks, such as the shrimp processing industries in India and Bangladesh, where studies suggest that the vast majority of the workforce in the shrimp peeling sub-component of the industry are women.⁷

Indeed, not enough is known about gender equalities in fisheries and aquaculture value chains.⁸ Consequently, it is difficult to map gender inequities in the post-harvest sector. Depending on sources, what is considered as part of the seafood industry varies greatly. Consider, for example, the following questions: (i) Where does the post-harvest start? (ii) Where does it end? and (iii) Which input/output production and support activities should be included? Currently, we do not have adequate answers to these important questions. Enhanced statistics on both the secondary post-harvest and service sectors would greatly improve our understanding of the existing impact of women on this sector of the Blue Economy.

Women participate in the primary sector of aquaculture and fisheries, according to data from the FAO. However, the female quotient of primary aquaculture labour in the Indian Ocean tends to be small.⁹ Women, for example, comprised only 7% of all those engaged in Sri Lanka’s primary sector of fisheries and aquaculture in 2016. Interestingly, this is up from 2006, when less than 1% of the total workforce in this primary sector were female (World Bank, no date). It is thought-provoking to contrast this with female participation in inland fisheries. In the Indian Ocean, the ratio of male to female inland fishers varies significantly according to a review by Funge-Smith (2011). About 50% of the inland fishers in the United Republic of Tanzania and Mozambique are women. In Iran and Indonesia, on the other hand, all inland fishers were reported to be men. In primary aquaculture, women tend to be found in niche

⁶ These “are women on the Kenyan coast who buy and process fish for local markets from small-scale fishermen” (Matsue, Daw & Garrett, 2014). The term means “frying women in Kiswahili” (Matsue *et al*, 2014: 532).

⁷ Gopal (2015) provides an interesting analysis of this kind of gender segmentation in the Indian shrimping processing industry by looking at the state of Gujarat.

⁸ This knowledge gap is outlined, and guidelines for gender-sensitive value chains are provided, as a far-reaching report by FAO (2016).

⁹ On the other hand, marine ecosystem-scale fisheries research suggests that the undercounting of women is a particular problem in small-scale fisheries, where many women are thought to participate (Kleiber, Harris & Vincent, 2015). Consider, for example, Oman, where the Ministry of Agriculture and Fisheries Wealth of Oman does not gather gender disaggregated data. However, small-scale field-based research suggests that many women in Oman are involved in harvesting food from the ocean, as well as processing and marketing this food (Al Rashdi and McLean, 2014). Women are particularly included in the following: harvesting marine gastropods, bivalves, cephalopods, sea cucumbers and crustaceans; as well as spear-fishing.

industries. On the island of Sri Lanka, for instance, the female aquaculture workforce tends to be located in ornamental fish production – in that industry, 30% of workers are female (FAO, 2012). In another example, women make up 10% of the total aquaculture workforce in Malaysia, but tend to be found mainly in freshwater aquaculture and hatchery operations (FAO, 2012).

Table 2: Female versus male participation in aquaculture¹⁰

Country	Year	Aquaculture - Female	Aquaculture - Male	Aquaculture - Unspecified	Aquaculture - Total	% Women
Australia	2000			4281	4281	N/A
Australia	2005			4126	4126	N/A
Australia	2010	307	3444		3751	8.18%
Australia	2011	1135	3321		4456	25.47%
Australia	2012	259	3477		3736	6.93%
Australia	2013	566	2734		3300	17.15%
Australia	2014	913	4190		5103	17.89%
Australia	2015	1734	5300		7034	24.65%
Australia	2016	873	4490		5363	16.28%
Australia	2017	1946	6415		8361	23.27%
Bangladesh	2000		2750000		2750000	0.00%
Bangladesh	2005		2890000		2890000	0.00%
Bangladesh	2010		3080000		3080000	0.00%
Bangladesh	2011		3080000		3080000	0.00%
Bangladesh	2012		3080000		3080000	0.00%
Bangladesh	2013		3080000		3080000	0.00%
Bangladesh	2014		3080000		3080000	0.00%
Bangladesh	2015		3080000		3080000	0.00%
Bangladesh	2016		3080000		3080000	0.00%
Bangladesh	2017		3080000		3080000	0.00%
India	2000			1900000	1900000	N/A
India	2005	1090495	1632367		2722862	40.05%
India	2010	1614855	2574700		4189555	38.54%

¹⁰ Data obtained from FAO following an email request. Note the data may be incomplete and subject to change.

Country	Year	Aquaculture - Female	Aquaculture - Male	Aquaculture - Unspecified	Aquaculture - Total	% Women
India	2011	1657236	2690210		4347446	38.12%
India	2012	1695491	2733543		4429034	38.28%
India	2013	1650403	2633233		4283636	38.53%
Indonesia	2000		2142759		2142759	0.00%
Indonesia	2005		2506614		2506614	0.00%
Indonesia	2010		3351448		3351448	0.00%
Indonesia	2011		3343934		3343934	0.00%
Indonesia	2012		3344000		3344000	0.00%
Indonesia	2013		3344000		3344000	0.00%
Indonesia	2014		3344000		3344000	0.00%
Iran (Islamic Republic of)	2000		14857		14857	0.00%
Iran (Islamic Republic of)	2005		14898		14898	0.00%
Iran (Islamic Republic of)	2010		35907		35907	0.00%
Iran (Islamic Republic of)	2011		40303		40303	0.00%
Iran (Islamic Republic of)	2012		52761		52761	0.00%
Iran (Islamic Republic of)	2013		56303		56303	0.00%
Iran (Islamic Republic of)	2014		59409		59409	0.00%
Iran (Islamic Republic of)	2016		74073		74073	0.00%
Kenya	2000		10618		10618	0.00%
Kenya	2005		10038		10038	0.00%
Kenya	2010		19979		19979	0.00%
Kenya	2011		21977		21977	0.00%
Kenya	2012		54731		54731	0.00%
Kenya	2013		67883		67883	0.00%
Kenya	2014		67883		67883	0.00%
Madagascar	2005		38600		38600	0.00%
Madagascar	2010		43800		43800	0.00%
Madagascar	2011		43800		43800	0.00%

Country	Year	Aquaculture - Female	Aquaculture - Male	Aquaculture - Unspecified	Aquaculture - Total	% Women
Madagascar	2012		43800		43800	0.00%
Madagascar	2013		43800		43800	0.00%
Madagascar	2014		43800		43800	0.00%
Madagascar	2015		43800		43800	0.00%
Madagascar	2016		43800		43800	0.00%
Madagascar	2017		43800		43800	0.00%
Malaysia	2000		19300		19300	0.00%
Malaysia	2005		20100		20100	0.00%
Malaysia	2010		26291		26291	0.00%
Malaysia	2011		28599		28599	0.00%
Malaysia	2012		29494		29494	0.00%
Malaysia	2013		26802		26802	0.00%
Malaysia	2014		26516		26516	0.00%
Malaysia	2015		24452		24452	0.00%
Malaysia	2016		21156		21156	0.00%
Mauritius	2000	10	58		68	14.71%
Mauritius	2005	15	50		65	23.08%
Mauritius	2010	28	64		92	30.43%
Mauritius	2011	30	168		198	15.15%
Mauritius	2012	28	170		198	14.14%
Mauritius	2013	28	173		201	13.93%
Mauritius	2014	28	173		201	13.93%
Mauritius	2015	38	173		211	18.01%
Mauritius	2016	36	89		125	28.80%
Mauritius	2017	47	132		179	26.26%
Mozambique	2010			750	750	N/A
Mozambique	2011			800	800	N/A
Mozambique	2012	595	327		922	64.53%

Country	Year	Aquaculture - Female	Aquaculture - Male	Aquaculture - Unspecified	Aquaculture - Total	% Women
Oman	2013		46		46	0.00%
Oman	2014		42		42	0.00%
Oman	2015		43		43	0.00%
Oman	2016		53		53	0.00%
Seychelles	2000		130		130	0.00%
Seychelles	2005	5	213		218	2.29%
Singapore	2000	13	122		135	9.63%
Singapore	2005	18	147		165	10.91%
Singapore	2010	73	367		440	16.59%
Singapore	2011	73	367		440	16.59%
Singapore	2012	91	494		585	15.56%
Singapore	2013	101	541		642	15.73%
Singapore	2014	102	568		670	15.22%
Singapore	2015	101	488		589	17.15%
Singapore	2016	113	602		715	15.80%
Singapore	2017	117	636		753	15.54%
South Africa	2010	545	1011		1556	35.03%
South Africa	2011	600	1200		1800	33.33%
South Africa	2012	1000	2000		3000	33.33%
South Africa	2017	651	1367		2018	32.26%
Sri Lanka	2000		5000		5000	0.00%
Sri Lanka	2005	300	5300		5600	5.36%
Sri Lanka	2010	120	5850		5970	2.01%
Sri Lanka	2011	570	21630		22200	2.57%
Sri Lanka	2012	840	14710		15550	5.40%
Sri Lanka	2013	710	16440		17150	4.14%
Sri Lanka	2014	744	13426		14170	5.25%
Sri Lanka	2015	1340	15948		17288	7.75%

Country	Year	Aquaculture - Female	Aquaculture - Male	Aquaculture - Unspecified	Aquaculture - Total	% Women
Sri Lanka	2016	1441	21457		22898	6.29%
Thailand	2000			237598	237598	N/A
Thailand	2005			265000	265000	N/A
Thailand	2010			275000	275000	N/A
Thailand	2011			275000	275000	N/A
Thailand	2012			275000	275000	N/A
United Arab Emirates	2005		40		40	0.00%
United Arab Emirates	2011		44		44	0.00%
United Republic of Tanzania	2000		2000		2000	0.00%
United Republic of Tanzania	2005		3000		3000	0.00%
United Republic of Tanzania	2010	5497	2659		8156	67.40%
United Republic of Tanzania	2011	5497	2659		8156	67.40%
United Republic of Tanzania	2012	1534	9267		10801	14.20%
United Republic of Tanzania	2013	1534	9267		10801	14.20%
United Republic of Tanzania	2014	8720	9120		17840	48.88%
United Republic of Tanzania	2015	3976	16300		20276	19.61%
United Republic of Tanzania	2016	6233	16607		22840	27.29%
United Republic of Tanzania	2017	10150	13850		24000	42.29%

Table 2 demonstrates that women’s participation in aquaculture remains relatively low across IORA countries. In countries such as Oman, for example, there seems to be either no data or no participation of women in aquaculture (it is not clear given that the FAO did not specify). In the United Republic of Tanzania, women’s participation in aquaculture was approximately 67% in 2010, but declined to approximately 42% in 2017. In describing possible reasons for this, Lentisco and Lee (2015) highlighted that

By being excluded from mainstream development, some fishers and communities are becoming poorer and resources are becoming degraded. The study described how fishers saw themselves – fishing was mainly a male activity, although women were also engaged in the fishery in other ways such as seaweed farming, octopus trapping, and netting of small fish in the intertidal zone. However, the type of fishing that women were involved in was not considered as “fishing”. Cultural constraints prevented women fishing from boats, going great distance from home, or diving with scuba gear on the reef. Women were the traditional fishers of octopus; however, when the octopus fisheries became more economically attractive because of demand by international markets, women were displaced by men from their traditional fishing activity. Men went fishing in groups, using new technologies that allowed them to fish longer (such as scuba equipment) and farther away (with boats). They also ignored women’s knowledge on seasonal fishing that preserved the stock. Soon, intermediaries started becoming involved, renting boats to the fishermen and controlling the market. Migrant fishers became interested in this fishery, but did not follow any conservation measures. As expected, all this had a negative impact on the health of the octopus resources and, consequently, on food security in general and particularly on the female fishers. By being excluded from decision-making mechanisms, women were being excluded from the developmental benefits of the market access and opportunities of the fishery on which they had in-depth knowledge.

There is evidence that the participation of women in aquaculture is constrained or affected by strong cultural rules, robust societal conventions, and even in some cases by discriminatory laws. In the Indian Ocean there are stereotypes about female participation in fishing.¹¹ In addition, women in the Indian Ocean often do not have access to the resources necessary to enter the fisheries sector. Indeed, Brugere and Maal's *Study of fisheries and aquaculture value chains in Mozambique: How to reduce gender discrimination in fisheries and aquaculture sectors* (2014) highlighted that men are generally involved in resource management and fish-catching activities, while women engage in trading activities. Further to this, they note the weak nature of social organisation among women traders, as well as their underrepresentation in management committees of fisheries, and a lack of finance as barriers to facilitating gender equality in this sector. They further highlight that “women dominate aquaculture production” due to specific government interventions targeting women.

Entry barriers into the sector have also increased in recent years due to the widespread decline in marine resources and the deterioration of marine habitats (Stoeckl *et al.*, 2017). Women are also more vulnerable in contexts where labour laws are either poorly designed

¹¹ In Bangladesh, for example, fishing is traditionally a low-caste Hindu occupation, and only men in fishing communities normally engage in catching fish (Islam, 2011). However, while women play a significant role in aquaculture production in Bangladesh, their contributions remain underreported (also see Deb, Haque & Thompson, 2015).

or inadequately enforced, and do not receive the same political support as men.¹² Such discrimination limits women's protection at work and their entrepreneurial opportunities in this expanding sector (for a further discussion of this problem in a developing country context, see Brugere, 2015). Furthermore, despite commitments by member states to end abuses, human rights abuse and bonded labour in the fisheries and aquaculture sector in the Indian Ocean continue (Tickler *et al.*, 2018). Human trafficking and forced labour are issues that have serious impact on women in the sector (see also Campbell and Stanziani, 2013).

It is clear that not enough is known about the participation of women in aquaculture and fisheries in the Indian Ocean. We noted that the main labour role of women in fisheries is processing and catching. But women also play other roles in this sub-sector, such as investors and sources of credit (for instance, see the Kenyan case study by McClanahan and Abunge, 2017). If we do not recognise this and find a mechanism to gauge the indirect effects of female participation in the sector, then we are marginalising the contribution of women here. Research suggests that female participation (especially if it involves a leadership or managerial role) in aquaculture and fisheries has important indirect benefits for women's local communities (see, for example, the Indonesian case study by Alami and Raharjo, 2017).

Participation in fisheries and aquaculture also encourages female collective action through community organisations and economic enterprise networks. Action of this type allows women to build human (as well as economic) capital through knowledge sharing¹³. In recent years, the introduction of new aquaculture technologies has also provided opportunities for these types of female-led enterprises¹⁴. However, we lack the data to present an adequate cross-national analysis of the role that women play in the aquaculture and fisheries sector in IORA.

¹² Instructive case studies related to these issues in Bangladesh and Indonesia is provided by recent FAO (2017) research.

¹³ A case study in two Bangladeshi shrimping industries by Choudhury *et al.* (2017) shows that women's involvement in aquaculture has contributed to some important forms and aspects of empowerment. Here, women's empowerment-related impacts were identified in terms of: expansion of economic decision-making and freedom, and some expanded control over resources; the ability to invest in plans for the future (within the scope of their earnings); and making strategic choices around consumption.

¹⁴ In an example from India, women who originally depended on collecting wild shellfish became involved in mussel and seaweed farming. This shift improved not only their own incomes but their social standing and decision-making power in their communities and families (Ramachandran, 2012). However, technology is not always a force for good in this sector. Women are often bypassed in the transfer of aquaculture technology and also remain excluded from large-scale production, with their participation restricted to small-scale production. Gopal *et al.* (2014) demonstrated the direct impact of technological changes on women in the ring net seine fishing in Kerala. The shift in fishing technology and practices in this sector benefited capital-intensive fishing, and this shift excluded women (see also Das and Edwin, 2018). This technological shift also restricted female participation in the post-harvest activities (including processing and primary selling) which had previously been an important source of economic capital.

MAKING GENDER EQUITY AQUACULTURE INTERVENTION WORK IN BANGLADESH

Bangladesh has been identified as one of the largest aquaculture food fish producers in the world. Labour is a major requirement for the country's intensified aquaculture production system and this cost is often saved by female family members. Women tend to be overrepresented in the post-harvest processing part of production (such as de-heading, counting and peeling) and underrepresented as owners or managers of production. It is important to remember here that women involved in this type of work are also asked to fulfil their domestic tasks and, consequently, they are carrying a double labour burden (for further discussion of this problem see Halim 2004). A number of organisations are trying to change this situation and allow more women in Bangladeshi aquaculture to participate in the more lucrative parts of the industry's value chain.



Source: https://commons.wikimedia.org/w/index.php?search=Aquaculture+Bangladesh&title=Special%3ASearch&go=Go#/media/File:Women_operated_aquaculture_2.jpg

Projects from the non-governmental organisation (NGO) sector have been developed to assist Bangladeshi women with loans to enter fisheries management and ownership. Such loans are important as poor women often lack the economic resources to take advantage of high-return opportunities in aquaculture. Bachte Shekha project, for instance, has achieved success in increasing female participation in beel management.

Training, particularly in new technologies (such as cage culture), is an important part of female empowerment in Bangladeshi aquaculture. Of course projects of this type are not without their disadvantages. In their study on aquaculture technologies, Morgan et al. (2015) found that the labour burdens placed on women by their family increased after they had received aquaculture project training. Their men expected them to take on more roles in aquaculture and used the training as justification to withdraw from their labour from previously shared production.

In addition, women are constrained in their network development (i.e. professional and market/client connections) by certain social practices (such as the purdah custom). These customs restrict the ability of women (especially in poor communities) from participating in more profitable parts (such as trading and contracting) of the aquaculture value chain (Belton et al. 2011). Aquaculture interventions need to be specially designed to have lasting and positive impact on women empowerment and Farnworth et al. (2015) argues that such interventions must be designed to incorporate gender equity messaging (also see Kantor, Morgan, and Choudhury 2015).

Intra-household decision-making patterns and norms can be a critical challenge for upscaling female participation in this part of the blue economy in Bangladesh. The FAO (2017), in their work in Bangladesh, identified spousal support as very important for intervention success in this area. Women need family support when challenging gender boundaries by moving into parts of the aquaculture value chain traditionally occupied by men. Moreover, to enter more high-return sub-components of the sector, women need help from their families to develop strategies to reduce time burdens from family responsibilities. Consequently, it is important to involvement of men and other household members, together with women, in aquaculture interventions. This is especially imperative in awareness-building around expanding the decision-making power of women in aquaculture and by promoting new ways to understand and envision gender role models.



Source: https://commons.wikimedia.org/w/index.php?search=Aquaculture+Bangladesh&title=Special%3ASearch&go=Go#/media/File:Women_operated_aquaculture.jpg

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3.2. Seaports and shipping

The countries of the Indian Ocean are an important global source of seafarers. The global supply of seafarers has increased over the past five years and IORA's Asian member states have supplied many of the qualified officers and personnel for the world's different merchant fleets. Indonesia is one of the five largest general seafarer supply countries and India is one of the world's leading suppliers of qualified officers (International Chamber of Shipping, no date). This is a male-dominated sector and female seafarers represent approximately 1% of the estimated global supply of qualified seafarers, according to the Baltic and International Maritime Council (BIMC) Manpower Report (2015). In addition, few women sit on the boards of maritime companies (for a further discussion of these issues, see MacNeil and Ghosh, 2017). The under-representation of women in this part of the maritime industry is particularly an issue for IORA's Asian members (BIMC 2015). It would appear that has not significantly changed over the past twenty-five years (for a retrospective, see Belcher *et al.*, 2003).

One of the reasons that women do not enter the maritime transport sector is a culture of stereotyping and discrimination against women looking to work in that industry. Such cultures of discrimination seem particularly apparent in the Asian member states of IORA (Turnbull, 2013). They disturb working conditions, equal access to education and training for women, as well as career opportunities¹⁵.

Although gender-specific data is scarce, it would appear that most women seafarers are employed in non-technical positions on passenger ships. There are few female shipmasters, chief engineers, and other officers, and this has had an effect on how companies in the Indian Ocean treat gender issues in the maritime sector. Issues such as women's health and safety gain little attention, and good practices regarding the empowerment of women remain barely visible. There is also a high risk of harassment and even sexual assault and rape when women are isolated at sea with no support (ITFGlobal, No Date).

Limited research has been carried out on the experience of women in the seaport and shipping sub-sectors of the maritime industry in IORA member states. Literature on the female contribution to this part of the Blue Economy in the organisation's African or Asian member states can hardly be found. The dearth of cross-national evidence on this important topic is concerning. Most policymakers and industry leaders in the region recognise the need to attract women into these sub-sectors, and new technology could provide an answer. The digital transformation of shipping will see it become part of larger intelligent mobility ecosystems, and that will create a variety of highly-skilled roles. Providing women with training opportunities in software and mechatronic engineering, to develop the emerging human-machine interfaces and artificial intelligence-driven services and operations, could jump-start female involvement in this part of the Blue Economy.

¹⁵ For an interesting Asian case study of how this affects the career development of women in the maritime industry, see Wu *et al.*, 2017.

SOUTH AFRICAN WOMEN IN MARITIME: A SNAPSHOT

The dominance of men in the maritime industry has created cultural barriers that make women's participation difficult. In 2015, a shift occurred on the African continent with the then AU Commission Chairperson Nkosazana Dlamini-Zuma calling for greater participation of women in maritime industries, especially in the development of Africa's Blue Economy.

The AU's events and conferences on these issues have drawn attention to the need for more women in the African maritime sector by facilitating spaces of dialogue and information sharing.

This has brought about unprecedented change, with a number of countries on the continent, South Africa is one of these countries, prioritizing the need to advance women's role in maritime activities.

In South Africa, there is an increasing number of young women who are achieving success in the local maritime industry.

Nevertheless, a major stumbling block is identifying how the role and contribution of women in maritime development would be recognized and framed. For women to achieve full industry recognition, discussions and initiatives must go beyond the inclusion of women in one or two areas, such as environmental work or entrepreneurship. The creation of a community of experienced women in maritime occupations must be carried out at various levels and in various industries.



"South Africa's first women take command of a navy ship"
Source: <https://www.destinyconnect.com/2015/08/27/meet-sas-first-woman-take-command-navy-vessel/>

Safety focused schemes that ensure women's safety and security while at sea

In the maritime industry, women suffer from many forms of sexual harassment and discrimination. However, this problem takes on an added dimension of insecurity because some of these incidents can take place at sea leaving them vulnerable to a number of problems. A case in point is that of Akhona Geveza, a 19-year-old South African cadet found drowned off Croatia in 2010. Geveza had, the day before she died, reported to the captain that she was raped by one of the officers. The Croatian authorities declared her death a suicide, however this finding has never been fully accepted, and it remains an unresolved point of contention to this day.

Pushing for women's participation

The maritime industry in South Africa has a number of education-centred Initiatives that focus on increasing women's participation. One of the major challenges facing the industry is the lack of skilled women (especially black women) in the industry. Women also face the challenge of progressing up the managerial hierarchy as there is a lack of opportunities to advance and be promoted. However, through some of these initiatives, a number of success stories are being highlighted. Three South African women have become the first black female marine pilots on the continent to gain open licenses, enabling them to navigate ships of all sizes and types into local waters. All three women are products of the Transnet National Ports Authority's development scheme, which has been encouraging more equitable participation in the maritime sector since the 1990s.

3.3. Marine biotechnology, research, and development

New ocean technology provides important opportunities for women's economic empowerment in the Indian Ocean. Some of the most promising of these new opportunities involve blue biotechnology, off-shore hydrocarbons, ocean renewable energy and blue carbon initiatives. The Indian government has, for instance, identified ocean blue technology as an important alternative to traditional energy sources and believe blue technology will transform coastal and island regions into a strategic energy resource. The National Institute of Ocean Technology (NIOT) has been working on the Oscillating Water Column, a wave-based energy technology over the last few years. NIOT has made recent advancement in this area, testing a wave-powered navigational buoy off the coast of Southern India in 2017.

However, no cross-national sex-segregated participation data exists for these technologies in the region. This may be due to it being difficult to measure participation in these sub-sectors. In addition, the majority of blue technology projects in the Indian Ocean are currently at the conceptual or prototype stages. In order to ensure a more integrated approach to science, technology and innovation in the region, IORA established a specialised agency in Iran, namely the IORA Research Centre on Science and Technology Transfer (RCSTT), for the first time headed by a woman. The RCSTT is making efforts to mainstream gender into its regional initiatives and makes a valuable contribution to technology development and transfer, including ocean medicinal plants. The levels of education of women in STEM would be a major factor in determining their ability to participate in research and development related to the Blue Economy.

3.4. Renewable Ocean Energy

In order to adequately understand the challenges faced by those seeking to unpack gender participation in the Indian Ocean's Blue Economy, let us consider ocean renewable energy. Providing accurate data on who is employed in the renewable ocean energy sector is difficult, and there is no comprehensive source of data on this important sector. This sector (also known as marine energy) is part of the renewable energy industry's hydropower sub-sector,¹⁶ and ocean energy makes up only a small segment of all hydropower jobs.

Most employment derived from hydropower involves inland bodies of water rather than ocean-derived energy. However, according to the Ocean Energy Systems Report, we could see a significant expansion in marine energy jobs in the Indian Ocean region in the next few decades¹⁷. Given the large cumulative capacities installed in the region, most of these future jobs will be in operations and maintenance. In contrast, the manufacturing sector, because of

¹⁶ Globally, according to IRENA's annual assessments, the number of jobs in hydropower has grown slowly in the last few years. The number of people working in large hydropower, for example, only grew from 1.4 million in 2012 to 1.5 million in 2017. The key job market for hydropower in IORA is India, where large hydropower employs about 287,000 people. These numbers can be compared with other member states like Iran and Indonesia, who each employ about 45,000 each. Small hydropower is less common in IROA, although some member states have significant investments. Malaysia's Sustainable Energy Development Authority estimates, for instance, that small hydropower accounts for six thousand jobs in that country, and India is estimated to have twelve thousand working in this sub-sector.

¹⁷ In the Ocean Energy System's report (2012), entitled "An international vision for ocean energy", the ocean energy sector is predicted to create 130,000 jobs by 2030 and 680,000 by 2050.

its lower labour intensity, will probably employ few people. Although this type of expansion may provide unique opportunities for women, existing stereotypes about women in technology could prevent many from taking advantage of this area of growth.

Estimating sex-segregated employment levels in renewable ocean energy is quite challenging, as data remains scarce and it is difficult to clearly identify indirect employment contributions here. In order to understand why, let us consider how the International Renewable Energy Agency (IRENA) struggles to gather data on the number of people working in hydropower. Researchers are forced to estimate the numbers of jobs in large hydropower through an employment-factor approach that allows an examination of direct jobs in the different segments of the value chain. Consequently, their data may not be accurate and recently, previous data shortcomings have forced IRENA to conduct a major revision of employment factors, statistics and available data. IRENA has also struggled to provide segregated data on female participation in hydropower and has been forced to rely on company surveys for data (see for example IRENA, 2018).

Policymakers in IORA need to make a more significant commitment to gathering and monitoring women's evolving participation in the blue technology workforce. To create an accurate gauge of employment in the blue technology sub-sector of the Blue Economy, data must be gathered on both indirect employment as well as direct employment.

INCREASING OUR UNDERSTANDING OF SOCIAL ECOLOGICAL SEASCAPES.

A CASE STUDY OF ZANZIBAR, TANZANIA

The need for gender mainstreaming in the use and management of coastal resources is steadily gaining prominence in policy discourse on the blue economy. Along with this discourse has emerged increased awareness that the social landscape needs to be mapped together with the ecological landscape to enable the achievement of inclusive sustainable development.¹ A key dimension of this social landscape is the issue of gender and women empowerment in the blue economy. An understanding of the gender differences that exist in how men and women use coastal spaces and resources gives better insight into coastal resource management policy, the environmental impacts of the use of coastal resources and the need to include gender in blue economy policy formulation and implementation.



Stockholm University and the Institute of Marine Science, University of Dar es Salaam collaborated on a study² that looked into gender dimensions to the use of coastal spaces and resources in the villages around Zanzibar, Tanzania. The study found differences in identity between the two genders that drive which coastal space and resources are used by which gender. The identity of men in the use of coastal resources was mainly related to fishing while women had a plural and diverse identity, related to farming, as collectors, small business owners, traders and handcraft making. These identities were strongly driven by gendered symbolism deeply embedded in strong cultural institutions.

The reproductive and nurturing role of women in the family confine them to on shore activities closer to home, while the men who are seen as providers and the main bread winners are closely linked to deep sea fishing which is offshore and involve the use of the entire ocean. Beside the gender symbolism, the women did not have the skillset required for deep sea fishing such as swimming, net drawing and a sheer lack of the sense of adventure the men had. However, some women aspired to own fishing vessels that they could employ men to operate. To a much lesser extent, men were also involved in agriculture, forestry, husbandry and tourism. Although the level of male participation in these coastal activities was very low, it was still above female levels in Zanzibar.

Source: https://commons.wikimedia.org/wiki/Category:Zanzibar#/media/File:Rwajuu_Zanzibar.JPG



Source: https://commons.wikimedia.org/w/index.php?search=Seaweed+farming+Zanzibar&title=Special%3ASearch&go=Go#/media/File:Seaweed_farm_uroa_zanzibar.jpg

In terms of income, men earned more income than women in all the coastal activities. Although women dominated seaweed farming it generated very low income. Persistent participation in seaweed farming by women was due to the fact that it is an activity closer to shore, giving women the opportunity to raise children and take care of other family responsibilities alongside. These gender identities were found to be very resilient to change, and have only changed slowly over time.

With regard to coastal resource management, existing structures did not have adequate representation of women. In addition, the gendered differentiation in fishing and habitat use were not accounted for in management. For instance, although seaweed farming dominated by women has great potential for export and tax revenues, no serious consideration had been given to it in coastal management in Zanzibar.

However, it is becoming increasingly clear that knowledge about gendered space will facilitate a more inclusive development and sustainable of ocean resources. The study found that "women cared more about future generations than men, and thus care more about conservation" Consequently, marine spatial planning (MSP) is emerging as a better management option for coastal resources.

MSP as defined by the Intergovernmental Oceanographic Commission entails "analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that are usually specified through a political process"³. MSP is used extensively in developing countries such as Australia, North America and Europe but also in developing countries such as Vietnam, Mexico and Madagascar.

The study recommended MSP as an attractive option for Tanzania in its attempt to mainstream gender relevant issues into the management of marine spaces and use of its coastal resources to achieve inclusive development and sustainable use of its oceans.

¹St. Martin, K., Hall-Archer, M. 2008. The missing layer, geo-technologies, communities and implications for marine spatial planning. *Marine Policy* 32 (5): 772-778

²De la Torre-Castro, M, Frocklin, S, Borjesson, S, Okupnik, J and Jiddawi, S.N. 2017. Gender analysis for better coastal management – increasing our understanding of social-ecological seascapes. *Marine Policy* 83: 62-74.

³Ehler, C Douvère, F. 2009. *Marine Spatial Planning: A Step by step approach towards ecosystem based management*. Intergovernmental Oceanic Commission and Man and the Biosphere Programme. UNESCO. Paris 2009.

3.5. Tourism

In the Indian Ocean region, a great portion of tourist activity takes place in coastal regions, with the region's ocean coastlines being popular tourist destinations. But despite its highly acclaimed attractions, the IORA member states surprisingly draw relatively few tourists and pale in comparison to the more established Caribbean region. In the Indian Ocean, Comoros, Maldives, Mauritius, Seychelles and Tanzania have the most advanced ocean tourism sectors. Yet despite a growing appreciation of the economic potential of marine and coastal tourism, it is only in recent years that policymakers have become interested in gauging who works in ocean tourism. It is difficult to measure the actual number of people directly participating in this type of tourism in the Indian Ocean¹⁸. This difficulty also been hampered by a lack of or fragmented regional cooperation (see for example Hardy, 2018).

Tourism's contribution to the Blue Economy is enhanced by a phenomenon known as the tourism multiplier effect. This is the term for the manner in which tourism fuels employment creation in all sectors of the area concerned. The growing popularity of a hotel (i.e. tertiary sector) on the coast results in the hotel hiring people to look after the rising number of coastal tourists. Other sectors would, consequently, then benefit from the growing demand of the hotel and result in further employment creation. We can understand then why measuring gender participation in coastal and ocean tourism in the Indian Ocean is complicated by this "mechanism". Any attempt to measure participation in the Blue Economy that did not take this mechanism into account would marginalise the role of women at different stages of the ocean tourism value chain. The World Tourism Organization (UNWTO) (2016) provides guidelines on the best practices for measuring participation in tourism, which researchers can tailor to ocean sector tourism in IORA.

Micro-studies suggest that gender inequality in ocean tourism is evident in different parts of the region. For example, Mshenga and Richardson (2013) found that most medium and small enterprises in coastal tourism in Kenya are owned by men, especially those in the transport sector. The same trend is evident in larger private sector institutions, such as hotels and other facilities. Women in the islands of Zanzibar, for instance, make labour choices that maintain spatial boundaries between themselves and tourists, and are often not the public face of the islands' diverse tourist industries (Demovic, 2016). These choices (informed by existing religious and cultural norms) place significant limits on women's economic participation in ocean tourism¹⁹. However, women on the islands are able to participate in support services

¹⁸ Consider, for example, that UNWTO (2011) provides an informative breakdown of female participation in hotel and restaurant (H&R) businesses. In Indonesia, Malaysia and Thailand, 50% or more H&R are run by women, and in Seychelles 43% of hotels and restaurants are managed by women. In contrast, 29% of the employers in the H&R industry are women in Mauritius, and in Iran practically no businesses are managed by women. However, it is not possible to adequately discern what share of women are working in coastal and ocean tourism using the data provided by UNWTO, and their report made frequent mention of the scarcity of data on this issue.

¹⁹ There is evidence that ethnic tourism in the Indian Ocean can improve gender equality and help women's empowerment in the region. Research by Sheikhi (2015) illustrates the potential of ethnic tourism as a vehicle for gender equality through increasing social interactions and cultural exchanges. This process leads women to hold greater awareness of their economic and social rights. Ethnic tourism can have a positive impact on gender equality in some communities and we should recognise the potential of ethnic tourism for women's empowerment in the Indian Ocean.

that indirectly service the tourism industry (also see Fröcklin, Jiddawi & de la Torre-Castro, 2018). Throughout the region we see the power of absentee landlords and how work in the tourism industry is increasingly dominated by precarious, temporary and low-wage work²⁰. Employment of locals (especially women) is often limited to jobs with expatriates (often men) typically holding higher paid management positions²¹.

Gendered data on the Blue Economy is increasingly in demand from policymakers and industry leaders. However, as the research team has repeatedly highlighted in this section, there is a substantial absence of quality cross-national data on gender participation in the Blue Economy. Stakeholders need to realise that this type of data is critical for decision-making on gender issues in the Blue Economy and need to devote the necessary resources to gather relevant data. Although some data on gender participation is available, most of the existing scholarly work is comprised of case studies, and it difficult to map the gendered nature of the Blue Economy accurately. For this reason, we still do not adequately understand the importance of women's economic contribution. We need data on gender participation in both industrial and small-scale operators, together with sex-segregated data on the direct and indirect effects of participation.

Moreover, there is a need to conducted gender-sensitive Blue Economy value chain analyses in IORA member states. Such analyses must not exclude the traditional (often unpaid) roles of women in aquaculture. Enhancing the quality and comparability of Blue Economy employment statistics would significantly improve the monitoring of Blue Economy labour markets and the promotion of productive activities, as well as the effective use of qualified labour (the principal factor in ensuring sustainable Blue Economy development and its contribution to economic growth and employment).

²⁰ For an interesting case study of the political economy of this process in the Seychelles, see Lee *et al.* (2015).

²¹ This gendered segmentation of labour is often informed by existing systems of cultural and racial oppression. Consider, for example, the intersection of race and gender in the study of tourism in coastal South-eastern South Africa by Mkhize and Cele (2017). Despite the competitive advantage of black African rural women in this sector, their participation is often constrained by existing systems of discrimination.

WOMEN IN COASTAL TOURISM: A COMPARISON OF SELECTED IORA COUNTRIES

Tourism in general and more specifically coastal tourism is viewed as a strategic sector for job creation, economic diversification and inclusion in IORA member states. Coastal tourism is a potential source of income and a means of livelihood transition for coastal communities most of whom are fisherfolks, agrarian, poor and deprived. Consequently, the IORA Action Plan 2017 – 2021 earmarks tourism and cultural exchanges as one of its key priority areas for cooperation to enhance inclusive growth and sustainable development among IORA member states. Core to this development objective is the aspiration to place special emphasis on women economic empowerment as central to the achievement of inclusive growth and sustainable development.

Economic inclusion in tourism refers to the involvement of previously marginalised and less powerful segments of society in the production of coastal tourism and sharing the benefits thereof. Women in IORA countries fall squarely into this category of the economically marginalised and excluded in general, not only in the tourism sector. The labour force participation rate of women in IORA countries have been below their male counterparts over the past two decades.

Hence the need to ensure that women economic empowerment is central to any developmental interventions and initiatives in IORA member states. The Coastal tourism value chain involves activities that are identical to tourism in general. Each of these activities involve several intermediaries, service providers and suppliers which creates avenues for the involvement and empowerment of women.

However, to focus on coastal tourism narrowly will be to refer to tourism, leisure and recreational oriented activities that happen in coastal areas and off-shore coastal waters. This would include accommodation, restaurants and the local food industry, retail businesses and activity suppliers.

Such activities include swimming, cruises and speed boats, fishing, ecotourism etc. The promising nature of coastal tourism is that entry barriers are low and the skill set required to function in this sector is easily obtainable and not excessively sophisticated. There is also a great deal of learning by doing making skills transfer much easier than in other sectors of the economy. This makes coastal tourism quite appealing to coastal and rural economies most of whose labour force do not have sophisticated skills.



EMPOWERING WOMEN IN THE SEYCHELLES

The economy of Seychelles is contingent on an active tourism sector and this sector is reliant on ocean-based resources. To reduce to these resources and prolong their longevity, in the 1980s the government decided to avoid mass tourism and focus on the high-end market (Gössling and Hörstmeier 2003). This requires maintaining delicate balance between environmental preservation and tourism development. The government has been successful in attracting tourists and the sector exceeded 300,000 visitor arrivals in 2017. This is near the government cap on tourist arrivals (400,000) which the government is looking to reach and maintain by 2040. The national strategy for tourism in the islands is outlined in the 'Seychelles Strategy 2017' which details support for female empowerment. The state is committed to achieving this through the involvement of women in 'high-value conservation tourism'. It is hoped that growth in the conservation tourism market will improve the overall quality of life for the women of the Seychelles.

One of the main barriers to greater female involvement in 'conservation tourism' in the Seychelles is a scarcity of bankable projects and of suitable skills and knowledge. Non-government organisations, like Sustainability for Seychelles, support the empowerment of women through conservation, research and education on the islands. Female enrolment numbers at the Seychelles Tourism Academy are increasing and the Seychelles National Parks Authority is making a greater effort to hire women. One of the recommendations from the United Nations Economic Commission for Africa (2018), on improving participation to the tourism sector, concerns access to credit. Greater access of credit to women will promote entrepreneurship ventures and help female entrepreneurs start businesses (such as restaurants and enterprises related to tours, souvenirs and arts). A proposed tourism innovation fund, for instance, may play a lead role in promoting this type of female empowerment.

Other sectors of the islands' economy must be leveraged to empower women in ocean-related tourism. The country's economic aquaculture vision (i.e., Seychelles mariculture master plan) should incorporate greater synergy between tourism and fisheries. Recreational fishing, for example, could provide a value avenue for entry.



Source: Sustainability for Seychelles
(<http://www.s4seychelles.com>)

This sector involves primarily charters and serves as a tourist attraction and has robust connections to the Seychelles marine spatial planning process. Such leveraging must, however, be carefully handled. The islands' vulnerabilities to climate change already stress the ocean tourism sector (Gössling and Schumacher 2010).

Support for female empowerment in the Seychelles should be directed at projects that prioritise environmental preservation.

Fortunately, women on the islands have historically displayed a commitment to conservation. Almost all the leaders of the school-based, Wildlife Clubs of Seychelles, are women for instance.

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4. Overview of Women’s Economic Empowerment in IORA Member States: A Secondary Data Analysis

Women’s economic empowerment is a multi-dimensional phenomenon, which encapsulates several different aspects of human wellbeing, all of which are closely interrelated. Women’s empowerment is largely influenced by economic, socio-cultural, religious, educational and health-related factors that ultimately define the parameters and boundaries of women’s capabilities and functioning in society. This section uses a range of variables to analyse trends in women empowerment and their underlying factors in selected IORA member states.

It is expected that the state of women’s economic empowerment in the Blue Economy in IORA countries cannot be any better than the state of women’s empowerment in general globally. This is especially with regards to the emergence of the Blue Economy (including traditional and emergent sectors) as a vehicle to facilitate women’s economic empowerment in IORA. It is thus imperative to provide an overview of the state of gender in IORA. The inclusion criterion of countries is simply determined by data availability for the variables of analysis. Four key dimensions are explored, namely economic, socio-cultural, access to education and access to healthcare for women in these countries; and how these compare with their male counterparts. All variables used are from the World Development Indicators of the World Bank. A comparison is made between the year 2000 (the beginning of the new millennium) and 2017, to synchronise with the time frames of the WVS, and capture trends over approximately two decades, as permitted by data availability. Table 3 details the different dimensions of women’s empowerment used in this report; variables used to represent each dimension; and how they are defined.

Table 3: Definition and sources of variable (sourced from the World Development Indicators of the World Bank)

Dimension	Variables, by gender	Definition
Economic empowerment	Labour force participation rate	Proportion of the population, aged 15+ years that is economically active
	Vulnerable employment	Contributing family workers and own-account workers as a percentage of total employment
Socio-cultural empowerment	Percentage of women in National Assembly	Percentage of parliamentary seats in a single or lower chamber held by women
	Access to finance	Account ownership at a financial institution or with a mobile money service provider. % of population 15+ years
Education	Access to tertiary education	The ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown

4.1. Economic dimension of women’s empowerment

Two variables are analysed under the economic perspective of women’s empowerment. These are labour force participation rate (LFPR) and vulnerable employment (VE) by gender. The definitions of the variables are defined in Table 4.

Figure 6 and Figure 7 compare the LFPR by gender in 2000 and 2017 respectively. In the year 2000, females who were economically active as a percentage of the female population above 15 years was below the level of their male counterparts. However, there are country-specific differences in the levels of gender disparity in LFPR. Of note is the wide disparity in LFPR in countries like Bangladesh, India, Iran and Yemen. These are four countries in which women’s economic empowerment or exclusion is strongly driven by either religious or socio-cultural factors. In contrast, close to or more than 50 per cent of the female population above 15 years were economically active in the rest of the selected IORA countries in 2000.

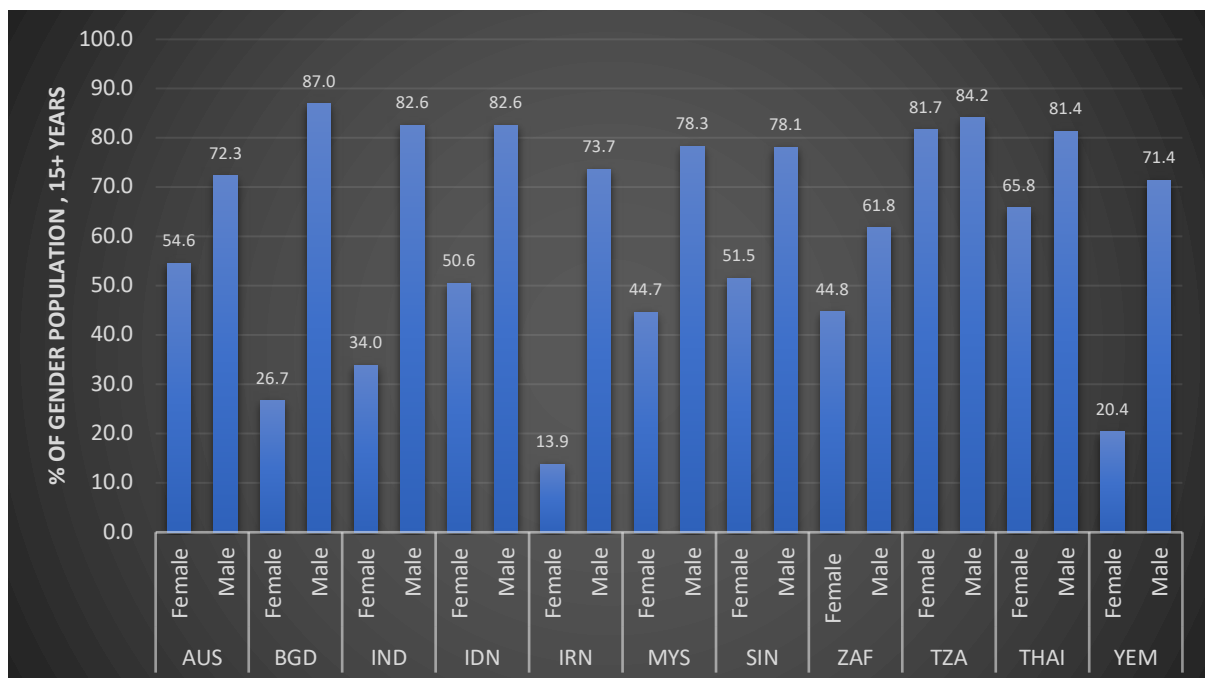


Figure 6: Labour force participation rates in 2000, % by gender population, 15 + years. (Sourced from World Development Indicators of the World Bank.)

Almost two decades later in 2017, there have only been marginal improvements in the female LFPR. Countries like Thailand, Tanzania and India have actually experienced some retrogression in female LFPR, with corresponding increases in the male LFPR. This supports the preference for male workers over females in formal employment in the IORA countries in this report, as depicted by responses to the WVS perceptions survey, that “if a job becomes available it should go to males rather than females.” According to WVS data, this patriarchy-driven role allocation was strongest in Yemen. Consistent with this perception, the strongest retrogression can be observed in Yemen, which has seen a drastic reduction in female LFPR from 20.4% of the female population above 15 years in 2000, to 6% in 2017.

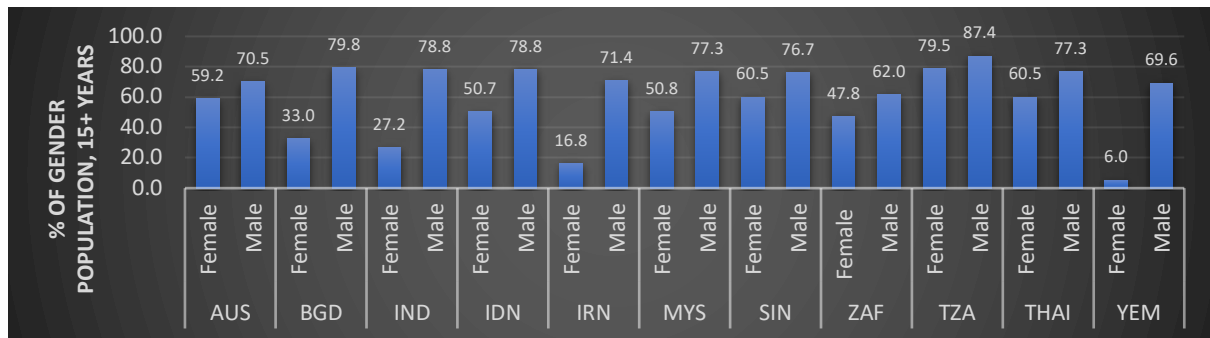


Figure 7: Labour force participation in 2017, % of gender population, 15 + years (Sourced from World Development Indicators of the World Bank)

Figure 8 illustrates the percentage of male and female workers in vulnerable employment in 2000 and 2017. With the exception of Australia and Singapore, more females contributed to family businesses or worked on their own as a percentage of female employment compared to males. Almost every country in this report has seen marginal declines in the level of vulnerable work for females between 2000 and 2017, except in Singapore, where there has been a marginal increase.

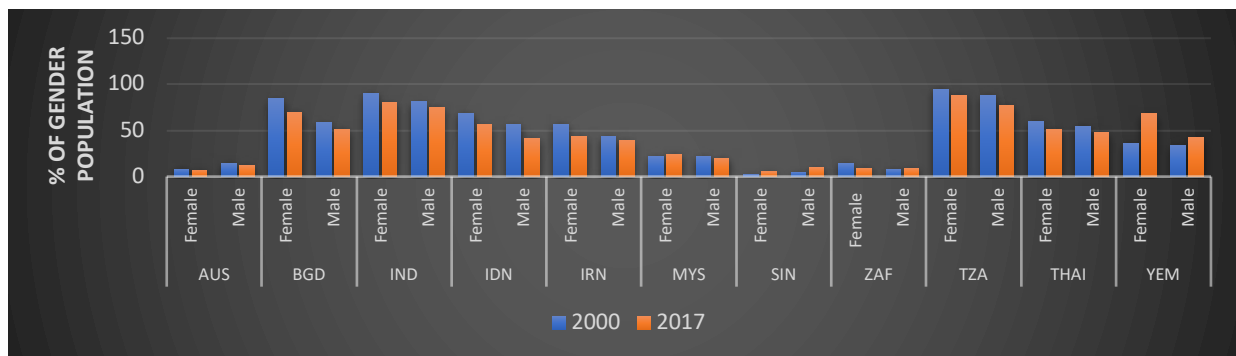


Figure 8: Vulnerable employment, % of gender population, 2000 and 2017 (Sourced from World Development Indicators of the World Bank)

There has been a step increase in vulnerable work in Yemen, especially for females in 2017, compared to 2000 levels. This is probably not only driven by perceptions of male preferences but also prolonged political conflict in Yemen.

4.2. Education dimension

The educational dimension of female empowerment is measured by the level of enrolment into tertiary education by gender in 2000 and 2016, illustrated by Figure 9 and Figure 10

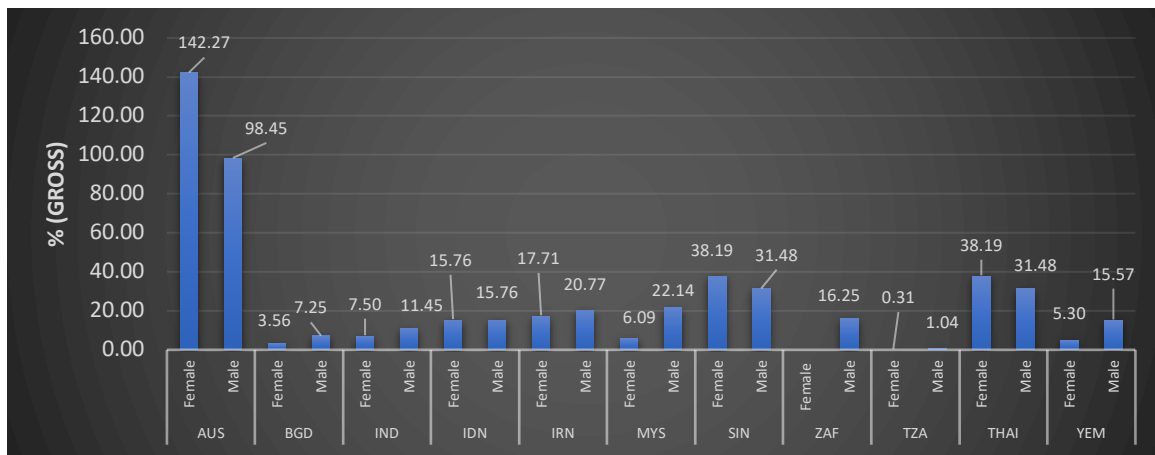


Figure 9: School enrollment in tertiary education, % of population in 2000 (Sourced from the World Development Indicators of the World Bank)

In 2000, Australia, Singapore and Thailand had more females enrolled in tertiary institutions than males. This trend remains the same in 2016. In all the other countries, males exceeded females in tertiary enrolment in 2000. This trend changed for a few countries in 2016. Malaysia and South Africa joined Australia, Singapore and Thailand in terms of countries with more females enrolled in tertiary institutions than males. In India and Indonesia, both genders were on par in 2016. These changes reflect the level of disagreement in these countries with the WVS perception that “university education is more important for a boy than for a girl.” The progress made also emanates from the accumulated benefits of implemented programmes that focus on the girl child’s education to mitigate other social vices, such as early childhood pregnancy or marriages, as part of global development agendas such as the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs).

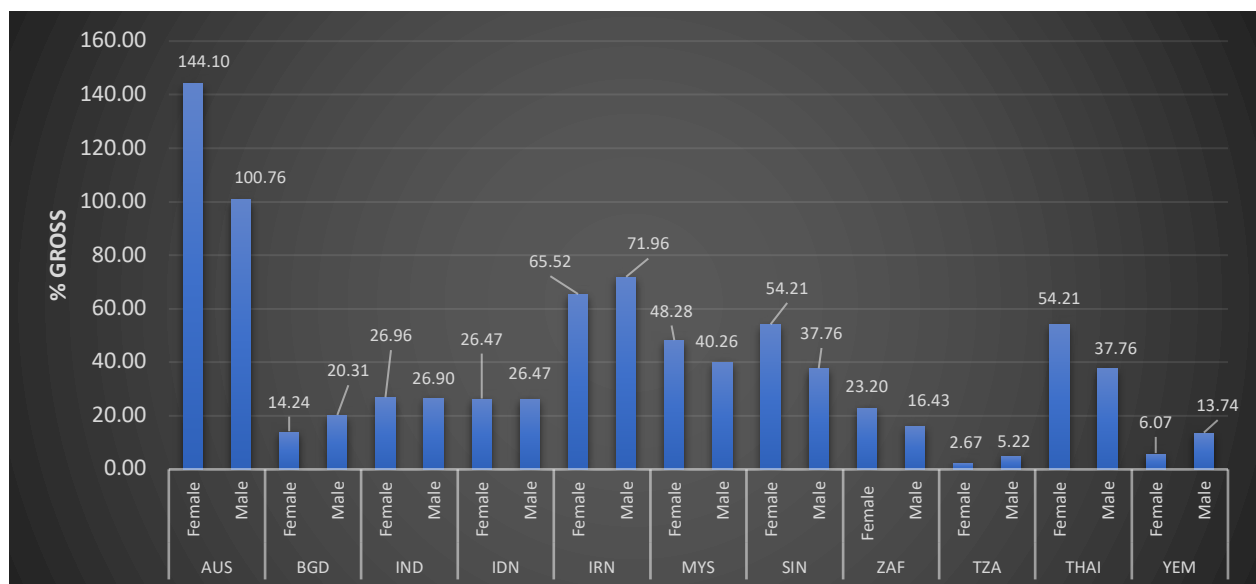


Figure 10: School enrolment into tertiary education, % of population in 2016 (Sourced from the World Development Indicators of the World Bank)

4.3. Socio-cultural dimension

Socio-cultural dimensions of women empowerment are captured by trends in the participation of women in the national assembly and the level of access to finance among females. **Error! Reference source not found.** Figure 11 illustrates the proportion of women in the national assemblies of the selected IORA countries in this report.

With the exception of Malaysia and Thailand, most IORA countries have seen significant increases in the percentage of women in the national assembly, illustrating a greater voice for women in governance and advocacy in these countries. The most commendable improvement can be seen in Singapore, where the population of women in the national assembly has increased from 4.3% in 2000 to 23% in 2017. Bangladesh and Indonesia have also seen female participation more than double in their national assemblies in 2017, compared to 2000 levels. However, in Malaysia and Thailand, there have been no changes over the period of analysis. South Africa registered the highest percentage of women in their national assembly among the IORA countries in both 2000 and in 2017. Yemen, however, depicts a reduction from an already low level of 7% in 2000 to none in 2017. It can be observed that seats held by women in the national assemblies in IORA countries do not exceed 50% in any of these countries. Hence, despite some progress in increasing the role of females in governance and advocacy, males still dominate political office. These patterns once again mirror the perceptions from the WVS that in most countries, it is believed that “men make better political leaders than women.”

The second variable used in this report to measure women’s empowerment from a socio-cultural perspective is access to finance. In some countries, access to finance for women is subject to socio-cultural barriers that require that females seek permission from their male counterparts before they can access finance, or open a bank account. In some Islamic countries, the bank account must be jointly held with a male partner. Indirectly, this variable measures the level of financial independence women are allowed to have in society.

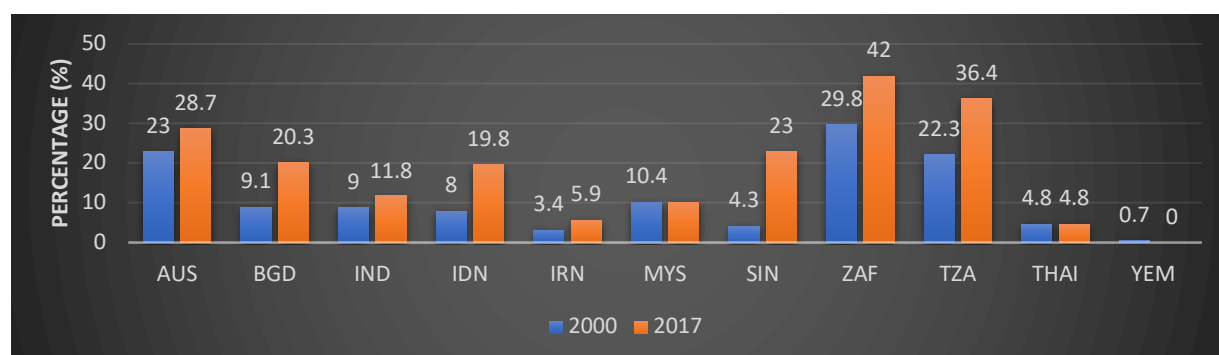


Figure 11: Percentage of women in National Assembly (Sourced from the World Development Indicators of the World Bank)

Thus, increasing women’s representation in national assemblies, and in policymaking and decision-making spaces, will be a key priority to advance policy development in the Blue Economy as the vehicle for women’s economic empowerment.

4.4. Health dimension

A good variable for assessing women’s empowerment from the health perspective is HIV prevalence, especially among the youth sector. This is because HIV prevalence among the youth encapsulates several other social dynamics, such as adolescent sexual behaviour, and the ability of females to negotiate sex, refuse sex or insist on the use of condoms with male partners, which in some cases are from older age groups. It also speaks to power dynamics in relationships, in which a woman is not properly empowered to insist on choices that ensure her health and safety. Data on these social dynamics are not available for IORA countries to allow for a more detailed analysis on women’s empowerment. Figure 12 shows trends in HIV prevalence by gender as a ratio of the population between 15 to 24 years.

Most IORA countries in this study register very low levels of HIV prevalence among this age group, indicating either successful awareness-creation on HIV prevention leading to the use of protection; better adolescent sexual choices; or more empowered females (see *Figure 12*).

However, in South Africa, Tanzania and Thailand, more females between the ages of 15 and 24 are infected with HIV than males in this age group. South Africa registered the highest levels of HIV prevalence among the IORA countries in this study. HIV prevalence among females stood at 16% in 2000 compared to 5.5% among the males, and 0.1% in most of the other countries. This could be attributed to the slow response of South Africa to this new epidemic. Each of these three countries have seen drastic reductions in infections between 2000 and 2017 owing to improved measures to prevent new infections and greater levels of awareness-creation. Thus, the reduction in HIV prevalence in South Africa is not due to higher levels of female empowerment, but rather to more successful implementation of policies aimed at mitigating new HIV infections and the spread of HIV.

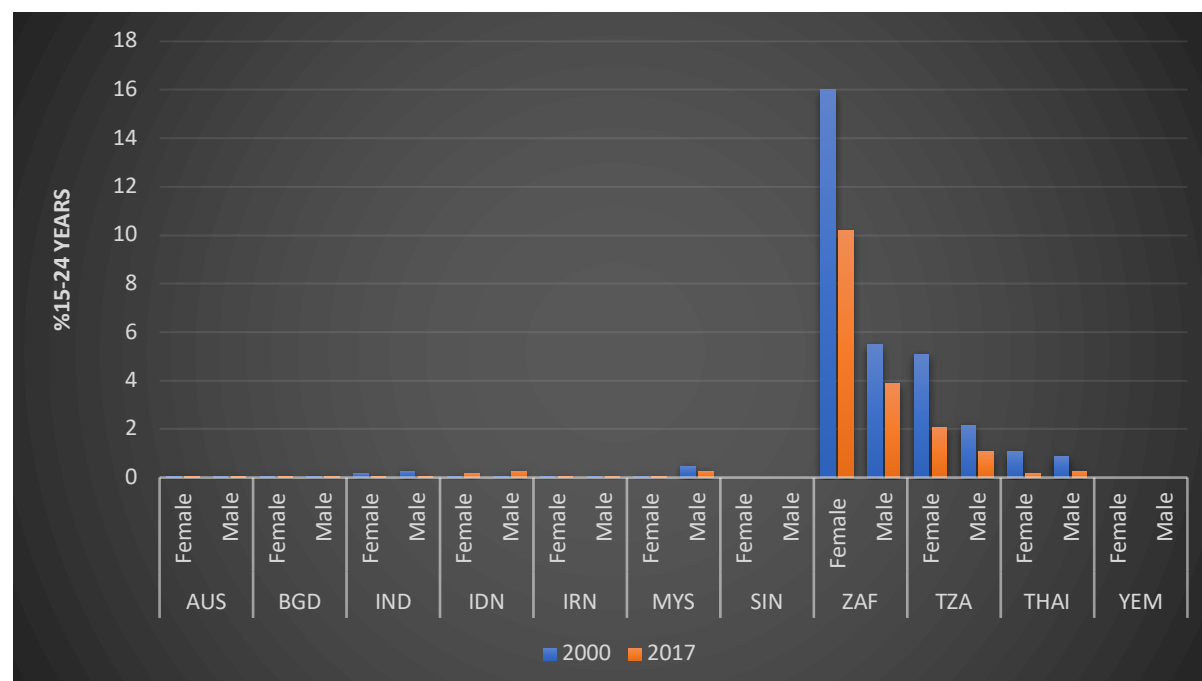


Figure 12: HIV/AIDS prevalence by gender, % 15 -24 years), 2000 and 2017 (Sourced from the World Development Indicators of the World Bank)

The social dynamics driving HIV in South Africa (such as poverty, imbalances in power, and sexual relations in favour of males and how that affects sexual dynamics and STIs) still remain the same to a large extent. The lack of economic empowerment for women feeds into dependence on males, sometimes from an older age group, with multiple partners, for survival, which leaves females disempowered and ultimately vulnerable to HIV and other STIs.

4.5. Implications for Women's Economic Empowerment in the Blue Economy

It can be observed from secondary data analysis that women's empowerment presents a mixed picture and different levels of progress in IORA member states along the four dimensions used in this study, namely economic, socio-cultural, education and health. In each of these dimensions, women are less empowered than their male counterparts. Less females as a percentage of the female population above 15 years of age are economically active in all the IORA countries as per the World Bank indicators, compared to their male counterparts. In spite of significant increases in female LFPR over the past two decades, their levels are still below male LFPR. More women work in vulnerable employment except in Australia and Singapore. Yemen stands out as the country with the lowest level of economic empowerment for women. This implies that significant effort will be required to avoid the repetition of the status quo with respect to women's economic empowerment in the Blue Economy. Targeted measures are required to identify which aspects of the value chains of the six BE sectors women could work in; the level of capacity required for them to work in these aspects; other resources needed, such as access to technology, finance and markets; and what legal and policy interventions need to be implemented to address these challenges, and to empower and increase the economic participation of women in the Blue Economy.

With respect to the socio-cultural dimension, South Africa leads the way with a greater role for females in governance and advocacy, as measured by the proportion of females in the national assembly. Singapore, Bangladesh and India also have a growing role for women in governance and advocacy. However, regarding access to finance, females are as equally empowered as males in Australia, Malaysia and Singapore. Women in Iran have also experienced rapid access to finance over the past two decades, while in South Africa, female access to finance now exceeds males'. Again, Yemen presents the worst-case scenario in socio-cultural empowerment of women. This presents some positive outlook on the levels of financial inclusion, and participation in positions of leadership and authority, for women in the Blue Economy in the IORA member states. However, there is still room for improvement in the majority of these states in this regard.

As at end 2016, Malaysia and South Africa had joined Australia, Singapore and Thailand in terms of countries with more females enrolled in tertiary institutions than males. Tanzania presents the worst-case scenario on this indicator of female education. Hence, on the capacity-building front, it does not look that promising in terms of women's economic empowerment in the majority of IORA member states. This highlights the relevance of capacity-building for women's economic empowerment in the Blue Economy as earmarked in the IORA Action Plan 2017 – 2021. Business development and capacity-building targeted at women is one focal area that needs optimal attention and consistent programme implementation to address this shortfall.

In South Africa, Tanzania and Thailand, more females between the ages of 15-24 as a percentage of the youth population are infected with HIV than males in this age cohort. South Africa registers the highest levels of HIV prevalence among the IORA countries in this study. This is a reflection of additional underlying social dynamics, such as adolescent sexual behaviour, the inability of females to negotiate or refuse sex, or to insist on the use of condoms with male partners, which in some cases are from older age cohorts. It also speaks to power dynamics in relationships in which a woman is not properly empowered to insist on choices that ensure her health and safety. This has a bearing on the safety of women in the Blue Economy, especially with reported incidences of rape and sexual assault of female maritime officers at sea by their male counterparts. Consequently, efforts to empower women in the sectors of the Blue Economy should coincide with efforts to ensure their safety and security.

It must be mentioned, though, that IORA member states are challenged in different aspects of women's economic empowerment and its associated drivers. This means policy interventions to address women's economic empowerment in the Blue Economy in IORA member states will differ between countries in terms of emphasis and focus. The heterogeneity of member states (in terms of the different starting points, required differences in policy emphasis, and foci) has to be taken into consideration in any joint IORA/regional policy formulation, programme design and implementation, to effectively bring all member states to the desired level of women's economic empowerment.

5. ELITE STAKEHOLDER INTERVIEWS

5.1. Theoretical underpinnings of the sampling framework

A non-probability sampling approach was used in this study due to the exploratory nature of the qualitative aspect of the study, specifically purposive sampling. This approach was further necessitated by the fact that the sampling universe is largely unknown and poorly documented. Consequently, the respondent selection criteria were pre-determined. This involved a pragmatic assessment of stakeholders whose knowledge and experience could provide important insights into addressing the study questions. Purposive sampling is informed by strategic choices and is synonymous with qualitative research.

5.2. Sampling Framework

The sample was selected based on a list of experts identified by both the research team and the IORA Secretariat. Eight experts were interviewed, unpacking the dynamics of women's economic empowerment in the Indian Ocean's Blue Economy. These interviews were conducted via Skype or telephone. Other interviewees also responded to interview questions via email. The interviews were transcribed and analysed using Atlas.ti, a qualitative analysis software that allows one to create discursive relationships flagging common themes and ideas relating to specific concepts.

Table 4 presents a summary of the main themes that emerged from the elite interview data.

Table 4: Thematic Summary of Results of Elite Interviews

Theme	Summary of key findings
Conceptualising the Blue Economy	Interviewees generally associated the Blue Economy with sustainability, equitable development, and as an alternative paradigm to development. Ocean resources and an ocean’s economic could provide space for inclusive growth and economic empowerment.
Challenges to the Blue Economy	Interviewees stressed that there is a lack of understanding at grassroots level of what the Blue Economy is. The notion of Blue Economy is discussed in high level panels and it does not necessarily engage communities to educate them on the potentials of the blue economy for economic development.
The Blue Economy and Women’s Economic Empowerment	<p>Interviewees highlighted that some areas of the Blue Economy like Fisheries, Seaports and Shipping and Seabed Exploration are considered male dominated. Gender stereotypes undermine the economic empowerment of women. Socio-cultural aspects prevent women from obtaining sufficient education or finance to start a business. A lack of capacity was also flagged as a barrier to women’s economic empowerment through the Indian Ocean’s Blue Economy.</p> <p>Interviewees flagged the necessity change gender stereotypes, create a space for self-empowerment for women through capacity building programmes, the need for context-specific policy making with a gender focus, as well as enabling environment for equal opportunity</p>

	and inclusive growth.
Interventions to strengthen women's economic empowerment through the Blue Economy	<p>Interviewees flagged the following as key interventions to facilitate women's economic empowerment through the Blue Economy:</p> <ol style="list-style-type: none"> 1. Capacity building programmes 2. Educational campaigns on women's value in work and society 3. Increased opportunities for education 4. Women's leadership and creating networks 5. Bringing men into a gendered approach to development
Gender mainstreaming in policy development of Blue Economy and Women's Economic Empowerment	<p>Interviewees highlighted the necessity for policy development through a gendered lens. Women leadership and representation is essential in this regard according to them. There is a concern that the narrative of women's economic empowerment is merely rhetoric and the socio-cultural context that may impact on women's economic empowerment is being ignored, and as such, interviewees highlighted the need to include women's voices in all spaces, not just in workshops and events that deal with women's economic empowerment. Men also need to attend these to become sensitized to gendered policy making.</p>
A need for quality research and data	Interviewees stressed that there is a

	<p>lack of focus on women in Science and Technology, specifically in relation to emergent sectors of the Blue Economy. Education is key to innovative development and women need to be given opportunities to pursue what is often seen as male-dominated disciplines. There is also a lack of understanding on the challenges that women may face in attempting to take hold of the opportunities that the Blue Economy may offer for women’s economic empowerment.</p>
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5.3. Conceptualising the Blue Economy: Elite Interview Perspectives

The conceptualisation of the Blue Economy encompasses a strong empowerment element towards social justice. It is also regarded as the vehicle through which to advance women’s economic empowerment in the Indian Ocean Rim. Indeed, elite interviews revealed similar views when asked what their understanding of the notion of the Blue Economy was, as well as the linkages between the Blue Economy and women’s economic empowerment.

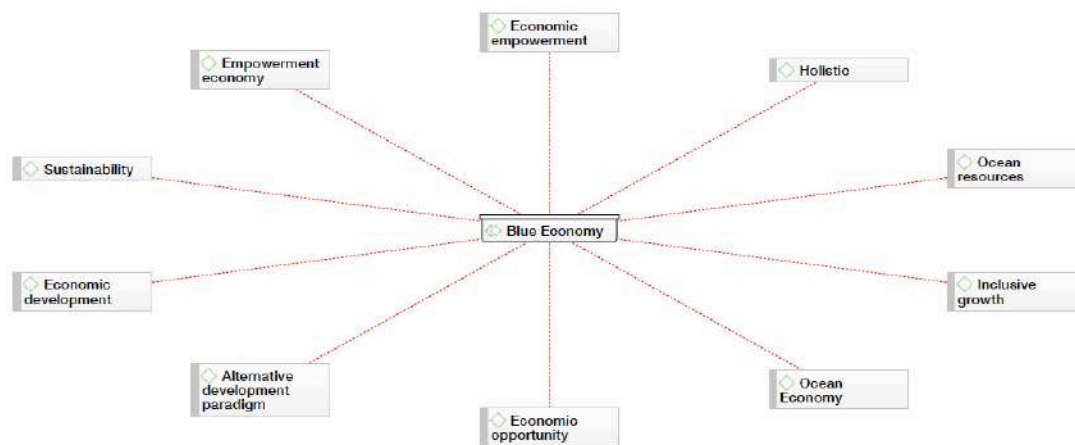


Figure 13: Constructing the Blue Economy: Elite Interview Perspectives²²

Interviewees stressed economic empowerment, opportunity, and the Blue Economy as an alternative paradigm to development that is more holistic in its approach to sustainability and focuses on the betterment of coastal communities and future generations. For example:

²² Created and analysed with Atlas.ti.

[I]t is about ocean's sustainability ... But it's, I think, very important to consider the needs of a healthy environment, interlinked ecosystems and benefits to the community ... So, I mean, I think it's a whole new area for development. Looking at a kind of more innovative approach really, like not doing the same things we've done on land but doing things in the ocean that are much more innovative with that are more equal in opportunity for women (Hoareau, 2019).

Blue Economy is the alternate way of visioning and envisaging the national strategy for inclusive economic growth. It is the "other way" that is the different way to look at the economic development which required empowering marginal people, women, local fisheries, minorities (Interviewee 4, 2019).

Some interviewees raised concerns that the notion of a Blue Economy is "romanticised". For them, the key concern was whether we will see a *business as usual approach to development*, where the focus is on extraction and profit as opposed to sustainability, inclusion, social justice, and human well-being. For example, Walker (2019) noted:

So the Blue Economy is a, if I can link it back to what I was saying in the beginning it is about trying to create something new in an environment where there's a lot of sometimes indifference, which can be changed but also ... it's, what's the correct word I'm looking for despair is a little too strong, but there's a bit of despondency when you realize that there is a lot of harm that's been carried out in the oceans by implicitly by human activities over the course of generations.

Similarly, Verma (2019) warned that "the only thing is that my concern is that it must be handled in the right spirit. So, there's a lot to offer but how do we handle it? How do we use the resources? How to be even include the resources?" For Walker (2019) a key concern is the language and how one constructs the economic potential of the Blue Economy in that "there's an economic interest in it It's the word "exploiting", I find quite troublesome".

In conceptualising the Blue Economy, sustainability for future generations and environmental impact were also flagged:

I think the one thing with sustainability which is quite hard, it's sometimes we start something new and we think it's a sustainable way. But then we find research that, oh, this is also giving pollution or oh, this is also giving, like, negative impact. So it's quite like hard question to answer really shortly, I believe. But I think that you use like ... I don't know how to explain it. But you try to use the least environmental impacts possible. But I think, and this will also change with new technology, you can have less environmental impact and sometimes maybe you think you have a little bit and you have it come up late that you have more. But I think that you do things with as small impact as possible, as much as you can do (Allard, 2019).

[A]nd also with sustainability, that it's something that we need to take care of our environment in a way that it is, it can be used in the same way by generations coming, and it's not the generation only today. It's the generations in the future. It's that everyone well-being, both for humankind and for nature, for everyone as a whole. I think it's the key for sustainability. So utilizing, it's not about, it's a balance between

conservation and economic growth. So that there should be a well-being for everybody (Bauer, 2019).

In answering the question on conceptualising the Blue Economy, interviewees highlighted a number of caveats in the narrative surrounding the idea of a Blue Economy (see *Figure 14*).

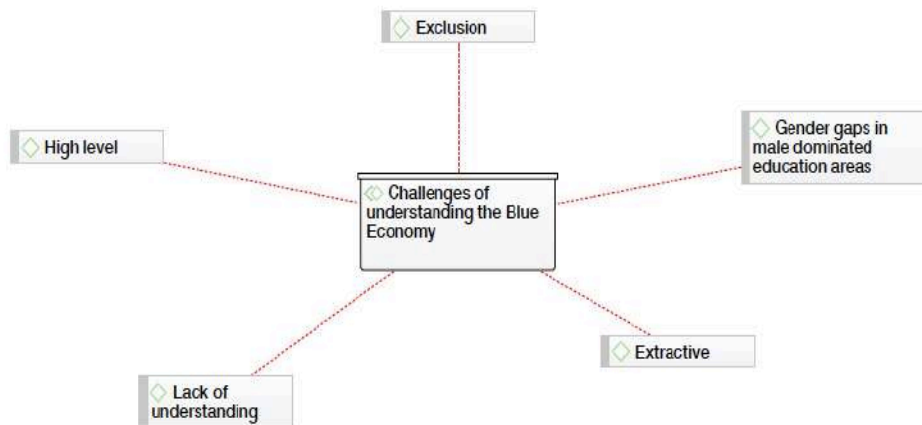


Figure 14: Challenges to understanding the Blue Economy: Elite Interview Perspectives²³

Interviewees highlighted that the idea of a Blue Economy operates within high level spaces; that communities at grassroots level do not necessarily understand the idea of a Blue Economy; and that there are gender gaps in male dominated educational spaces, which facilitates a salient exclusion, not just of women but of other marginalised groups.

You know, how is this, how are the social policies designed? To create equality between families in terms of child care, in terms of looking after the house, in terms of sharing financial responsibilities. I know some countries have issues with access to land, you know, women can't access land. So then how do they have a business? How do they get a business loan? You know, so it's looking like these kinds of mechanisms that are not enabling women to be able to be productive and contribute to society and then actually recognising, you know, how much is being done and how much isn't being done (Hoareau, 2019).

And so, woman's role within the maritime economies or structures which create food security or play a part in community life are taken for granted or a neglected and undergoing in effect a kind of a setup in a very kind of oppressive system I think is woman's kind of overshadowed or neglected, but key role in so many maritime related industries which give us food security or give us transport and trade and on the other hand ... the security threats side of things, that on both sides women have been sort of nominee champions ... I think women's role or as role players in the Blue Economy is undervalued and under recognized to an extent and taken for granted and

²³ Created and analysed with Atlas.ti.

the kind of dominant framings of economic activities, I think are not necessarily always ... so I'm putting a lot of words ... and not framed in such a way where women's empowerment is seen as a necessary part (Walker, 2019).

Thus, while the Blue Economy is central to IORA's economic development framework and strategy, and we find states in the process of developing appropriate policies, interviewees seem to stress the necessity to engage communities on the idea of a Blue Economy and the potential, economic and empowerment elements associated with the notion of a Blue Economy. It is for this reason that some case studies have been included in this report. Case studies are able to provide concrete examples of how the Blue Economy manifests in real ways "on the ground". These case studies focus on women's roles and how a new development paradigm could work towards empowering women in the ocean space, economically and otherwise.

5.4. The Blue Economy and Women's Economic Empowerment: Barriers

Interviewees were asked to identify some of the barriers that impede the empowerment of women in the Blue Economy in IORA countries. Some interviewees sent their written responses via email, while others were by Skype interview. The barriers identified by interviewees are reflected upon below.

Women have not always been able to fully enjoy the rewards of the growth in Africa's economies and the roles they have played in helping expand sectors across the continent are gaining greater recognition. The AU is committed to ensuring this is not the case with the Blue Economy and is advocating for women to be more involved in marine industries across Africa... The focus is on encouraging and celebrating women's participation in "becom[ing] sea cadets, lead[ing] port operations" and to "increase the number of women in the industry [to] become captains of ships, [to] celebrate their accomplishments and leaders in the industry, to expand their roles in shipping, fishing and other sectors of the marine industry (Wheeler, 2018).

This is a strong indication of the types of initiatives currently being pursued as part of women's economic empowerment in the Blue Economy. In a recent report by UN Women on Seychelles titled *Women leading in efforts towards a healthy ocean*, stories of women's contributions to the ocean are highlighted in an effort to illustrate the notable impact that women's participation can have in the various sectors. One of the many outstanding stories is that women are spearheading efforts in sustainable practices to find practical solutions to counter the negative impacts of climate change and the degradation of ocean environments (UNWomen, 2017). The report also points out that in various parts of the world, women's exclusion from employment in traditionally male-dominated fisheries and fishing industries is due to entrenched social norms and unfair employment policies (UNWomen, 2017). But coastal countries such as Seychelles are seeing significant changes in this sector, as there has been an increase of women in the fisheries sector, both on the fishing boats and in the labs (UNWomen, 2017).

A report conducted on women and the Blue Economy in Kenya and Somalia revealed a number of critical issues pertaining to women's experiences in the fishing industry in different regions in the two countries. A major challenge in the fishing industry is that women's

contribution to fisheries is considered “invisible”. Even though women are involved in the industry, much of the gender discrimination is due to the low value attached to women’s work, and is perpetuated in their limited access to credit, processing technology, storage facilities, and training (UNECA, 2016: 33).

The issues highlighted by UNECA were strengthened by the findings in this report; however, both countries also showed evidence that women’s participation is hampered by deeply entrenched beliefs that fishing is a male industry. Thus, women are either barred from taking up fishing or denied access to information and knowledge about how the industry works, in order to effectively make it a lucrative sector for them (CISP and KENWEB 2018: 11, 32). Stereotypes, such as women’s lack of ability to perform such difficult tasks and cultural beliefs that view women as bringing misfortune to the sector, have traditionally hampered women’s participation in the industry (CISP and KENWEB 2018:32). However, because women were involved in the sector in ways other than fishing, such as in fish trading, there has been an evolution of women’s roles, where some women have challenged these beliefs and entered the industry as fisherwomen despite the systematic barriers they face (CISP and KENWEB 2018: 10).

Some interviewees indicated that women are unable to go so sea and are confined to onshore activities, such as being intermediaries between the anglers and the market, and post-fishing processing. Women lack the training, skills, and resources to engage in offshore activities such as fishing. Some responses to this effect were as follows:

If you look at the, you know, take into account in terms of fisheries activities, but usually the women are not really important generally in sea activities, because usually only men will go to the sea. And the women, now, the women would be waiting at the other coast on the beach and usually the women are those who will buy the sources to bring them to the market. So if I dig very deeply they intermediary between the fishes and the market. So, because from what I’ve seen in many countries and especially also in the Indian Ocean, the women don’t usually really go to the sea. Those who go to the sea are the men or the young. But the women are involved in the trade of fishery resources from the beach to the public. And so the way to empower the women is also how do we organize the activities around fish activities? How do we organize them for be able to really benefit from these activities? (Talla, 2019).

You see fishermen hauling things in. It’s women in the marketplace. It’s women at home. It’s people who are acquiring these to be brought in as well. And those kind of perspectives I think are absolutely crucial to understanding the Blue Economy itself as well because we just focus on the creation of jobs and the expected revenue to be gathered, we’re missing the fact that yes, we might be a benefit for the next 20 years, but how are we going to feed ourselves in 50 years’ time if there were fewer fish in the sea? ... And, that’s why ... it’s more about having the attitudes amongst men changed quite a lot, because I think there’s just silence and a Gillette advert at the moment which everybody a lot of people I’ve seen been talking about on social media and stuff is interesting to see the reaction of men to something which is challenging, which is something men take for granted. And I think like say when it comes to a lot of how we conceive or perceive the maritime domain we take that for granted there as well. So, there were so that that’s a big challenge in that regard as well. So it’s about

finding stories which have not been told and seeing the results of things which are often like saying not even observed which is a big opportunity for say researchers, for the government, for the just a production of knowledge to enrich the overall story of what's going on here because they say we talk about the Blue Economy, we mix it up with the ocean economy and the story becomes a little muddy door or hard to actually kind of follow because it might be about oil extraction (Walker, 2019).

The true potential of the Blue Economy as a vehicle for women's economic empowerment can only be fully realised when all social groups, especially women, youth, local communities, and under-represented groups, are effectively integrated. These groups often face limited access to opportunities and public services, insufficient legal status, poor value added opportunities, low benefits, lack of access to finance, and a lack of recognition of their unique and valuable role in society (Rumbaitis del Rio, 2014). Similar issues emerged from the elite interviews on linking women's economic empowerment and the Blue Economy. Other interviewees intimated that there was the need for a change in gender attitudes, and better recognition and enhancement of the role of underrepresented groups, such as women, youth and local communities. Changes in gender attitudes, as well as recognising the value of women, are necessary elements to facilitate women's economic empowerment within the Indian Ocean Rim through Blue Economy activities. This also requires that stereotypes are broken. Indeed, Verma (2019) stressed that:

So, I think what basics we talk about, whatever so-called enabling factors or empowering strategies we talked about in general, that is very much applicable to Blue Economy as well. But one thing that I find good is that perhaps you can break the stereotypes, or maybe you could create new stereotypes in Blue Economy because, as of now, women's contribution is limited to mostly traditional areas. So there perhaps you need to break the stereotypes.

Lack of capacity and the need for capacity-building also emerged in the elite interview responses as barriers that hindered women's economic empowerment in the Blue Economy.

Capacity-building programmes are essential components in advancing a Blue Economy for women's economic empowerment. However, interviewees also stressed that these programmes must incorporate life skills to facilitate self-empowerment for women to have agency, autonomy and authority in taking advantage of the opportunities the Indian Ocean's Blue Economy may offer.

5.5. The Blue Economy and Women's Economic Empowerment: Opportunities

Given the experiences of exclusion, marginalisation, and vulnerability of women in Blue Economy sectors, and the policy narrative linking women's economic empowerment to the Blue Economy within IORA, interviewees were asked how they perceive the linkage between women's economic empowerment and the Blue Economy within the Indian Ocean Rim, and whether there were viable opportunities to enhance and empower women in the BE.

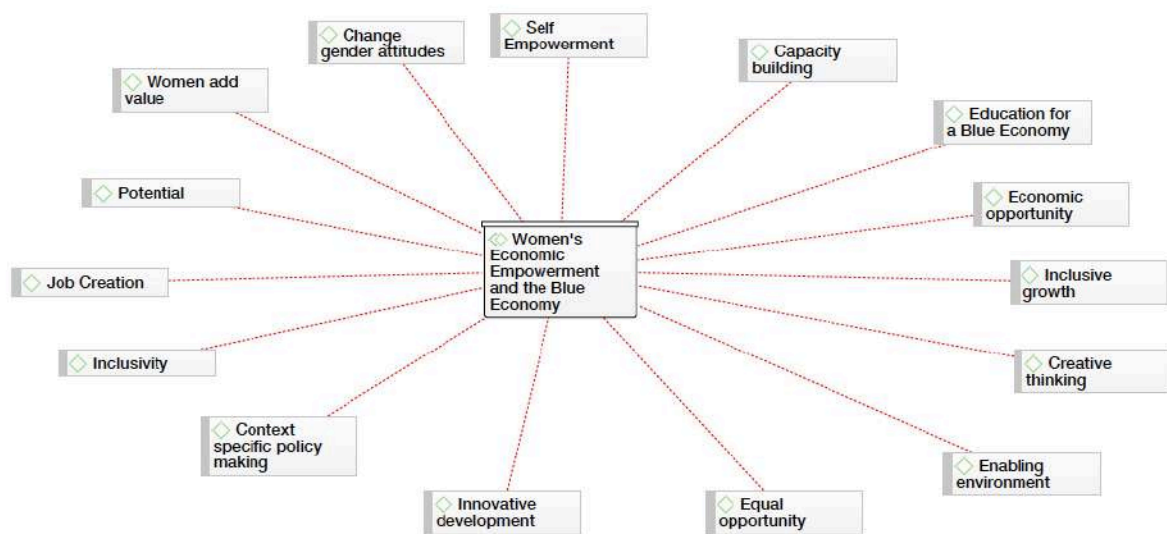


Figure 15: Themes linking Women's Economic Empowerment and the Blue Economy: Elite Interview Perspectives²⁴

Figure 15 demonstrates that, overall, interviewees drew a positive discursive correlation between the Blue Economy and Women’s Economic Empowerment. To this effect, interviewees highlighted that the Blue Economy can become a vehicle of self-empowerment for women; that women can add value to Blue Economy activities; and that women have unleashed potential and have great economic opportunity:

So in this context about how women can really take the opportunity to economically empower themselves through Blue Economy. It’s something that perhaps needs to be, you know, investigate further or to be you know, like I don’t think that there are, I think there are so many opportunities, yeah, that they still untapped by women itself to be empowered economically through Blue Economy. There are still many potentials that is not yet reached by women itself that can be offered by the Blue Economy (IORA Interviewee 3, 2019).

IT sectors. It may be, you know, these, what you call this, tourism for example. If you look at tourism, I mean one of the report says that one job out of ten is going to be in the tourism sector. Now, this is where women could come in a big way. They are there but, because you will be having a different kind of a tourism, you'll be having ... so women could come in. They could come into high-tech jobs also, in IT sector because that doesn't require really being on the field. So, and fortunately this area is having better legal provisions, at least from the paper. It should begin with at least you must have good laws and good, you know, policies on the paper. Only then they can be translated into action (Verma, 2019).

But not just teaching them the technical aspects of things but also teaching them how to manage the money that’s coming into their family because it’s probably be a new aspect for them. You want them to be, have a sustainable financial income in the future, not just to splurge and spend all their money as it comes in (Hoareau, 2019).

²⁴ Constructed and created with Atlas.ti

Interviewees also stressed, however, the necessity to create an enabling environment for women’s economic empowerment, and the necessity for education for a stronger Blue Economy in future. A change in gender attitudes was seen as an essential component for advancing gender equality within IORA in future. Interviewees felt that men should also be involved in women’s economic empowerment activities. Interviewees stressed that context matters and, as such, creative thinking in advancing women’s economic empowerment will be necessary in advancing the policy agenda of women’s economic empowerment through the Blue Economy in different IORA member states. This was especially relevant in relation to emerging areas such as information technology:

[W]omen empowerment by technologies like ICT. Both issues are impacted by the cognitive-cultural institutions, social norms and the legal rights of women in the sub-regions of IORA (IORA Interviewee 3).

[I]dentifying emerging areas and motivating more women, motivating means educating them also. Training them also, and psychologically preparing them also to take up unconventional areas. So, if that could be done, I think IORA as an association, IORA as a hub, could do something. Because up till now, honestly speaking, I don’t think, I’ve been following IORA for some time now, I don’t find that much has been done by them on women empowerment. I go through the whatever, you know, reports they have generated. It’s very shallow (Verma, 2019).

5.6. The Blue Economy and Women’s Economic Empowerment: Interventions

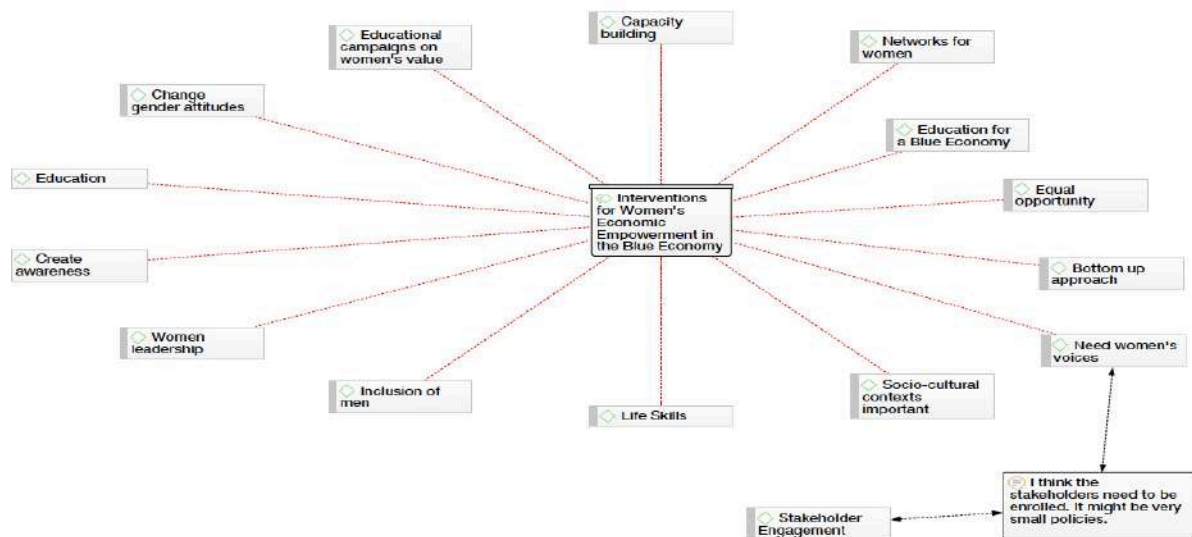


Figure 16: Interventions for Women's Economic Empowerment in the Blue Economy²⁵

Interviewees identified a number of interventions to facilitate women’s economic empowerment through the Blue Economy (see Figure 16). These included education

²⁵ Analysed and created with Atlas.ti.

campaigns within IORA member states on the value women can add; creating networks for women to engage with one another; facilitating women's leadership (who in turn can act as role models and mentors to younger women and girls); as well as recognising the importance of socio-cultural contexts (an element that is often ignored) and bringing women's voices into the discussions on the Indian Ocean's Blue Economy as the vehicle to advance women's economic empowerment. Most important, however, was the necessity to include men in these activities. Indeed, as Walker (2019) noted:

[G]ender training which often is undertaken by organisations, NGOs, and civil society organisations, gender awareness or gender sensitivity. From what I've heard, because I haven't actually facilitated any of these myself, but what I've heard from a wide range of people is that often women are sent to these Women will go to that and the other kind of more high level ... but high-level stuff is where we'll send, you know the top people when they've got the time kind of thing. And that's got to change. So, a good mix of men and women. Let me put it this way as well, there could be more men who could actually change the way they think and actually encourage other men to see differently as well. I say it is encouraging it's hard to isn't it to battle against patronizing without patronizing other people?

Another important aspect concerning women's economic empowerment that is closely connected to environmental sustainability is that of unpaid care work. Women's unpaid care work often includes taking on the responsibility of child-rearing, carrying out household tasks and ensuring food security. While some women are responsible for the well-being of their families, in single-headed households, some women carry the double burden of doing unpaid care work as well as being the sole provider (Rumbaitis del Rio, 2014). It is rather critical, then, that any efforts towards the inclusion of women use an intersectional approach to understand the situation of women in the Blue Economy, in order to fully realize their participation in this economy. Gender roles, and the traditional construction of those roles, were also flagged as challenges to women's economic empowerment in the elite interviews. As Hoareau (2019) highlighted:

And you know so I think it's these kinds of policies and these frameworks that enable, you know, some kind of equality in terms of you know, like shared responsibility within households and families so that men don't feel disempowered because women are becoming empowered. I think that's quite a hard that's quite a hard balance to strike because I think you know people are raised from the time they're very young to have a male and a female role and I think that translates to society and into sectors and into jobs.

Nonetheless, it is worth noting that some sectors in the Blue Economy are getting the necessary push to be more inclusive of women. Calls by the former chairperson of the African Union Commission, Dr Nkosazana Dlamini Zuma, for the need to integrate women into the maritime industry were answered by the 1st Continental Conference on the Empowerment of African Women in Maritime (CCEAWM) held in Luanda, Angola, in March 2015 (Royeppen, no date: 45). This conference was aimed at promoting the "development of a common agenda or platform of action for African maritime women and set up the basis for the creation of an adequate continental institutional framework to support its implementation" (UNECA, 2016: 36). Not only are such efforts needed to urgently address the gender barriers facing women in the maritime sector, but more work needs to be done both in and outside the

different industries in order to fully harness the meaningful role that women can potentially play in the Blue Economy (Royeppen, no date: 45). This is particularly relevant when it comes to women because, not only are they underrepresented in the various sectors of the Blue Economy, but when they are present, they are often marginalized from decision-making processes (Rumbaitis del Rio, 2014). Indeed, Allard (2019) stressed that:

The baseline is that everyone should be able to do it no matter what, based on the qualifications and all that; that there shouldn't be any stigma about being a man or woman for certain kind of jobs. Then norm should be that, well, it's not your gender that defines what you should go into or what you should work with. Then I think ... it's some jobs attract more women, some jobs attract more males, and that's fine. So, it's not that you have to go into that work if you don't want to, but you should have the possibility. You should have the possibility to be a fisherman no matter the stigma. And, so I think in Seychelles we thought it's also, just like with the fishermen, is starting to change, because a lot of more girls going into maritime sector overall. And then the mindset is starting to change. It's going slowly, but it's starting to change, and I think with Blue Economy, even if more females will go into new sectors in the beginning, I think that it will slowly change the existing sectors as well; the existing work places as well. To see that, oh they can do this, and they maybe can do this as well. So, it shouldn't be this work is for you and this work is for you. You should have the possibility to do whatever you want.

Given that Blue Economy sectors and their associated economic activities is the vehicle to advance women's economic empowerment, there is a need to engage on gender equality values. As noted by the interviewees, key obstacles to facilitating women's economic empowerment within the Blue Economy sectors include gender stereotypes and the construction of traditional gender roles. To this effect, a key concern was changing attitudes towards women within IORA member states and creating campaigns that highlight the value of women in Blue Economy activities, as well as the positive contribution women can make to sustainable economic development in facilitating prosperous coastal communities within the Indian Ocean Rim. It is thus imperative to analyse and engage with data that measure attitudes towards gender equality within IORA member states.

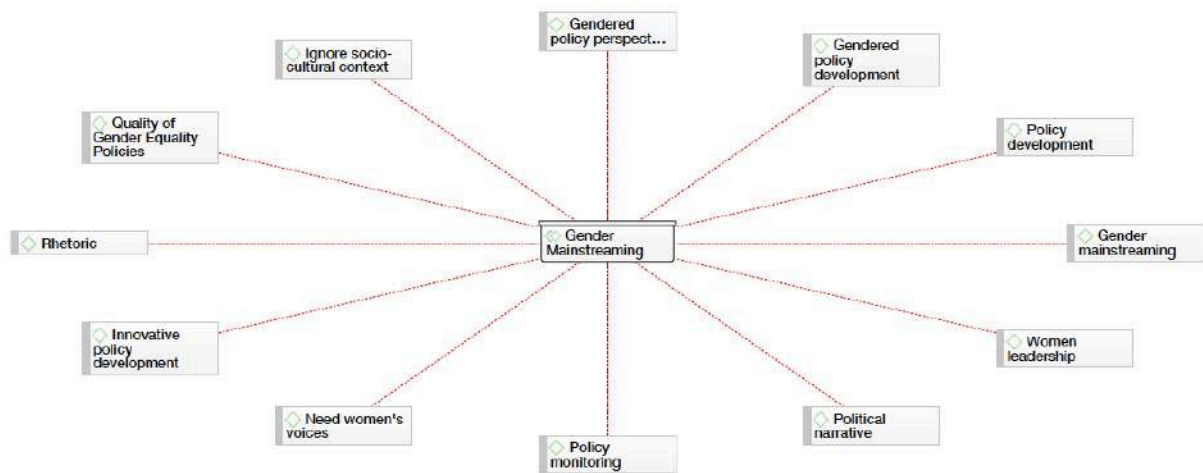


Figure 17: Gender Mainstreaming for a Blue Economy for Women's Economic Empowerment: Elite Interview Perspectives²⁶

Gender mainstreaming is built on the foundation of representation, resources, rights and reality (WECF, 2004). It requires policymakers to assess who is represented and participates; how resources are distributed between men and women; whether men and women enjoy equal rights; and what is the reality and the reason for the situation women may find themselves in. For example, some interviewees highlighted:

So in terms of the Indian Ocean region, it's looking at the data and analyzing in all of the countries we have, what policies are there in place in each of the countries that allow women to have choices when it comes to working in the Blue Economy in terms of you know, the childcare option You know, how is this, how are the social policies designed? To create equality between families in terms of child care, in terms of looking after the house, in terms of sharing financial responsibilities. I know some countries have issues with access to land, you know, women can't access land. So then how do they have a business? How do they get a business loan? You know, so it's looking like these kinds of mechanisms that are not enabling women to be able to be productive and contribute to society and then actually recognising, you know, how much is being done and how much isn't being done (Hoareau 2019).

The mainstreaming side of things is absolutely right. We should actually obviously be talking of a future environment, where there is equality, but we you know kind of neutrality around these things like we're not making such a big distinction because there's no need to. It's a bit like charities in a way not needing to exist in the future because the problem they dealt with tis addressed. Yeah, instead of it being a permanent feature. In a way, it feels like this this there are a lot of unnecessary hurdles in the way that you do need to be making some very positive, you know, sort of interventions as it were to in the end mainstream these things, that in the end this

²⁶ Constructed and analysed with Atlas.ti.

will become part of the, it will become mainstream over time, it does need to be almost like both at the same time, but with the ultimate goal of all of it being mainstreamed (Walker, 2019).

This links with the Women's Empowerment Principles, which seek to facilitate a gender lens to analyse policies, initiatives, practices, and innovations in facilitating women's economic empowerment.

Education and training were key themes that emerged from the interview data, most notably around creating an enabling environment for women and girls to gain access to what is often seen as male-dominated academic and scholarly spaces. Further to this, interviewees stressed the lack of necessary research around key sectors in the Blue Economy, which are again often perceived as male-dominated areas. For example, Hoareau (2019) stressed that:

It's the education from the school, you know, from very early age helping people to, helping women to be able to have positions in engineering, in technology, in business, you know, in science, having really good school systems and, you know, good attendance at school and then having opportunities to study further and then also having you know the opportunity to do technical jobs, you know, vocational jobs that are actually maybe a little bit more male dominated but only purely because of the way that society has defined men and women before, you know.

Walker (2019) reflected on women at sea:

I suppose it's traditionally been seen as a man's domain ... and where women have been involved in the maritime domain in the past if it's a classic example being I wish I remember the name of female pirates only 1700 and 1800, you know, they might play famous, the famous because they're women. Yeah as it were and so it's very kind of exceptional kind of field and and that's not helpful. I think it is something which has to have to change and it's from what I can see from what I can see, I'm glad it is slowly changing, but it seems to be a much harder than it that it really needs to be.

A key concern amongst the interviewees was the lack of research and necessary data to advance not just Blue Economy activities, but also how the Blue Economy can be used to facilitate women's economic empowerment.

Figure 18 demonstrates the dire need for continued research and knowledge generation in the Blue Economy, not just for women's economic empowerment, but also for issues around sustainable development, mitigating climate change, innovative development, and to facilitate a deeper understanding of the linkages between the Blue Economy and women's economic empowerment. There is a perception that the narrative on research, Blue Economy and women's economic empowerment is merely policy rhetoric.

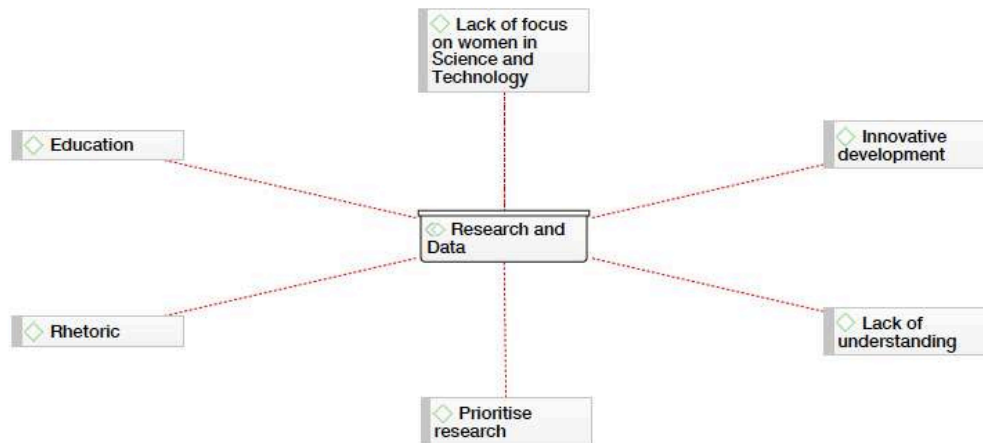


Figure 18: Elite Interview Perspectives on Prioritising Research and Knowledge Development in IORA²⁷

This perception is evident in, for example, Verma’s (2019) view:

My concern is that just by adding words like sustainability or environmental sustainability and inclusiveness into the idea, does not in any way ensure that they will be taken care of ... if you look at the usual the most emerging or popular destinations of Blue Economy, that’s how they talk about it: ocean economy, which is sustainable and equitable and efficient. I’m all for it. But I have seen as a student of Economics that many times global conventions are so strong, that somewhere sustainability and inclusivity, they become casualties. So that’s what I mean to say that, if you really want to have efficiency and growth in a longer time frame, it is very important to integrate these two words: inclusiveness and sustainability.

Furthermore, there is a sense that more investment in pilot studies should be undertaken in order to facilitate women’s economic empowerment in the Blue Economy. For example, Hoareau (2019) highlighted that:

So, I think it would be identifying pilot projects in each country, that we could support and use as a case study. And then also looking at the policies to enable women to participate in sectors that are currently underrepresented by females. And then also creating that, I suppose again with the education and awareness, it’s just that shared responsibility within the household, you know, looking at how to promote that shared responsibility and maybe the policies, you know, with maternity leave, you know, men or women can take maternity leave. I’m sure in a lot of countries in the Indian Ocean, it’s probably a very female dominated, you know, kind of benefit I suppose, maternity leave.

There is a need to open the policy dialogue on how member states within IORA are going to support knowledge development, research and innovation in the context of the Blue Economy. This dialogue will not only need to focus on women’s economic empowerment,

²⁷ Analysed and created with Atlas.ti.

but also on Blue Economy activities that are based on the foundations of the notion and conceptualisation of the Blue Economy.

5.7. Summary of findings from elite interviews

The key findings from the elite stakeholder interviews demonstrate a number of areas where the IORA Secretariat will need to strengthen its coordination capacity in order to generate the necessary data needed to measure the extent of women's economic empowerment through the Blue Economy. We noted that the conceptualisation of the Blue Economy draws on the narratives of inclusivity, sustainability, and a space to move beyond traditional approaches; and to develop and empower marginalised groups, including women. Thus, interviewees highlighted the opportunity for a new form of thinking around facilitating women's economic empowerment. However, there was also a warning against romanticising the notion of the Blue Economy as an alternative developmental paradigm. Capacity-building programmes were seen as an essential step, as well as engaging with women's organisations active in advancing women's economic empowerment in the Blue Economy.

Interviewees concurred that there are many opportunities for women's economic empowerment through the Blue Economy, but that this would require a gendered policy approach in facilitating the full inclusion of women in these sectors and economic activities. This, however, would require an enabling environment and creative policy thinking and development to facilitate women's economic empowerment through the Blue Economy.

Specific interventions the IORA Secretariat should consider, according to the interviewees, relate to better quality data disaggregated by gender, as well as campaigns through traditional workshops and social media to highlight the valuable contribution women can make. Specific interventions could relate to working with NGOs to teach women life skills and engaging in capacity-building initiatives to facilitate women's economic empowerment.

AMANDLA!

WOMEN MOBILISING FOR BETTER WORKING CONDITIONS IN SOUTH AFRICA



Source: <https://theecologist.org/2014/nov/21/marine-protected-areas-south-africa-ocean-grabbing-another-name>

In 2012, the Department of Agriculture, Forestry and Fisheries released their report on Transformation in the Fishing Sector in South Africa. Three key stakeholders that are of value in this report were the Benguela Fishers and the First Indigenous Women – Hout Bay.

The Benguela Fishers is a particularly interesting case study as this organisation was formed by women who "...had to fend for themselves and their families when their husbands died at sea" (PMG, 2012). The main concern was that they had fishing quotas, for some reason they were told to stop fishing and that people who did not understand their realities would speak on their behalf.

The key recommendation was to ensure inclusion of these women in policy consultations and that they should be able to continue fishing in order to provide for their families.

The First Indigenous Women – Hout Bay stressed differential treatment, highlighting that the South African government treated small scale fishers unequally and different to big companies.

They stressed that this differential treatment impacted on their ability to provide for their families as the quotas they were issued with was too small to make a sustainable living.

Source:
<https://pmg.org.za/tables-committee-report/1951/>.

AFRICAN EXPERIENCES

LESSONS FROM ASIA

Mshenga and Richardson, in their study of the Kenya tourism sector note that most SMEs in the coastal tourism sector are owned by men. The same trend persists in larger service providers such as hotels and other facilities. Most women do low income jobs and are not adequately represented in decision making organisations or community development committees. Hence women remain marginalised and excluded in coastal tourism, limited to menial jobs that relates to aspects of the value chain.

South Africa exhibits similar exclusion patterns for women in coastal tourism as in Kenya, but driven by more complicated factors. South Africa's unique history of racial segregation, complicates marginalisation and exclusion along social, economic and political dimensions. Within this complication, women and youth are grossly disempowered in coastal tourism in South Africa. In both countries the challenges of women in entering coastal tourism markets is saddled with challenges such as lack of access to finance, high cost of credit, lack of business operation skills, marginal gender focused SME development, market access and standards and the absence of incubation hubs for women business start-ups. Several programmes have recently been established to address these challenges in Kenya and South Africa. In Kenya, a Ministry for Public Service, Youth and Gender Affairs was established in 2015 mandated among other duties to address women empowerment. The ministry is guided by a National Policy on Gender



Market at ThaChalom Fishing village, Thailand. Source: https://commons.wikimedia.org/w/index.php?search=Thailand-tourism+seafood&title=Special%3ASearch&profile=advanced&fulltext=1&advancedSearch-current=%7B%22name-spaces%22%3A%5B6%2C12%2C14%2C100%2C106%2C0%5D%7D&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1&ns0=1#/media/File:Samutsakorn_ThaChalom_Fishing_village_4.jpg

and Development of 2000, and a Women Enterprise Fund to provide affordable credit to women start-ups irrespective of the sector in which they are involved. In South Africa, Operation Phakisa earmarks coastal and marine tourism as a key activity to develop as part of a broader tourism sector development strategy. The National Tourism Sector Strategy 2016 – 2026 (NTSS) also focusses on marginalised groups, specifically women and the youth. Earmarked activities to achieve this include access to finance, training, mentorship and business incubation. However, in both South African and Kenya, real evidence of empowered women SMEs in coastal tourism are not that readily noticeable.

¹¹¹Coastal Asian countries such as Malaysia, Indonesia and Thailand have made significant strides in ensuring that local coastal communities, including women benefit from coastal tourism activities. These countries make a clear distinction between mass international tourism and budget tourism. Mass international coastal tourism such as cruises and charter groups do not have much linkages with the local coastal economy. Thus, very limited benefits accrue to local communities. Budget tourism focusses on international backpackers, domestic tourists and regional tourists. In budget tourism niche markets are developed by local entrepreneurs who focus on food and informal restaurants, informal transport like local ferries, bars and informal accommodation such as backpacking. The Asian experience has shown that budget tourists spend more on locally produced goods and services. Indonesia, Thailand and Malaysia have created vibrant local SMEs by expanding backpacking in coastal tourism. This has fueled the establishment of internet cafes, tour services and local sea food restaurants by local entrepreneurs. Small scale farmers and fishers have also linked up with the food supply chains of formal accommodation establishments creating jobs for local coastal communities.

These opportunities and lessons from Asian countries serve as plausible entry points for women economic empowerment in coastal tourism in Africa especially because women's use of coastal spaces and resources are mostly on-shore based. This creativity needs to be linked to policy initiatives to boost women economic empowerment in coastal tourism in Africa.

6. CONCLUSION: RECOMMENDATIONS AND MAPPING A WAY FORWARD FOR IORA

In such a diverse region, it is obvious that IORA member states face different challenges when it comes to women's economic empowerment through the Indian Ocean's Blue Economy. This means policy interventions to address women's empowerment in IORA countries will differ between countries in terms of emphasis and focus. This calls for targeted and specific policy differentiation driven by the findings of evidence-based policy research, such as this study. The heterogeneity of member states, in terms of the different starting points and required differences in policy emphases and foci, have to be taken into consideration in any joint IORA/regional policy formulation, programme design and implementation, to effectively bring all member states to the desired level of women's empowerment. This was flagged as an essential priority issue by the interviewees. In mapping a way forward for the IORA Secretariat, we propose the following recommendations as per the findings of this study:

Recommendation 1: Prioritise capacity-building initiatives for officials and policy-makers on Women's Economic Empowerment through the Blue Economy

IORA's future work should emphasise capacity-building initiatives on women's economic empowerment for officials. What would be particularly relevant is to host a workshop, with key officials within the Blue Economy sectors, on gender mainstreaming within policymaking. Given that different member states will require policies unique to their specific context, such a workshop will facilitate capacity-building by introducing a gendered perspective on policymaking for individual member states. This will, however, require a policy analysis of women's economic empowerment in each member state of IORA. Thus, a future study should focus on engaging with Ministries of Oceans, Ministries of Women, Ministries of Social Development and Ministries of Labour to facilitate a policy status quo and framework for women's economic empowerment through the Blue Economy.

Recommendation 2: Create an awareness campaign for women on understanding the Blue Economy and their role in it

Women within IORA member states should be educated about what the Blue Economy is and how it can benefit them. A regional awareness campaign could be launched through the Women's Economic Empowerment Working Group, using traditional and social media in member states. Such an initiative should ideally be supported by the Secretary-General of the Secretariat using traditional and social media. Focus should be placed on sectors of the Blue Economy where women are under-represented or discriminated against. This would include traditionally male-dominated sectors such as Renewable Ocean Energy, Seabed Exploration and Minerals and Seaports and Shipping.

Recommendation 3: Support and facilitate research collaboration on key sectors of the Blue Economy and women's participation rates in those sectors

A critical element in advancing women's economic empowerment in the Indian Ocean's Blue Economy is the need for evidence-based policymaking. To this effect, IORA has stressed this as a priority in looking towards the future to achieve its long-term vision on women's economic empowerment through the Blue Economy. Research support is an essential component to advance evidence-based policymaking. It is essential to fill data gaps and, as demonstrated in this report, IORA needs more data disaggregated by gender, especially in the sectors of the Blue Economy. Given that in future IORA wishes to support women entrepreneurs, this data will be needed in determining strategies that advance women's economic empowerment through the Blue Economy in the Indian Ocean Rim Association. The Secretariat therefore needs to engage member states' Ministries of Labour to start capturing data disaggregated by gender in the key Blue Economy sectors. It will also be essential for the Secretariat to engage Business and Economic Development Ministries to conduct an audit of key companies in the emergent technology-driven sectors of the Blue Economy to ascertain the level of participation of women in those sectors. Another alternative would be to place the necessity of gendered disaggregated data on key sectors of the Blue Economy on the agenda for the next Council of Ministers' meeting. This would facilitate a baseline from which to facilitate and assess who participates in which sectors of the Indian Ocean's Blue Economy for the realization of IORA's 2017-2021 Action Plan goals on Women's Economic Empowerment through the Blue Economy.

Recommendation 4: Encourage academic collaborations and engage Ministries of Higher Education in member states to invest in research and academic mobility

In order to facilitate research support for evidence-based policymaking, academic collaborations are strongly encouraged. Member states need to consider investing more in research and academic collaborations – assisted by better resourced dialogue partners – in order to generate the necessary data needed for evidence-based policymaking. This could be facilitated through the IORA Academic Group's initiatives, such as increased mobility within the region, especially for researchers and post-graduate students, coordinated by the Chair of Indian Ocean Studies (CIOS). Collaborative research, especially amongst women in the sectors of the Blue Economy, could be encouraged by the IORA Special Fund, and through funding provided to high quality impactful research initiatives that focus on gender equality and the empowerment of women. Further to this, the Secretariat could engage member states' Ministries of Higher Education to ascertain the level of participation of women in STEM-related fields at universities. This is a necessary process to facilitate a sense of women's inclusion in these academic areas, as this will impact on women's economic empowerment in emergent science and technology-driven areas of the Blue Economy. Alternatively, it is recommended that the IORA Secretariat issue a call for research funding to facilitate the creation of the necessary database on women's participation in STEM-related disciplines at universities as this will impact on women's economic empowerment in the key sectors of the Blue Economy with a strong science and technology focus.

Recommendation 5: Map and engage NGOs advancing women's issues within key Blue Economy sectors

There is a need to map and engage with non-governmental organisations within IORA member states to determine the key issues around which women within the Indian Ocean's

Blue Economy are mobilising and prioritising to advance women’s economic empowerment. This exercise could build on already strong links between IORA and Women, including through a three year research and capacity building project currently underway in Australia.

Recommendation 6: Strengthen and facilitate cross-collaboration between WWEWG and BEWG

Key to integrating women’s economic empowerment in the Blue Economy will be to facilitate stronger cross-collaboration between the Working Group on Women’s Economic Empowerment (WGWEE) and the Working Group on Blue Economyn (WGBE). Members of each group need to be represented in both the working groups to streamline and facilitate strategies for women’s economic empowerment through the Blue Economy. This would also bring an element of gender-mainstreaming to IORA as a regional entity in working towards the long-term vision of the Blue Economy and women’s economic empowerment in its Action Plan 2017 – 2021. It is proposed that the Chair and Vice-Chair of each WG serve on the other to enable ease of decision-making.

Recommendation 7: Facilitate and increase women’s representation at all IORA conferences, seminars, training programmes, and workshops

Women need to be better represented at all IORA conferences, workshops, seminars, and training programmes, and female participation should not be limited to what are often constructed as women’s workshops. It is essential for women to be represented across the six priority and two focus areas within IORA, including traditionally male-dominated areas such as, seabed exploration, renewable ocean energy, and seaports and shipping.

Recommendation 8: Develop a matrix to capture relevant data on Women’s Economic Empowerment through the Blue Economy

IORA needs to ensure that interventions are monitored and evaluated in such a way as to measure the impact of new initiatives and ensure that there is no duplication in effort and thus wastage of funding. This could be done by the Secretariat, IORAG and the CIOS working together to develop indicators and how to measure them. We propose a matrix for input and further refinement to monitor women’s economic empowerment through the Blue Economy in IORA, given the heterogeneity of the region.

Table 5: Matrix for Measuring Women's Economic Empowerment in the Indian Ocean's Blue Economy

Dimension	Variables	Information available
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Economic empowerment	<p>Evidence of women working in any of the 6 sectors of the Blue Economy.²⁸</p> <p>Monitor carbon-credit programmes for women to ensure that they are remunerated for their work in this important area.</p>	
Socio-cultural empowerment	<p>Evidence of women in ministerial, directorship, senior management, and community leadership positions or associations' leadership positions that relate to the ocean economy.</p> <p>Credit/lending/funding schemes for women groups in fishing, aquaculture or any ocean economy-related business.</p>	
Education	<p>Programmes in education institutions that relate to the ocean economy. Monitor levels of enrolment in STEM-related fields for the development of emergent Blue Economy sectors and monitor women's educational empowerment to contribute to those sectors.</p> <p>Monitor capacity-building programmes at a lower-income community level to teach women life-skills and financial management, and to empower them with knowledge on key Blue Economy sectors to which they can contribute.</p>	
Health and welfare	<p>Health improvement programmes for women working in any of the Blue Economy sectors, most notably in male-dominated sectors</p>	
Policy directives	<p>Engagement with member states on policy development and gender mainstreaming to facilitate women's</p>	

²⁸Marine Safety & Security, Trade & Investment, Fisheries and Management, Disaster Risk Management, Tourism and Culture, Academic, Science & Technology.

	economic empowerment in the Blue Economy.	
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INTERVIEWEES

Allard, A. Research Institute of Industrial Economics, Sweden

Bauer, C. K11, Belgium

Hoareau, K. Director of the James Michel Blue Economy Research Institute, University of the Seyshelles.

IORA Interviewee 3, International Trade Centre (requested anonymity).

IORA Interviewee 4, T. IORA-RCSTT, Iran.

Talla, P. Environmental Lawyer, representing Comoros, Mauritius, Seyshelles, and Madagascar. Also works with the Indian Ocean Commission in IORA, Madagascar

Verma, N. Department of Economics, Kurukshetra University, India

Walker, T. Institute for Security Studies, South Africa.

ADDENDUM A: LIST OF REGISTERED MEMBERS FOR IORA’S FIRST WEBINAR ON WOMEN AND THE BLUE ECONOMY: A GLANCE AT POLICY, HELD ON 24 JANUARY 2019

Name	Country	Designation	Organisation
Cath Herron	Australia	Assistant Director, Indian Ocean Section, India & Indian Ocean Branch	South and West Asia Division (SWD), Department of Foreign Affairs & Trade
Thomas Krimmel	Mauritius	Project Director, GIZ Project to strengthen the IORA secretariat	GIZ
Parisa Ahmadlou	Iran	Diplomat	
Somyah Gupta	India	Assistant Director	Federation of Indian Chambers of Commerce and Industry (FICCI)
Sushma Nair	India	Additional Director & Head	Forum of Parliamentarians and Multilateral Engagement, FICCI
Mariyam Nasha	Republic of Maldives	Economic Development Associate	Ministry of Economic Development
Carla Kraft	USA (New York)	Analyst, Economic Empowerment	UN Women
Leigh Tomppert	USA (New York)	Coordinator of Promoting Women’s Economic Empowerment in the Indian Ocean Rim project	UN Women
Alesimo Mwangi	South Africa (Johannesburg)	Research & Partnership Director	Gen - 22 on Sloane
Nilanjana Biswas	India	Consultant	International Collective in Support of Fishworkers (ICSF)
Smita Bheenick	USA (US Embassy, Mauritius)	Economic and Commercial Assistant	US Embassy, Mauritius
Priyangani Hewarathna	Sri Lanka	Counsellor	Sri Lanka High Commission in Pretoria
Narnia Bohler-Muller	South Africa	Executive Director, DGSD	Human Sciences Research Council (HSRC)
Joleen Steyn Kotze	South Africa	Senior Research Specialist	HSRC
Michael Cosser	South Africa	Chief Research Specialist	HSRC
Emmanuel Sekyere	South Africa	Chief Research Specialist	HSRC
Chalida Chunark	Thailand	Counsellor, Department of International Economic Affairs	Ministry of Foreign Affairs of Thailand
Chayanin Sriviseth	Thailand	Third Secretary, Department of International Economic Affairs	Ministry of Foreign Affairs of Thailand
Judy Nwokedi	South Africa	Chief Operating Officer	Tourvest
Annabel wambui Kamondo	Kenya	Managing Director	Elaborate events
Andrea Teagle	South Africa	Science Writer	HSRC
Michelle Kristy	Switzerland	Associate Programme Officer	International Trade Centre (ITC)

Name	Country	Designation	Organisation
Ricardo Dominguez Llosa	Equatorial Guinea	Asesor Tecnico Principal	Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO)
Colin Glen	UK	Deputy Head of Maritime Policy	Foreign and Commonwealth Office
Swarna Sumanasekera	Sri Lanka	Chairperson, National Committee on Women	Ministry of Women and Child Affairs
James A. Sangori	Kenya	Director, Gender (Socio-Economic Empowerment)	State Department for Gender Affairs
Idil Liban	Somalia	Senior Project Assistant	Ministry of Finance
Sonthariya Netirungsiwatchara	Thailand	Plan and Policy Analyst, Department of Women's Affairs and Family Development	Ministry of Social Development and Human Security
Claudia Garland	UK (Mauritius)	Deputy High Commissioner	British High Commission, Port Louis
Jean Philippe L'Eveque	UK (Mauritius)	Political Officer	British High Commission, Port Louis
Emma Forsberg	Tanzania	Climate Change Coordinator and Coordinator of the Network for Women in Marine Science (WiMS)	Western Indian Ocean Marine Science Association (WIOMSA)
Irungu Kioi	Kenya	Gender Officer, State Department of Gender	Ministry of Public Service, Youth and Gender Affairs
Michael Kariuki	South Africa	Senior Assistant Director of Gender	
Veronica Bristol	Seychelles	Student Support	Seychelles Maritime Academy / Women in Marine Science (WiMS)
Bülent SÖNMEZ	Turkey	Head of Department	Ministry of Transport and Infrastructure, Directorate General of Merchant Marine
M.Kubilay ATLAY	Turkey	Maritime Expert	Ministry of Transport and Infrastructure, Directorate General of Merchant Marine
M.Tolga AVCI	Turkey	Maritime Expert	Ministry of Transport and Infrastructure, Directorate General of Merchant Marine
Tom Liebenberg	UK / South Africa	Policy Programme Manager, Prosperity and Policy Programmes Team, Southern Africa	British High Commission, South Africa
Nomvula Makgotlho	South Africa	Chief Director, Local Economic Development, Strategic Partnership and Market Access Unit	Department of Small Business and Development
Gunilla Tegelskär Greig	Italy	Project Coordinator, Coastal Fisheries Initiative – West Africa & Global Partnership	FAO
Octavia Rose	Seychelles	2nd Secretary, SIDS, Oceans and Security Dossier	Department of Foreign Affairs
Shaheena Nojib Jahangeer	Mauritius	Senior Analyst	Ministry of Foreign Affairs
Tuğba Bozlar	Turkey	Employment Expert	Turkish Employment Agency (İŞKUR)

Name	Country	Designation	Organisation
Ziyoon Amour aljabri			Women Affairs Department, Ministry of Social Development
Huda Salim Alkhatri		Economic researcher	Ministry of social development

ADDENDUM B: INTERVIEW SCHEDULE: WOMEN'S ECONOMIC EMPOWERMENT IN THE INDIAN OCEAN'S BLUE ECONOMY

1. How would you conceptualise the Blue Economy?
2. How is women's economic empowerment linked to your understanding of the Blue Economy?
3. How well is the Indian Ocean Rim Association (IORA) faring in:
 - a. The Blue Economy
 - b. Mainstreaming gender equality?
 - c. Managing to link the two?
4. What are the challenges and opportunities facing IORA and its Member States in these areas, especially the intersection between the Blue Economy and women's economic empowerment?
5. Do you have any advice or policy recommendations going forward?
6. Which areas do you think:
 - a. Are most pressing
 - b. Have the most potentialand should therefore be prioritised?