

# PANGANI FISHERY PROJECT BASELINE SURVEY REPORT



(Photos from Pangani survey 2018)



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## BACKGROUND

Since 2015 Pangani Heartland Development Organization (PHDO) have been in negotiation with Danish Society for a Living Sea (LLH) for cooperation and a partnership to support fisherfolk of Pangani District, Tanzania.

From this negotiation the idea of having common project was agreed. Following this agreement PHDO and LLH did an arrangement to conduct a Baseline Survey in Pangani districts fishing sites to get a common view on the situation and to get the fisherfolks, the local Community's and Pangani districts authorities' approval for this Partnership and to discuss challenges and proposed solutions to work on.

To make this possible LLH contribute with fishing expert Kurt Svennevig Christensen (KSC) and financial support from Living Sea, Torben and Alice Frimodts Foundation, Merkur Foundation, Grass rods Foundation and private donors.

Together with PHDO staff as well as Pangani District Office team KSC had succeeded conducting this survey from 9th to 18th of October 2018.

Prior to this Survey, Community and other important Stakeholders were consulted, meeting held in order to get this common understanding as well as making them effectively participate to the exercise. Timetable was prepared and shared to all parties. Both, Socio-Economic and Geographical information were gathered. (For more information about our plans see appendix to this report)

## THE BASELINE STUDY

### TARGET AREA

The Baseline Survey was conducted at Pangani Coastal belt involving Pangani District and neighboring Fishing Sites of Tanga City and Muheza District. 16 Fishing Sites were visited, named: Kigombe, Mwarongo, Matakani, Mashine ya Maji, Buyuni, Mkwaja, Mikocheni, Sange, Kipumbwi, Stahabu, Ushongo Mabaoni, Ushongo Mtoni, Kikokwe, Pangani Magharibi, Choba and Pangani Mashariki Fishing Sites.

Groups of Stakeholders at District level, Fishing Communities, including Fisherwomen, Fish Mongers, NGOs representatives, Marine Park, Fisheries and Community Development Officers of both District and Ward level, youth groups were involved. Different information gathering methods were used, including meetings, consultations, interviews, physical observations as well as group discussions.





PANGANI DISTRICT MAP



COMMUNITIES' ACCEPTABILITY

The Communities had shown high interest to participate in the forthcoming program. Each of visited villages, the community both women and men, had actively participated the pre-consultation meetings and discussions and openly declared their interest and the points of concerns.

Even the community have many histories of being cheated by NGOs and therefor demanded direct support to their fishers' groups, instead of having agencies. The communication breakdown between communities and NGOs after designing project and during implementation was pointed out as probably the reason for misunderstanding and reluctance of the fishers. This was discussed to be solved through improved communication between the actors thoroughly the program.

WOMEN INVOLVEMENT IN FISHING

Although women in Tanzania are not conspicuous in the formal fishing sector, their role in other fishing activities is significant. Their commitments are usually restricted to intertidal areas for a limited time of a few hours per day. They do much of the collection of seashells, sea cucumber, squids and octopus usually during spring tides using hands and long wooden sticks or metal rods.



Most of the areas visited we found a number of the women involving in fishing activities; from active fishing, processing as well as selling. For that, the team noted Women to be very important group in development of small-scale fishing industry in Pangani. Regardless of their social responsibility to serve families, they are taken part as fishing activities, processing as well as working as fish vendors to the local market in town and to the inland Districts.



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The following table is an example that shows the list of the villages visited and found active women on fishing activities in Pangani District

NO	NAME OF THE VILLAGE	GROUP NAME	NUMBER FISHERWOMEN	FISHERY ACTIVITIES
1.	Mwarongo	Manyau	13	Octopus & Squids
		Maua	4	Octopus & Squids
		Ulezi wa Wana	18	Octopus & Squids
2.	Choba	(Individuals)	30	Epipelagic shrimps (Ushimba). Prawns (ukamba) -Sardines (Uono)
3.	Pangani Mashariki	Changamoto	25	Epipelagic shrimps (Ushimba). Prawns (ukamba) Sardines (Uono)
		(Individuals)	21	Epipelagic shrimps (Ushimba). Prawns (ukamba) Sardines (Uono)
4.	Kikokwe	(Individuals)	28	Epipelagic shrimps (Ushimba).
5.	Sange	Msimamo	6	Epipelagic shrimps (Ushimba).
		(Individuals)	38	Epipelagic shrimps (Ushimba).
6.	Stahabu	(Individuals)	23	Epipelagic shrimps (Ushimba).

Part from this, women are fishing with Mosquito nets (famously known as “Obama-net”), poor markets and low prices for their products. Women are also faced with inadequate accessibility to the financial resources and post harvesting caused by poor processing and handling techniques for value



addition of their business. Some of the villages also women, regardless of their involvement in fishing activities, their husbands are not allowing the gathering in community activities as we have seen in some villages.

From these challenges, there is a need of strengthening women especially those who have shown the readiness to be developed and are involving in the fishery. These women can also serve as an example for other women to work hard. Mwarongo village, for example, showed a good relationship between them although they had a major problem with working tools. Likewise, in the Pangani Mashariki women and Kimang'a they in turn seemed to be strong in the fishery so they can be strengthened in training so that they can teach their peers.

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There is also a need to strengthen training on marketing, saving as well as controlling “Vicoba” (Village Community Bank) system especially for women to strengthen their income.

#### MARKET AVAILABILITY

The team has recognized presence of market opportunities for fish and fish products from the area to internal and international markets due to availability of a unique fish species such as Soles Crabs, Lobsters, and Prawns just to mention few. There are hotels around all over across the district that a well-organized fishing sector can contribute largely to the improved market of fish from small scale fishers.

There are also big towns Moshi, Arusha, Morogoro and Dodoma that can be used as opportunities for the market improvement in which both populations directly depending in fish for food and nutrition security. Traditionally the regions are not endowed with water sources that can provide with them some fish, thus fish products from the sea specifically from Pangani and Tanga remains a major source of protein and nutrition security.

However, the market has been severely affected by the lack of fish processing, storage and handling facilities to attract buyers and value addition as well as simplifying the transportation. No ice or ice boxes and fish processing facilities. In most part of our fishing areas fish is processed on the ground, something that is a health risk also affects the value of the product.

Lack of information about the presence of external markets and the way to integrate is also a problem. Internal vendors also fishermen themselves do not have the ability to seek outer markets and even to associate with companies or other businessmen in the fishing industry. So, they found themselves selling their products at a very low price compared to the prices of the surrounding cities like Arusha, Kilimanjaro, Dodoma and Dar es Salaam.

So there is a need to look how we can connect them with external markets outside the Pangani District so as to improve the value and the income they get from their products. Apart from the presence of the range of fish species that have the world's largest value, such as sole fish, crabs, lobsters, prawns, and squids, prices have still been lower than normal.

#### AQUACULTURE (CRABS FARMING) OPPORTUNITIES

The Pangani District especially the Pangani River belt is among the areas where fish farming, muddy crabs fattening can be done with great success. The presence of enough mangroves and enough clay helps the crab and other species of fish to breed and feed themselves thus providing the basis for the farming activity. The areas starting from Kumba, Matakani to Mashine ya Maji are suitable zone for this activity because of the mangrove forests that promotes blackish of water and muddy condition of its land.

Fish farming and crab fattening can be a solution to the situation in the River Pangani zone. Fish in this zone are so scarce that most fishermen are eager to migrate to the sea something that they are hampered by fishing tools they are using. The casting canoes they use cannot be used in marine areas as many of them are very small and poorly made so it adds to the challenge of the fish shortage in the river.

Fishermen have also been involved crabs fishing, however, according to the existing laws prohibits the sale of crabs that are under size (below 500 grams) and if you get of such size the law wants you bring it back to the river. This problem makes fishermen lose profits when they find those who are underweight, and many have come into frictions with the government when they get caught up with the smallest.

To deal with this problem, the idea of having a crab fattening pond was proposed by the fishermen that it will be as an alternative solution not only to the improved relationship with the government but also to increase the income of fishermen because by selling matured are of more value compared to the small ones. This will also help improve the product market as fishermen will be able to search for the market themselves when they are sure of their production, unlike now where fishermen do not know how much they will get for a day or a month.



## PROBLEMS BETWEEN INDIGENOUS FISHERS, FOREIGNERS AND BOAT OWNERS

Apart from the fact that fishing in the Pangani District is operated using traditional gears, there is still a major fishing operation in the deep sea that is generally driven by foreigners specifically from Zanzibar.

This fishery has had a profound impact on fishery and fishing Communities in Pangani district. Foreign fishermen from Zanzibar, have been using locally hired fishermen as employees in their denominations and pay them so little amount which keep them continued living in poverty. This situation has led to the economic underdevelopment of these people and continues to be so far as they die.

Another problem is that, these fishermen use Ringnets<sup>i</sup> that have been the cause of the destruction of fishing grounds. Ring nets destroy the traps set by local fishermen, so they generate conflicts between them hence reduce the production of indigenous fishermen.

There is also the problem of small fishermen and owners of fishing vessels, that the owners always ensure that fishers become poor and poorer so that they can continue using and control them for their benefits. The vessels owners ensure small fishermen do not merge and claim more interest in the work they are doing. If it comes to small-scale fishermen joining, the vessel owners makes sure they disrupt the union by taking advantage of their responsibilities. And in the distribution of what they get, the owner of the vessel still gets larger share than the majority fishers, that approximately two-thirds goes to the owner and the rest shared by the fishermen, which it's also a problem.

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## FISHERY POLICY AND MANAGEMENT ISSUES

The National Fisheries Policy of 2015 addresses the intentions of the government and other stakeholders to meet micro and macroeconomic changes, challenges facing the fisheries sector and rationally utilizing immense fisheries resources sustainably while optimizing the available opportunities and benefits. The main areas of concern include; resource management and control, knowledge of the fisheries resource base, efficient resources utilization, processing and marketing, applied and strategic research, extension services, training and information services. Other areas are aquaculture development, inter and cross-sectoral collaboration, regional and international cooperation as well as cross cutting and cross-sectoral policies.

Fisheries sector is among the priority sectors in the National Strategy for Growth and Reduction of Poverty (NSGRP). This is in recognition of the role played by the fisheries sector in the national socio-economic development. The fisheries industry provides employment, income, recreation, trade and economic wellbeing for the present and future generations. In 2014 the sector employed 183,800 full time fishermen and about 4.0 million people earned their livelihoods from the fisheries sector related activities. In addition, the sector has been growing at a rate of 5.5 percent and contributing 2.4 percent to the GDP (Economic Survey Report, 2014).



However, it seems the focus of the government is on the Fresh water Fishery (That's on Lakes and Rivers. For example, according to the Maximum Sustainable Yield (MSY) in 2014 harvest was estimated at 2,143,211 metric tons which is accumulated from Lake Victoria (1,550,211), Lake Tanganyika (295,000), Lake Nyasa (168,000), Marine Territorial Sea (100,000), and other minor water bodies (30,000). (National Fishery Policy, 201. Pg2.).

In terms of fish production, fresh water bodies contributed about 85 percent of the total annual fish landings while marine waters contribute about 15 percent. Of the three great lakes, Lake Victoria has the highest fisheries potential followed by Lake Tanganyika. (National Fishery Policy, 2015).

This information shows that, investments on Marine Fisheries is not yet considered regardless of its size which is about 850 km coast line and numerous islands, including the three large ones: Pemba, Zanzibar and Mafia.

Although fish potential in Tanzania EEZ is not yet established, the area is known for some valuable economic fish including Tuna and Tuna species, Marlin, Sword- Sail fish, Sharks, Mackerel, Kingfish. The existing potential in the pelagic and demersal sea fishery, if well exploited and developed, will lead to increased fish catches and hence per capita consumption to the Fishers.

#### FISHERY MANAGEMENT

In Tanzania fishing is regulated and managed at a general level by parliamentary law, while the shaping of concrete rules takes place at a local level under the established Beach Management Units (BMUs). This brings about a serious opportunity to influence the management of fishing at a local level, but this requires that fishing communities are well organised and have a good understanding of the consequences of decisions taken about shared rules for fishing methods and the management of stocks.

A Beach Management Unit means a group of devoted stakeholders in a fishing community whose main function is management, conservation and protection of fish in their locality in collaboration with the government.



**FISHERY PRACTICES**

**Dugout canoe**

**Traps/pots for river prawns**

Fishing in the Pangani District is dominated using poor and traditional gears, which only help them to meet their daily needs of the family. Because of the poor tools they use, this fisher are found themselves accumulated on the shores where water cannot exceed 30 meters. This has resulted into the destruction of these areas, which leads to significant fish shortages and others disappears completely. It should be noted that these are the areas where fish breed, reproduce, eat and play especially those whose age has not yet reached the maturity stage. The most common fishing methods used are trap fishing, hooks and line fishing.

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Different vessels are used for catching different types of fish. For example, the outrigger canoes mainly target near shore species such as snappers, emperors, rabbit fish, and groupers whereas the dhows and bigger boats catch the offshore larger fish such as marlin, kingfish, sailfish, and tuna.

Types of fishing gear used by artisanal fishermen In Tanzania, particularly at Pangani.

Type of gear	Associated gears	Comments
Gill nets Jarife	<ul style="list-style-type: none"> <li>• Drift gillnet-1.5 inches to 3 inches mesh size</li> <li>• Demersal gill nets (small mesh), 4 to 6 inches mesh size</li> <li>• Demersal gillnet (large mesh) or Shark 7 to 10 inches mesh size</li> </ul>	Used in tidal, sub-tidal and reef areas to capture fish moving with the tides. Target species are nets, tuna, billfish, kingfish, blue fish, parrot fish, lethrinus harak (thumb print) fish, sigunas sutor and sharks.
Seine nets Nyavu	<ul style="list-style-type: none"> <li>• Ring nets</li> </ul>	Use light to attract pelagic fish (sardines) on moonless nights. Catch rate is 500-3000 kg net -It operates in water about 50m -It has been prohibited for fishing fishes unless for sardines because of it destruct spawning areas especially when it is used on shore/reefs
Scoop nets Senga		Hexagonal in shape with a single opening. Traps are usually set in sea grass beds, among wild or cultured seaweed, or coral reefs.

Basket traps Dema, towe	Large ones (dema), small ones (towe)	Usually made up of mangrove stick or palm frond midrib. They are semi-permanent stake traps that are set in intertidal areas especially in sheltered areas.
Fixed traps (weir, fence) (uzio, wando)	Cages	-This is the use of cages in the water bodies to catch the targeted fish while untargeted can be removed
Handline Mshipi		Common fishery, probably found in every fishing vessel. Can be used from a vessel or from the shore. Currently important as a sport fishery in the tourist industry at several sites.  Used by artisanal fishermen for catching pelagic fish.
Longlines Dhulumati	Surface long line Bottom longline	Usually use artificial lures in catching fish such as, cat fish, tuna etc.
Octopus spearing Mkuki/kijiti	Spear, stick	A spear is made up of a stick with a sharp end or a piece of iron is inserted at the tip. Kijiti IS a stick. Collection is done by diving or on exposed reefs.
Mosquito net (Obana nets) Utazi wa Juu Utazi wa chini	Sheets of fine netting (mosquito nets) or a big piece of cloth 2 to 10m long,	Obama net is used during neap tides and one during spring tides. Used by women in intertidal areas. Nets are held by several women. Others approach this sheet over a decreasing circle splashing and making noise to chase pelagic shrimps (Ushimba/shimba or Uduvi into the net.

(Source: (Pangani District Council, 2018)

TABLE SHOWS THE NUMBER OF FISHERS, VESSELS AND FISH MONGERS FROM 2015 TO 2017

Year	Fishermen & Women	Vessels		Number of Fish Mongers
		Engine boats	Others	
2015	1540	19	252	113
2016	3725	31	267	135
2017	6084	65	389	168

(Source: Pangani District Fishery Department, 2018)

Generally, fishing situation in district is small scale fishery categorized with poverty among the fisher communities, poor fishing vessels and gears, as well as various challenges that affects the sector. However, apart from all these challenges fishery sector is the leading and continued to be the main Local Government revenue source, as it contributes to about 80% to district council revenue. (Pangani District Council, 2018).

#### POST-HARVEST LOSSES

Due to the lack of modern infrastructure and equipment in fisheries, there has been a problem with the loss of most fisheries products estimated to be more than 50%. No fish storage, ice production centers, no storage and processing facilities, hence increases the challenges in the sector. Fishers experience fish rotting before they reach the marketplace. This problem causes significant losses and decrease in the value of fish when they arrive at the marketplace.

The lack of good fish storage infrastructure also causes difficulty in fish transportation to the marketplace even in nearby towns. This causes fish vendors impossible to take fish to the market where is needed as they fear rotting. The only way it is by flaming or sending sun-dried fish which is

something that minimizes the value of the product.

The problem becomes much complicated during the rainy season since even drying processes becomes more difficult. This period is accompanied by severe high temperatures that also cause fish rotting so easily. There are no fish-drying sites, drying depends on open areas where when it rains the fish becomes wet and then causes rot. In addition to decaying, fish dried on the ground often have the risk of having too much sand, which also reduces the value of fish at the market.

Poor infrastructures have also prompted the loss of value of the products. Fish processing is being done more locally in an unhealthy environment that causes some people not to buy these fish. Cutting is done on wooden beams and can also be done even on the ground. On example of one of the locally table used for fish processing at Buyuni Village.



This affects much the marketing processes of our products and makes market access difficult especially in Tourist hotels available around the area. This problem also affects the ability to reach the international market from the existing competition in the market. International

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buyers are disliked by the existing infrastructure environment, so they cannot invest in this zone. It is believed that many traders have strengthened themselves in the Lake Victoria zone due to the presence of good processing and storage facilities in the area.

#### ISSUES RAISED AND PROPOSED SOLUTIONS

Core issue	Proposed solution	Comments
Presence of Traditional fishing methods which is now categorized by the government as the Illegal Fishing	<ul style="list-style-type: none"> <li>Providing new gears for exchanging programme</li> <li>Advocating for the alternative's creation and considerations during government operations against Illegal fishing</li> </ul>	Several Fishermen complained on loosing of their jobs from Anti-Illegal fishing operations conducted by the Military forces in specified villages.
People said they are tired of the promises given by the organizations and government on supports and project implementation on their areas without keeping their promises	<ul style="list-style-type: none"> <li>We have to keep our promises and if issues delay there should be communication in between and among the parties</li> </ul>	Communities has shown very high expectation from our expected programmers, hence need time to time updating them
Women uses mosquito nets (Obama nets) instead of normal fishing nets for prawns, Ushimba and sardines fishing which lowers their productivity.	<ul style="list-style-type: none"> <li>Supporting them with fishing gears and vessels for increased income for their livelihoods.</li> </ul>	What a little woman earns from their activities contributes much to the family's livelihoods as they are primary family caregivers. Hence supporting them, means supporting the entire Families and society.

Women lacks marketing and pricing techniques for their business, hence results into low profits for their businesses.	<ul style="list-style-type: none"> <li>• Finds the markets (internal and International) for their products</li> <li>• Introduces processing and packaging techniques for value addition of their products.</li> </ul>	There said presence of the markets for their products, however, how to reach them is the most challenges to them
Traditions and norms that prohibits women to involve in Social issues	<ul style="list-style-type: none"> <li>• To use few women supported as our case studies to encourage others to join our initiatives</li> <li>•</li> </ul>	Successful of women targeted programmes will play a key role to motivate husbands and parents to allow them to involve in these activities.
Small Scale fishers are thinking big boat fishers are taking away fish in open sea	<ul style="list-style-type: none"> <li>• To support them with boats</li> <li>• To establish Revolving Fund Scheme as strategy to stabilize their saving capability for boat and other fishing gears acquisition.</li> <li>• To establish Non-Profit Fishing Gears Shop for fishers to buy gears for cheaper prices and Introducing fishing technologies for increasing their fishing capabilities</li> </ul>	It seems one of the biggest challenge to our proposed project, as most of the areas we visited fishers were explaining the same. Our problem is how we will fulfill these demands.
Crabs fishing is one of the fish products found along River Pangani. However, fishing of under sized (Under 50 grams) is Prohibited, that according to the law you are not allowed taking them to the market; instead you are supposed returning them into the River.	<ul style="list-style-type: none"> <li>• There is a need of establishing crabs fattening as well as collection ponds for marketing purposes</li> <li>• Assisting them to find better markets in neighboring towns and cities and if possible, in abroad markets.</li> </ul>	This if well managed can play a role in maximizing profits of the fishers but also overcoming conflicts with government Officials from selling undersized crabs.

## SUCCESS & CHALLENGES DURING THE STUDY

Success	Challenges	Comments
<ul style="list-style-type: none"> <li>• We were able to cover all expected areas</li> <li>• Good support from Living Sea representative (Kurt)</li> <li>• Cooperation among the team members (Working team)</li> <li>• All the visited areas accepted the proposed project and gave mandates to the PHDO to enter into Partnership agreements with Living Sea</li> <li>• Government authorities accepted and promised to be cooperating with us</li> <li>• Community participated and were able to openly talk and discuss with us on their real situation about fishing and fishery sector in general</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of coordination and communication flow to some of the targeted areas minimized community participation and preparations in advance</li> <li>• Community delaying attending the areas of the meetings</li> <li>• Some community members neglected to participate due to fear as they thought we were there for government Anti-Illegal Fishing operation to capture them</li> <li>• Some of the Businessmen in Fisheries tries to interfere the community not to attend the meetings hence not be supported as they are using them as cheap labor for their business</li> <li>• Some hotels not leaving spaces as the way for the locals to pass through for their daily activities on the sea. (Good example is in Ushongo area).</li> <li>• Some of the area's women were not allowed to come to the meeting and others were not given chance to talk</li> <li>• Poor organization among the fishers, no one stands for their interests</li> <li>• There is increased pressure to the Fishery Resource due to overfishing on the seashore as a result of Illegal fishing and increased population that increases pressure to the marine resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Need to improve communication flow for better and effective programs in a future</li> <li>• Clear information for better understanding</li> <li>• The use of the media (radio and television) should be considered for awareness raising</li> <li>• Division of authorities and roles should be in place for everyone to play on his responsibilities and overcoming overlapping and misleading from each other</li> <li>• There is a need to find out how we can work to overcome and minimize direct confrontations with fishery Investors</li> <li>• Awareness to the hotel owners to make sure there are ways for the locals going to the sea to overcome conflicts that may occur in near future</li> <li>• Women empowerment program should be considered</li> <li>• Community awareness to</li> </ul>

## MAJOR THREATS

**Fisheries decline;** all along the coastal shore water and river especially Matakani. This is said to be caused by destruction of fish nurseries from poor fishing methods along seashores, illegal fishing including SCUBA fishing.

Sustainability of small-scale fishing industry is questionable if further intervention measures will not be undertaken. While large number of people especially young boys and ladies are coming to the small-scale fishing industry, they seem to have poor technology and lack of proper facilities in food chain development such as infrastructure, fishing gears, storage facilities, transport, access to right information etc. These have pushed them into unsustainable methodologies and unprofitable fishing activities. Improper post handling method which decrease the value of their product and hence attain low price in local market is among of the serious problem.

## ABOUT PANGANI DISTRICT

Pangani is one of the eight (8) districts of Tanga Region in Tanzania. It is bordered to the North by the Muheza District, to the East by the Indian Ocean, to the South by the Pwani Region and to the West by the Handeni District. The name Pangani is derived from the river that runs through the northern part of this historical town flowing from the slopes of Mt. Kilimanjaro. Located about 50km South from Tanga town.

Pangani district is one of the coastal plains with the potential for earning a livelihood from fishing on the Indian Ocean shoreline and the upland and foothills of the Eastern Usambara Mountains. The drainage systems of this District consisting of the Pangani, Zigi and Mkulumuzi rivers flow into the Indian Ocean and dissect the lowlands. Pangani District is in the Tanga Region. It has a land area of around 1,800 km<sup>2</sup> and a coastline of 182 km.

Pangani has a remarkable history dating back to the 15th century and traces of old buildings and monuments still can be seen. It was a trading port dealing mainly with ivory and slaves. Several historical sites, in and around the town, serve as reminders of the strong Arabic influence, and the much later German and British colonial era in Tanganyika. Currently Pangani is mainly a fishing town providing beautiful beaches with coconut trees.



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## POPULATION

Population size: 54,025 with 27,155 females and 26,870 males. The district has experienced an average annual growth rate between 2002 and 2012 of 2.07 % leading to more than 24 % increase of

the population over the ten-year period, with a low level of net in-migration. The population density in the district has grown to 31 persons/km<sup>2</sup> in 2012 from 25 persons/km<sup>2</sup> in 2002.

Based on 2002 census data, the percentage of the population living below the poverty line was 22 %, the over 15 years of age literacy coverage was 73 % and under five years of age mortality was 173 per 1,000 live births.



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## CULTURE

The history of the Pangani district is derived from the history of Sisal plantation and slave trade, which collectively collected people from different parts of the country, particularly Tabora, Kigoma, Mtwara, Lindi and so on. So, this district has a huge mix of different ethnic groups, although the Zigua and the Bondei are described as native tribes of this district.

These tribes were deeply affected by the Arab culture which was the dollar during the Slave trade and thus completely lost the cultural origins of their tribes. As a result of these impacts, this district has found itself far more formal than those of various ethnic groups that involve people living here. There is no native language here than most of the population using Swahili which is a national language. As far as the Illustrated Zigua and Bondei to be native here, they are still described as people from the Handeni (Zigua) and the Muheza (Wabondei) Districts.

Based on this history, some villages in this district were initiated due to the various activities that were being undertaken in the area. For example, the Buyuni and Mkwaja Villages are based on fishing activities. That, those villages were used as fishing camps (Lago) from different parts of Pangani. Kimang'a, Kikokwe, Mwera and Kigombe villages are mainly derived from the sissal farming activity, which has collected a variety of tribes, particularly the Makonde from Mtwara and Lindi whose origin is from Mozambique. Likewise, the Pangani city itself is related with Slavery trade.

Due to this slave trade, the Pangani people were reluctant to progress and most of them were content with whatever they had and believed that access was based on God's will and no human efforts could change the situation. This belief was based on the misconceptions that were being exiled during slavery so that they could continue to serve those (Slave Masters) even cheaper or free.

This situation has made the district people not valued tomorrow, not working harder and thus causing continuous growth in the poverty. People of this district origin work only for the day's bread and believe tomorrows will be obtained tomorrow. However, from the interaction of various ethnic groups has begun to change the situation. The entry of Pastoralists and Traders from the outside Pangani has led the inhabitants to begin changing and copying the cultures of these visitors especially on the issue of work.

Generally, culture of Pangani is a mixture of cultures of different ethnic groups and livelihoods. However, these tribes were deeply affected by the Arab life style and the Umwinyi system that dominated colonial times.

## ECONOMY

The economy of Pangani District largely depends on small-scale agriculture and animal husbandry, with the coastal population highly dependent on fisheries. Other economic activities are including retail and wholesale trade and tourism.

Economically Pangani is among the poorest district in the country. However, historically Pangani had a huge economy promoted by large-scale coconut and bananas plantations that were under Arabs. The area was largely productive because there were migrant workers from the South and North Western Tanzania and were paid less wages. However, after the generation of slavery ended, new workers came demanded high wages from the new farm owners (Afro Arabs), which they were not able to pay. The situation made the production to decline and later many farms collapsed.

However, far from marine fishing activities, pastoral and agricultural activities being conducted by using poor tools and technology as well as involving more foreigners yet these activities provide direction and hope for the future development of the economy of the Pangani district.

In the fishing industry there are still more opportunities as far off the coastal areas seem to be more exposed to overfishing, yet the deep-sea areas have not yet been fished due to poor tools and weak technologies used by fishermen thus to enable them to reach those areas.

## FISHING AT PANGANI DISTRICT

Fisheries contribute to the economic activities in Pangani District with 13 landing sites, of which four are permanent and nine are temporary, with fisheries regulated through 12 BMUs and three FMPs, (Fisheries Management Plans) though there are no fisheries bylaws in the district (Pangani District Fisheries Department, 2018).



Districts carry out all fishing activities, such includes enforcing fishing laws, regulations and policies to ensure protection and conservation, for resources sustainability as well as environmental conservation. The main objective is to ensure resources sustainability and that are used by the current and future generations for community and district development in general.

However, because of illegal fishing, the use of poor tools, climate change and population growth has led to the decrease in catch compared to high demand of the community.

Used tools are so poor that they cannot cope with the challenges and do not have the ability to be used in the deep sea. Due to the weakness of these tools used in fishing, they are unable to fish in the deep sea. This problem has led to fishing concentrating more on the shore which led to severe degradation of fish breeding sites and the catch of fish chicks that are often the shores are the areas they birth, eating and living before they mature to move to the deep sea.

#### FISH CATCH DATA

The fishing situation in district is moderate categorized with poverty among the fisher communities, poor fishing vessels and gears, as well as various challenges that affects the sector. However, fishery activities have continued to be the main Local Government revenue source, as it contributes to about 80% to district council revenue.

Apart from poor tools used, still fishery and fish products remain the hope and the main source of the animal protein to the people of this district. In addition, apart from raising the city's revenue and food security, these fish are used and highly needed in neighboring towns such as Arusha, Kilimanjaro and Dodoma.

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#### ACCESS TO NEW, IMPROVED AND AFFORDABLY EQUIPMENT

Pangani District and Tanzania Fisherfolks suffers from access to the fishing equipment that causes to by in very high price. Most of the gears obtained are of second hand, if not of third hand as we depend buying them from Zanzibar whom themselves get them from Dubai instead of buying directly from the manufactures in China or another county manufacturing them. This affects much the industry and it had side effect to the increased uses of poor tools hence concentrating fishing on the shore.

Prices for the equipment as they land onto our localities you may find it goes up to three or even for times the real prices. From this, Small Scale Fishers find themselves with no ability to procure the gears, hence continued fishing illegally and with poor tool to sustain their lives.

#### DESCRIPTION OF THE COAST

The second largest of the four Tanga Region, the Pangani District borders Handeni district to the west, Muheza to the North and Bagamoyo District (Coast Region) to the south. The district is penetrated by several main rivers, Pangani River that drains a basin of 43,000 km<sup>2</sup>, extending from the slopes of Kilimanjaro, and emptying at the coast at Pangani town, plus five smaller coastal rivers



(Msangazi, Ushongo Mabaoni, Madete and Kipumbwi rivers) in addition to numerous seasonal streams. The shore is mostly soft substratum extending to the sub tidal, and sediments dominated by sand inshore, mainly of siliciclastic river-dominated origin extending to 50 m depth, except for 7-8 km of raised reef platform north and south of Pangani estuary (Shagude, 2004).

Offshore there is the single small island of Maziwe (a Marine Reserve) and two clusters of coral patch reef clusters, the largest Ushongo, Datcha, and Kipumbwi and adjacent reefs.

**Coastal ecology:** The coastline and inshore waters of Pangani District support coral reefs, intertidal rocky and sand expanses, some with seagrass beds that extend into the subtidal areas, and extensive mangrove forests. A prominent feature of the district is the Pangani River, from which the district takes its name. It has a large floodplain and delta and vast mangrove forests that flank the tributaries of the delta.

**Coral reefs:** Pangani reefs can be divided into two major types according to reef formation in relation to the main coast, the inshore fringing reef and a series of sand banks few kilometers from the shore. The inshore fringing reefs extends from Ras Kikobwe past Kigombe, Mkwaja to Sunge, while the reef off the coast around the sand banks include Mwamba Mawe, Maziwe, Fungu Ushongo, Kibumbwe reefs, Fungu Datcha, Mwamba Alek, Mkwaja and Mwamba Buiuni. Coral cover and condition of these reefs vary with some areas such as Maziwe, Dambwe, Upangu and Zinga having 40 – 50 % cover.

**Mangroves:** Mangrove forest cover in Pangani District is estimated to 2,260 ha. In Pangani, the main mangrove stands are at Pangani river mouth (753 ha, extensive, stretches for about 10 km inland); areas near Ushongo Mabaoni (153 ha), areas along Msangasi River (422 ha), at Kama River (170 ha), and near Ras Machusi (184 ha).

**Beach and rock shorelines:** Part of Pangani shoreline, especially within the river mouth and few kilometers north and south is characterized by long continuous stands of mangrove forest with muddy substratum. The area is also characterized by long sandy beaches, for example at Ushongo village the beach stretches for more than 3 km.

**Coastal waters:** The peak outflow from the many rivers of Pangani occurs from March to May and the influence of freshwater from this river and the five additional small rivers, contributing large amounts of freshwater and sediment to coastal waters resulting in reduced water salinity near the coast.

**Marine species of importance:** Humpback whales are reported within short distances of the coastline especially from July to November. **Turtles** – Maziwe Island was known for green, hawksbill and Olive Ridley turtle nesting in the 1970s. Although it is covered by water during high tide it is still a natural nesting site and turtles still frequent the area. Madete beach, within Saadani National Park, is a second very important turtle nesting site in Pangani (Wells et al., 2007).

**Temperature:** The climate is predominantly hot and humid over the wide coastal plains, with average monthly temperature data, from nearby Tanga weather station (Tanga Airport, from 1987 to 2012),



revealing ranges from a low of around 20.5 °C during the coolest months of July to September when maximum temperatures are 29.4 °C and 29.7 °C for those months, to the highest monthly means of 32.0 °C to 33.2 °C during the hot season from December to March, when the temperatures drop to only 23.7 °C to 24.5 °C.

Relative humidity at Tanga ranges from 72-75 % for much of the year, increasing to 79 % during the wettest months of April and May, while for Dar es Salaam, relative humidity ranges from 67-70 % from August to October, increasing to 82 % during the wettest months of April. Pangani is likely to experience relative humidity within those of the neighboring districts.

**Precipitation:** The average annual rainfall for Pangani (from Pangani weather station) is 1,206 mm (ranging from 661 mm to 1,991 mm), over the period 1980 to 2008. From 1980 to 2011 (with data lacking for some months) the monthly rainfall peaks are March to May (main wet season) with over 530 mm of rain during those three months, and October to November (short rains) with 290 mm of rain, reflecting a clear predominantly bi-modal rainfall pattern.

**Winds:** Based on 26 years of data (1987 to 2012) from the Tanga Airport weather station (in Tanga Rural), in the morning (9 am) winds are generally light (5-9 knots), with strongest morning mean wind speeds during the months of May to July. Slightly stronger wind speeds (9-13 knots) are experienced in the afternoons (3 pm) throughout the year, with strongest mean speeds (12-13 knots) during the months of January and February, resulting from typical north-east monsoon variability from light to strong winds within a few days, compared to the typically steady winds of the southeast monsoon period.

In a study by Dubi (2001) of maximum coastal wind speeds, from 1972 to 1996, the highest wind speeds reached in Tanga was 20 knots, with peak speeds during July-August. Tanga is considered an area of coastline that is influenced mostly by offshore winds, though over the studied period, the maximum wind speed has shown a decreasing trend (Dubi, 2001).

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## POLITICAL SYSTEM OF TANZANIA

After attaining its independence in 1961 from the British, Tanzania has passed through two administrative systems; Single Party ruling system and later in 1992 it entered into a multi-party system, a system that continues to date. General elections take place every five (5) years and the first election of Multi-party was held in 1995.

All state authority in the United Republic are exercised and controlled by the Government of the United Republic of Tanzania and the Revolutionary Government of Zanzibar. Each Central Government has three organs: The Executive; Judiciary; and The Legislature that have powers over the conduct of public affairs. In addition, Local Government Authorities assist each central government. The Government of the United Republic of Tanzania has authority over all Union Matters in the United Republic and over all other matters concerning Mainland Tanzania and the



Revolutionary Government of Zanzibar has authority in Tanzania Zanzibar over all matters, which are not Union Matters. (LHRC, Constitutional Database 2006)

Tanzania has been divided into 26 administrative regions; between them 21 are in Tanzania Mainland and 5 in Pemba and Unguja. District Councils are located at 99 under the Local Government Authority and the Regions are under the Central Governmental Authority.

#### LOCAL GOVERNMENT STRUCTURE

On the mainland Tanzania Local Government consist of city councils, municipal councils, town councils and the district councils with township and village council authorities.

The district and urban councils have autonomy in their geographic area. District councils coordinate the activities of the township authorities and village councils, which are accountable to the district for all revenues received for day-to-day administration. The village and township councils have the responsibility for formulating plans for their areas. All together, the mainland hosts 22 urban councils, 92 rural councils and 97 district councils.

At the lower level of the Local Government is a Village followed by the Sub-Villages (In the rural) while in township, lower level of Local Government ends to the Streets.

#### RELIGION AND THE SOCIETY

Tanzania identifies itself as a non-Muslim nor –Christian country, yet she still recognizes and appreciates the beliefs of her people. Apart from not to follow any religious institution, the country still recognizes the presence of religion amongst its citizens and has set the basis for ensuring that its citizens are not different or argued because of their differences in the believes.

These basics were constructed since the beginning of late Mwalimu Nyerere, since then he spent much of his time telling people to avoid differences and avoid conflicts among themselves because of religion, ethnicity, or politics. The Tanzanian Constitution allows anyone to worship according to his/her faith, unless he/she violets the law of the country.

Tanzania's estimated population of 45 million under domination of Islamic and Christian religions, with more than 120 ethnic groups, we have been able to live in peace and harmony since then. Apart from the worst economic situation, this peace and harmony gives us the comfort and hope of continuing to live happily.

#### ABOUT PHDO

Pangani Heartland Development Organization (PHDO) is an Organization (NGO) established in 2002 and become registered in 2015 under the Tanzania Non-Governmental Organizations Act, 2002 with registration number 00NGO/08203.



Initially the organization was started as Community Group named Peace and Cooperation with about 22 founder members with the aim to support Fishing Community at Pangani District on Marine Conservation, Sustainable Fishing as well as promoting Sustainable Development to the Community. PHDO is now with 97 members.

**Vision:** The organization vision is to see the Community living in harmonious lives and Cooperation to support their Socio-Economic Development

**Mission:** To support Economic Development Initiatives for empowering community on Environmental Conservation, Resources Management and Entrepreneurial skills for sustainable development.

**Organization Goal:** to mobilize and involving the Community to fight poverty by improving Socio-Economic Activities, Environmental conservation, Natural Resources Management, housing to marginalized communities as well as education matters mostly to young girls.

**Specific Objectives:**

- To build attitudes and Capacity of the Fisherfolks Community to Self-Reliance
- Mobilizing the Community on Natural Resources Management and Environmental Conservation hence to support achievement of Sustainable Development.
- Economic empowerment to Pangani Community by improving fishing sector, entrepreneurship as well as insuring market availability to small producers.
- To improve Marine and Terrestrial Resources Management.
- To promote gender equality to the community to bring about Harmony life between different social groups in the society.
- To promote partnership and Partner relations among and between organization within and outside the country
- Awareness rising to the Community on Environmental conservation and Climate change matters.
- Capacity building to the community members especially youth and women to have capacity and skills on various affairs including agriculture, sustainable fishing, vocational skills, beekeeping etc
- Information sharing on Climate change and its impacts to environment and people's wellbeing.
- To promote entrepreneurship and entrepreneurial skills to youth and women groups as well as ensuring availability of funds for credit schemes.
- Mobilizing the community on mangroves planting and management.

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**Sectoral Areas of Intervention:** PHDO organization is mandated to various development interventions and strived to work the below areas:

**Fishing Sector:** Population increase, and climatic change has resulted into increased demand but also food shortage to the world population, therefore, need to increase production as well as minimizing post-harvest losses especially to Fisher Folks.



**Natural Resources and Environment Conservation:** Recently, Natural Resources and the environment of the world are in great danger that needs effective and serious consideration for its sustainability.

**Gender issues, youth and women empowerment:** Poverty level of the world varies and it's a gender concern as it varies from society to society, youth to women groups, disabled and non-disabled groups. Therefore, youth and women empowerment is one of our priority areas.

**Non-formal education:** The aim of this is to educate and train those who did not get or failed to finish their education due to various reasons so that they can have vocational skills to enable them to reach their dreams.

## ABOUT LIVING SEA

The Danish Society for A Living Sea was founded in 1995. LLH works for sustainable uses of marine resources, marine environment and coastal communities working with coastal fishery and fishery management in Denmark and EU.

Living Sea has worked since 1996 – 2008 with EU-, DANIDA- and private funded NGO fishery development project of the coastal communities around the Aral Sea in Kazakhstan, and 2004 – 2010 in Eritrea support and capacity building in the small-scale fishery. In India 2014 – 2017 with focus on fish woman. Other fishery projects: felt fishery study and investigation in Poland, Baltic's and Russia (1991 – 1992), Ghana (2004), Senegal (2005), Sri Lanka 2005, South Africa (2007) Cambodia, (2008), Kenya (2010), Tanzania 2013.

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The coordinator of PFP project on the Danish side, Kurt Svennevig Christensen, fisher and skipper with 20-year professional fisher and 30 years of experience from managing fishery development projects, latest from 2011 – 2018 as project manager Somali FairFishing in Somalia.

### Living Sea aim and purpose:

- To work for the conservation of the marine ecosystem and the marine landscape.
- To work for the benefit of a more sustainable and natural fishing.

### Works:

- to stop any pollution of the marine environment.
- for a fisheries policy based on precautionary principles in the exploitation of the marine ecosystem and resources.
- that fish and fish products caught and processed according to climate, natural and environmentally friendly principles are introduced to consumers.
- for the development and introduction of regulatory practices in fisheries management, which consider a stable ecosystem and a sustainable resource utilization.
- for trials and projects aimed at supporting and developing fishing methods and technologies in a more sustainable and natural way.



- for restoration and conservation measures of necessary biotopes, in order to secure spawning grounds, nursery areas and food grounds, as well as areas of scientific and recreational interest.
- to secure that the construction of the building, at the coast or at sea, is ecologically sound.
- for limitation of the genetic contamination of the marine environment as a result of international maritime transport, or as a result of the transfer of marine species to aquaculture
- that knowledge and experience about sea ecological issues and fisheries issues are exchanged internationally, not least for development areas.
- for training of staff, information material and documentation are produced for information on the sea as a natural and cultural landscape.

## THE STUDY'S CONCLUSIONS AND AGREEMENTS:

This baseline Survey has succeeded giving an opportunity to understand and learning more about the fishing industry in the Pangani District, where we were able to identify the presence of many challenges in the fishing sector driven by poor fishing systems, lack of storage infrastructure and fish processing, ice scarcity as well as huge fish shortages in the area. We have also learned the worst economic situation in our villages and the state of the population's income that was found to be very low.

Based on this study, the working team agreed that there is a need for establishing a partnership between PHDO and the Living Sea that will enable to implement joint projects in facilitating the community to strengthen fishing activities.

We have an agreement between PHDO and LLH on a project with Pangani Fisheries Project PFP with a strategy to build capacity in PHDO; in the near coastal fishing activities conducted by both women and men, we have agreed to have a concrete strategy for support to the women, their fisheries and markets as well as the strategy for the small-scale fisheries with new infrastructure and fisheries procurement associations. We have also agreed to have more long-term strategy for support to the big vessels ready to abandon their fishing with the ring net (between the coast and the reef) and ready to move their fishing outside the reef.

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## PARTICIPANTS

NO	NAME	POSITION	ORGANIZATION
1.	RASHIDI ASILIA	CHAIRPERSON	PHDO
2.	MOHAMED S. RAJABU	GENERAL SECRETARY	PHDO
3.	KURT CHRISTENSEN	CHAIRPERSON	LIVING SEA
4.	HASSANI SAMLI	COORDINATOR	PHDO
5.	JOEL BENJAMIN	FISHERIES OFFICER	PANGANI DC
6.	ZUHURA RAMADHANI	COMMITTEE MEMBER	PHDO
7.	SAUMU MZIRAI	TREASURER	PHDO
8.	LEOPOLD ABEID	DRIVER	PANGONET





**Memorandum of Understanding (MOU)**

**Between  
LLH and PHDO 20. October 2018**

The Danish Society for a Living Sea (LLH) and Pangani Headland Development Organisation (PHDO) have agreed to establish a partnership and cooperation for a direct support to the fishery in Pangani district, Tanzania. This MOU is based on the factfinding mission report, with program, listed teammembers and official meetings conducted in Pangani District, Tanzania October 2018.

**Overall objective**

Efficiency of artisanal fisheries value chain promoted, and jobs created. The priority issue towards this result will be a substantial support to big- and small-scale artisanal fisheries and women's fishery activities in the whole value chain, from sea to table, aimed at reviving and stimulating economies of the coastal populations through improved production, marketing and trade.

**It is summarized in the following points:**

1. A direct focus on the bigger scale fishery fishing inside the coral reef near the coast.
2. A direct focus on the small-scale fishery on the Pangani coast line and river.
3. A direct focus on the women's fishery activities on Pangani coast line and the river
4. A direct focus on LLH/PHDO partnership

1a. With this MOU accepted and confirmed by LLH and PHDO executive committees we will start seeking the needed financial support to a program supporting the more bigger scale fishery with an interest in changing their fishery from the coast to the ocean. It is expected that this program can start autumn 2019. (Detail description for this program see annex 1)

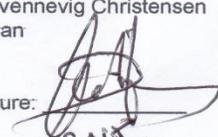
2a. With this MOU accepted and confirmed by LLH and PHDO executive committees we will start seeking the needed financial support to a program supporting small scale fishery with and substantial support offering new equipment's to low prizes, organisations, training, marketing. It is expected that this program will start in spring 2019 with one container transport from Denmark to Tanga with a support based on a humanitarian support with new and second-hand equipment and goods. (Detail description for this program see annex 2)

3a. With this MOU accepted and confirmed by LLH and PHDO executive committees we will start seeking the needed financial support to a program for supporting all women fishery activities on the coast and river. It is expected that this program will start in spring 2019 with one container transport from Denmark to Tanga with a support based on a humanitarian support with new and second-hand equipment and goods. (Detail description for this program see annex 3)

4a. With this MOU accepted and confirmed by LLH and PHDO executive committees, LLH start seeking the needed upstart financial support to a program for strengthen its Tanzanian partners capacity both internal and external. It's expected that the support will start before end of 2018. (Detail description for this program see annex 4)

For LLH  
Kurt Svennevig Christensen  
Chairman

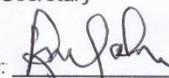
Signature:



21.10.2018

For PHDO  
Mohamedi Saidi Rajabu  
General Secretary

Signature:



21/10/2018



## CONCEPT NOTE

PROJECT TITLE: Establishment of the Sustainable Fishing Center at Pangani District.

### Local Contact Name

Hassani Samli (Coordinator), Pangani Heartland Development Organization (PHDO), P.O. Box 157, Pangani Tanga, Tanzania. Mobile +255 654768343 Email: [samlihassani@yahoo.com](mailto:samlihassani@yahoo.com)

Region

Tanzania/East Africa/Western Indian Ocean

### Introduction

Pangani is one of the eight districts of Tanga Region in Tanzania. It is bordered to the North by the Muheza District, to the East by the Indian Ocean, to the South by the Pwani Region and to the West by the Handeni District. According to the 2012 Tanzania National Census, the population of the Pangani District was 54,025 (26,870 males and 27,155 Females). Pangani is a town in northeast Tanzania (5°24'0"S 38°59'0"E) that lies 45 km south of Tanga, at the mouth of the Pangani River.

The District is administratively divided into 13 wards: Bushiri, Bweni, Kimang'a, Kipumbwi, Madanga, Masaika, Mikinguni, Mkalamo, Mkwaja, Mwera, Pangani A (West), Pangani B (East), Tungamaa and Ubangaa wards.

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### Fishing

Pangani District is dominated with Agriculture and Fishing as economic base for its development. Fishing is taking place in Indian Ocean and River Pangani. The valley of the Pangani River extends south of the Usambaras in a north-west/south-east direction.

The Pangani River Basin is of the size of about 43,650 km<sup>2</sup>, with about 5% of this area in Kenya, and the remainder distributed across the Arusha, Manyara, Kilimanjaro and Tanga regions of Tanzania. The Pangani River system drains the southern and eastern sides of Africa's highest peak, Mt. Kilimanjaro (5,985 m) as well as Mt. Meru (4,566 m), then passes through the arid Masai Steppe, draining the Pare and Usambara Mountains before reaching the coastal town of Pangani, marking its estuary with the Indian Ocean.

Fishing is largely carried out along the coastal belt within a stretch of about 210 kilometers. It is narrow and being only 3 to 5 nautical miles wide between Tanga and Pangani. The stretch widens in the northern part of Tanga and southern part of Pangani and maximizes its distance (NorthSouth) to about 25 nautical miles.



Fish is a particularly important resource for people living in Pangani. First, fish is an important food for combating undernourishment and malnutrition as it contains unique nutrients. Second, artisanal fishery provides employment and a livelihood to the people.

However, the health of fisheries and ocean ecosystems are increasingly being put at risk by overfishing, as well as illegal, unreported or unregulated fishing. Also, high proportion of the fish caught is lost because of a lack of refrigeration and transport facilities and inappropriate processing facilities and techniques. Illegal, unreported and unregulated fishing (IUU) is also restricting local fish supplies. Furthermore, fishermen frequently do not have access to technical resources, loans and advice that give them the means to establish sustainable management practices. Local authorities often do not have the necessary administrative capacities to implement registration and control systems.

### **Overall Objective**

Fisherfolks has access to more fish products and a higher income derived from sustainable artisanal fisheries that conserve resources.

### **Specific Objectives**

- To establish Sustainable Fishing Trainings Centre for Socio-Economic and ecological sustainability
- To transform Fisherfolks from Subsistence Fishing to economic fishing practices through added values of the fishing and fishery products
- To establish the fishing zone where the fish population does not decline over time because of fishing practices
- Ensuring availability of improved fishing gears and equipments for Fisherfolks of the targeted area.
- To promote information collection and sharing for marine safety
- Expected outputs
- Established Sustainable Fisheries Training Centre
- Active and strong Beach Management Units (BMUs) in all fishing villages of Pangani District
- Community participation in Marine Resources Sustainable Management increased
- Increased Fisherfolk income as fish catches and market situation improved
- Activities
- Supporting establishment of the Sustainable Fisheries Centre
- Designing and running trainings (theoretical and practical) for Sustainable Fishing
- Supporting establishment of Non-Profit Fishing Gears shop
- Training fishers on fish processing and storage techniques to overcome post harvest loses
- To support fishers with fishing gears, fish processing and storage facilities
- To procure ice production machine
- Support Certification scheme for active and responsible BMUs and individuals

- To mobilize Fisherfolks for establishment of Revolving Fund Scheme

### Target group and community setup

The target beneficiaries in this project will include entire population found in Pangani Fishing areas, include areas named; Pangani town, Kigombe, Kimang’ a, Matakani, Mwera, Kikokwe, Kigurusimba, Mkwaja, Sakura, Ushongo, Kipumbwi, Buyuni and Bweni. The project will concentrate working with youth groups, women and fishermen in groups and individually and implementation will be through the Beach Management Units (BMUs). The project will also closely collaborate with the Pangani District Council and other important stakeholders to be thought as important for the success of this project.

### DETAILS ABOUT PANGANI FISHING AREAS

S/N	QUESTIONS	DESCRIPTION/ANSWERS
1	How many fishermen and vessels are there in the area?	According to the PANGANI Fishery Department, there are 6,084 local fishermen and 450 vessels in which 60 vessels are somehow advanced and remained made poorly or locally.
2.	What do fishermen do with the catch today? Is there more than local market?	Use local catchment vessels and gears. There is another market across the district and country. Some of fishing products like prawns, lobster, mangrove crabs and sardines are traded across the country and to the hotels allocated along the area.
3	Do you know how many tons of fish are traded annually in the district? Do all the 13 wards have an active fishing? Can you draw a map draw your own map of the district with points where fishing, sea and river take place?	Yes. Fish traded annually in district is 11,738 kgs, sardines are 308,200 kgs  Yes. Only 9 wards are active for fishing activities, to mention; Bushiri ward along river Pangani, Kimang’ a ward along Indian ocean, East and west Pangani wards along Indian ocean and river Pangani (because they boarder with river Pangani and Indian ocean at the same time) Mikunguni ward along Indian ocean, Kipumbwi ward along Indian ocean and Mkwaja ward along Indian ocean. In which there are 12 villages which are involved in active fishing.
4	Are there the same fishermen who fish on the river and out in the sea? Or is there a significant fishing up in the river? I can see villages up the river all the way up at Mkalamo ward I cannot find names of villages and not see vessels. Is there a better overview?	Yes, the same fishermen fishes in the river and ocean.  There is significant fishing up in the river, however they only use local technologies and gears.  Mkalamo is not one of the ward involve in fishing simply it neither bordered with ocean nor river.
5	Have there been any fisheries projects in the district with international support previously?	Yes, there were projects carried out previously with international support. For example; Management Cost Environmental Management Program (MACEMAP) This project was aimed at empowering fishermen. The project ended on 2013. Another project was MASMA which aimed at gathering of

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		information for improving fishing and management of water resources.
6	How many years has the district's BMU been working?	BMU have been existed for 15 years and was started in 2003 after passing fishing Act in 2002 by Parliament.
7	How do I get to Pangani? From Dar or from Tanga, what is the easiest? There is a small airport in Tanga domestic, but maybe it's easier to take the bus from Dar?	The easiest way to take a bus from Dar to Tanga then Pangani because of minimizing cost. From Dar to Tanga then Pangani is only spending a day from Dar to Pangani but there is a bus from Dar to Pangani directly via Tanga city. There is small aareports in Tanga
8	Do you live you self in the city of Pangani?	Yes, I'm living with my family (a wife, a child and my uncle)
9	Can we have a phone call? Messenger or other media? I have more options; do you have any options for phone contacts via internet?	Yes, we can have phone call through my mobile number: +255 654768343 It is possible also by using Skype, even messenger

Source: Pangani District Council, 2018

Apart from the above data, we are waiting additional data for Kigombe Fishing area. Kigombe is not a part of Pangani District (It is at Muheza District). However, it is very important and very close fishing spot of Pangani District. That is why we included it to our program.

**SURVEY PLAN AND TIME SCHEDULE**

PROPOSED TIMETABLE FOR PANGANI FISHERY PROJECT BASELINE SURVEY (OCTOBER 2018)				
DATE	ACTIVITY	AREA OF EVENT	ACTIVITY DESCRIPTION	PARTICIPANTS
8th - 10th Oct	Visiting Zanzibar	Zanzibar	As we discussed, Visiting Zanzibar was agreed to be important for finding out the opportunities available for business fishing	KURT & SAMLI
11th Oct	Travel from Zanzibar to Pangani	Zanzibar	Boat trip will be used from Zanzibar to Pangani	KURT & SAMLI
12th Oct	Office Signing, Introductions and Meeting PHDO Executive Members as well as Staffs	Visiting PHDO Office, District Commissioner, District Executive Director as well as Immigration Offices	Protocallity we have to report to these Offices to make them aware on the presence of our guest and undertaking government procedures	KURT&PHDO Comrades
13th Oct	First day of SURVEY	BUYUNI AND MKWAJA fishing sites	Community will be gathered in their fishing sites for data collection purposes (Because of the distance and road condition, our night is proposed to be taken at Mkwaja Village)	KURT & WORKING TEAM
14th Oct	2nd day of Survey	MIKOCHEMI & SANGE fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
15th Oct	3rd day of Survey	KIPUMBWI fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
16th Oct	4th day of Survey	STAHABU & USHONGO fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
17th Oct	5th day of Survey	KIKOKWE & PANGANI MAGHARIBI fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
18th Oct	6th day of Survey	PANGANI MASHARIKI, CHOBA, BOZA & KIMANG'A fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
19th Oct	7th day of Survey	BOAT TRIP ON PANGANI RIVER (To be covering MATAKANI, POMBWE & KIGURUSIMBA fishing sites)	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
20th Oct	8th day of Surver	KIGOMBE & MWARONGO fishing sites	Community will be gathered in their fishing sites for data collection purposes	KURT & WORKING TEAM
21st Oct	Weekend leave	PANGANI town	To have social interaction and other town businesses	KURT & WORKING TEAM
22nd Oct	MEETING WITH IMPORTANT STAKEHOLDERS at the district level	PANGANI	Professionals from district departments, NGOs, and other Important stakeholders are to be invited to discuss and have their overviews on the sector. Here we will have to do presentation on the excrise and the targeted future plans.	KURT, WORKING TEAM AND INVITEES
23rd Oct	GENERALIZATION & REPORT WRITING	PHDO Office	Gathering information, data collected and writing report of the whole Baseline Survey findings	KURT & WORKING TEAM
24th Oct	Travel back to Zanzibar	PANGANI TO ZANZIBAR	Kurt has to travel to Zanzibar then on 25th Oct to have fly back to Denmark	KURT

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**LINKS**

- <http://extwprlegs1.fao.org/docs/pdf/tan168881.pdf>

<sup>1</sup> Ring-net is also called "Purse-seine" but nowadays the concept of purse-seine is connected to big vessels using nets in open sea with heavy machinery and technology. The ring-net used here is big net, compered with all other local nets, but the ring-net very effective in shallow water because it covers the whole water area from bottom to surface.

<https://www.findafishingboat.com/article/seine-net-explained>

