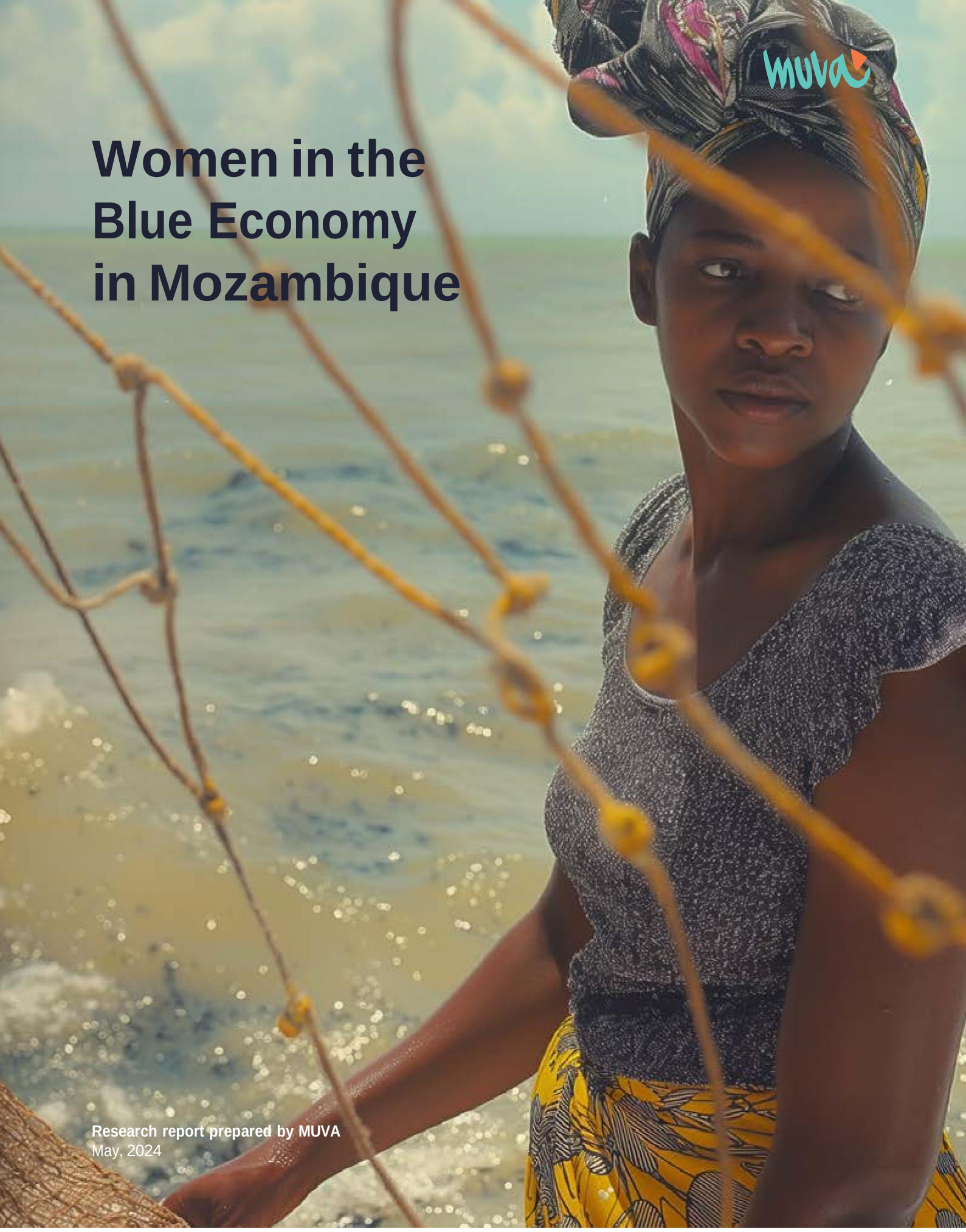

Women in the Blue Economy in Mozambique

Research report prepared by MUVA
May, 2024

Credits

Published By Associação Para o Empoderamento da Rapariga - MUVA

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About MUVA

MUVA, a Mozambican Non-Governmental Organization (NGO), is committed to the economic empowerment of women and youth. MUVA envisions a world in which women and youth have the skills and agency required to access decent economic opportunities in a supportive, inclusive and gender equitable environment. MUVA's work focuses on achieving Women Economic Empowerment (WEE) in all sectors, infiuencing both public and private stakeholders to become WEE champions, and contributing to generate an enabling environment for young people and girls to thrive.

With this report MUVA's objective is to enable the Blue Economy Sector in Mozambique and globally to have better gender lenses.

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Acknowledgements

Firstly, the MUVA team wishes to thank Pro Azul for having raised the need to improve the gender lenses in the sector and then for collaborating with this research. Without their support this work would not have been possible.

Secondly, we would like to thank all the partners who have extensively assisted this research working with our team in the identification of the research target group. We would like to especially extend our thanks to the district authorities visited for their support and for sharing their knowledge: the local authorities in the visited provinces, districts and localities; the District Services for Planning and Infrastructure (SDPI); the District Services for Economic Activities (SDAE) in Machangulo, Moma, Vilankulos and Nicoadala; the Maputo National Park and in particular Mateus Bila and Geraldo Saranga; the Association of Parceiros Comunitários (ParCo) and in particular Ilidio Joaquim Cole ; Solidariedade Mozambique and in particular Andia Fernando Esquadro and Isaura Mendes Juma, Associação para o Desenvolvimento da Zambezia (ADECOZA) and in particular Carlitos Pinto.

We would also like to thank the partners that made this possible, namely, the French government through the French Embassy and the French Development Agency (AFD), the British Government through the Foreign, Commonwealth and Development Office (FCDO) and the German cooperation through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Finally, all of this was only possible with the willingness of the women that accepted to take part of the research and share their stories with us, their vision, hopes, fears and dreams. Their strength is humbling and inspiring.

We hope you appreciate those voices, enjoy the report and use the findings and recommendations.

Executive Summary

The concept of the Blue Economy emerged to address the urgent need for ocean sustainability and preservation. For coastal communities, the term “Blue Economy” is literal, as the ocean is often the primary source of income and food, shaping their economic activities based on proximity to natural resources.

MUVA’s research aims to ensure that Blue Economy projects and programs in Mozambique are designed with a gender lens. A significant challenge is the lack of data on women’s roles in the Blue Economy. Often, the Blue Economy is narrowly defined as fisheries, a sector perceived as male-dominated, despite the significant presence of women. Women’s contributions, typically concentrated in processing and trade, are undervalued. This perception not only overlooks women’s essential roles across the Blue Economy but also misses a crucial need for their economic empowerment.

When examining Women’s Economic Empowerment, it is important to acknowledge the intersectionality of gender and the wide range of social identities that infiuence women’s status and their access to information and resources. This research aims to fill this gap by generating data on the women working in the Blue Economy. The research question focuses on identifying the constraints and opportunities faced by women in the Blue Economy today and understanding how these factors affect their economic empowerment, livelihood improvement, and ultimately the sustainability of ocean conservation efforts.

Despite a dedicated Sustainable Development Goal (SDG) for ocean conservation, funding for it has only recently increased. In Mozambique, which boasts the third-longest coastline in Africa, the Blue Economy is strongly present. Recent efforts to address the funding gap in Mozambique have led to a significant increase in external aid, with nearly 500 million USD allocated to the country in 2024 from various partners.

Key research findings

This research has identified 10 personas **from the most frequently found and least empowered persona to the most empowered and less frequently found persona**. Those personas are a fictional character created to represent a typical woman in the Blue Economy. They were created based on field work data collection to help understand and anticipate the needs, goals, behaviors, and pain points of this target group and to enable the integration of a finer gender lens to the work in the sector. For each persona, a detailed description of the MUVA Women’s Economic Empowerment framework components, namely their skills, economic opportunities and agency, is outlined. Across the personas it was found that:

- Women’s **skills** in the sector are not recognized as skills, not even by themselves and are overlooked by the community, contrary to the skills of their male counterpart. This can be partly explained by social norms and partly by the lack of formal training. All the income earning Blue Economy activities observed were learnt by doing and by traditional transmission. Training provided did not results in substantial income.

- In terms of **economic opportunities** women in general have access to lower income opportunities compared to men and diversification is the key factor that determines higher levels of income and resilience. This is also the case when new opportunities appear, as they are first accessed by men. Beyond access there is also a trade-off between enhancing economic opportunities in the Blue Economy for coastal communities and protecting the ocean. Projects aiming at the creation of alternative income generation and economic diversification are designed to address this challenge, but they have until now faced significant challenges in adapting to local contexts, achieving long-term impact, and generating resources beyond project-specific employment. This is especially true in Mozambique in the case of pisciculture, which faces overwhelming challenges.

- Women’s agency is a **socio-economic determinant**, as stereotypical gendered behaviors are still often present in coastal Mozambique and levels of women autonomy are less than optimum, and rarely challenged, either by men or women. Additionally being a successful woman is not welcomed by the community, the expectation being that women should serve the husband and the family, not be autonomous. Such rejection is a real barrier that can lead to domestic violence, harassment, and mental health challenges and destruction of potential role models and should not be underestimated.

- Despite their reliance on the ocean, women aspire for their children to find work away from the coast. Improving value chains to make ocean resources more lucrative could increase pressure on coastal ecosystems, confiicting with efforts to promote alternative livelihoods. While there are limited competitive alternatives for those currently making a living from the ocean, there is a real opportunity to build on mothers' aspirations for the next generation, encouraging their children to pursue different paths.

Recommendations

1. **Invest in gender literacy at the local authority level,** as the local institutions are eventually the ones that interact with the women from communities.

2. **Avoid creating unpaid additional work to women** or engaging them in activities that do not generate income in the long run, especially for the most vulnerable ones.

3. **Consider gender lenses in project design** to enable stakeholder to integrate a gender approach from the outset of interventions.

4. **Include cultural and religious preference into project design**, as they play a significant role in shaping social norms, values, and gender roles, which directly impact women's access to opportunities and decision-making power.

5. **Consider the opportunity of breaking the intergenerational activity reproduction** by investing in leveraging local aspirations to yield sustainable change.

6. **Invest in better understanding the relationship between the communities and the conservation areas,** especially in terms of access to livelihoods so the interventions related to conservation can be more inclusive of communities, including women and better mitigate the restrictions they impose.

Table of Contents

List of Boxes, Tables and Figures

List of abbreviations and acronyms

AFD: French Development Agency

ANAC: Mozambique's National Administration of Conservation Areas

BE: Blue Economy

CBO: Community-Based Organization

CBMPA: Community-Based Marine Protection Area

CCPs': Community Consultative Councils

CSO: Civil Society Organization

DEFRA: UK's Department for Environment Food and Rural Affairs

DFID: Department for International Development

EDEA: Mozambique's Blue Economy Development Strategy

EU: European Union

FAO: UN's Food and Agriculture Programme

FCDO: UK's Foreign, Commonwealth & Development Office

FGD: Focus Group Discussions

GBV: Gender-Based Violence

GIZ: German cooperation through the Deutsche Gesellschaft für Internationale Zusammenarbeit

KII: Key Informant Interview

MCC: Millennium Challenge Corporation

MIMAIP: Mozambique's Ministry of the Seas, Inland Water and Fisheries

MPA: Marine Protected Areas

MSMEs: Micro, Small, and Medium Enterprises

NGO: Non-Governmental Organization

NORAD: Norwegian Agency for Development Cooperation

ParCo: Association of Parceiros Comunitários

POEM: Mozambique's Maritime Spatial Plan

POLMAR: Mozambique's Sea Policy

REPMAR: Maritime Fishing Regulation

SDAE: District Services for Economic Activities

SDG: Sustainable Development Goals

SIDS: Small Island Developing States

SDPI: District Services for Planning and Infrastructure

UN: United Nations

UNCTAD: United Nations Conference on Trade and Development

USAID: United States Agency for International Development

WB: World Bank

WEE: Women Economic Empowerment

WWF: World Wildlife Fund

1. Research Context

1.1. The Blue Economy in Mozambique

The concept of the Blue Economy (BE) emerges from the frustration of Small Island Developing States (SIDS) and coastal states during the preparation for the Rio+20 Conference in 2012. The term "Blue Economy" has been employed in various contexts, and similar terms such as "ocean economy" or "marine economy" are utilized without clear definitions. Blue Economy can be defined as the human activities aiming to achieve economic growth, social inclusion, and livelihood preservation while ensuring environmental sustainability of oceans and coastal areas (World Bank, 2017). It seeks to decouple socioeconomic development from environmental degradation, acknowledging the finite nature of ocean resources and their decline due to human activities. Rather than a sector, Blue Economy includes various economic sectors (e.g. fisheries, pisciculture, culture, tourism, conservation, energy and extractive industries) and policies that collectively determine the sustainability of oceanic resource utilization. There is no agreement if the concept also includes freshwater related activities and economy. In this research we focused on the ocean and the economy of coastal ecosystems.

Mozambique, with the third longest coastline in Africa, is a country where the Blue Economy is critical for the country. Mozambique's Blue Economy sectors are pivotal to its economic and environmental sustainability, with significant opportunities and challenges in fisheries, pisciculture, tourism, transport, waste management, and marine conservation. Addressing these sectors' issues and maximizing their potential is essential for the country's growth and the well-being of its coastal communities. Nearly two thirds of its population live on the 2,700 km coastline (USAID, 2021), and one third depends directly on coastal resources. The coastline of Mozambique boasts a diverse range of ecosystems that play a crucial role in supporting its blue economy sectors. These ecosystems comprise coral reefs covering 1,890 km^2, mangroves spanning 4,467 km^2, seagrass beds encompassing 439 km^2, coastal dunes, and sandy beaches. Within these habitats thrive a remarkably abundant marine biodiversity, featuring protected species like turtles, dugongs, sea horses, dolphins, sharks, giant mantas, and whales (Pereira et al., 2014). Natural assets such as mangrove forests serve as crucial breeding grounds for fish, contributing to the mitigation of climate change impacts and natural disasters such as cyclones. Additionally, these ecosystems play a vital role in promoting human well-being by providing a wide range of services, including food provision, climate regulation, erosion control, and energy.

Blue Economy is generally associated with a variety of UN's Sustainable Development Goals (SDGs), but SDG 14, focused on the oceans, receives the least amount of funding compared to the other SDGs (WEF, 2022). A recent push to close this gap is resulting in large investment in BE and Mozambique is a priority country of several initiatives. In 2024 nearly 500 million USD have been allocated to the country's Blue Economy from funders such as Millenium Challenge Corporation (MCC), European Union (EU), FCDO, Department for Environment, Food & Rural Affairs (DEFRA), U.S. Agency for International Development (USAID), World Bank (WB), and Norwegian Agency for Development Cooperation (NORAD). These investments are aimed at bolstering marine conservation efforts, strengthening regulatory frameworks, enhancing value chains in fisheries and pisciculture, establishing entrepreneurship incubators, and advancing scientific research.

1.2. Purpose of the Research

Blue Economy offers significant potential for women's economic and social empowerment. Research indicates that initiatives aimed at enhancing women's entrepreneurial and negotiation skills have led to improved livelihoods, including higher income, increased agency, and better social and health outcomes (Matthews et al., 2012). Therefore, when looking at Blue Economy, addressing gender disparities is crucial not only for the development of women, their families, communities, and the economy, but also for the conservation of marine and coastal ecosystems. Ensuring Blue Economy future funding includes relevant actions towards WEE requires relevant data about women's involvement in these economic activities

When it comes to projects, the Blue Economy is often reduced to fisheries, which are seen as a male-dominated sector. Women's participation in this sector is often undervalued, primarily limited to processing and trade. This perception fails to recognize women's critical roles across the Blue Economy sectors, where they usually occupy low-paying, informal, and temporary positions with limited access to resources such as capital, credit, and training opportunities (J. Siles et al., 2019). Globally, women represent 15% of the harvesting workforce and hold 90% of the positions in fish processing, including tasks like canning and gutting (FAO, 2016).

MUVA's research objective is to ensure that the projects and programs being designed have a gender lens and include in their intervention a deeper understanding of intersectionalities and of community engagement. An inclusive Blue Economy must prioritize

fairness, equity and mainstreaming gender considerations throughout all stages of policymaking, research and development, rather than treating gender inclusion as a compulsory checkbox.

One of the main challenges to ensure interventions have a gender lens is the lack of data on women's role in the Blue Economy. The main objective of this research is to build knowledge on the opportunities and constraints for women working in the Blue Economy – especially within the sectors where funders are focusing in the next 5 to 10 years in Mozambique – and to help blue economy stakeholders design, implement and monitor blue economy projects with gender lenses. Based on MUVA's literature review (Milward, 2023) and preliminary interviews with blue economy stakeholders, the little knowledge and recognition of women's role in the BE is apparent.

The research question focuses on understanding what are the constraints and opportunities that women working in the Blue Economy today face and how can these elements impact their economic empowerment and the improvement of their livelihoods.

PISCICULTURE, FISH FARMING OR AQUACULTURE

Aquaculture encompasses the cultivation oF a wide range oF aquatic organisms, including fish, shellfish, mollusks, crustaceans, and aquatic plants. Pisciculture is a specific subset oF aquaculture Focused solely on the breeding, rearing, and harvesting oF fish. Thus, while all pisciculture is aquaculture, not all aquaculture is pisciculture. This research only included activities outside oF the ocean related to the specific branch oF aquaculture Focused solely on the cultivation oF fish in Fresh water, tanks and ponds. Throughout the report we talk thereFore oF pisciculture or fish Farming and not oF aquaculture.

2. Research Methodology

2.1. The Methodology

As this research aims to provide a nuanced understanding of women's role in the Blue Economy and facilitating the design of interventions with a gender lens, we selected a qualitative methodology to have in-depth insights into the social, cultural, and environmental contexts that shape women's participation in the Blue Economy. The fiexibility of qualitative methods allows researchers to adapt their data collection approaches based on emerging insights, enabling deeper probing into specific issues and the ability to shift focus during interviews or focus groups.

This qualitative research selected the persona method to investigate the roles and needs of women in the Blue Economy. The persona method involves creating fictional characters that embody the key attributes, behaviors, and motivations of a specific user group. These personas are detailed archetypes, characterized by a brief description of their identity, a narrative that outlines their key characteristics. Unlike preconceived notions, personas are constructed from field data, capturing individualized social, emotional, and cognitive information (Bornet and Brangier, 2013). This technique enriches user representations for designers and implementers, facilitating the development of products or services tailored to a specific, quasi-real individual with distinct traits, a typical face, and a unique name (Cooper, 1999). The persona method provides a human centered approach to the research. Traditionally used in business and marketing environments, we adapted the technique for socio-economic research. Based on the fieldwork we identified and developed 10 personas. Each of them represents a specific target group. This method was selected to support blue economy stakeholders in creating gender-sensitive initiatives in Mozambique as it enables the modelling of different women's roles and needs and aims at creating empathy with them. These fictional characters, equipped with specific instructions, beliefs, and desires, act as catalysts for the empathy process, countering the natural tendency to project one's own beliefs onto others (Keysar, Lin, Barr, 2003).

Given the large number of sectors considered part of the Blue Economy sectors we selected three to focus on, namely: fisheries, pisciculture and conservation projects related activities. The selection was done based on a scoring grid that gave a relevance score from 1 (low) to 3 (high) to an exhaustive list of the Blue Economy sectors for each of the following criteria: (i) employment potential; (ii) economic importance for the country; (iii) innovation potential; (iv) women's' involvement; (v) environmental impact. The selection grid can be found in annex 2.

To ensure a representation of the country's diverse realities, data collection was conducted in the South, Centre and North, namely in the provinces of Maputo, Inhambane, Zambezia and Nampula. A list of the districts where data was collected can be found in annex 1.

2.2. Instruments and Data Collection

In total 6 Key-Informant Interviews (KII), 18 semi-structured interviews, 19 Focus Group Discussions and 1 shadowing were conducted with Blue Economy stakeholders.

A combination of the following data collection instruments was used:

- **Semi-Structured Interviews:** This method enabled the research team to engage with both Blue Economy stakeholders and identified profiles of women. This allows for in-depth exploration of personal narratives, experiences, perspectives, challenges, and aspirations with a set of guiding questions that remain adaptable (see Annex 4 for the KII guides);

- **Focus Group Discussion (FGD):** This method brings together diverse participants to discuss specific topics related to gender in the Blue Economy. This method encourages interaction, enables the exploration of diverse viewpoints, and often generates rich qualitative data. FGD are particularly helpful with groups of participants that may be uncomfortable speaking on a one-on-one basis with researchers due to language barrier, power dynamics or social norms constraints. This is also useful to triangulate data. (FGD roadmaps can be found in annex 5);

- **Semi-Structured Shadowing:** Shadowing is a type of direct observation that literally relies on the metaphor of 'shadow'. According to Meunier and Vasquez (2008, p. 168): "The researcher follows a person as his or her shadow, walking in his or her footsteps over a relatively long period of time, throughout his or her different activities, to collect detailed-grained data". Semi-structured shadowing involves observing individuals as they go about their daily activities, focusing on their movements rather than specific loca-

tions (Sirris et al., 2022). It allows researchers to understand the routines and practices of the profiles.

The tools were piloted first in Maputo province and adjusted before the rest of the data collection that took place over a two-week period at the beginning of April 2024.

Data was compiled in one common database to streamline the data analysis.

2.3. Data Analysis

Data was analyzed using the empathy map instrument and two theoretical frameworks: (i) the MUVA WEE framework; (ii) the MUVA entrepreneurship pyramid. Each of those are outlined below.

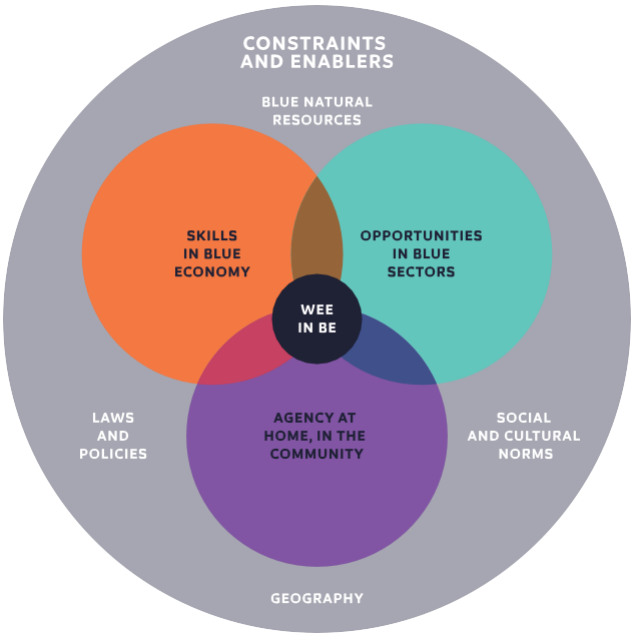
MUVA's WEE framework. MUVA's conceptual framework considers that WEE is a process where women's lives are transformed through having more agency, a decent work, access to economic assets and control over their resources. This requires addressing constraints that hinder this process, such as social norms, geography limitations, normative restrictions, etc. MUVA's approach to enable this articulates the following three dimensions:

- **Skills:** This dimension focuses on the skills, knowledge, and competencies of women. First assessing them and the opportunities for women to grow them with the necessary support from their surroundings;

- **Economic opportunities:** This dimension encompasses the range of economic prospects and opportunities such as employment, access to resources and markets, participation in value chains, involvement in entrepreneurial activities, access to financial inclusion services, etc. First understanding which ones exist and the level of access women have – or not, to them and how this can be improved while limiting any potential backlash.

- **Women's agency at home and in the community:** MUVA's interpretation of agency is that of having power within and self-efficacy, including women's ability to act on aspirations, make decisions that matter to them and participate in economic and public life.

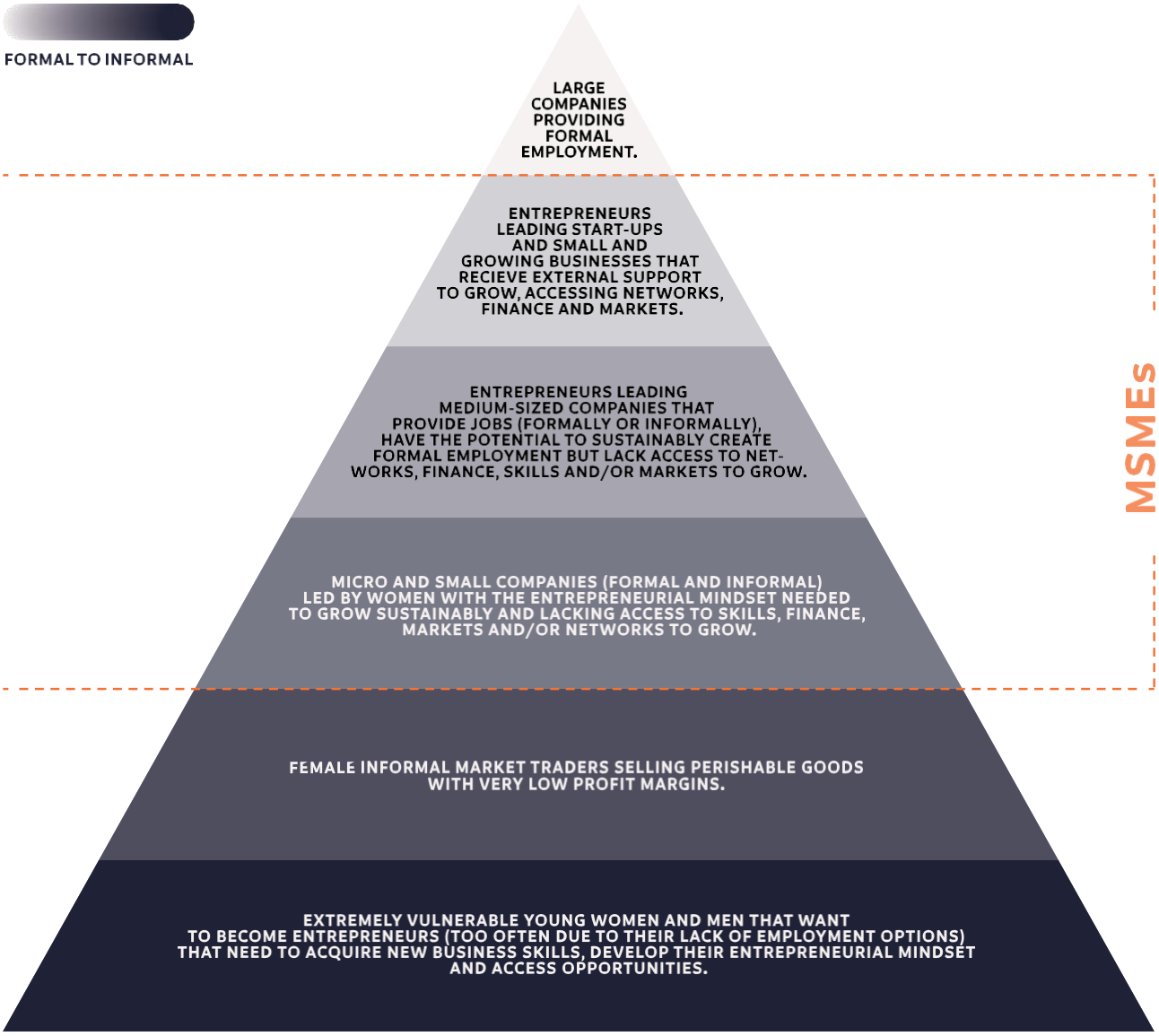
The framework also considers contextual aspects that may be transversal factors of change in women's economic empowerment, such as laws and policies, social and cultural norms, geography as well as blue natural resources. For this research the framework was adapted to blue economy specific constraints and enablers.



Source: MUVA

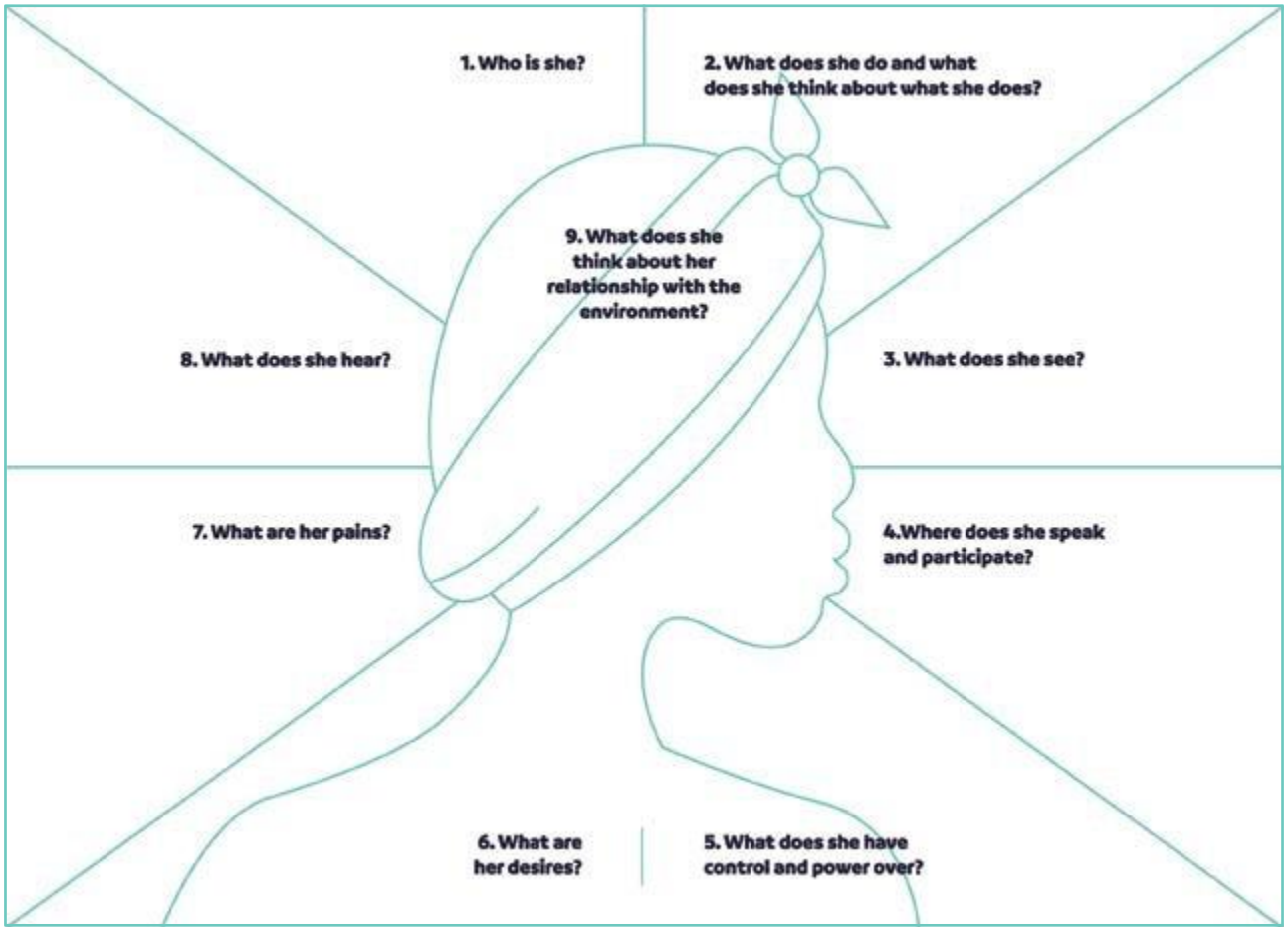
Figure 1. MUVA's Women Economic Empowerment Conceptual Framework Adapted to the Blue Economy

MUVA's entrepreneurship pyramid was developed to promote a deeper understanding and contextualization of the diverse group labeled as "female entrepreneurs," challenging the conventional concept of "entrepreneurship" for women. This approach highlights the wide range of realities behind the term, from subsistence entrepreneurs to those in powerful positions in large companies. Understanding the heterogeneity of this group and the intersectional constraints faced by different women entrepreneurs is critical to develop policies, interventions and projects that are fit for purpose, support women empowerment and at least do no harm (Baremboim, 2020). The pyramid presented below has three main groups: (i) the lowest one where are the subsistence entrepreneurs, aspiring entrepreneurs, extremely vulnerable young women who hover around the poverty line; (ii) the middle one, where you can find the mix of Micro, Small, and Medium Enterprises (MSMEs) and (iii) the top one where are the larger compagnies that provide the larger number of employment (per company). In Mozambique, a country with 10% of the population working in a formal job and with the government being by far the largest employer, this group is an absolute minority.



Source: Baremboim, 2020

Figure 2. MUVA's Entrepreneurship Pyramid



Source: MUVA, Adapted from David Gray's Empathy Map Canvas
Figure 3. The Empathy Map

The empathy map is a collaborative tool highly effective for analyzing social phenomena by focusing on the human aspect in all its subjectivity. This methodology, generally attributed to Dave Gray, founder of Xplane—a company specializing in Visual Thinking—is used to describe individuals' thoughts, emotions, motivations, desires, and needs. By encouraging researchers to view issues through the subjects' eyes, it fosters empathy with their feelings. The empathy map served as a foundation for our interview questions, ensuring that the research captured the full behavioral spectrum of the women observed and interviewed. Its visual nature allows to summarize the data collected and compare profiles based on specific feelings and behaviors.

2.4. Ethical Considerations

Ethical treatment of participants was ensured throughout the research through the following measures:

- Adherence to informed consent procedures. Each participant was informed about the nature of the research and its objectives. Participants were told that the study is purely informative and does not provide any form of support. They were also made aware of their rights to withdraw from the study at any point without consequence;
- Establishment of protocols to maintain the confidentiality of participants;
- Implementation of safeguarding measures and gender sensitive approaches such as ensuring that KII and FGD were led by facilitators of the same gender as the participants whenever possible.

Additionally, the research team was attentive to issues of researcher refiexivity, positionality, and subjectivity throughout the study. Refiexive practices were employed to critically examine the infiuence of researchers' backgrounds, gender, experiences, and biases on the research process and findings. Transparency was maintained regarding the researchers' positions and perspectives, and efforts were made to mitigate the impact of any biases on data collection and analysis.

3. Research Findings: Cross Cutting and Trends

Data analysis was done based on MUVA's economic empowerment conceptual framework and on MUVA's entrepreneurship pyramid presented in the methodology. Research findings are presented following both frameworks, with first a short description of the personas build on the findings, then a presentation of the entrepreneurship pyramid adapted to the Blue Economy and key findings of women's skills, economic opportunities they access and their agency. Finally cross-cutting constraints and other structural determinants such as the territory and the sector norms are highlighted. This analysis enables a deeper understanding of both tangible and intangible constraints and opportunities that women working in the blue economy face, and of how those impact their potential for economic empowerment.

3.1. The Personas

The Blue Economy sector emerged in response to the pressing need for an increased focus on ocean sustainability and preservation. Achieving positive lasting impact requires interventions to be designed with gender lenses, which involves an understanding of the gender dynamics and women's profiles and specificities. Although gender is a social concept, having a gender lens requires understanding the social dynamics of women, compared to their male counterparts.

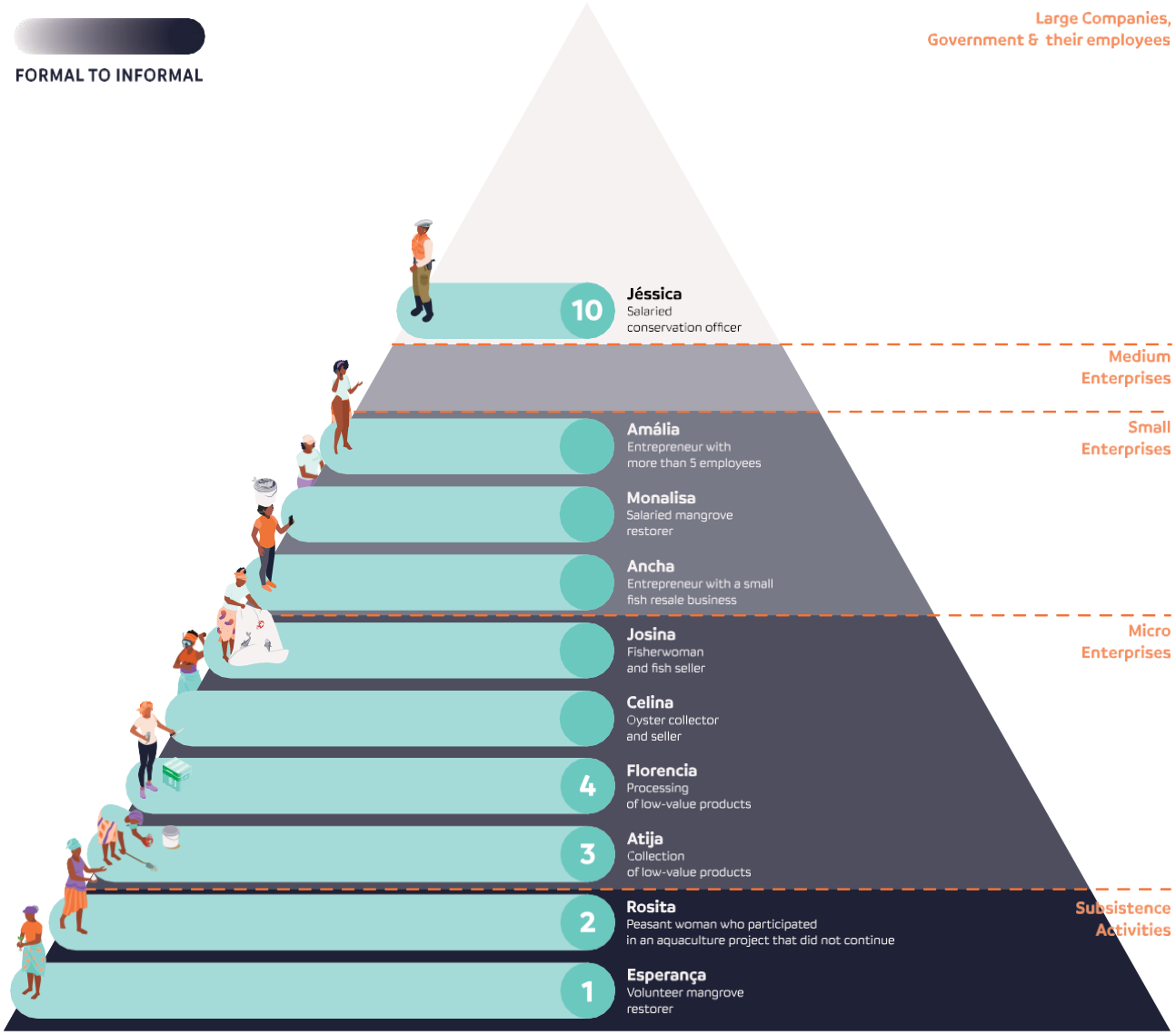


Figure 4. MUVA's Entrepreneurship Pyramid Adapted to Segment Blue Economy Women Persona

Women is not a homogenous group. An overly simplistic view of the benefits of empowering women, including as entrepreneurs can lead to the homogenization of women and the group denoted as "female entrepreneurs" and a failure to acknowledge the intersectionality of gender, and the huge range of social identities that infiuence women's status, their access to information and resources and their ability to succeed as entrepreneurs (Shields, 2008). MUVA has developed a typology for entrepreneurs illustrated in a pyramid structure, where the base is made up of the largest group: subsistence and low-income entrepreneurs. Each layer of the pyramid represents entrepreneurs with higher levels of income and capitalization, narrowing at each level, to reach, at the top, the small number of large-scale businesses (Baremboim, 2020).

Following on from the logic of the entrepreneurship pyramid, the findings of the Blue Economy study have ranged from the most numerous and least empowered persona to the most empowered and less frequently found persona. Those personas are a fictional character created to represent a typical woman in the Blue Economy. They were created based on field work data collection to help understand and anticipate the needs, goals, behaviors, and pain of this target group and to enable the integration of a finer gender lens to Blue Economy actions.

Adapted from MUVA's pyramid and in line with the job ladder theory (Fields at all, 2023), we split the pyramid for the Blue Economy into the ones who have access to a formal job at the top and the rest who works mainly in informality. In the informality there are 3 main tiers: (i) the lowest tier, at the bottom of the pyramid, we find the majority of women trying to do business and in subsistence activities; (ii) at the next level up from the bottom of the pyramid, the Micro, Small and Medium sized Enterprises (MSMEs) can be found – an heterogeneous group divided into a more detailed segmentation; (iii) in the upper tier of the informal group are the more structured entrepreneurs. The last group at the top is in the formal sector.

In the lowest tier of the informal sector we have designed two personas : (1) Esperanca and (2) Rosita. They are 52 and 45 years old respectively, which means they are old in a country where the average age of the population is 16,6 years old (INE 2017) and life expectancy 53,7 years old (INE 2017). They live from subsistence farming mainly and although they have been involved in some projects and received training from those it did not convert in additional income. They are vulnerable and hover around the poverty line.

Figure 5.
Persona 1
Esperança

Figure 6.
Persona 2
Rosita

In the middle tier of the informal sector we have created four personas: (3) Atija, (4) Florencia, (5) Celina and (6) Josina. They are younger than the previous group and all have income-generating activities based on their access to wild products, which they catch, harvest, or fish themselves and then resell, sometimes after processing. The ocean is their main source of income, but they all have a machamba (a plot of cultivated land in Mozambique, often small, less than 1 hectare, used for feeding the household) to complement their livelihood. Economically, the main differences between the four personas lie in the types of products they have access to. In terms of agency, it varies between those who have a family, husband, community, and social networks they can rely on and those who do not.

Figure 7.
Persona 3
Atija

Figure 8.
Persona 4
Florência

Figure 9.
Persona 5
Celina

Figure 10.
Persona 6
Josina

In the higher tier of the informal sector we have identified three personas: (7) Ancha, (8) Monalisa, (9) Amalia. They are the same age of the previous group. Economically they have several income sources, through different businesses, and in some cases have a regular additional income (such as payment from a project).

Figure 11.
Persona 7
Ancha

Figure 12.
Persona 8
Monalisa

Figure 13.
Persona 9
Amália

Finally, persona 10, Jessica is the only one who works mainly in the formal sector and has a stable income with social protection rights; in addition she has also invested in different businesses to complement her salary. She has a strong voice, choice and level of control of her life and has a partner that also supports the household.

Figure 14.
Persona 10
Jéssica

In annex 6 each persona is presented in detail, including their socio-demographic profiles, their economic activities and why they do them, as well as their aspirations and dreams on one hand and pains and frustrations on the other.
The research did not find any women at the top of the pyramid (i.e. running a large formal business in the Blue Economy), but only men. Hence, there is no persona 11.

Besides Esperança and Ancha working in mangrove restauration, all the women represented in the pyramid use livelihood strategies that do not represent a sustainable use of the ocean resources. As you progress up the pyramid, there is a higher likelihood that the livelihood activities deplete the ocean resources. Even the personas at the bottom, due to lack of alternatives and demographic pressure, cause an unsustainable use of the resources, at times against the regulations. The mangrove wood is for example that is highly protected and should not be cut. With no capacity to buy or access wood or charcoal, coastal communities only have mangrove wood for cooking and building their houses. This in turn has significant negative knock-on effect on the ecosystem.

3.2. An Organic Transmission of Traditional Skills

Women's skills in the sector are not recognized as skills, not even by themselves and are overlooked by the community, contrary to the skills of their male counterpart. Women are strongly active in Blue Economy activities and have a diverse range of skills essential for their economic activities. These skills include fishing with a net, processing (of fish and other sea products), harvesting and collecting (of oysters, crabs, shellfish and other sea products), entrepreneurship (i.e. not only accessing resources for feeding purposes but also buying and selling fish and other products, processing them and working along the value chain). None of those jobs and skills were recognized as competencies. Women did not identify their occupation and the techniques required to conduct them as skills.

All the income earning Blue Economy activities observed were learnt by doing and by traditional transmission: no formal training was received. Traditional fishing and harvesting skills are primarily passed down through learning by doing, through observation and hands-on practice within families or community groups. For example, oyster harvesters invite individuals interested in learning to begin in shallow waters, gradually assessing their diving capabilities and with their improvement going to deeper areas. This empirical approach allows learners to observe and participate in real-world conditions. Only imported projects, such as fish farming and mangrove rehabilitation,

have provided the participants with formal training (i.e. related to fish care or mangrove cultivation techniques).

Differences of skills transmission was observed based on cultural factors across the regions. Notably, in certain communities in Nampula, skills are exclusively transmitted within gender-specific groups. Cultural and religious factors influence this practice, as seen in Muslim communities in the North compared to predominantly Christian communities in the South. In the North, skills are exclusively transmitted from men to men and women to women, unlike in the Southern parts of the country where this division was not observed.

Skills transmission starts at a very young age. Households quickly face a choice between sending the children to work on the beach or going to school which is a long-term investment with no direct return for the family. Once children start working and generating resources it is virtually impossible to get them back into school.

In the coastal communities, women have limited educational backgrounds, ranging from no formal education to completion of the 7th grade. In Mozambique the national levels of education in rural areas are low with an average of primary schools (7th grade) completion of 66% for women and 71% for men (World bank 2022). Women in the costal Blue Economy activities seem below this average. Only those with formal employment or entrepreneurship activities have received further education. This low educational level can be attributed to the long distances from communities to schools, as coastal areas, are remote and poorly serviced by public services such as health and education. Additionally, in spite of primary education being free for all on paper in the country1, there are the cost of informal fees, school materials, transport and uniform, and the opportunity cost of the loss income from going to school instead of working.

The exception to the low levels of formal and/or recognized skills, was found in salaried workers, employed either by the government, for example, as inspectors, or people working with the NGO sector. These people were considered to have a 'proper' job in an office instead of being entrepreneurs or self/employed, even if they have an entrepreneurial activity to complement their income.

3.3. Unequal Access to Opportunities

Economic diversification is the key factor that determines higher levels of income and resilience particularly for women at the lower end of the economic spectrum. Having different sources of income, both in terms of cash and livelihood (food production) is the main difference between women living in absolute poverty and the ones slightly better off, who have in addition to their farming activities (i.e. machamba), a small businesses (i.e. stall), and animal hus-

Figure 15. MUVA's Blue Economy Women's Pyramid: Skills Characteristics

bandry (i.e. raising goats or having chicken) that are used as savings and sold in times of financial need. It is what determines if you are in the highest tier of the pyramid informal section. Farming is part of this diversification, but it is essentially a women occupation to bring food on the table. It does not in most coastal areas bring cash to the household, hence it is not valued nor considered by the communities and by the women themselves as an economic activity. In addition, it takes a long time to yield anything, compared to fishing where you make money on the same day or week.

Across Blue Economy activities, women have access to lower income opportunities compared to men and are not considered fisherpersons. Activities associated with higher income, such as deep-sea fishing are traditionally conducted by men. Deep sea fishing is viewed as difficult and hazardous, a task believed to be achievable only by men (in reality only by a few men). Specific skills are required, and this knowledge is passed from men to men. Additionally, the boats that are not industrial require the crew to live-on-board for up to one week in precarious conditions. Interestingly, in Portuguese the word fishermen (pescador) is only used for men and brings a connotation of a skilled and higher income activity rather than a technical activity of catching or getting fish. In local language specific words designate the women activities by the ocean. For example in Tsonga2 deep-sea fishing is referred to as “Kuvedja,” while shoreline fishing (or fishing with a net) is called “Kutanda”.

Access to higher income activities is linked to social norms that seem to determine male access to the better remunerated activities, this includes deep-sea fishing but not only. When better alternatives sources of income appear, they are first accessed by men. This can be observed when new opportunities appear, such as paid work, including in tourism, conservation, or construction. Men are the first ones hired, leaving their ocean or beach activities being taken over by women. There is a displacement here: when men move away from the ocean through accessing alternative livelihood, their previous activities are taken over by women, being eventually responsible for using the ocean resources, not always sustainably.

Women’s access to better income–generating opportunities is closely linked to their capacity to be active at different levels of the value chain (i.e. buying, processing, selling and reselling, cooking and selling a transformed product)**. While theory suggests that improving one’s economic conditions requires going up the value chain** (i.e. moving from fishing to processing, acquiring access to the cold chain and transportation means, etc.), **in practice, to guarantee stability and manage to increase its income from Blue Economy activities being present at multiple points within the value chain and spreading one’s risks appears to be a better strategy.** This is illustrated in the personas: the highest they are in the pyramid the more diversification of income sources they have. We found evidence of women working at various stages of the value chain,

CASE STUDY OF A SUSTAINABLE FISHING INITIATIVE DESIGNED WITHOUT A GENDER LENS

In Cabo Delgado, World WildliFe Fund (WWF) implemented a sustainable octopus fishing initiative to ensure both environmental conservation and economic benefit For local communities. In this initiative, certain areas, defined in partnership with the communities, were designated as no-fishing zones, allowing octopuses to grow undisturbed. By protecting these areas and preventing premature harvesting, the octopuses reached a larger size and greater maturity. The approach resulted in a significant increase in the size and weight oF the octopuses caught, leading to higher market prices. This initiative’s success demonstrated the positive impact oF combining conservation eFForts with economic strategies, ultimately benefiting the environment and local livelihoods. However, although the project was designed to benefit women in the coastal area, when the project became profitable, the men displaced the women carrying out the activity as they started to take over the octopus fishing and selling. From an intertidal fishery lead by the women became a very overexploited intertidal and subtidal fishery and women’s were the first aFFected.

(Franscisco L, 2019; Muaves L 2020)[1] .

1. The source does not mention the gender backlash, it mostly explains the scope and results oF the project, the inFormation about the gender backlash was obtained through Key inFormative Interviews with PROAZUL

with different combinations of control, showcasing how those value chains are not linear. For example, fisherwomen who engage in both fishing and selling have access to more income than the ones who solely engage in buying and reselling (re-vendedoras). Women who have access to freezers have higher income potential than women re-sellers with no access to the cold chain.

While having access to refrigerators is one of the critical factors to go up the pyramid of entrepreneurship it brings challenges in terms of market access. The informal sector middle-tier profiles (personas 3 to 6) main market is local, including because they do not have freezing capacity or access to transport. The local market prefers and has been used to, fresh fish over frozen products. Hence, having access to the cold chain alone does not mean a better income. To leverage freezing capacities effectively, women require reliable transportation and access to new markets. Beyond the initial investment in freezing equipment and associated energy costs, accessing distant markets poses a barrier for women seeking to advance within the fish and crustacean value chain because of road conditions, transport costs, and social norms that restrict women's mobility.

Additionally, there is a tension between improving economic opportunities in the Blue Economy for coastal communities and protecting the ocean. Economic opportunities in the Blue Economy either mean the utilization of more resources from the ocean contributing to adverse environmental consequences or accessing alternative sources of income. The pyramid mentioned above, and the profiles identified are all primarily dependent on ocean resources. Despite seeing marine resources reducing, they still consider them their best option in terms of income and aspire to access refrigerators to increase the volume of sales. Therefore, while freezing capacities can offer more economic opportunities, they also entail careful consideration of their sustainability implications due to the potential increase in fishing and harvesting.

Imported projects aimed at bringing alternative income generation and economic diversification to reduce the pressure on the oceans have encountered challenges in adapting to local contexts, reaching long-term impact and generating resources beyond hiring people to work in the projects. Coastal communities have expressed strong levels of frustration with all the development projects, firstly because most of them never saw actual interventions being implemented but rather studies, research and mapping being done. Secondly, when there were project activities that happened they have been mainly training (including of women) in income-generating techniques dependent on inputs that are too expensive for the participants to purchase, hard to find or non-existent locally. Partic-

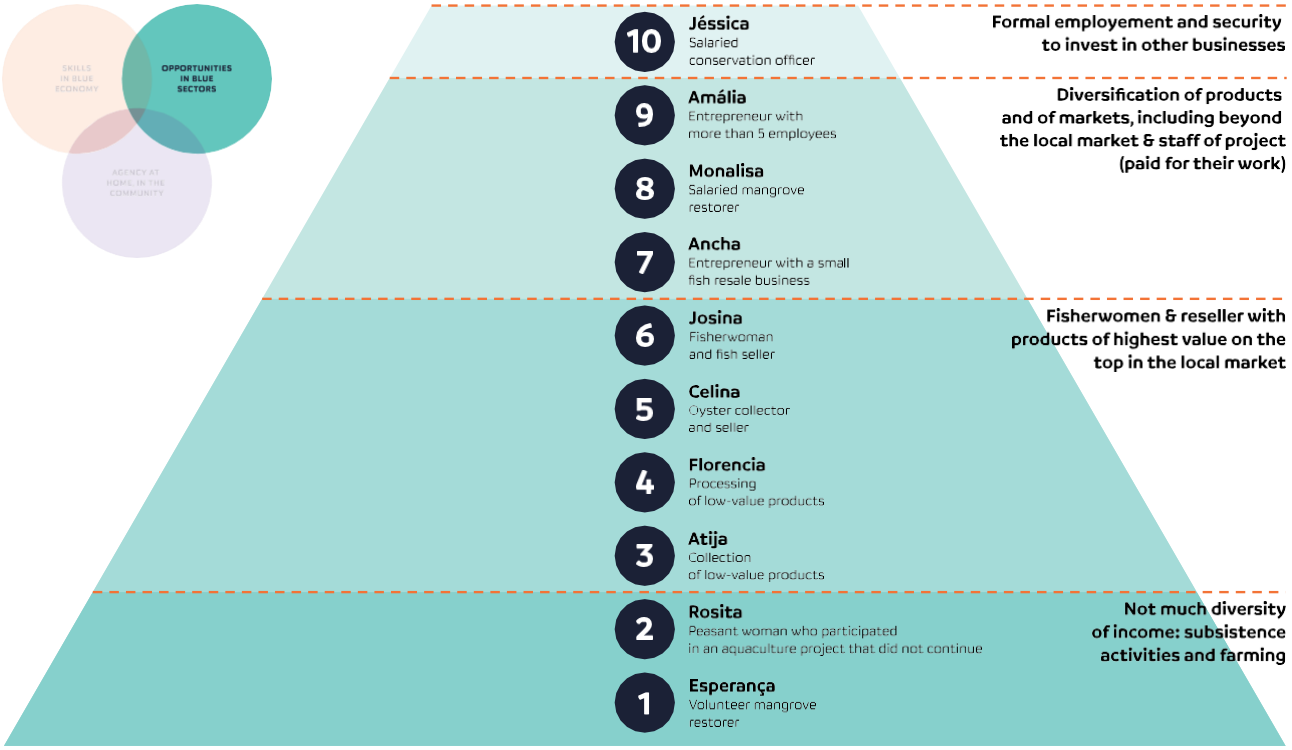


Figure 16. MUVA's Blue Economy Women's Pyramid: Opportunities Characteristics

ipants, including women are hence diverted from their daily, more dependable work, to carry out an activity that is not profitable and does not provide subsistence in the long run.

In spite of being in theory a good alternative to fishing, pisciculture interventions challenges are largely unsurmountable to the communities met in the remote rural communities. Overall poor conditions were encountered in the project areas, which means the activity does not generate income or food. Pisciculture is considered a good alternative in the Blue Economy due to its potential in providing sustainable food sources through the fish produced while reducing overfishing and pressure on wild fish populations, allowing ecosystems to recover and maintaining biodi-

PISCICULTURE CHALLENGES FACED BY WOMEN IN THE COMMUNITIES

The main challenge Found in the literature is lack oF capacity. This is not what was Found in the Field. Multiple training sessions have been conducted in Mozambique and both communities and SDAE technicians can explain in technical detail the steps required to make it work. The challenges outlined below have been all reported by women that have signed in to Fish Farming projects and beneFited at the minimum From training.

Main challenges reported:

- **Inadequate infrastructure**, such as reliable water supply systems and the pumps required to ensure the water quality required;
- **Cost of the initial investment and of the required ongoing inputs,** which includes mainly (i) the young Fish (Fingerlings) that are not available close by, are expensive to buy and transport to the tanks (ii) the Food For the Fingerlings, also expensive and not available;
- **Difficulties to get the fingerlings to grow,** even when the inputs are given as the risks oF death are numerous. The main ones reported are the Following: (i) the quality oF the water which is oFten not up to standard and diFFicult to control; (ii) the temperature oF the water, in places where it's very hot the water in the tank temperature goes up more than what the Fingerlings can handle; (iii) predators eat the Fish such as birds, salamander, snakes; and other larger Fish and that get in the tank either through the tubes linked to the water source when that inFrastructure exists or when it Floods – which in some areas is regular; (iii) Food needs to be given 3 times a day at regular intervals which is constraint, especially when the tanks are not close to the houses;
- **Safeguarding risks** as the tanks are not protected and amount to large swimming ponds in a country where virtually no one can swim and where there is no electricity (you cannot see where the ponds are at night). This risk is even higher considering the responsibility oF Feeding the Fish (when Food is available and given by the projects) is usually given to the children, as the women attend other domestic chores;
- **Limited access to market.** In most oF the coastal areas that are remote the only market access is the local one. Accessing larger and/or more distant markets requires transport and inFrastructure that oFten do not exists. This can result in high levels oF wastage as Fresh Fish requires rapid preservation techniques. This constraint is stronger For the women that have less access to technology and mobile phones, reduced networks and mobility compared to men. Both For structural reasons (i.e. they do not have the mobile phone, they do not know how to ride bicycles, etc.) as well as due to social norms restrictions (i.e. it is not acceptable For them to leave the household to go Far away, less opportunities to meet people and make networks outside oF their community, etc.);
- **Cultural preferences.** In Mozambique, especially in coastal areas, there is no demand For Farmed Fish and For tilapia, the most common Farmed Fish. People preFer wild-caught Fish;
- **Demand for space competes with farming land,** as in some places the pisciculture ponds replaced land where there was crop For subsistence. Especially in coastal areas that have marshes that are good land For rice cultivation;
- **Return on investment takes a time** that people and communities living in poverty do not have. Tilapia, the most common Fish Farmed takes about 6 months to grow enough to be eaten or sold.

versity. It is also a potential source of job creation and revenue generation. Additionally, it brings a range of environmental benefits, promoting healthier blue ecosystems. The challenge is that to make it work usually requires large scale industry. Only a few exceptions exist globally in a handful of specific countries that have for centuries done fish farming (i.e. Philippines and Indonesia) and where household pisciculture is a thriving sector. Even then, the expansion of freshwater pisciculture in Asia (93% of global production) has been driven mainly by urban demand (Naylor, R. 2021). In Mozambique the list of challenges reported is endless and seems overwhelming.

Mangrove restauration does not bring alternative income unless someone pays the workers a salary or buys the mangrove seedlings. Communities in Vilankulos and Moma have expressed frustration with mangrove restoration projects. Community members, including women, often volunteer for these activities. The projects are presented to foster a sense of responsibility within the community for the preservation of their ecosystem. However, these projects divert participants from their subsistence activities to engage in unremunerated work. Despite any compensation the women replanting mangroves continued the work with the hope of being supported by similar projects in the future and due to a lack of any other economic activity. Despite the positive effort to preserve the local environment, this may create unrealistic expectations, leaving participants in precarious financial situations. This also demonstrates how mangrove restoration projects are highly dependent on external support.

3.4. "Power Within" and Social Norms: Socio-Economic Determinants

MUVA's interpretation of agency is that of having the power within and the ability to make choices, have control (self-efficacy) and to act (take up opportunities). Women's agency also means having the ability to make decisions about economic matters, participate in public life, take on leadership roles and have decision-making power within the household, community and local economy, not just in areas that are traditionally regarded as for women (Hunt and Samman, 2016).

Having power within is a socio-economic determinant. 'Power within' can be defined as the knowledge, individual capabilities, sense of entitlement, self-esteem, and self-belief to make changes in one's life, including learning skills for jobs or to start an enterprise. It is complemented by three other aspects of power and agency that are all necessary to contribute to women's economic empowerment and include 'power to' which includes economic decision-making power within the household, community, and local economy (Hunt and Samman 2016).

Balancing immediate needs with future goals remains a fundamental challenge for women engaged in maritime activities as they have little incentives and ability to make long term plans. The need to address daily challenges hinders the development of long-term aspirations and planning. In the case of the coastal communities, the ability to access immediate income makes the need for long term planning less of an urgent necessity. As it was mentioned in all KII and FGDs: the sea provides immediate money, while all other activities including farming take a long time. Any alternative income generating activities to be taken up by the communities needs to be able to compete with this.

Family dynamics are one of the causes of women's situation in terms of socio-economic development and personal agency. Most women in the rural and coastal areas marry within their communities. Traditionally, men in the households take the final decisions about both social and economic aspects of family life. Households where the level of negotiation and communication between the sexes is strong can be seen to thrive, sharing expenses and taking on new income opportunities where possible. Interestingly, in comparison with similar work carried out in agricultural inland areas, the findings from our research seem to indicate more collaboration between spouses. There are however, stereotypical gendered behaviors, often present in these isolated communities, that designate gender roles and levels of women autonomy that are less than optimum, and rarely challenged, either by men or women. Women who are single or widowed and older generally have more decision-making autonomy and economic agency compared to those with husbands.

Children are not perceived as a barrier to work. The main constraint reported was the prohibition against pregnant women going on boats, although some women still do so in the early months of pregnancy when the condition is not clearly visible. When it comes to childcare, a sense of solidarity appears, with community members collectively taking care of children while mothers engage in maritime activities. Despite prompting, childcare responsibilities were not mentioned as a challenge to conducting economic activities effectively.

Having a network and social capital is a socio-economic determinant. Having the support of a network or family members significantly impacts women's

Figure 17. MUVA's Blue Economy women's pyramid: network and social capital characteristics

ability to engage in and develop economic activities. The women on top of the pyramid worked with family members, counted on personal networks for transport, accessing products, loans, being the workers of the business, etc.

Being a successful woman is not welcomed by the community, the expectation being that women should serve the husband and the family, not be autonomous. The women in the research that are classified to be sitting on the top of the pyramid suffered from social pressure, exclusion within their communities, jealousy, and envy. This complex interplay between an individual women's economic growth and community integration should not be underestimated. A rejection of the successful women is a real barrier that can lead to domestic violence, harassment, and mental health challenges and destruction of potential role models.

3.5. Cross Cutting Constraints and Enablers

3.5.1. The Importance of the Territory

The term Blue Economy may seem conceptual to some, but in coastal communities it's literal as the ocean is considered the main, if not the only, source of income and food. The proximity of fertile lands is a key factor in determining the volume of farming activities. Only in very few coastal areas farming is a viable income source for communities as often the land is too distant to make farming competitive even in complementarity with the income earning opportunities from the ocean.

Women are fully aware of and deeply affected by the increasing scarcity of the ocean resources. Fish and crustaceans are increasingly rare and harder to obtain. Looking at the past, some refer to a collective memory wherein "fishing by hand" was feasible due to the abundance of fish decades ago. As women are the primary responsible to both bring food home and cook for the family, they indicated that the lack of sea products is turning increasingly difficult for them to ensure the diet of the whole family. The current scarcity of blue natural resources is frequently attributed to the increase in the number of boats strongly linked due to population growth and the related overfishing.

On one hand, the proximity to natural resources shapes the communities' economic activities that are directly determined by the types of natural resources available within a radius of up to two hours of walking distance. Certain communities are inherently predisposed to specific economic pursuits driven by the presence of particular natural resources such as oysters, crabs, mangroves. **On the other hand, the proximity of communities to the village center (called 'Vila" in Mozambique) significantly impacts the access to market and the possibility to attend**

school. Our research highlights a contrast between people living in the center and the others who suffer from critical difficulties of access to markets, schools, and information. Even relatively short distances from village centers present significant obstacles to accessing markets because they have to be covered by foot, often with heavy loads and the cost of transportation, such as local buses ('chapas') are quickly prohibitive.

This territorial determinant is for the women an intersection with her marriage, as by the coast in Mozambique women move to the husband's house and community when they marry. This tradition implies that women is required to adapt their livelihoods to their new geographical circumstances upon marriage. A woman relocating may lose access to the resources she used to have, with her family, before moving.

The ocean is not seen as a place of inspiration: all women aspire for their children to work "away from the beach." Improving value chains to make ocean resources more lucrative may have long-term consequences, increasing pressure on coastal ecosystems and confiicting with the push for alternative activities to compete with ocean-based ones. Despite limited

THE PERSONA AND THE CONSERVATION AREAS

The research was not conducted within conservation areas, it collected data around national parks including in their buFFer zones. In the South, communities interviewed included the buFFer zone oF the Maputo National Park; data was also collected in the district oF Vilankulos and Moma that Face respectively the Bazaruto National Park Primeiras and Segundas marine protected area. The personae related to the mangroves (both Esperanca and Monalisa) and the persona 10, Jessica, have been designed based on people living close to national parks and/or marine protected areas.

The role oF Marine Protected Areas (MPAs) as ecosystem nurseries and significant sources oF coastal fish populations was not recognized or mentioned at the community level. For example, evidence suggests that the protection provided by the Bazaruto National Park alone is responsible For sustaining a substantial number oF fish not only in the archipelago, but also more broadly along the coast oF Mozambique. However, our interviews revealed that some community members perceive these regulations as creating a literal division in the sea. It emerged that conservation measures are not well understood by the communities living outside these protected areas, leading to at times Feelings oF injustice and dissatisFaction.

The most significant determinant observed and reported For people living around conservation areas and their buFFer zones are the possibilities oF being hired, either by the public sector as fiscal, or by projects to monitor the biodiversity or replant mangroves. Those are the only income generating activities related to the conservation areas that were met during the field work. Accessing one oF those opportunities enables a person to jump From subsistence economy (i.e. Esperança) to the higher tier oF the inFormal sector (i.e. Monalisa). When projects don't pay they are an additional burden in the day oF vulnerable women who participate in the expectation that they will eventually get something, either in cash or in kind (i.e. a snack, a kilo oF rice) in return.

PRINCIPLES THAT HAVE ENABLED COMMUNITIES TO OVERPASS THE TRAGEDY OF THE COMMONS

Elinor Ostrom's work on the governance oF commons oFFers valuable insights into how communities can sustainably manage shared resources without Falling into this dilemma. The engagement oF local communities, adaptive governance, and shared responsibility are pivotal in achieving sustainable resource management outcomes. By aligning socio-economic development with long-term ecological goals, Mozambique can Foster sustainable fisheries, conserve biodiversity, and enhance the resilience oF its coastal communities. Ostrom's principles provide a Framework For sustainable governance oF coastal commons:

1. Establishing clearly defined boundaries to delineate resource use rights and responsibilities among users.
2. Tailoring resource use rules to local conditions by integrating ecological, social, and economic Factors through collaborative development and adaptive adjustments.
3. Emphasizing active participation oF resource users in decision-making processes to promote ownership and legitimacy.
4. Monitoring fishing activities to ensure compliance and early detection oF overuse or degradation.
5. Implementing graduated sanctions For rule violations to deter unsustainable behavior.
6. Planning eFFective conflict resolution mechanisms to preserve social cohesion.
7. Recognizing and enForcing user rights and responsibilities to Foster trust and cooperation.
8. Creating polycentric governance structures that enable adaptive management, innovation, and collaboration across diverse stakeholder groups.

competitive alternatives for those already making a living from the ocean, there is a real opportunity to build on the aspirations of these women and mothers for the next generation to have different opportunities. Mothers invest heavily in their children's education, despite increasing disappointment that education does not always lead to paid work, and that jobs often need to be paid for.

Improving the livelihood opportunities needs to consider the potential consequences of additional exploration of the ocean resources, as more lucrative fishing or collecting activities may present significant challenges to the ecosystem balance. Without viable economic alternatives individuals within these communities will continue to exploit the marine resources available to them, even if it leads to the degradation of the ecosystem in the long run on which their livelihood depends. This results in a vicious spiral where the depletion of resources further exacerbates poverty and reliance on unsustainable practices, ultimately leading to a decline in marine biodiversity and the overall health of the ecosystem. This dilemma is akin to what some scholars call the "Tragedy of the commons" (Hardin, 1968), highlighting how common pool resources (non-excludable but rival), can be overexploited and degraded when individuals are forced to act in their own self-interest, due to a lack of alternatives, rather than considering the long-term sustainability of the resource. Despite the implementation of various restrictive measures, including fishery closures, conservation areas, regulation of fishing gear, and protection of certain species, reconciling immediate subsistence needs with long-term biodiversity conservation requirements remains challenging in deprived coastal communities.

Some cases and evidence suggest however, this tragedy does not need to be. Ostrom's research on Community-Based Marine Protected Areas (CBMPAs') offers a robust framework for effective marine conservation and sustainable fisheries management. CBMPAs' involve local communities in planning, establishment, management, and monitoring, ensuring that local knowledge and traditional practices are incorporated into conservation strategies. This approach has empowered communities to take ownership of marine conservation initiatives and to find a balance between conservation and livelihoods.

3.5.2. Law and Policies

At the local level, where fishing activities happen, there are two public sector institutions responsible for the normative aspects. This research did not look at the national level stakeholders and will nottherefore describe the different actors at this level but focused on the localities. The two local institutions are the:

- **Community Consultative Councils (CCPs),** government established community councils aimed at: i) supporting the government in co-management of fisheries, ii) regulatory compliance and

enforcement, iii) community engagement and education and iv) supporting sustainable livelihoods;

- **District services for Economic Activities (SDAE)**, the government representations at the district levels to provide support to all economic activities, business development and licencing of economic activities.

CCPs were created, as their name indicates to represent fishermen and are constituted by them. CCPs where created in 2020 through the Maritime Fishing Regulation (REPMAR) to represent fisherman and be the representation of the Ministry, at the time called Ministry of Fisheries. With the recent emergence of the Blue Economy concept their role was broadened. This was neither a structured planned change nor was it really considered if they were fit for the purpose, as by definition they only focused on fisheries. This explains, at least partially both their limitations and being male-dominated institutions. In all the areas visited only one CCP was led by a woman.

At the local level, CCPs roles have recently been widened and at times they are perceived as abusing their power. They are on one hand, the arm of the government locally, imposing rules, controlling their implementation, disseminating information on fishing regulations and other relevant topics, while on the other hand, being the representation of the community with the local authorities at district level. They are also the door for projects, opportunities, identification of participants and beneficiaries, as well as platforms for saving and obtaining loans through (i.e. “xtique”).

In Mozambique, both the CCPs’ and SDAEs’ play significant roles in managing and promoting sustainable practices within the fisheries sector. With the increasing role of CCPs, the overlap between both institutions leads to potential confiict and challenges in coordination. The overlapping roles of CCPs and SDAE primarily arise in areas of resource management, enforcement, and community engagement, as both are involved in monitoring and enforcing fishing regulations, promoting community-based resource management practices and implementing fishing community’s livelihood improvement projects.

None of the personas top of the pyramid had a relationship with neither the CCPs or the SDAE. As public sector institutions, they do not represent the private sector even in its small, subsistence form. The ones who were more familiar with the CCPs where the personas at the bottom of the pyramid, the higher you go the less they mention having heard about it, or being involved with it and for the ones who knew they did nottrust it or did notparticipate in their meetings. Even the ones at the bottom of the pyramid who knew about it reported not trusting the structure to be inclusive and representing their needs. In terms of the SDAE, only the areas where pisciculture projects happened or where happening mentioned SDAE technicians. They were the ones who came to deliver the training for fish farming.

One of the main sector prohibitions at local level is the control of only authorized fishing gear to avoid small catch, which is a necessity in terms of biodiversity but difficult to implement and that negatively impacts mainly women. 70-80% of the fish and sea creatures depend on reefs and on the three first miles of the sea for at least a part of their reproduction process. Therefore, net fishing in the shores has a catastrophic impact on fish stocks as they catch the ocean biodiversity – including fish, in their natural nurseries. In spite of this, the activity is authorized as long as done with legal gear, meaning a net with a fishing net mesh of a minimum of 2 inches4. This should in theory protect the smaller and juvenile creatures, as long as they do notget caught in the drag. The implementation of this regulation is patchy and difficult to assess with exactitude. Governments and Blue Economy projects are planning to support a tighter control of those. Net fishing and harvesting in those first three miles are mainly women activities, which means those regulations impact women in the first place. Without alternatives in terms of income and access to food it will be challenging to manage those rules to be respected.

The second key regulation is the annual fishing closures (veda), another measure to ensure some protection of juveniles and guarantee a minimum level of fish stock preservation. Mozambique has two national fishing closures per year that are imposed at national level around October to December and January to March, although the exact dates vary between provinces and species. In addition to those official dates stipulated by the national government, local communities through each CCPs and in collaboration with district authorities, are entitled to designate supplementary, localized, fishing closure periods. This is usually done when at local level the volume and size of the catch reach a significantly low level and communities agree that they need to give time for the fish to grow. These additional closures are challenging as they depend on a collective agreement and if the area of one CCP agrees the neighbour may not. Those differences cause tension and confusion resulting in varied levels of awareness and compliance.

4. Recommendations

Invest in gender literacy at the local authority level. The local institutions and government counterparts such as the CCPs and SDAE are eventually the ones that interact directly with the women from communities. To ensure that the gender lenses are implemented they must be the ones to do it. Therefore, addressing capacity building of local institutions like CCPs and SDAE is recommended to foster a deeper understanding of gender dynamics, promote inclusive practices.

Avoid creating unpaid additional work to women or engaging them in activities that do not generate income, especially the more vulnerable women. Initiatives that can sustain themselves beyond intervention phases and that are culturally relevant should be prioritized.

Consider Gender lenses in Project Design. Blue economy stakeholders can adopt a better gender approach by integrating gender considerations into the design of policies, projects and interventions. Neglecting this aspect may lead to inefficiencies or counterproductive outcomes. Critical considerations are:

(i) **Understanding Intra-Household Dynamics.** Family dynamics significantly impact women's ability to engage and succeed in the Blue Economy. Understanding these intra-household dynamics and recognizing the role of family support or burden in enabling women's economic activities is critical.

(ii) **Addressing Social Pressures on Successful Women.** Successful women entrepreneurs in the Blue Economy often face social pressures and exclusion within their communities. To enable WEE, creation of environments that support women to navigate social pressures in their own community is recommended.

(iii) **Including the concept of agency in interventions.** Women's personal initiatives and confidence are key to their ability to take up existing opportunities, without this agency women's active participation in decision-making processes within their household and communities and their ability to have a voice, a choice and control remains limited.

(iv) **Designing and implementing livelihood projects that engage both genders, ensuring a balanced distribution of responsibilities.** Our findings indicate a shift of men towards non-marine sectors when opportunities arise, often resulting in women replacing them in the fishing related activities. This can undermine efforts to reduce pressure on marine resources. It is advisable for stakeholders to prioritize the creation of gender-inclusive economic alternatives that deter both men and women from overfishing.

(v) **Acknowledging mobility restrictions, particularly for women in intervention design.** Even short distances represent substantial obstacles, because of the physical strain of walking with heavy products and the high cost of transportation that constraint women's mobility.

(vi) **Imposing needed and legal restrictions in parallel to providing access to alternative sources of income and livelihoods at least as good as the current ones.** This can be considered a general recommendation for all biodiversity conservation interventions, but in this case, it is especially critical for the activities women depend on conducted in the shores, such as harvesting and net fishing.

Include cultural and religious preference into project design. Understanding the religious practices is crucial for analyzing women's agency and gender disparities within coastal communities in Mozambique. Religion plays a significant role in shaping social norms, values, and gender roles, which directly impact women's access to opportunities and decision-making power.

Consider the opportunity of breaking the intergenerational activity. Mothers do not aspire their children to work on the ocean. Investing in alternatives for the next generation would leverage local aspirations and potentially yield sustainable change.

Consider the need for better understanding of the relationship between the communities and the conservation areas, especially in terms of access to livelihoods so the interventions related to conservation can be designed accordingly.

Annexe 1: Localities Where the Field Work Was Conducted

Sector	Profile of the people interviewed and/or in the FGD	Location Comunidade, districto, provincia	Data collection method
Fisheries	Shrimp seller	Ndelane, Machangulo, Maputo	Focus group
	Crab harvester	Mabulucu, Machangulo, Maputo	Focus group
	Crab harvester	Magalisse, Vilankulo, Inhambane	Focus group
	Crab harvester	Mocorogi, Moma, Nampula	Focus group
	Crab harvester	Ngomene, Machangulo, Maputo	Focus group
	SeaFood processor	Vila de Moma, Nampula	Focus group
	Fish processor	Bairro Mingurine, Vila de Moma, Nampula	Semi-structured interview
	Fish seller	Mondego, Vilankulo, Inhambane	Focus group
	Fish seller	Pilivili, Moma, Nampula	Semi-structured interview
	Fish processor and seller	Mondego, Vilankulo, Inhambane	Focus group
	Oyster collectors	Chigamane, Vilankulo, Inhambane	Focus group
	Oyster collectors	Mabandene, Vilankulo, Inhambane	Focus group
	Fish seller	Santa Maria, Machangulo, Maputo	Focus group
	Fisher woman	Vila de Vilankulo, Inhambane	Shadowing
	Entrepreneur crab and shrimp seller	Ndelane, Machangulo, Maputo	Semi-structured interview
	Entrepreneur fish seller	Chigamane, Vilankulo, Inhambane	Semi-structured interview
	Entrepreneur fish seller	Chigamane, Vilankulo, Inhambane	Semi-structured interview
	Entrepreneur fish seller	Central market, Vilankulo, Inhambane	Semi-structured interview
	Entrepreneur fish seller	Central market, Vilankulo, Inhambane	Semi-structured interview
	Entrepreneur fish seller with investment capacity	Vila de Vilankulo, Inhambane	Semi-structured interview
	Entrepreneur fish seller with Freezing capacity	Bairro Mingurine, Vila de Moma, Nampula	Semi-structured interview
	Entrepreneur fish seller with export to Maputo	Santa Maria, Machangulo, Maputo	Semi-structured interview
	Boat owner	Magalisse, Vilankulo, Inhambane	Semi-structured interview
	Boat owner	Chibuene, Vilankulo, Inhambane	Semi-structured interview
	Civil servant and fish seller	Santa Maria, Maputo	Semi-structured interview
Pisciculture	Subsistence pisciculture	Bairro Supinho, Nicoadala, Zambezia	Focus group
	Subsistence pisciculture	Namacata, Zambezia	Focus group
	Subsistence pisciculture	Bairro Supinho, Nicoadala, Zambezia	Semi-structured interview
	Subsistence pisciculture	Bairro Supinho, Nicoadala, Zambezia	Semi-structured interview
	Subsistence pisciculture	Batimuziva, Zambezia	Focus group
	Subsistence pisciculture	Pilivili, Moma, Nampula	Focus group
	Subsistence pisciculture	Pilivili, Moma, Nampula	Focus group
	Former entrepreneur in pisciculture	Namacata, Zambezia	Semi-structured interview
Conservation	Mangrove rehabilitation (unFormal)	Magalisse, Vilankulo, Inhambane	Focus group
	Mangrove rehabilitation (unFormal)	Bairro Mingurine, Vila de Moma, Nampula	Semi-structured interview
	Mangrove rehabilitation (unFormal)	Bairro Mingurine, Vila de Moma, Nampula	Focus group
	Mangrove rehabilitation (employee)	Maphanga, Machangulo, Maputo	Focus group
	Marine conservation inspector	Chibuene, Vilankulo, Inhambane	Semi-structured interview

Annexe 2 : Blue Economy Sector Selection Process

Given the large number of blue economy sectors, the MUVA team decided to focus on a reduced number of blue economy sectors to achieve high quality findings that are more impactful for women's economic empowerment. To understand which sectors of the blue economy to focus on for the research, the team prioritized blue economy sectors according to criteria such as blue economy stakeholders' priorities, the employment rate, the economic importance, the innovation potential, the involvement of women and the impact on the environment. These criteria have been defined to ensure we look at sectors that have the most impact on women's economic empowerment while ensuring a sustainable development of the blue economy. This evaluation was then shared with blue economy stakeholders to receive their feedback and modify accordingly.

Selection of focus subsectors (1=low; 2=medium; 3=high):
Based on the prioritization of sectors, our research will hone in on the three most valued blue economy sectors: fisheries, pisciculture and conservation.

	Selection criteria						
BE Sectors	Prioritised by BE stakeholders (1= low; 3=high)	Employment rate (both Formal and inFormal)	Economic importance (contribution to GDP)	Innovation potential	Women's involvement	Impact on the environment (1=harm-Ful impact; 3=positive)	**Total**
Fisheries	3	3	1	2	3	2	**14**
Pisciculture	3	1	1	3	3	2	**13**
Coastal and maritime tourism	1	3	2	2	2	2	**12**
Marine biotechnologies	NA	NA	NA	NA	NA	NA	**NA**
Extractive industries	1	1	2	2	1	1	**8**
Desalination	NA	NA	NA	NA	NA	NA	**NA**
Marine renewable energy	NA	NA	NA	NA	NA	NA	**NA**
Maritime transport and port	1	2	2	2	1	1	**9**
Waste	1	1	1	3	2	3	**11**
Marine conservation	3	2	1	2	2	3	**13**

Annexe 3 : The Personae

We created 10 personae that refiect the most prominent variables identified during the research.

The persona method translates the findings into personalized information that foster the understanding and empathy towards women working in the blue economy. The persona method aims to provide decision-makers and funders with clear and user-friendly information about women in the blue economy. The personae were identified to ensure a representation of : (i) the identified sector in the methodology namely fisheries, pisciculture and conservation projects/work related activities; and (ii) the entrepreneur pyramid, ensuring the capture a variety of power dynamics and positions within blue economy activities and value chain.

The table below summaries the final list of personae that emerged.

	Subsistence entrepreneurs / livelihoods	**MSMEs**	**Stable formal income**
Sector 1: Fisheries	**Atija**: Women who collects and sells low-value seaFood (crab, clams, small fish, etc.) & that also works without remuneration For conservation projects; **Florência:** Women who processes and resells low-value fish; **Celina:** Women who collects and sells oysters (High-value seaFood product); **Josina:** Fisherwomen who fishes with a net in the shores and seller.	**Ancha:** Woman with a small resale business, who collaborates with a small team oF people (Fish, squid, shrimp); **Amália:** Entrepreneurial woman with an SME that operates in the artisanal fishing value chain with 5 or more workers (owners oF boats or nets and or has diversified businesses and sends to other locations).	**NA***
Sector 2: Pisciculture	**Rosita:** Farmer who participates in a fish Farming project.	**NA***	**NA***
Sector 3: Conservation projects/work related activities	**Esperança:** subsistence entrepreneur who joined a project that was not remunerated (i.e to replant mangroves).	**Monalisa:** Salaried conservation activities (monitor, mangrove replanting, etc).	**Jéssica:** Women inspector and employee in the conservation area.

*Large compagnies such as Aquapesca and fishing compagnies have staff that could be included in those categories. The research did not include them as it considered their profiles were of workers of large compagnies that would work for any large employer in the area.

Persona 1 - Esperança: Mangrove replenisher with no income.
Persona 2 - Rosita: Peasant woman who lives off the farm and who participated in a fish farming project with no income and which went bankrupt.
Persona 3 - Atija: Women who collect and sell low-value seafood (crab and clams and small fish) as well as conservation monitors without income.
Persona 4 - Florência: Women who process and resell low-value fish.
Persona 5 - Celina: Women who collect and sell oysters.
Persona 6 - Josina: Women fishermen and sellers (trawl net – Shrimp, crab, squid, fish, etc.).
Persona 7 - Ancha: Woman with a small resale business, who collaborates with a small team of people (Fish, squid, shrimp).
Persona 8 - Monalisa: Mangrove repository/other salaried conservation activities.
Persona 9 - Amália: Entrepreneurial woman with an SME that operates in the artisanal fishing value chain with 5 or more workers (owners of boats or nets and or has diversified businesses and sends to other locations).
Persona 10 - Jéssica: Women inspectors and employees in the conservation area.

Esperança

Age: **52 years old**
Locality: **Moma Village, Nampula**
Activity in the Blue Economy:
Volunteer mangrove restorer
Household: **3 people**

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Her family consists of her sick husband and orphaned grandson. Therefore, Esperança is solely responsible for the family's livelihood and does so to the best of her ability. She focuses on selling salt and fuel, operating in small quantities because there's not enough left over to invest and increase earnings.

HOW AND WHY SHE DOES IT

For the mangrove restoration, Esperança hardly uses any equipment, despite the mangrove being a place of difficult mobility and risks with its mud, branches, and stones. She goes with just her basin, where she collects seeds to dry and cultivate seedlings in her backyard. The same basin transports the seedlings to the mangrove, where she plants them, digging holes with her hands. Like Esperança, 40 more people from her community dedicate themselves to this activity. They organize and walk to the mangrove at least 3 times a week, always very early when the tide is low, staying there for at least 3 hours. Unfortunately, this challenging and costly activity generates no income for Esperança, as it is done on a voluntary basis.

HER FRUSTRATIONS

Esperança states, "There was a lot of encouragement that the activity could generate some income, but so far the promise has not been fulfilled, and we are starting to lose motivation with the activity." Even when there are meetings of NGOs where Esperança shares her pains and difficulties, she feels some comfort in the moment, but sees that nothing has been addressed or improved so far.

As many organizations approach the committee to reinforce the importance of the activity, Esperança still deals with envy from people in the community who believe she is receiving payments from the organizations. This further demotivates her. "It really doesn't make sense to them for us to continue the restoration while we earn nothing." Within her family, they say she should give up and focus on activities that generate income.

HER DESIRES FOR CHANGE

She continues with great resilience, dreaming of a world where her struggle is finally recognized. She hopes to give her grandson the opportunity to study and make his own choices for the future.

Rosita

Age: **45 years old**
Locality: **Nicoadala Sede, Zambézia**
Activity in the Blue Economy: **Peasant woman who participated in an aquaculture project that did not continue**
Household: **5 people**

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

A few years ago, she joined an aquaculture project, giving up part of her rice field, dreaming of reaping the benefits of tilapia farming. She chose to join the project because she had already benefited from previous community initiatives, and the idea of creating tanks seemed like a good alternative for additional income and food.

HOW AND WHY SHE DOES IT

The project brought in teams, dug holes, placed fingerlings, and provided the initial feed. Everything seemed to be going well until challenges began to arise: the intensive work of cleaning the tanks while also working in the rice fields, feeding the fish three times a day, shortages of feed, birds, large fish, and even thieves stealing fish from her tank. These exhausting episodes demotivated Rosita, but she persevered with the resources she had.

HER FRUSTRATIONS

However, the project that initially supported her eventually ended, leaving Rosita uncertain about the future of her activity, as the lack of the project makes it difficult for her to access feed and fingerlings. Rosita then returned to dedicating herself to subsistence farming in her rice field.

HER DESIRES FOR CHANGE

Alongside her husband and children, Rosita persisted in maintaining the tilapia tanks even without any fish inside, hoping for a return of the project that could provide inputs and allow her to try again.

Despite financial difficulties and uncertainties about the future, Rosita dreams of fishing in the tank, receiving help with feed and fingerlings, and also having a bicycle to facilitate her transportation to the market and the rice field. But above all, her greatest wish is to see her children thrive, study, and find jobs that take them beyond the borders of their small community.

Atija

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **32 years old**
Locality: **Mocorogi, Nampula**
Activity in the Blue Economy:
Collection of low-value products
Household: **9 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Atija married very young, at the age of 15, and now at 36, she has 7 children. To maintain their home and keep the children in school, she and her husband travel long distances together every day, sometimes to the sea, sometimes to the fields, and sometimes to the market where they sell what they can catch from the sea. Atija's journey is even longer. Her daily routine starts long before sunrise, searching for water and firewood to begin her household chores.

HOW AND WHY SHE DOES IT

To catch crabs, in addition to walking, there's also the crossing of the river in small rowing boats. For her crab-catching activity, Atija uses only a stick to find crabs in their holes, a cloth wrapped around her hand to avoid being stung, and a bucket to collect what she finds and take to the market. The crabs are sold by size since she doesn't have a scale.

HER FRUSTRATIONS

The pains of her journey are countless. "When a crab bites, we have to bite it back to make it let go. If not, we end up losing part of our finger," she said with a smile, showing the scar on her finger. There are also psychological pains evident when she speaks with frustration about community members who prosper through entrepreneurship while she feels there's nothing left to invest in a business.

HER DESIRES FOR CHANGE

Atija says her courage and dedication are her way of paving a path so that her children do not repeat her story.

Florência

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **48 years old**
Locality: **Mocorogi, Nampula**
Activity in the Blue Economy: **Processing of low-value products**
Household: **4 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Separated, Florência lives with her three children and takes on the responsibility of supporting her family. To ensure this livelihood, she is part of a women's association of fish processors and vendors, where she serves as the coordinator of the fish processing center. This role involves coordinating the purchase, processing, and resale of fish, organizing a schedule of activities to facilitate rotation among the association members. Additionally, in partnership with her friend, Florência buys, processes, and resells fish in neighboring communities.

HOW AND WHY SHE DOES IT

Florência's day starts very early, around 5 AM, when she and her colleagues head to the beach to buy fresh fish directly from local fishermen. For transporting the fish to the processing center, they use large basins carried on their heads as they walk to the center. Their working equipment includes knives for cleaning and cutting the fish into fillets, as well as thermal boxes and freezers for fish storage. Depending on the schedule, Florência and some colleagues take responsibility for selling the fish to market vendors in Mucoroge, while others transport the fish to the central market in the city of Nampula.

HER FRUSTRATIONS

Florência has experienced moments of great frustration due to the increasing scarcity of fish, which she attributes to the high number of fishermen currently at sea. Additionally, she faces challenges in negotiating her merchandise with suppliers who claim that the women in the association earn too much money from resale, preferring to sell fish to other vendors instead. Therefore, there are days when she cannot buy enough fish for resale, and other days she returns home without any fish, affecting her livelihood. Besides professional difficulties, Florência also deals with community comments suggesting she doesn't fit the ideal wife profile, implying she would kick her husband out of the house for any mistake. These additional challenges further increase pressure and frustration in her life.

HER DESIRES FOR CHANGE

Florência believes in a better future for her children, with completed academic levels and good jobs. Her goal is not only to ensure the livelihood of her family but also to create opportunities for other women in the community, encouraging them to join the association.

Celina

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **32 years old**
Locality: **Mabandene, Inhambane**
Activity in the Blue Economy:
Oyster collector and seller
Household: **6 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

She and her husband are responsible for supporting their household and family, which includes four children. To ensure their livelihood, Celina dedicates herself to collecting, processing, and selling oysters, while her husband engages in fishing and selling fish.

HOW AND WHY SHE DOES IT

For oyster collection, Celina heads to the beach in the early hours of the morning to secure her spot on the boat that she and other collectors rent to reach the collection site. She always carries her work equipment with her, including a diving mask, a knife for opening oysters, a basin for transportation, and a bag tied around her waist to hold the oysters during collection in the sea. After collecting, Celina starts processing, which usually takes place on the beach. She uses a grill and makes a small improvised fire to smoke the oysters. Once ready, she sells them to her customers in the community. This activity provides her with a good income, which is why she invests all her energy and time into it.

HER FRUSTRATIONS

Celina struggles with the seasonality of oyster collection, which only occurs from September to December, leaving her without her main source of income for most of the year. Additionally, the increasing number of collectors and boats in the sea has reduced the quantity of oysters collected each year.

HER DESIRES FOR CHANGE

Despite the many obstacles, Celina never stops dreaming. She aspires to a better future for her children, where they can graduate and find jobs or other opportunities away from the hardships of the sea.

Josina

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **48 years old**
Locality: **Chibuene, Inhambane**
Activity in the Blue Economy: **Fisherwoman and fish seller**
Household: **3 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Josina relies on fishing and selling fish as her primary source of income. This activity is also undertaken by her husband, but on different boats, making them the sole providers for their family while their daughters focus on their studies.

HOW AND WHY SHE DOES IT

Influenced by her husband, who is also a fisherman, Josina became involved in fishing herself. Her day starts very early around 4 AM. She needs to be at the beach with her share of the money to join 10 to 15 other fishermen so the captain can buy fuel to supply the boat that takes them to the fishing grounds. During the journey, which lasts about an hour, Josina prepares her work equipment: a large net that is thrown into the sea when the captain gives the signal, and a pole that fits around her waist to help pull the net along with her fellow fishermen.

Typically, hauling the net takes about 3 to 4 hours. Afterwards, she and her colleagues return to the beach and begin selling the fish together. The profits from the sale are handed over to the boat owner, who distributes the money among the fishermen to ensure everyone receives an equal share. Any leftover fish is distributed among the fishermen. Through fishing and selling fish, Josina manages to support her family and her daughters' education.

HER FRUSTRATIONS

The closed fishing season causes Josina great frustration since it is her only source of income. During this period, she lacks her usual income, forcing her to seek other activities like cleaning houses or farms, but the pay is very low. Another frustration stems from the physical toll fishing takes on her, resulting in constant body aches and swelling in her lower limbs.

HER DESIRES FOR CHANGE

Despite working in fishing for many years and striving daily to perform well in this activity, Josina does not envision herself as a long-term fisher due to the physical strain it causes. Therefore, she dreams of acquiring a freezer to sell fish from home. Additionally, she hopes to see her daughters complete their studies and work in tourist resorts or start their own businesses.

Ancha

Age: **38 years old**
Locality: **Mabuluko, Maputo**
Activity in the Blue Economy: **Entrepreneur with a small fish resale business**
Household: **5 people**

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Ancha's main economic activity is fish resale at the Machangulo market, in partnership with her friend who sells fish at a local market in Salamanga. Ancha also processes fish throughout the months to sell during closed seasons and supplies shrimp to a local resort twice a month. Additionally, she shoulders the responsibility of supporting her household, along with her son who works as a fisherman.

HOW AND WHY SHE DOES IT

When she was younger, Ancha focused exclusively on farming in her fields while caring for her two young children, as her husband worked at a grocery store. However, after her husband's death, she became the sole provider for her family. She formed a partnership with her friend and started working in fish resale at the market, while her friend handles sales in Salamanga. Every day, Ancha buys fish from fishermen on the beach or from sellers in neighboring communities who come to the market. To ensure stock availability, she visits the beach twice a day, in the morning and afternoon, using a basin to transport the fish. At the market, she uses a Coleman cooler to preserve the fish during sales. To diversify her products, she purchases shrimp from a nearby island through a resident client who sends them to Mabuluko. She sells small shrimp at her stall in the market, while large shrimp are supplied to a local resort.

HER FRUSTRATIONS

Despite achieving relative success, Ancha faces difficulties in negotiating with local fishermen. She distrusts the scales used by fishermen and questions the fairness of prices, but feels powerless to contest this as she depends on them to acquire her fish stock. They do not allow her to use her own scales for weighing. Additionally, Ancha is often pressured by family members who borrow money and rarely repay, which frustrates her and limits her financial growth opportunities.

HER DESIRES FOR CHANGE

Despite the challenges and successes she encounters, Ancha believes in the possibility of a better life for her daughter and dreams of a future where she has a good formal job, less strenuous than fish resale.

Monalisa

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **32 years old**
Locality: **Maphanga, Maputo**
Activity in the Blue Economy: **Salaried mangrove restorer.**
Household: **8 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Monalisa works as a mangrove reforestation assistant for a partner company of Maputo National Park. With this job, which provides her with a monthly salary, she has become the main provider for her family, as her father's income from fishing is not always stable. Thus, she ensures the family's food, pays for her younger siblings' school expenses, and covers her own personal expenses.

HOW AND WHY SHE DOES IT

Monalisa enrolled in the mangrove reforestation project and was selected to participate in a week-long training where she learned mangrove replanting techniques. During the training, Monalisa learned how to propagate seedlings, collect mangrove seeds, and identify suitable planting areas. In her daily work, she wears a uniform consisting of a company shirt and a hat, along with a pair of boots to navigate through muddy ground and bags to carry the seedlings. Her group of replanters consists of about 25 people, many of whom are women. She enrolled in the program because she saw it as an opportunity for learning and growth. She sees the impact her work has on people's lives in her community, especially for crab collectors.

HER FRUSTRATIONS

Monalisa faces difficulties walking in the mangrove planting areas due to excessive mud, which makes the ground very slippery and deep, posing a significant danger to her.

HER DESIRES FOR CHANGE

For the future, Monalisa dreams of participating in more projects. Whenever possible, she attends community meetings and some fishermen's associations to learn about new opportunities in her community. One area that particularly interests her is seaweed production, knowing that there are projects dedicated to this activity on a nearby island.

Amália

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **45 years old**
Locality: **Vilankulos, Inhambane**
Activity in the Blue Economy: **Entrepreneur with more than 5 employees**
Household: **3 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Amália is a woman whose determination and entrepreneurial spirit have allowed her to overcome the vulnerability of the social class in which she was born. At 45 years old, she leads a small resale business with over five employees and has built a large clientele, keeping her phone ringing constantly.

HOW AND WHY SHE DOES IT

From the outset, Amália forged her own path, learning the trade secrets through practical, self-taught methods without formal training. Her company reflects her entrepreneurial vision: she buys, processes, and resells fish and shrimp.

But Amália's success goes beyond commercial transactions; it's a story of leadership and care for her team, composed not of formality but of people she recruits based on trust and establishes a bond of responsibility with everyone. She manages a diverse team, from fishermen sourcing raw materials to sellers taking her products across Nampula. Amália takes responsibility not only for profits but also for the well-being of her employees, providing meals and financial support, even in difficult times. "They are not to blame if the sea doesn't give much," she declared.

HER FRUSTRATIONS

However, the path is not without challenges. Amália faces obstacles with courage, from covering long distances, riding motorcycle taxis when alone and using public transport when carrying goods, to the increasing scarcity of fish due to bad weather. She is always attentive to opportunities, closely watching the market and seeking ways to expand her business, recently considering investment in the pork business.

HER DESIRES FOR CHANGE

Despite the financial burden and logistical difficulties, Amália desires more opportunities for her community, investments in essential equipment like freezers and motorcycles, and better roads to facilitate the flow of her products.

Those around her admire her strength and determination, recognizing her as a pillar of the community. She not only supports her family and team but also inspires everyone around her, showing that with hard work and perseverance, it's possible to move forward even in the most challenging times.

Jéssica

The persona is a story based on the aggregated results of this research. Any resemblance to a real person is purely coincidental.

Age: **37 years old**
Locality: **Limpambe, Inhambane**
Activity in the Blue Economy: **Salaried conservation officer**
Household: **4 people**

ECONOMIC ACTIVITIES AND RESPONSIBILITIES

Jessica's main economic activity is her work as a marine conservation officer. Additionally, she owns a stall where she prepares meals and sells meat. She and her husband work hard to support the family and pay for their older children's university education.

HOW AND WHY SHE DOES IT

Jessica enrolled in the military academy and was assigned to work as a marine conservation officer. At that time, she moved from her hometown of Maxixe to Vilankulo with her entire family. Her work is conducted in shifts, mainly at sea, where she uses a motorboat to monitor fishermen, controlling aspects such as the size and type of fishing nets used, the fish species caught, and the licenses of both vessels and fishermen. When fishermen commit an offense, Jessica imposes fines that can amount to a minimum wage or more, depending on the violation. Jessica also carries a weapon, as fishermen can sometimes be very defiant during the seizure of sea products or boats and the imposition of fines. As part of her enforcement duties, Jessica also conducts awareness-raising work with fishermen, educating them about maritime regulations.

HER FRUSTRATIONS

As the only woman in the group of officers, Jessica constantly faces pressure to prove her competence. Therefore, she adopts a stricter stance to command respect, which leads fishermen to prefer dealing with male officers, as they perceive them as more lenient.

HER DESIRES FOR CHANGE

Jessica believes that much of her success comes from diversifying her sources of income. Therefore, she advises other women, especially fishermen, to diversify their sources of income so as not to rely solely on fishing, as the closed season brings a lot of uncertainty to this group.

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