

Women of the Blue Economy

Gender Equity and Participation in the
Management of Water Resources:
Lessons from the Coast of Kenya and Somalia



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Gender Equity and Participation in the Management of Water Resources: Lessons from the Coast of Kenya and Somalia

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The Blue Economy on the coast of Kenya



The blue economy on the coast of Kenya includes several artisanal and commercial scale activities, from the traditional ocean and fresh water industries such as fisheries and tourism, to new and emerging activities, such as seabed salt extractive activities, aquaculture, and honey harvesting from mangrove trees. The coast of Kenya is a high attraction for local and foreign tourists, because of special sites such as Tana River delta, a wetland recognized internationally, under the Ramsar Convention for its unique biodiversity, and the Sabaki Estuary, which is managed by local conservation and development organizations. The fisheries sector is carried out at industrial and small-scale business levels, targeting local markets, tourist restaurants with high priced crustaceans such as lobsters and crabs, as well as foreign markets. Sand and coral shells are harvested and sold for house and hotel decoration and to make ornaments for tourists. Seven salt mining companies have been established in the northern coast of Kilifi (Magarini Sub-County) for salt production and marketing in Kenya and abroad. Currently, aquaculture and mariculture are the least developed activities in blue economy, although they show a great potential.

It is important to mention that, in addition to coastal and near-shore activities, Kenya - mainly via concessions to international mining companies - has been exploring for offshore oil and gas fields since the 1950s, with an intensification of activities since 2012, following the oil discoveries in Tanzania, Mozambique and Uganda. Drillings were done by at least 4 companies, which however failed to strike commercially viable oil or gas. In parallel with the coastal explorations, an oil company has been probing for oil in the northern Turkana basin. The realization of the planned LAPSET transport corridor ^[1] bound to the oil extraction in Turkana would have important impacts on the maritime transport sector and possibly on tourism and fisheries activities. Nowadays, virtually all of Kenya territorial ocean waters are covered by some exploratory concessional contract, and Kenya has been involved in a legal dispute with Somalia on boundaries of territorial waters essentially due to disagreement on oil and gas fields exploitation rights ^[2]. Recently, an Australian firm has confirmed presence of commercially exploitable oil fields off Lamu's coast.

Fisheries Sector on the Coast of Kenya

The fisheries sector in Kenya plays an important role in the national economy.

It contributed 0.5% to GDP in the year 2011 and generates employment for over two million Kenyans through fishing, boat building, equipment repair, fish processing, and other ancillary activities. ^[3] The estimated annual economic value of goods and services in the marine and coastal ecosystem of the blue economy in the Western Indian Ocean is over US\$22 billion, with Kenya's share standing slightly over US\$4.4

1 <http://www.lapsset.go.ke/>

2 In 2017, the International Court of Justice ruled in favor of Somalia in the maritime boundary dispute, but the process is still open.

3 Blue Economy for Inclusive and Sustainable Growth - UNDP Policy Brief n 6/2018.

billion (20%) and with the tourism sector taking the lion's share of over US\$4.1 billion. ^[4] Marine fishing had an annual fish potential of 350,000 metric tonnes in 2013 worth US\$ 900 million (KMA), yet the region only yielded a paltry 9,134 metric tonnes worth US\$ 23 million. Therefore, the full economic potential of marine resources has not been exploited.

Historically, fisheries in Kenya had been managed locally using traditional knowledge. After independence, the Kenyan government took over fisheries management, implementing a top-down approach to manage natural resources with little input from local stakeholders. This led to a decline in fish stocks with some local fisheries almost collapsing. Central problems included use of illegal and/or destructive fishing gears, environmental degradation, and cross border fishing conflicts. The Fisheries Act 1989 was marked by a lack of enforcement capacity as well as overlapping administrative competences between various authorities for fisheries, wildlife protection, and forestry. Further tensions existed between different fisheries management levels, including the government, municipalities, and traditional leaders. This perception of the fisheries resources as belonging to the government was one of the underlying reasons that inevitably led to the disengagement of local communities from the industry. Responding to the declines in fish stocks and decreasing aquatic biodiversity, in 2007 Kenya established Beach Management Units (BMUs) under the Fisheries Act Cap 378, an innovative system to co-manage freshwater and marine fisheries.

The aim was to integrate local and national management through a participatory approach, making use of both traditional knowledge and scientific findings. Its essence was to create a link and a partnership between the government and artisanal fishermen. Such legal empowerment of local communities has been proven to be a sustainable ecosystem approach to fisheries management. ^[5]

The establishment of 73 BMUs on the coastal areas of Kenya has brought some successes including a decrease in the use of destructive fishing gear, increased vertical and horizontal linkages of relevant institutions, significantly expanded community participation, and higher levels of compliance. BMUs are sustained by the contribution of its members, which may vary based on each member's activity and assets owned. Each BMU is regulated by its own bylaws, therefore the fees members pay are different depending on each BMU's guidelines. Since the formation of the BMUs, registered members have benefited from free standard fishing nets and capacity development initiatives organized by the County Government and other organizations with focus on sustainable development, poverty alleviation, well-being, gender and equity. BMUs are responsible for vetting members and recommending them to the fisheries department at the county level for permits. However, there are no limitations in the number of fishermen and vessel owners, and the overpopulation of competitors is still a threaten for the ocean resources.

The more recent Fisheries Management and Development Act (2016) provides a great opportunity in respect to a wide range of matters concerning the fisheries sector including fisheries management and

4 Kenya Maritime Authority (KMA) estimates.

5 "Kenya Fisheries (Beach Management Units) Regulations, 2007 to the Fisheries Act, 1989", Z.N. Ngige, A Jaekel.

conservation (prohibition to catch turtles, young lobsters and lobsters laying eggs or the use of specific nets and gears), aquaculture and fish processing and marketing. The Act establishes the Kenya Fisheries Advisory Council, the Kenya Fisheries Service, the Fish Marketing Authority, the Fisheries Research and Development Fund and the Fish Levy Trust Fund. The Act also implements obligations under international law concerning fisheries.

The fishery is regulated by the Fisheries Department of Kenya, under the national government. They are mandated to collect data on fish catch and compile national fisheries reports. The industry is also regulated by the County Fisheries Department, which supports Monitoring, Control and Surveillance (MCS) of the sector. The functions of licensing of fishermen, boats and canoes, protection of important fishing areas, and monitoring for illegal fishing methods is completely devolved to the county government. Fisheries officers from both national and county government patrol fish landing sites to enforce regulations and confiscate illegal fishing gears and indiscriminate fishing activities.

CASE STUDY 1:

Fisheries in Magarini, Kilifi County



MAGARINI, KILIFI COUNTY

Situation analysis

Currently fishing is carried out at three different levels:

- » individual, with fishermen owning small boats and fishing a substantial harvest to sell in the local market.
- » Semi industrial, managed by Kenyan traders who own vessels (accommodating 5-10 people) and hire fishermen to fish a bulky harvest and supply the local market and other parts of Kenya.
- » Industrial and International fishing, being done by other countries within Kenyan waters. These companies are licensed at national level and the government is in charge of regulating their harvest. The companies are supposed to pay a standard fee of US\$ 450 by catch to the BMUs, and on average they pay 2 or 3 times per season (April-October). Since Kenya has no fishing port, the international companies' vessels do not land in Kenya, which makes it difficult to control their harvest.

Majority of men and women involved in the actual fishing are employed as casual workers on medium scale vessels, a few use their own traditional boats to fish for themselves. Some fishermen are organized in self-help groups. Fishing is viewed as a 'last resort' job rather than as a profitable enterprise. It's mostly an inherited activity practiced by members who belong to fishing communities and those who live near the ocean. For the young generation, fishing is the least option after they have followed their interests and failed. There are very few youths in Magarini Sub County who are interested in fishing or inherited the business from their parents. Some have organized themselves in self-help groups, and with the support of BMUs through start-up tools they are currently performing well. Most youths are transporters; motor-bike riders are used by small traders like women who buy fish daily at the boat landing sites and hawk in faraway markets.



Mother and daughter frying the fish before taking it to the market in Magarini sub-county. Despite long term initiatives to promote fuel efficient cooking, the three stones cook stove concept is still widely used.

Some well-established BMUs have offices and freezers that are used by members to store fish. Others have organized workshops to enhance skills of fishermen and traders and have provided at subsidized amounts fishing gears, nets and boats through the Fishery Department. However, a performance assessment of BMUs carried out in 2014, ^[6] revealed some gaps in the full achievement of their mandate. Many BMU are

6 Performance assessment of Beach Management Units along the coastline of Kenya, N. Kanyange 2014, Indian Ocean Commission.

not registered, some are not active, and others lack resources and authority to ensure law enforcement such as powers to arrest. The assessment also revealed that: post-harvest practices are still limited as well as sales and marketing channels; costs of running BMUs exceed benefits; individual members felt that most of their expectations, especially financial were not met though the level of awareness had increased; provision of credit support had stopped for some BMUs and members sought financial assistance from few (3 in Kilifi) active cooperatives.

The assessment highlighted also that the Fisheries Department and other government agencies such as Kenya Wildlife Services (KWS) are: under staffed; have insufficient resources and inadequate baseline studies, including M&E framework; in absence of a dedicated BMU unit. This among other factors negatively affected delivery of services to communities working in the fisheries sector.

As a consequence, there are still many gaps to ensure proper management of the fisheries sector in Kenyan coastline, particularly in terms of enforcement of the Fisheries Act and its regulations.

The number of bigger vessels on the coast of Kenya has increased in the last 15 years and their capacity to catch fish is higher than the small-scale businessmen. Hence, local fishermen are getting less fish than before, and their economic situation has deteriorated. Taking advantage of the low monitoring capacity of BMUs, illegal fishing is on the rise. Some fishermen use crude ways of fishing to reach the daily target e.g. fish poisoning. Therefore, the population of fish has greatly reduced due to the catching of young fish. Although imposing the fishing seasons is a very good practice to ensure that fish are given time to breed, during this period fishermen go fishing illegally to Tanzania and vice versa.

Climate is also affecting the sector; while during long period of droughts the increased salinity of water near the coast affects breeding of certain fish species ^[7], during rainy and windy seasons fishing is not practicable. On the other hand, along the Tana and Sabaki Delta during flooding, hippos are forced to scatter and the estuaries are not accessible by fishermen.

An MOU and a co-management plan were signed between BMU, Fisheries Department and only 2 salt firms (out of 7) in Magarini Sub County. The lack of MoU with the other salt companies causes many disputes. The MOU focuses on safeguarding the environment, access to roads and fishing at the salt ponds. On one side, fishing is affected by salt mining firms, which do not respect the agreement and discharge into the ocean highly saline water (so called beaten water) threatening fish breeding. Access to boat landing sites has also been blocked by some salt firms making difficult for traders to get fish and transport it to the market. On the other side, when it's not a good fishing season in the ocean, fishermen fish at the salt ponds tempering with the salt dykes so that they can easily catch fish. This has interfered with the flow of water from one salt pond to another hence making salt firms incur losses' as a result.

7 Atlas of aquaculture potential in costal Kenya, FAO 2017.

Women's role in the fisheries sector

In the target locations of this study, Magarini Sub County, there are 4 registered BMUs with a total number of 2,735 members out of which 1065 or 40% are women and with an executive committee in which 25-45% members are women. ^[8]

According to the local tradition, fishing is a man activity, although there is a small group of women who is fishing during the day or owns boats and employs men to fish. These women are also traders of the fish they get. The other women deal with processing and trading of fish: they purchase fish from fishermen, cook fish in restaurants or at home, serve fried fish in kiosks, hawk raw, dry, smoked or cooked fish door-to-door, in market places or to restaurants. In Magarini there are 32 fish shops with freezers of which only one is managed by a woman. Women do not deal with transportation nor are involved in net repairing.

Majority of women choose fisheries as the last option after they have tried many other activities. This is because of the low profit, as market prices are not regulated. Most women involved in this business are illiterate, mainly divorced or single mothers, including girls who got pregnant and dropped out of school. An incentive for women to start a trading business in this sector is the low startup capital. There are no women cooperatives, although some are organized in savings unregistered groups, which help them access to credit. With the support of the government one women group was provided with startup items like freezers. However, due to poor management the group did not survive for more than 5 months.

The small income they get from these activities is either managed by themselves, maybe in agreement with their husbands, or shared with them. In a few cases, women have no control of the income they get. There are also women who got business capital from their husbands, however the men do not provide for any family needs because they expect their wives to do it. However, due to the burden of providing for all the family's needs, the business is negatively affected.

The evolution of women's role

At the time when fish was available also near the coast, many women were involved in the actual fishing in shallow waters. However, the scarcity of fish, the struggle to make a profit because of the fluctuating prices and the hardship of this activity have pushed them to leave the sector. While they were previously able to buy fish from the closest landing areas, nowadays they have to travel to far away beaches due to the scarcity of fish in some areas like Mambrui. Furthermore, often there are brokers who buy fish in bulk and sell them to women at a higher price. This implies, additional transport expenses, lower revenues and extended working hours.

Fish price has fluctuated in the last ten years from US\$ 1.2 to US\$ 3 per kilo, with the exception of some species that remain abundant and whose the price is stable.

8 2018 census of Fisheries Department, Kilifi County.

The BMUs create awareness on the role of women in fisheries and support some women to acquire soft loans and capacity development workshops. However, the availability of capital managed by the BMU is limited. Therefore, the majority of local community, and women in particular, have no capital to purchase advanced fishing tools like boats, freezers to store large quantity of fish or capital to start a fish shop. The Fisheries Department occasionally subsidizes to BMU with standardized fishing nets, solar-lit fishing boxes, life jackets, freezers and boats. These are sold or rented to BMU's members including women.

Main challenges women face

Even though it is not a taboo for women to practice fishing, it is a belief that fishing is a men's activity. Moreover, with the available equipment fishing is predominantly a nocturnal activity, which requires physical strength, hence women do not feel safe or strong enough to join the venture. Insecurity is also faced by women traders who have been robbed in certain landing areas, now patrolled by the marine police.

Women are subject to sexual exploitation by fishermen, as reported by some interviewed BMU members. Due to scarcity of fish and without having a special agreement with a fisherman it is difficult to buy fish at the boat landing sites. Fishermen exploit this advantage to demand sex in exchange for fish, an issue that has been reported by the media and different organizations as a common practice around the Winam Gulf of Lake Victoria, that hinders women working in the sector. ^{[9] [10]}



Fish Market along the Mombasa-Lamu road in Magarini, Kilifi county.

9 <https://youtu.be/5Cg7UT6fBpk>.

10 <https://www.youtube.com/watch?v=aNiQZ6JZUb8>.

Access to soft loans for business investment, fish price fluctuation, small business revenue and low business management capacity are great challenges for women traders. Many women buy fish daily in small stocks, due to lack of storage facilities and access to electricity, and at times they either buy by mistake rotten fish or they waste their stocks before it can be sold. The Department of Fisheries together with BMUs are trying to eliminate the infiltration of men brokers both at the landing sites and at the market, although there have been little improvements. Other challenges women face include lack of daycare facilities for young children and respiratory problems due to long exposure to smoke and heat when frying fish.

Development opportunities of women's role

The main opportunity is that there is unsatisfied demand for fish. Kenya imports fish from other countries to satisfy the market demand. Many of the challenges faced by women could be overcome through a strong intervention of the duty bearers who need to reinforce their human and financial investment in the sector. Therefore, women could play a more important role in fish trading and processing.

Recommendations for enhanced participation of women in fisheries

- » Facilitate women to access soft loans and to technical and business capacity development opportunities to be able to own and properly manage vessels, coolers, fish shops, and trade larger quantity of fish. The improved fish hygiene, quality, value addition and modern ways of preserving fish would also reduce wastage.
- » Strengthen BMU governance by giving equal opportunities to men and women in leadership. BMUs could become the point of connection between fishermen and traders to reduce exploitation of women and regulate prices in order to compete with international markets. BMU could also support finding market for its members and organize transport for bulky trade to other towns.
- » Support establishment of cooperatives/registered groups of women, which would help in marketing and make the fisheries sector better organized e.g. have processing industries to improve quality/value addition like packaging in tins.
- » Create community awareness on equal opportunities in fisheries and reduce stigma against fisherwomen.

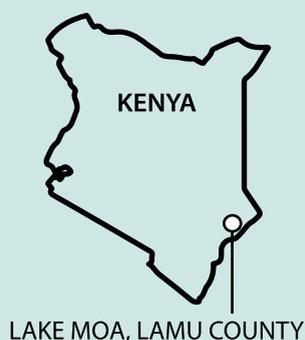
Recommendations for fisheries sustainable development

- » Promote and multiply marine conservation initiatives such as planting of mangroves as breeding ground for fish.
- » Strengthen law enforcement by reinforcing infrastructures, financial and human capital of the Fisheries Department, through for example building a fish port that will help in collecting levies for the international fishing and monitor illegal fishing. This might also attract other partners and investors.
- » Define and sign an agreement between BMUs and salt firms on permanent solutions on disposing the harmful waste.

- » Fisheries Department to enhance participation of community members in management of ocean resources and fight corruption. BMUs to create awareness on the threats of fishing small fish and using fishing methods that destroy ocean resources. This could be accompanied by providing them with modern fishing nets and gears.
- » Invest in and develop the aquaculture sector and mariculture, in particular, as an alternative to ocean fishing. There are groups who have started culture of crabs, prunes, milk-fish in Magarini, however it's a challenge getting seeds and fingerlings. The county government could support establishment of hatcheries.
- » Strengthen the recently established cooperatives and promote membership registration.
- » Conduct bi-annual fisheries surveys to monitor the sector development. The last one was conducted in 2016.
- » Establish fishing training courses, currently not available. In Kilifi, only Pwani University has a degree course on management of ocean resources but not on fisheries business activities.

CASE STUDY 2:

Fisheries at Lake Moa, Lamu County



Situation analysis

Lake Moa is found within Moa village located in Witu division of Lamu County. The fishermen from this lake are composed of mostly the Pokomo, Luo and Luhya communities, with the latter two being immigrants who settled into the Tana River Delta around the 1940s just after the Second World War. It is explained that some war veterans originally from western part of Kenya, upon their return from war made a stop in Mombasa, here they were enticed by the abundant supply of freshwater fish. Following its source to the Lake Moa in Tana River delta, they decided to settle and integrated with the local communities. The Orma are a pastoralist community and have only recently become interested in fishing, though they remain a minority in numbers. The Luhya and Luo form majority of fishers and have brought with them fishing techniques used in their native home around Lake Victoria region.

The Moa fishermen are organized locally through a Beach Management Unit (BMU) established in November 2008. This BMU enables the management and development of fisheries resources in this area by ensuring equal access, benefit sharing and sustainability. Membership now stands at 116. Monitoring, Control and Surveillance is carried out thrice in a year in Moa, once by fisheries officers and twice by the BMU officers.

Women's role in the fisheries sector

The pre- and post-second world war fishery at the Lake Mwa has been dominated by men carrying out active fishing and women as fish traders. Most women admit that fish trading is a good source of income that enables them to purchase daily household requirements, keep children in school and make savings. Some women would rather be involved directly in fishing as well in order to have a choice on fish without a broker. However, various beliefs and taboos have restricted women from active fishing. Among the Pokomo, the fishermen believe that women's presence is bad luck to the fishery and reduce the quantity of fish caught. Among the Luo, women are prohibited from getting into boats for similar reasons. The Orma also have taboos prohibiting women who have been in contact with fish from entry into cattle paddocks.

Other women in the fishery industry buy fish from fishermen at landing sites and process the fish through smoking, drying or frying for sale in markets. The markets extend as far as Watamu, Kilifi and Malindi. Fish processing requires a large quantity of wood fuel and thus a lot of time is spent in firewood collection, and in some instances money is spent to purchase firewood.

As fish vendors, women are required to possess a health certificate from Ministry of Health. Women play a role in environmental protection by refusing to purchase juvenile fishes, often caught by illegal undersized fish net mesh sizes. They are also aware of areas of the lake protected for fish spawning and are commonly heard referring to this area as "range".

The evolution of women's role

Many women of Lake Mwa village have based their fisheries-based economy around fish trading. However, one woman, a widow from the Luo community has for the last decade defied taboo and beliefs and become a fisher, in a bid to support her family after the death of her husband, a former fisherman. Her involvement has become recognized and lauded by the Mwa community.

Women traders have become more and more innovative in ways of sustaining their activities. One such means has been through informal cooperative movements locally known as chamas. Members of chamas make weekly contribution of at least US\$ 5 towards savings, allowing them access to loans and receive collections of funds in a rotational manner. In some cases, annual dividends are also shared among members. Due to the successes of these groups, men have increasingly allowed their wives to manage finances. Some women use their savings to purchase their own fishing nets, which they rent out or loan out to fishermen, on agreed credit terms.

Main challenges women face

The lack of cold storage and transportation infrastructure, and inadequate fish smoking facilities are a major cause of fish spoilage during high fish abundance. Women require a large amount of wood-fuel for smoking and frying of fish for market, which in the Moa area is very scarce and expensive. In addition, Moa village is not connected to electricity supply, which further hinders the possibility of establishing cold storage facilities. Long distances, poor roads and high rates charged by vehicles and motorbikes, also hamper transportation of fish to markets. In some cases, trucks carrying other goods may agree to carry fish from the traders, however fish is likely to be squashed or exposed to heat and therefore spoil before getting to markets. During seasons when fish catch is low, many women are forced to shift from trading to seek jobs as casual labourers in farms and other areas. The low abundance seasons have been attributed to reduced levels of rivers, mainly due to over abstraction of water upstream. Some have attributed these changes also to changing climate, and the resulting dryer periods.

Some women, who have ventured into providing credit to fishermen in form of nets, have been faced with defaulters who have either refused to pay or completely denied the debt.

Development opportunities of women's role

Recent increased interest in fisheries-based economy is an opportunity for youth and pastoralist communities. Younger women have indeed shown interest in fish trading as a good source of income. Similarly, those in formal employment have been shown to invest in fisheries as traders or have purchased boats and nets and employed fishermen to catch fish on their behalf.

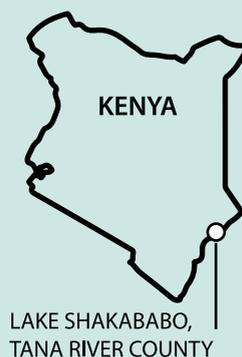
The Orma, traditionally a pastoralist community who also previously did not eat fish, are now showing interest in fisheries as well as consuming fish.

Recommendations for enhanced participation of women in fisheries

- » Financial and management capacity building to informal cooperative movements known as chamas in order to increase their ability to impact women's income building.
- » Education and awareness building on gender mainstreaming in fisheries sector, in a bid to diminish impacts of negative taboos and cultures that restrict women's full participation in fisheries.
- » Ensuring that women have direct access to fish without going through brokers that take advantages of taboos to inflate prices.
- » Capacity building for women in fish processing, storage, and marketing.
- » Enable women acquire credit facilities for capital.

CASE STUDY 3:

Fisheries at Lake Shakababo, Tana River County



Situation analysis

Located within Tarasa Location in Garsen Sub-County of Tana River County, Lake Shakababo is considered the largest ox-bow lake in East Africa. It is a shallow lake with an elevation of limited extent rising above the surrounding land and fills with water during the flooding period of the delta.

In the last decade, the lake dried out, due to loss of connection to the Matomba River channel that has also experienced drying. This situation has negatively affected fisheries and other water dependent economic activities in the area. However, in June 2018 the lake refilled during the long rains, providing hope for renewed fisheries and trade. The Tana River County Government carried out a restocking activity, using Nile tilapia fingerlings in order to boost fisheries, although a fishing restriction has been put in place to allow the fish to grow and reproduce.

The drying of Lake Shakababo, displaced fishing camps and villages, causing communities to travel longer distances for fish and others to abandoned fishing for farming or to seek jobs elsewhere. Fish traders, mostly women, changed their economic activities as well, many living lower standards than before by selling less profitable goods in Tarasa Market.

The Pokomo, Luhya and Luo community are the main fishing communities around Shakababo, the latter two having immigrated from western Kenya and Nyanza, and first settled in the Lake Moa village after the Second World War. Other communities inhabiting this area, namely the Giriama, Orma and Wardei also fish occasionally.

The Lake Shakababo BMU established in 2007 collapsed when the lake dried up in 2008. However, the County Fisheries officers under Tana River County Government are actively involved in monitoring, control and regulation fisheries activities in the area. All fish traders are required to apply for a trading license at US\$ 3.5 per annum and a health certification at US\$ 3 yearly while fishermen are required to apply for permits including for boats and canoes owned.

Women's role in the sector

Men are predominantly the fishers at Shakababo while women are fish traders. Women are restricted from fishing due to cultural beliefs and taboos that portray them as misfortune to the sector. Some of these taboos prohibit women during menstrual cycle (Luo) or women who have had sexual intercourse the previous night (Pokomo) from approaching fishing gear. Among the Giriama, husbands to expectant women are equally prohibited from engaging in fishing activity. However, the impact such beliefs is said to be fading and in some cases these taboos are no longer spoken of.

An isolated case of fisherwoman is smoking fish after harvest in Lake Shakababo, Tana Reve County, the largest oxbow lake in East Africa. Her community's grandfathers settled here on their way back home from the World War II, bringing fishing techniques from Lake Victoria. The business of fish smoking is not devoid of health risks such as chest pain and headache.



Women are nevertheless an integral part of fisheries sector in Tana River delta, including the Shakababo area, playing important role in each step of fisheries supply chain, none carry out active fishing but most assist in gutting, cleaning, processing and trade.

Some women traders offer credit facilities in terms fishing gear to fishermen, which ensures sustained supply of fish to meet demand. Other women are involved indirectly through weaving of baskets used to transport fish to various fish markets. Though rare, some women own fishing boats and gear that they hire out. This is particularly observed around the Tarasa area.

Women are considered good custodians of money, and some men admit to allowing their wives to manage their income. Many seasoned fishermen attribute their success to partnership with their wives who are responsible for marketing the fish and handling the money. As with lake Moa, women around Shakababo have come together in chamas to save their money cooperatively, gain access to small loans and share dividends.

The evolution of women's role

Amongst the traditionally fishing communities, notably Luo and Luhya, cultures that have barred women from directly undertaking fishing are beginning to dissolve. Women who were also viewed as physically and mentally weak are now being recognized as capable participants in fisheries. Even though many have not ventured into fishing, those that have purchased their own nets and boats, are managing their own fishermen employees, thus assuring them direct access to fish for trade. The ability of women to form and sustain chamas has also enabled them to sustain fish trading. They are able to easily identify new markets and support fishermen.

Main challenges women face

There are several threats mentioned by women that affect their daily operation as traders and fishers. These include:

- » Sexual demands from fishermen in order to access fish.
- » Stigmatization by the community for their involvement in the fisheries industry.
- » Lack of adequate storage and transportation facilities for fish to markets.
- » Increased seasonality of river channel in fish abundance in the last decade jeopardized sustainable supply of fish for trade.
- » Threat from hippos and crocodiles that damage fishing nets and occasionally threaten human life.
- » Malaria and outbreak of typhoid due to water pollution and poor sanitation.
- » Increased water abstraction and climate change causing drying of the Shakababo and reduced flow of the main river channel.

Development opportunities of women's role

Women have formed and subscribed to cooperatives known as chamas whereby they contribute a minimum of US\$ 5 monthly, a percentage of which is retained by the 'chama' and the rest shared among members in a rotational manner. The amount retained may in future be used to give loans to members. These cooperatives are registered, and women have come up with leadership structure and regulations that govern their association.

Majority of young women are interested in taking up fish trade, although most mothers encourage their children to stay in school in order to attain formal employment.

Recommendations for enhanced participation of women in fisheries

- » Provide financial and management capacity building to informal cooperative movements known as chamas in order to increase their ability to impact women's income building.
- » Education and awareness building on gender mainstreaming in fisheries sector, in a bid to diminish impacts of negative taboos and cultures that restrict women's full participation in fisheries.
- » Improved access to healthcare facilities and creating more awareness on the importance of public health and sanitation.
- » Regulation of market prices to reduce the losses incurred due to fluctuating prices; empowerment of fishers to acquire recommended catch sizes for the market need.

Recommendations for fisheries sustainable development for Lake Moa and Lake Shakababo

- » Access to cold/refrigeration storage facilities and installation of a fish processing plant within Tarasa.
- » Fish traders need support to buy a cold storage vehicle to transport fish to markets.
- » There is need for collaborative work when doing fish introduction. Fishermen and traders feel tilapia species introduced at L. Shakababo may not grow to the size of native tilapia. They are also worried the 6-month closure of the lake is not appropriate, October – November wet season is due and the mature fish likely to escape to main channel thus not benefiting the local community.
- » Fishermen within Tana River still sell fish in bunches unlike it is done elsewhere in Kilos, some women traders support this because it earns them huge profits while the fisherman is exploited.
- » The market is disadvantageous to fish traders who do not have capacity to access distance markets. Local markets with connection to distant buyers or exporters are needed.
- » Need of diversification of livelihoods to reduce pressure on fisheries.
- » Encourage aquaculture to reduce pressure on the capture fisheries.
- » Develop a comprehensive plan to eradicate *Prosopis juliflora* commonly known as 'mathenge', which has invaded important floodplain fisheries.
- » Develop Lake Shakababo integrated management plans to bring all stakeholders together.

Salt mining on the Coast of Kenya

The salt industry in Kenya commenced operations in 1970's in Magarini - Gongoni, now in Kilifi County. This followed a feasibility study, which established that Magarini was the most suitable place to produce edible raw salt in Kenya. Here is where in 1974, the government of Kenya established a parastatal salt manufacture in joint venture with an Italian company to develop the first salt works in the country, while the salt refinery was built near the port of Mombasa. In 1993 the company was privatized, and several other companies were licensed to develop additional salt works. Currently there are six salt companies along the Malindi-Lamu Road in Kilifi County, one of which is under receivership and another is not operational. Refinery and packaging are nowadays done near the mining sites.

The salt industries currently employ over 7,000 people, around 1,000 being permanent while the majority being seasonal pieceworkers. It is estimated that over 100,000 community members and traders among other stakeholders depend on the salt industry directly or indirectly for livelihood. In 1995 Kenya was a salt importer, while today Kenyan salt industry exports 60% of the sea salt produced to neighboring countries including Tanzania, Uganda, Rwanda, Burundi, DR Congo, Malawi and South Sudan.

Salt firms have both modern and old ways of harvesting. Using the old technology, the ocean waters flow through around 10 ponds divided by dykes and characterized by increased percentage of salinity; the process is monitored by workers. Pieceworkers are also employed to break salt crystals and move/carry them to be collected in heaps. The dried crystal is then taken to a washing plant using tractors where it's further dried, and any impurities/particles removed. Packaging is carried out by people who stack up the salt, in readiness for transportation. With the modern technology - called Pure Vacuum Evaporated Dried Salt – the water is pumped from the ocean, it passes through the ponds to attain a certain percentage of salinity, but once the water has the required percentage of salinity it's passed through the system and salt is harvested. It goes through mechanized packaging where a small number of pieceworkers are involved. The modern technology has shortened the duration of salt harvesting and production from 4 to approximately 2 months but has also reduced job opportunities. A few locals have been trained on the job to operate some of the machines. Salt distribution is managed mainly from Mombasa and Nairobi.

According to a 2006 public inquiry ^[11] post-colonial governments of Kenya perpetuated colonial injustices against the community by leasing their land to salt manufacturing companies without ensuring that the people had recourse to alternative and equally valuable settlements. The inquiry found that the legal basis, which allowed the state not to compensate the people for land leased to the salt manufacturing companies, was unjust because the community had had de facto ownership and use of the land in question for many generations. On the same issues of land grabbing, lack of appropriate compensation, human rights violation and corruption, the accusations from the community are extended at different levels to Provincial Administration and Police, salt manufacturing companies and national government. The same inquiry accused the salt companies because:

11 Report of a Public Inquiry into allegations of Human Rights violations in Magarini, KNCHR 2006.

- » Workers employed in salt manufacturing companies work under extremely poor conditions. Workers who harvest salt and those who work in the factories are not provided with appropriate work attire and equipment such as gloves, boots, helmets, overcoats, scrapers and basins.
- » The health and safety of workers in these companies is undermined by company practices and ineffective government inspection regimes. Poor maintenance of machines has led to unacceptably high numbers of accidents in the factories. Toilet facilities for workers are also inadequate.
- » In many aspects, salt manufacturing is a seasonal business. For this reason, the salt manufacturing companies may not be able to employ all their workers on fulltime basis. Instead, they have sought to employ the minimum possible number of workers on contract, with most being on casual terms. However, the companies continue to abuse piece rate employment by paying workers excessively low wages for specified work.
- » The workers have limited opportunity to participate in collective bargaining processes. The limitations are used by the salt manufacturing companies, which discourage them from joining trade unions.

CASE STUDY 4:

Salt mining in Magarini, Kilifi County



Situation analysis

The community believes that this occupation is for poor people and the salt firms are oppressing them because of the low pay compared to the amount of daily work. The worker tasked with crashing can earn US\$ 2-3 per day, while removers/carriers are paid on cube meters transported and they get an average of US\$ 6 per day. The payment rates are not regulated.

Because of low payment per dimension, pieceworkers overwork themselves to get more money for the day. This might have contributed to medical issues like back and chest pain. Other health consequences include incurable or long to heal wounds, cracked lips, and very dry skin. Injuries also happen especially at the salt-water ponds/ crystalized ponds during breaking and firms don't provide accident insurance for pieceworkers.

With the rainy seasons salt harvesting is interrupted. During the last two rainy seasons in 2018 (May-June and) the county has been experiencing a lot of rain causing floods. This has kept workers home without any income. Salt wind affects the workers while on the job and it damages iron sheet roofs and crops of the communities living nearby. The salt harvesting ponds affect underground water, which is used by communities that live nearby for domestic consumption. Salt harvesting affects the fishing sector. The concentrated water left over from salt harvesting is returned to the ocean and this has a negative impact on breeding of some fish species, which have low tolerance to high level of salinity ^[12]. As a solution, BMUs and the salt firms have agreed that beaten water should be released during the rainy seasons.

A 2017 audit established that a lot of concerted efforts have been undertaken towards resolving the human rights violations reported KNCHR 2006. Nevertheless, working conditions of workers have not improved, with no protective gears in most of the firms especially in those that are in the harvesting sector. After the 2006 inquire, a law regulating the use of protective gear and equipment was passed. According to the salt companies the management has tried to provide protective gears, but turnover of pieceworkers is high, and they leave the firm with the equipment. The gears they provide are not weather friendly e.g. plastic gumboots are hard to wear with the coast hot climate, but the companies have not yet found a solution. Government monitoring assessments are nowadays carried out rarely, and when they are done all workers are either temporarily provided with protective gears or ordered to go at home. Workers also complain of poor sanitary conditions, while according to the companies they have tried to provide portable toilets, shade, drinking water and bathrooms after every two salt ponds, but for hygiene reasons the Ministry of Health don't allow regular toilets near the salt ponds.

Salt mining, and harvesting in particular, does not interest the young generation. This is because of its harsh working environment. It's an occupation accepted by people with no or low level of education who do not have alternatives. There are few youths that have acquired skills in machines operation in a college in Thika and are employed in salt firms to operate this kind of tractors and machines. Some learn on the job.

Some permanent employees are trade union members. The pieceworkers are not members of the trade union since it requires to pay some contributions on a monthly basis and majority are not able to register, being paid daily. Pieceworkers are also afraid of registering with the trade union, at the risk of being fired.

The salt firms do try as much as possible to train some of the pieceworkers in workshops related to the work they do, but there has been high turnover since getting the same people in the next harvest season is not guaranteed.

Women's role in the salt mining sector, challenges and opportunities

With the pure vacuum evaporated dried salt plant (mechanized salt harvesting system), the companies employ mainly men since there is no crystallization and therefore no activity of breaking/crushing and carrying/removing of crystals, which is the work done by women (80% of the pieceworkers). Women who do

12 *Brackish Water/Coastal Aquaculture Development in Kenya*, Banchong Tiensongrusmee 1990.

this task are illiterate or with low level of education. Some are employed in packaging process, i.e weighing, sealing and packaging in bundles. Very few women have recently being assigned supervisory and management positions, except for one salt company where there are women supervising different departments such as stores and cleaning. Being the supervisor in the harvesting section with mixed workers is a very difficult task for a woman, because they fear criticisms and they struggle to go consistently to work given the many domestic challenges they have. Swahili women don't work at the salt firms because they believe the activity is too hard and can only be done by men.

Harvesting salt is seasonal (for about 6 months a year) and during the rainy season women find other activities such as farming. Many of the interviewed women had worked from 10 to over 20 years for salt companies, but because they are on piecework, they don't enjoy any medical coverage, leave days or pension. Women in the harvesting section are also economically exploited due to the low pay, however they have no alternative to provide for their children. According to the interviewed women the income is insufficient to meet all family's needs and is not commensurate with the work done. Mostly single women manage their income, but married women must give or share it with their husband. It happens that if the woman doesn't give the revenue to her husband, he mistreats and threatens her that she would not be allowed to work. There are women who have come together to form saving groups for the purpose of giving each other small loans. However, these groups are not formally registered. Few of the women belong to groups that are under microfinance institutions.

Working hours are not favorable for women especially in the harvesting section; they sometimes report to work as early as between 3am and 4am and the companies do not provide transport for them. If you don't have your own working tools such as a spade, *jembe* and basin you cannot be allowed to work. Many injuries happen at the salt harvesting section, which carries majority of women. There are also short and long-time diseases and medical conditions associated to salt harvesting work e.g. loss of eyesight, cracking of lips and peeling off of skin, backbone injuries, miscarriages etc. An interviewed man said that salt mining is not good for women because it needs a lot of strength and it very tiring. Many women had to leave their job due to severe medical conditions caused by the work in salt harvesting.

The sector is growing, and skilled or unskilled women could have decent job opportunities if the government imposes strict regulations and monitoring systems on the salt extractive firms.

Recommendations for enhanced participation of women in salt mining

- » More awareness creation on the importance of education especially for the girl child. This will give women in future generations skilled employment opportunities in the sector.
- » Provide ideal protective gears and tools for salt harvesting.
- » Have regulated reasonable wages for piecework for salt harvesters.
- » Engage salt harvesters on contract with standard benefits not on casual basis.
- » Have reasonable working hours, such as not from 3am-4am, which is very risky for women. There

should be flexible shifts/working hours, which can allow women with young children to work.

- » Provide women with necessary training to be able to take up managerial positions.
- » Provide transport for salt harvesters to avoid instances of women walking very long distance to reach working stations.
- » Provide day care facilities for women with young children. When they have babies or young children, either they are left home on their own or mothers are forced to leave their job.
- » Provide accident and medical cover for all workers.
- » Assign lighter duties to expectant and lactating women instead of being fired.

Recommendations for salt mining sustainable development

- » Invest in research to continuously improve the technology to harvest, process and package salt.
- » When there is too much rain sometimes the firms experience wastage especially for the harvested salt that is heaped outside waiting for further processing. It can be drained back to the ocean. Firms can build shelters to store raw harvested salt to avoid wastage during rainy seasons.
- » Promote the use of solar power machines to process and package salt instead of electric energy or firewood.
- » Some companies are still returning waste into the ocean, which is toxic for fish, mostly in breeding areas such as the creeks. All salt companies to be compelled to adhere to waste management regulations.



Salt harvesting site in Magarini, Kilifi county.

The waterway along the Somali coast (Gulf of Aden) is part of the important Suez Canal shipping route between the Mediterranean Sea and the Arabian Sea in the Indian Ocean, with 21,000 ships crossing the gulf annually. Shipping and fisheries vessels have for long exploited the ocean waters along the Somali coast. In the early 1980s, prior to the outbreak of the civil war in Somalia, the Somali Ministry of Fisheries and the Coastal Development Agency launched a development program focusing on the establishment of agricultural and fishery cooperatives for artisanal fishermen. It also received significant foreign investment funds for various fishery development projects, as the Somali fishing industry was considered to have a lot of potential owing to its unexploited marine stocks. The government at this time permitted foreign fishing through official licensing or joint venture agreements, forming two such partnerships in the Iraqi-Somali Siadco and Italian-Somali Somital ventures. ^[13]

After the collapse of the central government, the Somali Navy disbanded. With Somali territorial waters undefended, around 2000 foreign fishing trawlers began illegally fishing on the Somali seaboard and ships began dumping industrial and other waste off the Somali coast. This led to erosion of the fish stock and local fishermen started to band together to try to protect their resources. An escalation began, leading to weapons being used as well as tactics such as taking over a foreign ship until their owners paid a ransom. ^{[14][15][16]} After seeing the profitability of ransom payments, some financiers and former militiamen later began to fund pirate activities, splitting the profits evenly with the pirates. ^[17]

International organisations began to express concern over the new piracy due to its high cost to global trade and the incentive to profiteer by insurance companies and others. The Somali government has been active in policing the area, though some believe that it wants to collaborate with the pirates as a bulwark against Islamist insurgents. By 2010, these patrols were paying off, with a steady drop in the number of incidents.

Disagreements between the Federal Government and regional governments in Somalia on natural resource management of the fishing and the oil and gas sectors have as potential consequences misappropriation of public resources, the hindering of political and economic development and armed conflict. ^[18]

Hydrocarbons (oil and gas) and other mineral resources in Somalia are untapped. The Somali Government before 1991 had signed several agreements with extractive companies, which were put on hold. Since 2013 the Federal Government has restarted negotiating agreements with several companies. However, in 2017 the

13 *Marine Fisheries Review, Somali fishery industry has potential for growth, 1982, 44 (12).*

14 *The Advantage of Piracy.* German-foreign-policy.com. 2011.

15 *Somali pirates a far cry from buccaneers of old.* The Washington, 2009 Washingtontimes.com.

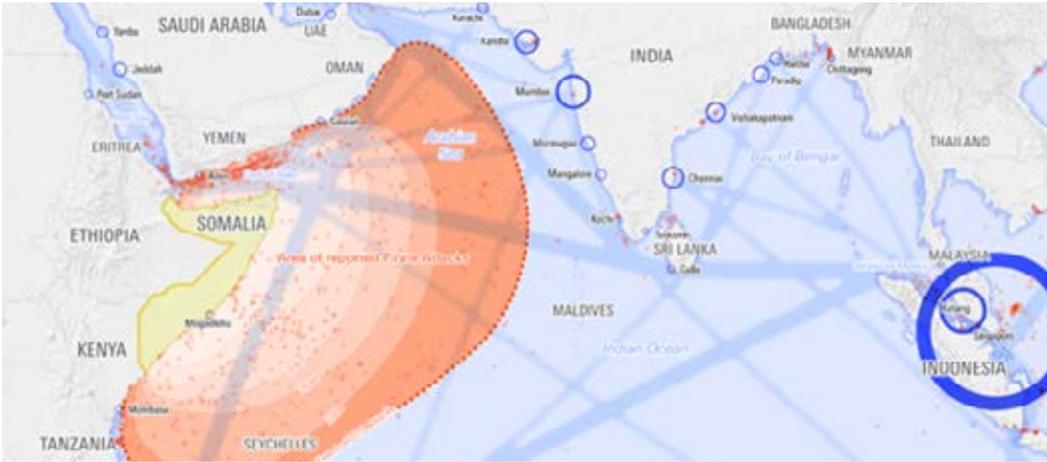
16 *Toxic waste' behind Somali piracy, Najad Abdullahi, 2008 English.aljazeera.net.*

17 *Somalia's pirates face battles at sea,* Westcott Kathryn, BBC News 2008.

18 *Somalia report of the Monitoring Group on Somalia and Eritrea submitted in accordance with resolution 2317 -2016.*

The Blue Economy in Somalia





Somalian Piracy Threat Map 2010

CREDIT: Planemad - Own work Attack Locations: NGA - Maritime Safety Information http://en.wikipedia.org/wiki/List_of_ships_attacked_by_Somali_pirates Shipping Routes

Monitoring Group on Somalia and Eritrea was concerned that the Federal Government lacks the regulatory framework and institutional capacity to effectively govern the extractive industries and mitigate the risk of conflict. Weak fishing governance and widespread illegal, unreported and unregulated fishing entail a substantial loss of State revenue, which could have otherwise been generated from licensing fees and taxes. Perhaps more than 200 Iranian and Yemeni fishing dhows operating off the coast of Puntland, exacerbates the risk of fishing dhows being used for illicit purposes, including small arms trafficking. ^[19] In 2017 at least three vessels were hijacked by pirates off the coast of Somalia, the first incidences since 2012.

Apart from the fisheries and extractive sectors, there are no other major activities in the Somali coast of the Indian Ocean. Income generating activities carried out especially by women at a very small scale, include collection of seashell and attractive rocks for hotel, restaurant and home decoration, harvesting of salt at artisanal level for local sale, and extraction of oil from turtles for traditional treatment of several diseases.

Fisheries Sector in South-Central Somalia

Somalia has one of the longest coastlines in Africa – roughly 3330 km long - but its fisheries sectors is currently one of the least developed with an average annual contribution to the GDP of only 1%. ^[20] This is in stark contrast with the situation before the start of the civil war in 1991, when fisheries was the second

19 Estimate of the number of Iranian and Yemeni fishing dhows operating off the coast of Puntland as of December 2016 provided by United Nations agency fishing expert, 17 July 2017.

20 FAO, www.fao.org.

largest economic sector preceded by the livestock. The management of artisanal fisheries before the civil war was centralized and ruled by presidential decrees (law n.23 - 1995). There were extensive shore-based facilities, and fishermen were organized in cooperatives. Fishing in Somalia shorelines and waters was rigorously controlled, and there were few cases of illegal fishing. Industrial fisheries used sophisticated equipment and was carried out in joint venture with two foreign private companies.

Following the civil war, which left the entire fishing infrastructure in ruins, some of those cooperatives restarted their operations along the coastline, but while retaining their fishing skills, most fishermen had lost their equipment or had outdated gear.

Currently, fishing is mostly on a small-scale level, however there is no data on the fishing operations of the small-scale fleet throughout the Somali coast. This still makes it possible for illegal fishing to thrive in the waters off the Horn of Africa region.

Fishing in Somalia is still regulated by the 1985 law. However, since 2013 the Federal Government has recognized the potential for successful expansion of fishery and made ambitious reforms. There is no license for fishermen, but the Ministry of Fisheries and Marine Resources regulates the fishing periods and locations. The Diaspora and large international companies have not yet invested in the sector, which is remarkable due to the past historical importance of fisheries in the country, and to the role the Diaspora has been playing in other sector of the economy, in cash transfers and in services delivery. There are small companies who employ a few fishers, including isolated cases of women. Fishermen are organized in cooperatives to respond to the fish demand. There is a large competition among cooperatives and prices are based essentially on the quality of fish and on the need to quickly sell fresh products in absence of freezing storage facilities.



Fisher mongers are selecting fish from the fish catch, Mogadishu.

Before the war, domestic fish consumption was limited to the coastal communities because of lack of familiarity with fish food, seasonality of supply and a tradition of meat-eaters among Somalis, typically nomadic pastoralists. The shortage of meat due to destocking experienced during the war and recurring droughts has diverted some protein demand towards fish, especially among low income groups like internally displaced people (IDP). This, together with increasing education programs to promote fish consumption, is changing the fish demand. Fisheries targets mainly the internal market, even though from Kismayo nowadays they are some fishermen able to export fish to Kenya. High quality fish and lobsters have started to be exported to the neighboring Arabian Gulf States. Dried shark meat and dry shark fin exports have also restarted with high profit for artisanal fishermen.

The fisheries sector used to attract few youths, as they were interested in more profitable employment or business opportunities. With the growing potential of the fisheries sector in South Central Somalia, young women and men are venturing into the sector.

Compared to the pre-war situation, even though the government has developed clear fishing regulations, their enforcement is a challenge. Illegal fishing is expanding and creating unfair completion. The use of nets with very small mesh results in overfishing of any kind and size of fish indiscriminately. This affects the future sustainability of the fishing activity and slowly leads to extinction of fish in the ocean. The magnitude and implication of these trends are however unclear, because for the past over twenty years no fish data has been collected and no fish stock assessment has been carried out.

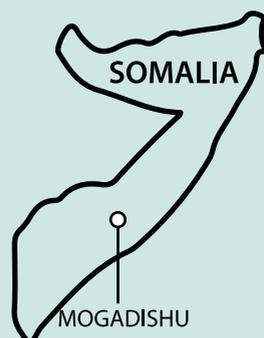
The fishing activity, as per government regulations, should be diversified, targeting different species depending on the season, weather and tidal elevation, and respecting selected closures in breeding periods. Such diversification comes with different fishing gears, for example trammel nets and mackerel gillnets. The combination of geographic and seasonal restrictions and the use of appropriate gear would decrease the pressure on the primarily targeted species, like shrimp, and increase the catch and earning of households depending on the fishing value chain.



In the cold currents off shore the Somali capital, Mogadishu, there is no lack of fish. Black Marlins can reach up to 5m in length and weight up to 500 kg.

CASE STUDY 5:

Fisheries in Mogadishu



Situation Analysis

In Mogadishu the Federal Government has established a Marine and Fisheries Institute, which offers courses on: Fish processing and preservation, Fish management and mending, Net making, Boat building, Navigation boat riding, Fishing technology. A School of Marine Sciences is also available at the Khalif Moscow Academy. Nevertheless, most of young men and women do not have access to these training institutions and lack technical knowledge to boost up their business.

Concerning food hygiene and safety, there is a great challenge in seafood handling. There is no proper cleaning of equipment, storage at the right temperature, and no enforcement of guidelines on worker's personal hygiene; thus, limiting quality standards of the products that reach the market.

Lack of storage facilities and low capacity in fish processing contribute to fish wastage, limited access to market opportunities and reduced profit. Because fish perishes easily if not kept in refrigerators, fishermen are forced to sell their catch quickly and at low prices, despite the difficulties they encounter while fishing.

People use motorboats made out of fiberglass to travel further offshore and catch highly demanded species such as finfish, sharks and crabs. However, most lack capital to acquire modern fishing equipment, like trawl nets and modern processing, preservation and storage facilities. This has limited the scaling of their activity. Moreover, poor market infrastructure, boats, landing facilities and roads leave many potential development areas unexploited.

Fish is sold to hotels, restaurants and individuals, but the individual consumption remains small compared to livestock meat. Finally, security is still a challenge due to piracy and illegal foreign vessels, which attack fishermen, even though this risk has drastically reduced.

Women's role in the fisheries sector

More women are involved in fishing industry after the war as gender roles are changing due to lack of employment for men.

Women are mostly responsible for skilled and time-consuming onshore tasks, such as making and mending nets, baskets and pots, processing and marketing catches, and providing services to boats, such as selling fuel or rent refrigerators and boats to fishermen. Women in processing are mostly affected by lack of cold chain storage facilities, and they are tasked with fish preservation through simple methods such as smoking, sun drying and salting.

Women are also wholesalers and retailers. As wholesalers, they purchase fish in bulk from fishers or from co-operative societies and sell it to retailers. As retailers, women purchase fish from wholesalers and transport it to their selling points. There are few exceptions of women who practice fishing both for commercial and subsistence purposes in areas close to their community. Some rent boats while others fish from the seaside with simple traditional handmade tools including baskets, hooks and fishing lines. As fisherwomen mostly use canoes, their catch is different because is limited to near shore species.

The need of income is the driving reason for women to join the fisheries sector, especially widows and divorced women who are encouraged by low initial capital requirement, easy accessibility and business management, and encouraging raising profits. Women interviewed in Mogadishu reported to earn 2-10 USD a day and did not complain about the income they are getting. More importantly, they also said to be in control of an income, which is enough to cover the family expenses including school fees. Apart from earning a living, fish has a nutritional benefit as supplements the family diet. It also helps women reduce dependency on men and consequently domestic violence.

However, compared to men very few women are organized in cooperatives, and only around 20% of youth who study at the Marine and Fishery Institute are women, with clear room for change.



A woman is selling fish at the largest fish market in Mogadishu.

Challenges and opportunities for women

Most communities believe that fishery is for men, so women have low access to information and knowledge. A common stereotype is that women have no capacity to perform difficult physical tasks such as fish catching, hunting, repairing boats, tools and gears. Some men do not appreciate their wives working in the fisheries because they consider the sector as not a very lucrative one. However, interviewed women believe that if given the knowledge and chances, and if allowed to have a share into the sales and market prices, they would know how to exploit more this business opportunity. Women have a pivotal role to play in dispelling myths of the fisheries sector as a male-only activity, in particular in an entrepreneurially oriented culture such as the Somali one.



A woman is buying fish in Mogadishu fish market.

Lack of or inaccessibility to fishing gear, transportation, and credit facilities are among the immediate consequence of this unequal relations between men and women in the sector. This results into artificially lowering women's competitiveness against their male counterparts. Men own boats, which enable them to sell fresh fish directly to agent or restaurants for best possible prices. Low purchasing power of the local population, negative social norms against women in fisheries and negative beliefs toward eating fish by some communities have contributed to limited fish market in Somalia. Policy makers usually overlook the significant role women play in fisheries production and there is not enough information on women involvement in artisanal fisheries.

Rampant presence of gangs along the beaches is a security threat for women. For instance, they cannot go alone early morning and night at the sea shore without a male escort.

Despite the challenges above, more women have had access to training opportunities in the fisheries value chain, and in the last 5 years, NGOs and cooperative societies have enrolled more women in the fishing industry.

Recommendations for enhanced participation of women in fisheries.

- » Promote gender mainstreaming in fisheries sector and developing action plans to ensure that women play more active role in designing fisheries policy reforms, including necessary steps that encourages and support women to become leaders in fisheries.
- » Enhance access of girls to post-primary education and of women to fisheries vocational training and marine resource management courses.
- » Enable women access to financial resources through grants and loans to invest in the business and purchase adequate tools and gears.
- » Increase access of women to business management trainings to boot their activity and profit.
- » Promote social norms that enable access of women to leadership positions in business.
- » Girls and women empowerment to overcome cultural and social constraints limiting access of women to the sector.

Recommendations for fisheries sustainable development

- » Improve access to and the dissemination of good quality and timely weather forecast in support of responsible fishing and trade.
- » The government to formalize the existing private sector and invest with the necessary resources required to protecting marine biodiversity.
- » The government to ensure security in the ocean.
- » Provide technical training opportunities for fishing communities to improve their capacities and promote the use of improved and affordable techniques in fish catching, processing and marketing that reduce the environmental impact of the sector.
- » Major capital investments as to rebuild destroyed and outdated facilities and infrastructures for catching, processing and marketing.
- » Provide access to and promoting use of modern fishing gears.
- » Invest in the cold chain to reduce wastage.
- » Improve the regulatory framework of the industry and its implementation; Planning and monitoring the use and management of marine resources to protect the environment and maintain the rich biodiversity of species.
- » Promote research on different fish species and dissemination of key information among the actors in the fishing sector.
- » Ensure data collection and analysis to monitor the exploitation and conservation state of ocean resources.
- » Create awareness among communities on the importance of preserving fish resources and fishing grounds and wastage management. This would help controlling contamination of the fishing grounds by especially farmers, pastoralists or slaughter house managers.

Open Research Questions

The above report takes, by choice, one particular lens to skim through the surface of a very complex network of interactions between different economic activities and existing power relations that hinder women's participation in the Blue Economy on an equal footing with men. In doing so, it elicits women's view and their complementary understanding of aspects of the economic activities they are involved in.

At the same time, it highlights opportunities for transformation, which are synthesized in the recommendations at the end of each section. It also highlights how such opportunities – to come to reality - cannot consider women as mere potential beneficiaries of reform, but as active agents of change.

Although this report was not designed to be a rigorous research project, it also uncovers a number of questions that merit further research. Some of them are listed below:

- » How do unequal structural power relations manifest themselves in women's everyday experiences of responding to development challenges in the blue Economy sector?
- » Who takes the decisions, who controls resources? How are roles and responsibilities negotiated?
- » How does that influence the resilience of the households and the individuals in the households?
- » How a better knowledge of these factors informs a more sustainable implementation of large economic development projects linked to the Blue Economy in Somalia, Kenya, and in West Indian Ocean more at large?
- » What is the true impact of environmental and climate change on marine resources in the waters of Kenya and Somalia and which data are missing to track such impact? Are the data available, or the ones research has been focusing on, related to ecosystem services and resources that benefit women's livelihood, or has research been skewed towards the study of systems that mostly benefit men?

To make only one example, data on the sensitivity of fish species of commercial importance to varying concentration of salinity, in particular during the hatching and breeding season, are available but in a patchy mode. They often refer to a limited number of species; and some of the best studies date back from the early 90s. With better evidence linking salinity to productivity of commercial fisheries, and consequent economic data at hand, it would be easier to inform decisions on the harmonization of different activities, avoiding the risk of lose-lose mechanisms like the ones described in the report on salt mining in Kilifi.

Research Methodology

This report was developed based on information collected through literature review, interviews to key informants and focus group discussions with community members, mixed groups and women groups. The research objective was to understand the roles that women play in the blue economy and what are the potentials of involving women while promoting a sustainable development of the specific economic sectors. This was done through five case studies:

This was done through five case studies:

- 1)** role of women in marine fisheries in Kenya, Magarini Sub-County, Kilifi county, targeting Swahili and Giriama communities;
- 2)** role of women in fresh water fisheries in Kenya, in Lake Moa, Lamu county targeting Moa and Bilisa communities;
- 3)** role of women in fresh water fisheries in Kenya, in Lake Shakababo, Tana River county targeting Ozi and Tamaso communities;
- 4)** role of women in salt extractive sector in Kenya, Magarini Sub-County, Kilifi county, targeting Giriama communities;
- 5)** role of women in marine fisheries in Somalia, Mogadishu - Hamarwenye, Shangani and Abdiaziz districts.

A total of 32 key informant interviews and 10 Focus Group Discussions with 120 people (75% women) were carried out in the targeted three locations.

About Authors



CISP - Comitato Internazionale per lo Sviluppo dei Popoli (*International Committee for the Development of Peoples*) is a non-governmental organization established in Rome in 1983 and currently active in over 30 countries worldwide. CISP intents are summarised in the motto “Rights, Change, Sustainability”, i.e. enhancing sustainable development at all levels (environment, society, economy, institutions), and fighting against poverty and social exclusion. CISP has been working in Somalia and Kenya since 1983 and 1997, respectively. Main sectors of intervention in the two countries are: Protection (Gender Based Violence and Child Protection), Health and Nutrition, Environment and Economic Empowerment, Primary, Vocational and Higher Education, Governance and Culture.



KENWEB - The Kenya Wetlands Biodiversity Research Group is a multidisciplinary group of environmental scientists hosted by the National Museums of Kenya (NMK). The KENWEB team have experience in Africa’s aquatic ecosystems including lakes, rivers and wetlands and developed methodology for a better description of the biodiversity values and of various ecosystems services; compiling inventories and assessing species distribution and conservation status; and undertaking simple hydrologic models to predict scenarios related to hydrology and wetlands biodiversity. KENWEB members have conducted studies of the Tana River Delta for over two decades.

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