




Community Governance and Fishery Performance Diagnostics Case Studies

Shimoni–Wasini – Kibuyuni

Kenya

Mwambao Coastal Community Network

with

Maliasili Initiatives

July 2013

Report commissioned by:

IDDRA
Fisheries, Economics, Policy and Management

Registered Address:
88 Northern Road
Cosham
Portsmouth PO6 3ER
UK

Website: *www.iddra.org*

Study carried out by:

Mwambao Coastal Community Network

Registered Address:
PO Box 3810,
Shangani, Zanzibar
United Republic of Tanzania

Mwambao Coastal Community Network is a Tanzanian network formed to promote sustainable community-based management of coastal resources, thereby building community resilience to environmental change. MCCN works on the principle that the ability of communities to build livelihoods and reduce their vulnerability is critical in enabling them to protect local ecosystems.

Website: *www.mwambao.or.tz*

With

Maliasili Initiatives Inc.

Registered Address:
PO Box 293 Underhill VT 05489
United States of America

Maliasili Initiatives supports and facilitates community-based natural resource management by helping enable local organizations and social entrepreneurs assist communities to secure stronger rights over natural resources, to improve natural resource governance and stewardship, and to promote sustainable local resource-based enterprises.

Website: *www.maliasili.org*

CONTENTS

Index of Questions

List of Tables

List of Figures

Abbreviations and Acronyms

BMU	Beach Management Unit
CBO	Community Based Organisation
CCA	Community Conservation Area
CFM	Collaborative Fisheries Management
CORDIO	Coastal Oceans Research and Development in the Indian Ocean
CPUE	Catch Per Unit Effort
FiD	Fisheries Department in Ministry of Fisheries Development
EAWLS	East African Wildlife Society
EEZ	Exclusive Economic Zone
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organisation
FFI	Fauna and Flora International
FPI	Fishery Performance Indicator
KCDP	Kenya Coastal Development Project
KEFRI	Kenya Forest Research Institute
KFS	Kenya Forest Service
KWS	Kenya Wildlife Service
KMFRI	Kenyan Marine and Fisheries Research Institute
KSMMPR	Kisite-Mpunguti Marine Park and Reserve
MCD	Marine and Coastal Fisheries Directorate
MCCN	Mwambao Coastal Community Network
MENR	Ministry of Environment and Natural Resources
MALFD	Ministry of Agriculture. Livestock and Fisheries Development
MoD	Ministry of Fisheries Development (former, now merged as above)
MI	Maliasili Initiatives

MPA	Marine Protected Area
MR	Marine Reserve
PRA	Participatory Rural Appraisal
PRSP	Poverty Reduction Strategy Paper
RBFM	Rights-Based Fisheries Management
RECOMAP	Regional Management for the Sustainable Management of the Coastal Zones of the Indian Ocean
SSF	Small Scale Fisheries
WCS	Wildlife Conservation Society
WIO	Western Indian Ocean
WIOMSA	Western Indian Ocean Marine Science Association
WWF	World Wide Fund for Nature

1 BACKGROUND

1.1 Aims and Structure of the Report

The project has two main aims:

1. The most important is to document and evaluate some empirical examples where Rights-Based Fisheries Management (RBFM) systems have been, or are being, set up in African communities, particularly where these systems are economically, ecologically and socially sustainable.

2. A second aim of the project is to document the nature of SSF in the case study countries, focussing broadly on whether such fisheries are essentially commercial or subsistence in nature and how the benefits that they provide are perceived at different levels.

The Case Study follows the suggested template shown below:

1. Characterisation of SSF
    - At the national level
    - At the case study level
2. Legal and institutional framework for case-study community rights
3. Performance of case-study community fisheries
    - Use of World Bank Fisheries Performance Indicators (FPI)
    - Other indicators (if necessary)

Key case study questions have been presented in italics within the text***(highlighted and numbered 01., 02., 03. as such).***

1.2 Methodology

To collect the information required for the case study community, to answer the questions provided in the template, and to inform the FPI process, a short period of field work was undertaken in the chosen study area of Shimoni on the South Kenya coast, the project area of the Darwin funded East African Wildlife Society (EAWLS) / Fauna and Flora International (FFI) project (2009-2011) and incorporated visits to three contiguous BMUs.

Fieldwork was undertaken by Lorna Slade and Ali Thani of Mwambao Coastal Community Network accompanied by EAWLS project staff.

As a result of the restricted time period in the field, only three of the seven project communities were selected for survey; these are the three neighbouring communities of Shimoni, Wasini and Kibuyuni.

In order to collect the information required a series of semi-structured interviews, key informant interviews and focus groups were carried out in the communities and with selected government officials. Approximately two days were spent in each of the selected communities.

Meetings (interviews) were held with the following persons/groups in each community:

- Each BMU Executive Committee (a minimum. of five members interviewed including at least one woman)
- Members of the BMU Assembly (wider membership – five members)
- Women's groups associated with the BMU (only Wasini and Kibuyuni)
- Fish processors (only Shimoni)
- Company agents (two agents representing TransAfrica Fisheries Ltd and Sea Harvest (K) Ltd were met in Shimoni but service the wider area).

Further interviews were given with key informants and are listed below:

- Ms. M.Barabara Principal Fisheries Management Officer, Mombasa
- Mr. J. Njuguna and Mr. C. Odindo (Fisheries Officers) Kwale County
- Mr. A. Makame Chair BMU network (and Vice Chair Mkwiro BMU)
- Village Chair Kibuyuni BMU
- EAWLS staff (Mr N. Amoyo and Ms.A. Ogada)
- FFI East Africa Office (Ms J. Juma and Dr R. Lamprey)

A PRA exercise known as the '3 R's' (Rights, Responsibilities and Revenues) was modified to include Resources (4R's) and was conducted both with all three BMU Assembly groups and with the women's groups and the fish processing group. This exercise involves brainstorming (and listing on a chart) rights, responsibilities, revenues and resources, followed by a scoring exercise where each participant gives a score out of ten (using beans as counters) for their perception of the level of each (where one is low and ten is high). The scores are summed and converted to percentages and recorded on the chart (chart shown below).

Figure 1: An example of the chart used for carrying out the '4R's' exercise (Rights, Responsibilities, Revenues and Resources)during the field study

RIGHTS	**RESPONSIBILITIES**	**REVENUE (HOUSEHOLD INCOME)**	**RESOURCES (STATE OF NATURAL RESOURCES)**
10 YEARS BEFORE BMU			
Notes Score	Notes Score	Notes Score	Notes Score
AFTER THE BMU (NOW)			
Notes Score	Notes Score	Notes Score	Notes Score

Additional meetings were held with other organisations working with marine fisheries on the Kenya coast including CORDIO and WCS (email consultation) to verify information collected and to gauge the representativeness of the study site within the wider Kenya coast.

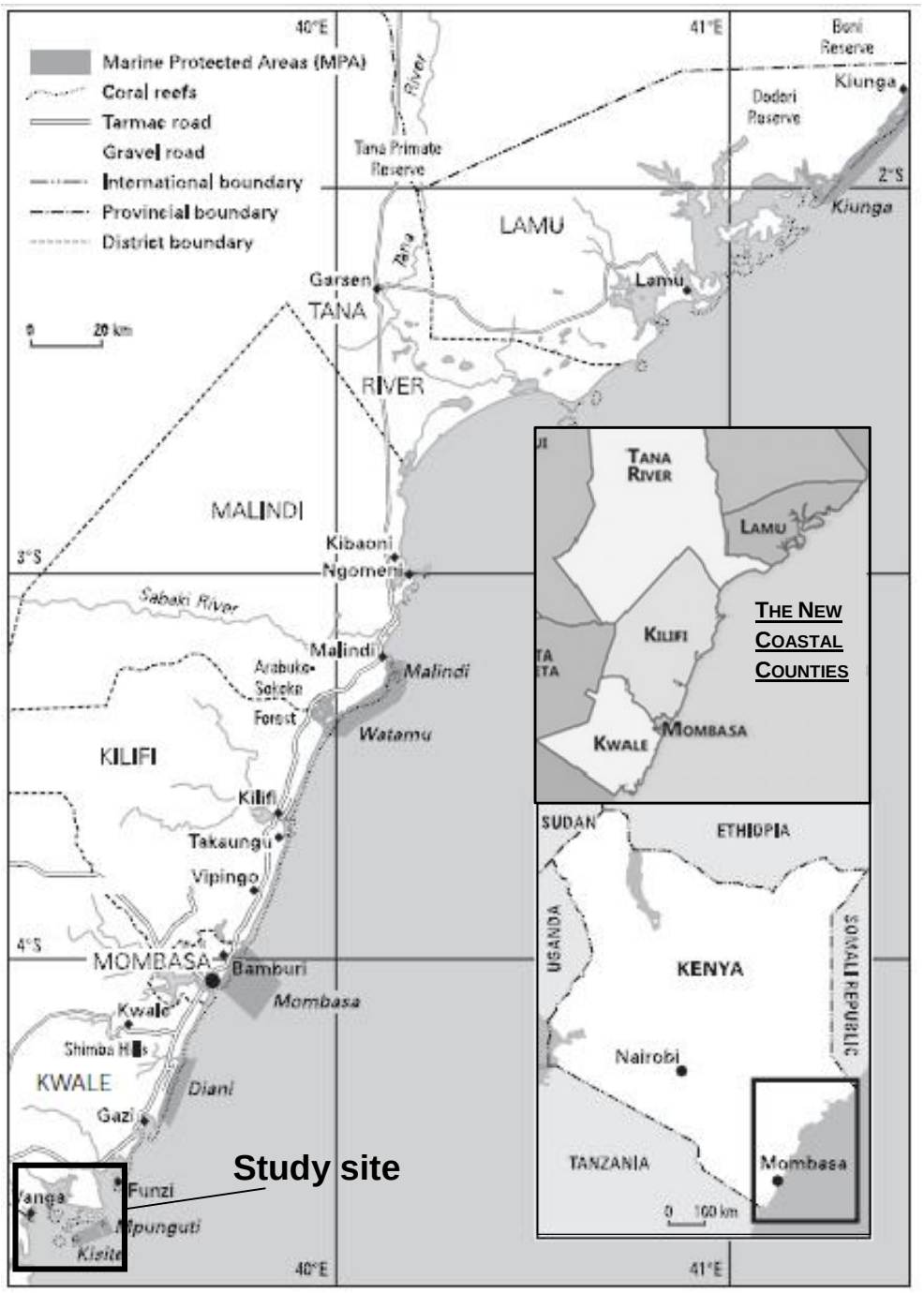
Fieldwork was carried out over 1-10th July 2013, including a visit to FFI offices in Nairobi.

2 CHARACTERISATION OF SMALL-SCALE FISHERIES

2.1 National Level

The Kenyan coast lies between latitudes 1°-5° south, stretching from Kiunga on the border with Somalia in the north to Vanga on the border with Tanzania in the south: an estimated 600 km of coastline. Kenya's marine inshore fishing grounds include the rich grounds around Lamu

Figure 2: The Kenyan Coast and location of the study site (see Section 3).



an important part Archipelago, Ungwana Bay, North Kenya Bank and Malindi Bank. This "inshore" fisheries zone is an important part of the whole Kenya coastal fishery and is exploited predominantly by artisanal fishermen. Two major rivers flow into the Indian Ocean north of

Malindi; the Sabaki River flows through the Athi and Tsavo regions and the Tana River traverses the Mount Kenya area and North-east Province.

The coastline encompasses a diversity of habitats including rocky cliffs, sandy shores, creeks, estuaries, mangrove swamps, sand dunes and coral reefs. To the south of the Sabaki River the main characteristics are a fringing reef, the coastal strip, and nearby coastal uplands. To the north, the main features are lowlands and river deltas, islands and creeks. The hinterland consists of an extended shrub zone that is sparsely inhabited and separates the coastal plains and uplands from the fertile highlands in the centre of the country.

The seasons are governed by the trade winds with the hot north-east monsoon (*kaskazi*) and the cool south-east monsoon (*kusi*)[1]. The marine waters harbour numerous species of reef fish as well as sharks, billfish, sea turtles and the endangered dugong. In 2008, ten percent of Kenya's population lived in the coastal area with an estimated 3.1 million in Coast Province; this is a marked increase from 1948 when the coast province had a recorded 501,121 people (Hoorweg and Muthiga 2009). The southern part of the coast has more rainfall and better soils and the majority of the population (80%) lives in the former Kwale, Mombasa, Kilifi and Malindi districts. Under recent government restructuring these districts are now part of Kwale, Mombasa and Kilifi Counties. Most of the population growth in Coast Province in the past 60 years has occurred in these districts.

Table 1: Population statistics of the Kenya's coastal counties (Source: Wikipedia[2])

County	Area (km^2)	Population (2009 Census)	Population Density (Capita km^{-2})
Mombasa	212.5	939.370	4420.6
Kwale	8270.3	649,931	78.6
Kilifi	12,245.9	1,109,735	90.6
Tana River	35373.8	240,075	6.8
Lamu	6,497.7	101,539	15.6

[1] 'Kaskazi' – NE monsoon, light wind blows Nov- Mar; 'Kusi' – SE monsoon, strong wind blows Jun-Sept

[2] http://en.wikipedia.org/wiki/Counties_of_Kenya

2.2 The Macro-economic Role of the Fisheries Sector

(01) What is the macroeconomic role that the fisheries sector in general is expected to play? For instance, is fishing included in the poverty reduction strategy paper (PRSP) and if so what objectives are assigned to the sector? If not is there a national fisheries strategy and policy document, and how does this relate to the macro-economy?

Kenya's fisheries resources comprise both freshwater and marine, with freshwater landings from Lake Victoria accounting for more than 90% of total landings [3](Kamau et al. 2007). At this time the annual average total fish production in Kenya was estimated at 200,000 metric tonnes (Mt) with the fisheries sector contributing about 5% to the country's gross domestic product. In 2004, the sector raised KES 8 billion (equivalent USD100.7 million) which supported the livelihoods of about 500,000 people (Kamau et al. (2007) from FiD).

Marine fisheries in Kenya are separated into nearshore and deep sea fisheries, the former being exploited by subsistence and artisanal fishers while offshore deep sea fishing is relatively underexploited and due to lack of local capacity, is conducted by foreign vessels with Kenya licences(Global Fish Alliance, 2013). Annual marine catches have fluctuated between 4,000 and 10,000 Mt over more than a 20-year period. In the 1970 period two studies estimated the potential yield of the demersal fishery outside the reef to be 5,000-7,500Mt (Kamau et al, 2007). Information about the potential of the marine fishery varies considerably. The Fisheries Department estimates the total marine potential at 350,000Mt/year while FAO (1990) estimated the potential annual marine catch at 20,000Mt with the reef fisheries contributing 12,000Mt of that.

Malleret-King et al (2004) state that the lack of information on the value of the marine fishery contributes to the underestimation of its importance. They estimate a conservative value of GBP 2.07 million (USD 3.19 million) per year which does not include the commercial and non-reef artisanal fisheries. Because of the unreliability of statistics they consider this valuation to be extremely tentative and conservative.

The Fisheries sector is mentioned in the Poverty Reduction Strategy Paper (PRSP) (GoK 2004) as key to Kenya's "Economic Recovery Strategy for Wealth and Employment Creation 2003-2007". The document states, *"Freshwater and marine fisheries have significant growth potential in improving the livelihood of communities of Western and Coastal regions of Kenya, and they are a source of foreign Exchange earnings. The government is committed to developing an enabling environment to ensure sustainability in fisheries development and management."*(GoK 2013).

Meanwhile in the 2012 PRSP progress report little reference is made to fisheries apart from the Government stating they *"...will continue to create an enabling environment for the private sector to invest in the six key sectors identified to achieve higher economic growth over the medium-term*": i.e. they will continue to support fisheries, forestry and mining, and protect the environment and natural resources (GoK 2012).

The national Fisheries Development Policy (2008) acknowledges that the Oceans and Fisheries sector plays an important role in the global economy. In Kenya, the sector provides food,

[3] Lake Victoria was estimated to contribute 92% of total fish production in Kenya in 2007.

employment and incomes to a large population and earns the country KES 5 billion (USD 57.6million) annually from the foreign exchange (this includes freshwater fishery figures). Kenya's annual fish production is valued at approximately KES 8 billion (USD 92.2 million) at ex-vessel price. These earnings are likely to increase if the underexploited areas such as Aquaculture and the Exclusive Economic Zone (EEZ) are tapped.

It is estimated that up to 53% of the marine fishery is not accounted for (Waweru pers. comm. 2013). The BMUs are mandated with data collection but this is not taking place. This lack of data is a concern in that it has resulted in a lack of investment by the government in the development of the marine fishery and the appropriate low allocation of county budgets for fisheries development.

2.3 Small-Scale Fishing

(02) What is the definition of "small-scale fishing" in the national legislation? Is there a separate formal definition for subsistence fishing? Otherwise what would be the understanding of the difference between the two terms?

The majority of the marine fishing on the Kenya coast is regarded as 'small-scale artisanal' operating in the near-shore waters and confined to a strip of 2.5 to 3.0 nautical miles inside the offshore barrier reef (Maina 2012). Because the marine fishery is predominantly small scale and artisanal, the legislation is largely aimed at small-scale fishers.

There would appear to be no formal definition of "small-scale fishing" or "subsistence fishing" in the national legislation. For the purposes of this paper the term 'small-scale fisher' has been adopted as there appears to be no meaningful distinction made between the two in the Kenyan context.

Regards ownership of the fishery resource, Swan in the draft of the Fisheries Management and Development Act 2011 states:

> ***23.*** *(1) All fisheries and fisheries resources in Kenya, except where these are owned by private persons, are a property and a heritage of the people of Kenya and are held in trust by the State, subject to any rights of user in respect thereof, which by or under this Act or other written law, are granted to any other person.*
>
> *(2) Nothing in this Act shall be deemed to prevent any member of the community from using, subject to such conditions as may be prescribed, such fisheries or fisheries resources as it has been the custom of that community to use, otherwise than for the purpose of sale.*
>
> (Note: this bill is still under development)

2.4 The Perceived Benefits of the Fishery Resource

(03) What are considered to be the main benefits in general from fish resource exploitation? How are these benefits perceived at the national level in the case of SSF?

The economic benefits of small-scale fisheries have already been discussed including their contribution to the national economy and their perceived future value. Fisheries provide employment both directly and indirectly throughout Kenya. FAO (2005 – Global Fisheries Alliance) estimate that were 63,000 fishers in Kenya supporting a further million people directly and indirectly working as traders, processors, suppliers and merchants of fishing accessories and their employees and dependants.

The 2008 national fisheries policy (GoK 2008) estimates that there are at least 80,000 people working as fishers and fish farmers. The sector also provides livelihoods for about 2.3 million Kenyans involved mainly in fish processing and trade. Further figures are provided in the section below on Small Scale Fisheries (SSF) statistics.

Tourism and shipping are the highest contributors to the coastal economy, contributing 45% and 15% respectively. The artisanal fishery lands 95% of the total marine catch, contributes 6% to the coastal economy, and is the main source of livelihood for more than 60,000 households. However, there is growing concern about over-exploitation and the associated declining catch within inshore marine fisheries, while the offshore deep sea fisheries have remained largely unexploited by Kenya (State of the Coast Report 2009, ReCoMaP).

2.5 Small Scale Fisheries in the Fisheries Policy

(04) Does the fisheries policy provide different objectives for SSF compared to other kinds of fishing? If so, why?

The National Fisheries Development Policy (2008) does not provide explicitly different objectives for SSF. It has the overall objective, "*...to enhance the fisheries sector's contribution to wealth creation, increased employment for youth and women, food security, and revenue generation through effective private, public and community partnerships*". This policy focuses on the promotion, implementation and monitoring of sustainable management and responsible fishing practices. It also focuses on the promotion of fish consumption as a means increasing food security, employment, income, foreign exchange earnings, arising from trade and related activities. It aims at securing the rights of vulnerable and traditional fisher communities. This policy further states the Government's commitment to promote gender equity, and to integrate HIV/AIDS prevention and management. It applies the following guiding principles in developing the fisheries policy:

(i) Good governance (co-management and transparency)
(ii) Ecosystems approach (holistic approach to resource management)
(iii) Pro-poor
(iv) Precautionary approach (taking management measures based best available information),
(v) Public private partnership,
(vi) Sustainability and environmental integrity,
(vii) Subsidiarity (making and implementing decisions at the most relevant levels)
(viii) Equity (generational equity, fair access and use of resources)

In Chapter 4 of the Fisheries Policy, the following issues that concern small-scale fishers are identified for focus:

(4.12) Human Resources Development
(4.12.1) The Government will encourage training of young people to join the fishing industry and develop means to improve working conditions and the income earning capacity of artisanal fishermen.
(4.13.2) The Government will promote public awareness and active participation of all stakeholders in the management and development of fisheries and oceans
(4.2.4) The Government will promote the role of Beach management units (BMUs) in the management of fisheries resources.

(05) What particular measures apply in the case of small-scale fishing?

Particular measures that exist to accommodate small-scale fishing are primarily encompassed in the Fisheries Act (GoK, 2012) Beach Management Unit Regulations (2007) and these are explained further in the governance section of this document.

In the Fisheries Regulations, a Beach Management Unit is defined as:
'..an organization of fishers, fish traders, boat owners, fish processors and other beach stakeholders who traditionally depend on fisheries activities for their livelihoods'.

The Fisheries Regulations state that the Director of Fisheries shall facilitate the establishment of a beach management unit for each fish landing station. In the Regulations the stated objectives (p.146) of a beach management unit are to:

(a) Strengthen the management of fish-landing stations, fishery resources and the aquatic environment;
(b) Support the sustainable development of the fisheries sector;
(c) Help alleviate poverty and improve the health, welfare and livelihoods of the members through improved planning and resource management, good governance, democratic participation and self-reliance;
(d) Recognise the various roles played by different sections of the community, including women, in the fisheries sector;
(e) Ensure the achievement of high quality standards with regard to fish and fishery products;
(f) Build capacity of the members for the effective management of fisheries in collaboration with other stakeholders; and
(g) Prevent or reduce conflicts in the fisheries sector.

2.6 Small-Scale Fisheries Statistics

(06) Please provide figures for the <u>number of people</u> engaged in SSF and subsistence fishing, giving separate figures for men and women and differentiating between activities (e.g. fishing, trading, processing – or finer breakdowns if these exist). In order to develop some idea of trends in numbers, it would be useful to have a time series of data going back 5 or 10 years, with even earlier years if possible.

By law, fishers are required to register with the Fisheries Department every year. These figures give an indication of fisher numbers but they are recognized as being an underestimate as not all fishers do register and many sites are inaccessible (Malleret-King et al., 2004). In 1989, estimates for the number of fishers along the entire coast varied from 5,000 to 12,000 (Ministry of Tourism and Wildlife 1989). McClanahan and Obura (1995) suggested a figure of 8,000 at that time. Mallaret-King et al. (2004) estimated a number higher than 5,231 (2.2% of the male population) although data for Lamu District was not included. More recently Kamau et al. (2012) estimate that the marine sub-sector is host to 12,000 fishers of which 95% are artisanal.

Mallaret-King estimated that the number of people dependent on fishing (5-7 individuals per fishing family) could vary in total between 25,000 and 56,000 excluding fish traders and their dependents. Using these figures and accounting for a further 1,000 people involved in fish selling and processing (estimated by Obura 1999), the total number of people depending on the coastal-marine fishery could be as high as 30,000 to 63,000. Finally Maina (2012) gives a figure for the number of coastal fishermen of 12,077 in 2008 estimating approximately 84,539 people directly dependant on artisanal fishers (using a dependency rate of 1:7). It is unclear whether any of these figures however include women fishers.

Benards (2010) in a study of south coast fisheries from Diani to Kinonga found that the role of women has been largely overlooked in the literature. He found that while fishing using vessels was almost exclusively carried out by men, women predominantly dealt with the fish – buying from the sellers and reselling. He recorded some change with the emergence of fish dealers who buy the fish in large quantities and sell further afield. Further he found that women were very active nearshore collecting shellfish, shrimps and oysters.

In terms of family income, Benards found that artisanal fishers engaged in different occupations with the majority of them carrying out subsistence farming also with maize, cassava and fruits such as mangos being the most common. Women, as well as being involved in buying and selling of fish catches and gleaning along shore and in the mangroves, were also active in fish processing such as sun drying, smoking and cleaning. Others ran small retail shops selling basic items.

(07) Please provide figures for the <u>means of production</u> in SSF and subsistence fishing (e.g. shore gatherers, canoes, small liners (long lines, hand lines). In order to develop some idea of trends, it would be useful to have a time series of data going back 5 or 10 years, with even earlier years if possible.

The majority of fishers use non-motorized dug-out canoes, outrigger canoes and dhows with only an estimated 10% of vessels being motorized (Kamau et al. 2012). Data on powered boats is unsubstantiated but information gathered by Kamau et al. suggest that there are 32 purse seine vessels and 75 longliners operating under license from the Fisheries Department with no obligation to land, tranship or declare catches in the country. There is apparently only one Kenyan longline vessel which started operating in 2005. There appears to be no information

available on shore-gathering/gleaning, an activity undertaken by women and children (and some men) collecting shellfish, octopus and squid.

Table 2: A summary description of gear used by artisanal fishers (taken from Samoilys 2011)

Fishing Gear type	**Description**	**Main pelagic target families/species**
Hand line (*mshipi*)	A single monofilament nylon line attached to one or more steel hooks onto which bait are fixed	Jack/trevally (*Carangidae*), tuna/mackerels (*Scombridae*)
Longline – drop-lining and drift longlines (*zulumati*)	Single main line of nylon anchored and buoyed in a horizontal position on or near the bottom (set longlines), near the surface or at a certain depth (drift longlines) at times deployed vertically (droplining)	Tuna/mackerels (*Scombridae, Scomberomorus commerson*), Sharks (*Carcharhinidae*), swordfish (*Xiphiidae*), billfish (*Istiophoridae*)
Trolling (*mshipi wa kurambaza*)	Nylon monofilament mainline(s) used within the pelagic offshore waters beyond the fringing reef. The line is attached to either an artificial lure (*rapala*) or a baited hook and towed through surface waters.	*Scombridae; Scomeromorus commerson; Scomberoides* spp; barracuda (*Sphyraenidae*); dolphinfish (*Coryphaenidae*); billfish (*Istiophoridae*)
Set gillnets* (*jarife, nyavu ya kutega*)	Gill nets made of multi-filament nylon, suspended with floats and held vertically with sinkers. Set on or near the bottom but often catch pelagic	Sharks, rays, herring, sardines and also larger pelagic such as tuna and squid. Tuna/mackerels (*Scombridae, Scomberomorus commerson*), Sharks (*Carcharhinidae*), swordfish (*Xiphiidae*), billfish (*Istiophoridae*)
Drift gillnets (*jarife, nyavu ya kuogelesha*)	Gill nets made of multi-filament nylon with large mesh size and suspended mid water but drifting and/or connected to the operating vessel	Sharks, rays, tuna
Ringnets (*nyavu ya kufunga*)	A multifilament nylon mesh netting similar to a purse seine suspended from floats and weighted at the bottom to hold the net vertically in the water. A footrope threaded through metal rings at the bottom of the net is used to close the net (hence the name purse) to enclose a school of fish	Intended for pelagic; *Carangidae, Scombridae; Clupeidae, Engraulidae*
Cast nets (*kimia*)	Circular nets often made with monofilament nylon line, with weights attached around the edge. The usually comprise 3 parts; the upper section, the middle section and the weighted lower section. A foot rope is used to close the net during retrieval.	Sardines (*Sardinela*)
Beach and reef seine (*juya, buruta, nyavu ya kukokota*)	Small variable mesh sized nets made of multifilament nylon with a floatline and a weighted footrope. A section of larger-mesh netting on each wing of the net corals fish towards the smaller-mesh centre (codend) of the net.	Sardines, half beaks. (*Hemiramphidae*)
Fence traps (*uzio, rasaka, wando*)	Stationary semi-permanent traps and fences set in the intertidal zone. Usually made of mangrove stakes, plaited mats, or palm frond with midribs tied tightly together.	Sardines (*Sardinela*)

**Benards (2010) records an improved version of the set net where the nets are arranged in a manner that their mesh size is gradually reducing; the sinkers and floaters are arranged so that the nets can move at*

varied water depths. Fish are caught in relation to their size in the different nets and the net is used mostly to catch sardines and sprats (detail recorded in Tuda et al 2008).

Dugout canoes (*mitumbwi*) and sailboats (*mashua*) are the most common fishing vessels used by artisanal fishers. Other vessels include *hori* (flat bottomed fishing boats used in shallow waters and propelled by sail or paddle), *ngalawa* (pointed canoes with outriggers on both sides and propelled using sail) and *Mtanyingi* (*dau* - flat-bottomed craft with ribs on sides and floor). Okemwa et al. (2009) record 85% of fishing vessels in Shimoni as dugout canoes. The figure below shows numbers of craft recorded by the Fisheries Department 2008 (taken from Maina 2012). Most craft are small and do not go beyond the fringing reef during the southeast monsoon (May- August) due to the strong winds and rough seas. However the larger sailboats (*mashua*) and outrigger canoes (*ngalawa*) can withstand the rough conditions and travel outside the reef to fish for pelagics. They are mainly equipped with shark nets, drift nets, ringnets, other set gillnets and line gear (Okemwa et al. 2009).

Figure 3: Trend and type of fishing craft used in marine artisanal fisheries (from Maina FiD data 2008).

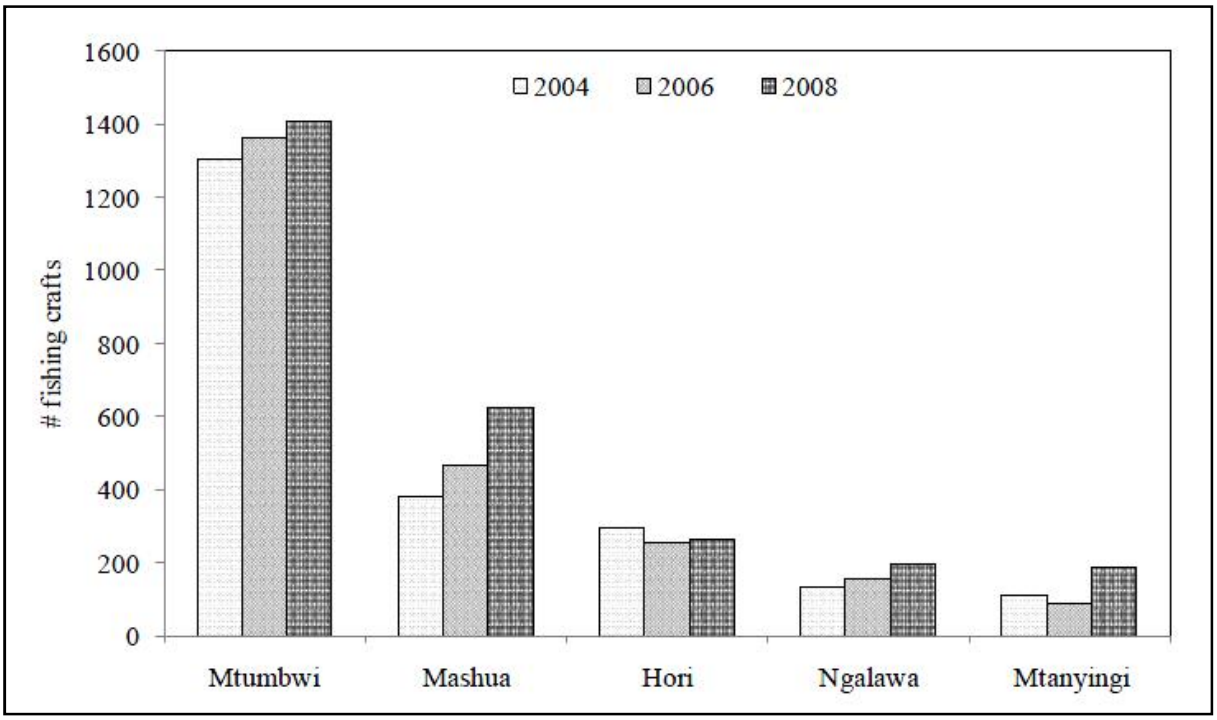
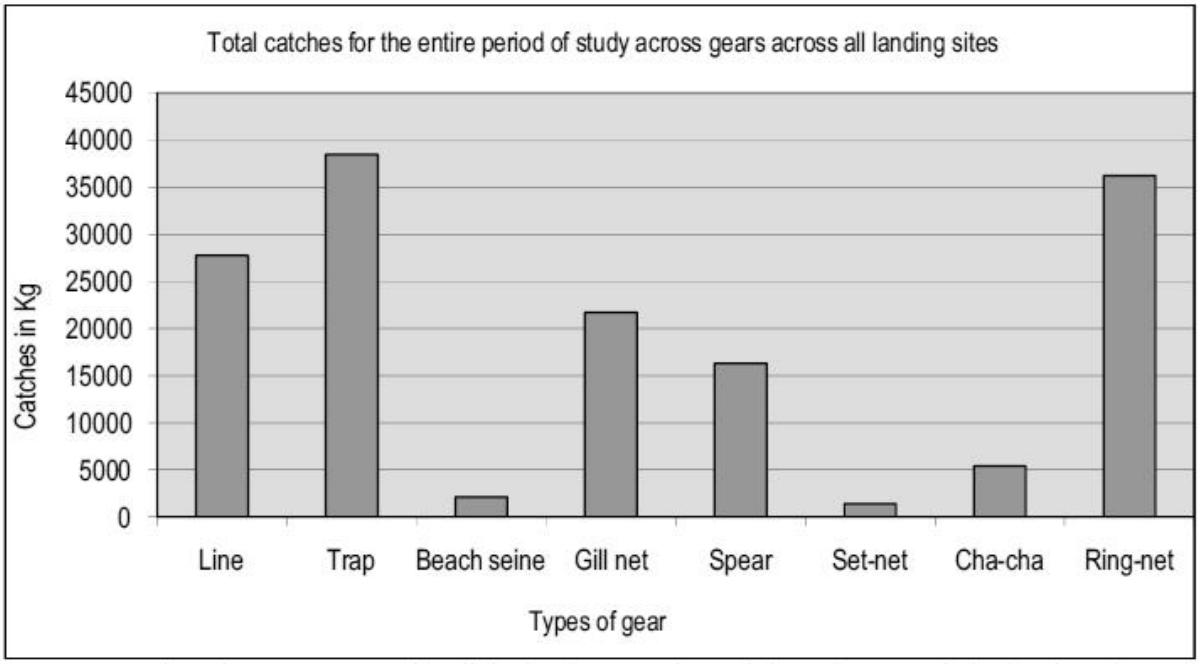


Figure 4: Total catches across gear for all 9 landing sites recorded by Benards in2010 – distributed over 23 months in 2003/2004



Benards (2010) in a study of the artisanal fisheries of the south coast over a 2-year period 2003-2004 targeted the Diani- Kinondo area covering nine fish landing sites just north of Shimoni. He visited the 9 identified landing sites twice a month for a 2-year period and collected data on vessels and catches. He compared CPUE for different gears at different landing sites; his results gave an estimated catch per unit area in the study area of 14tonnes/km of coastline per year. He compares this to the figure given by UNEP in 1998 which put the fish productivity of the Kenya coast of between 12-18 tonnes/km/year. Benards found that fishers shifted gears depending on the season, predominantly using traps during rough water seasons and gill nets during the calm water season. He also found that introduced fishing gear had higher yields and found increased used of ring nets in some locations (Gazi[4]) for this reason.

Benards found traps to be the most common gear with a count of 545 of all 1928 gears sampled within the 9 landing sites. Spears were next most common (23%) with both line and gill nets common (20% each of all gear).

[4]About 30km north of the study site.

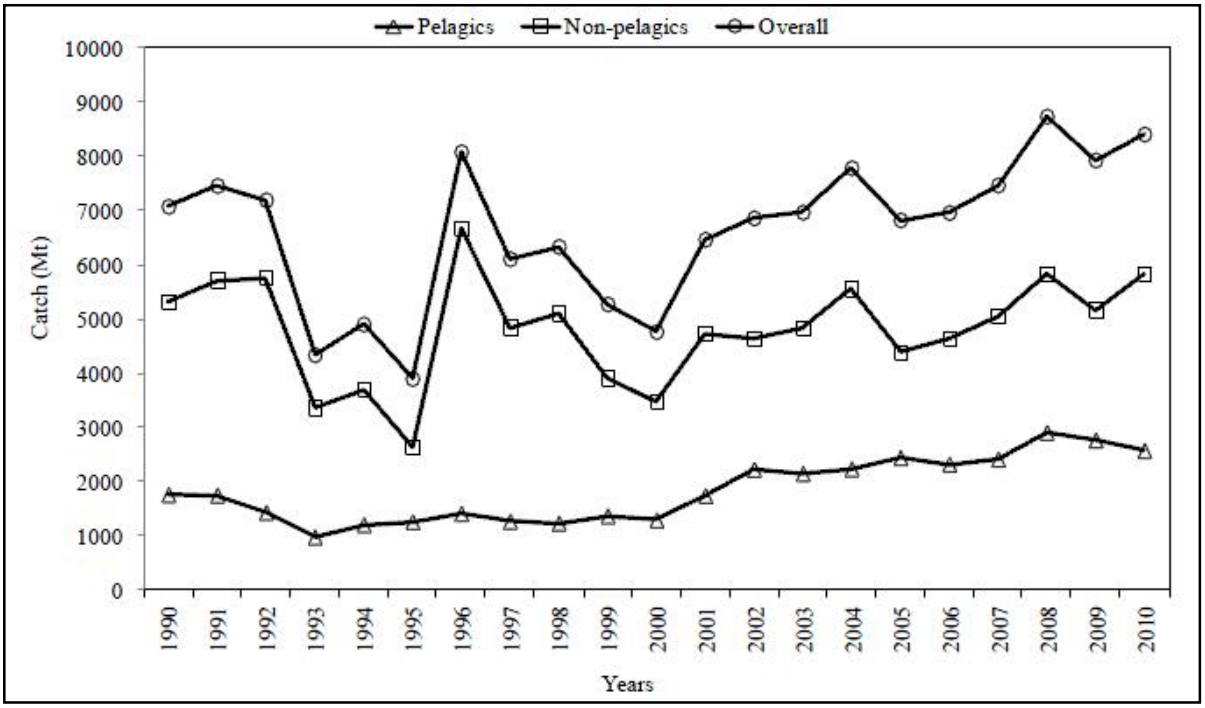
(08) Please provide figures for the <u>fish landings in volume and value</u> of SSF and subsistence fishing. In order to develop some idea of trends, it would be useful to have a time series of data going back 5 or 10 years, with even earlier years if possible

Fish are mostly landed and registered at landing sites. The figure below shows the number of landing sites per district and can be seen to have increased.

Table 3: Number of Landing Sites per District. Source FiD Frame Survey

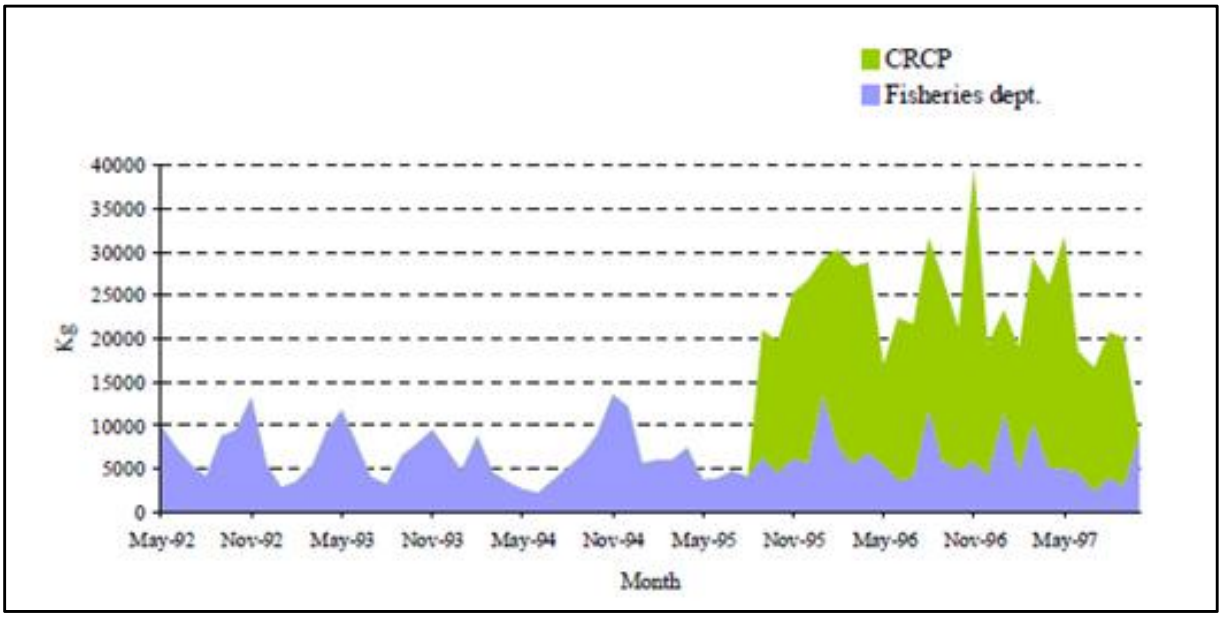
District / County	2004	2006	2008	2012
Lamu	22	22	21	19
Tana Delta	4	3	4	4
Malindi	12	16	23	31
Kilifi	14	15	26	29
Mombasa	23	28	29	31
Kwale	35	31	38	46

Figure 5: Annual catches from the marine artisanal fisheries over the period from 1990-2010 from Fisheries Department catch data (Maina 2012).



Annual catches from the artisanal fishery have been thought to have increased over the last 10 years. This is echoed by FiD data (see Figure 5) but is generally acknowledged to be significantly underestimated (Waweru pers. comm. 2013). The figure below illustrates the large discrepancy between FiD and CRCP fish landing data.

Figure 6: The difference between data collected by FiD and that collected by the Coral Reef Conservation Project in Diani. Source FiD adapted from Mallaret King (2004).



(09) ***Please provide figures for the <u>marketed output in volume and value</u> of SSF and subsistence fishing. Where possible please give an indication of product form and markets (especially local versus regional export versus international export). In order to develop some idea of trends, it would be useful to have a time series of data going back 5 or 10 years, with even earlier years if possible.***

Maina (2012), in an analysis of artisanal catch data from FiD found that demersal fish were the most dominant (>385Mt) with *Lethrinidae, Siganidae and Scaridae* being the most dominant families recording an annual mean of 448 Mt, 435 Mt and 230Mt respectively. The mean catch for pelagic species in the families *Carcharidae/Rhinobatidae*, *Clupeidae, Sphyrainidae* and *Scombridae* ranged from 127 Mt to 185 Mt.

Large pelagic species that include many of the migratory tunas and bill fishes are caught by both the artisanal and deep sea fleets.

Figure 7: Average marine artisanal fisheries catch by family from 1990-2010. Catches recorded as 'unaccounted for' and 'mixed/others' was combined and categorised as 'others'. (Source: Maina [2012] from FiD data.)

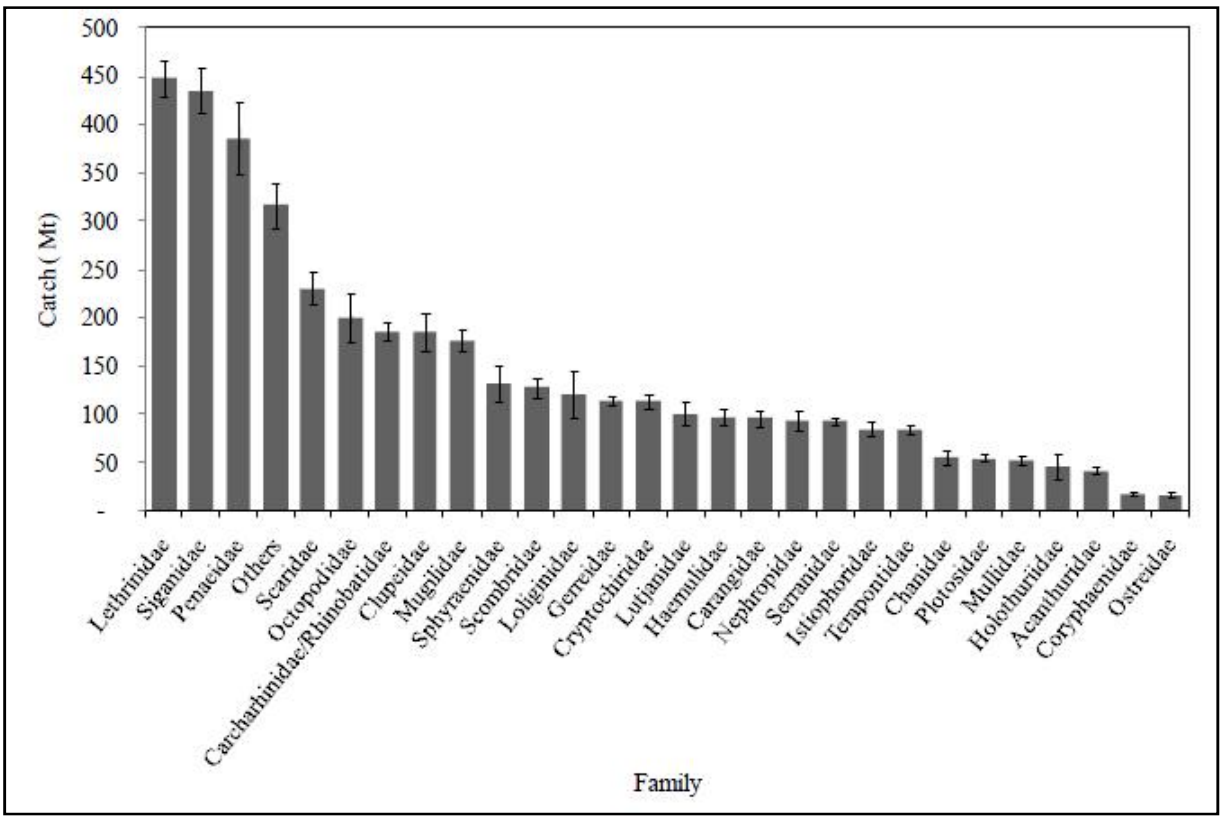
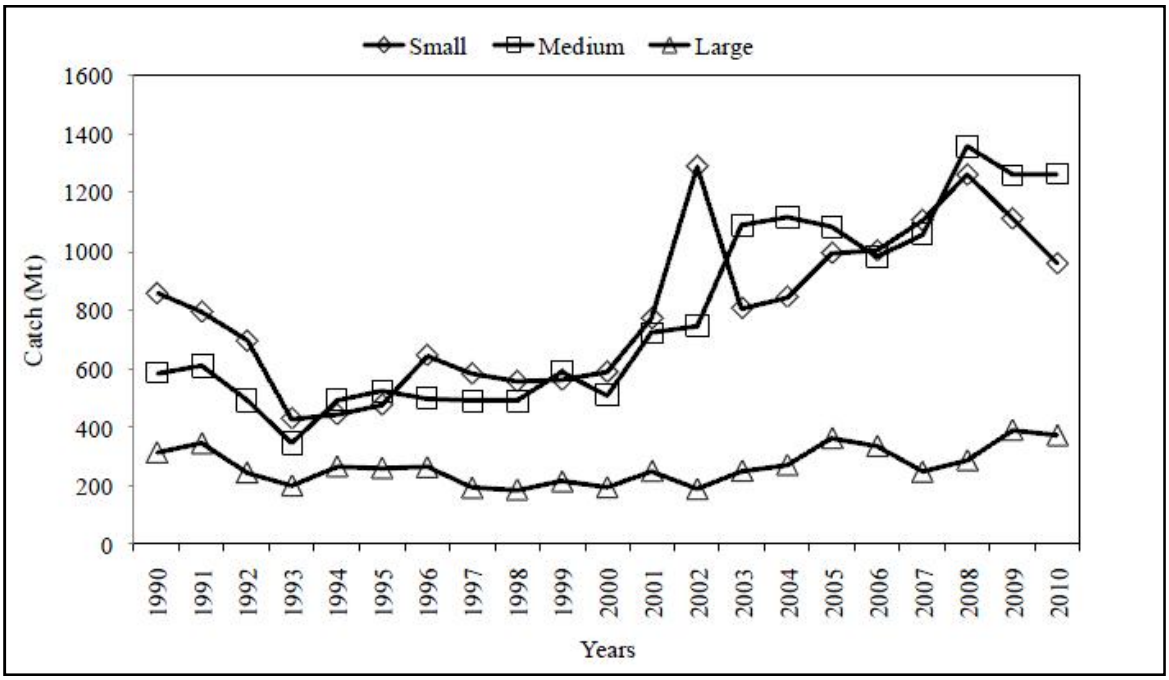
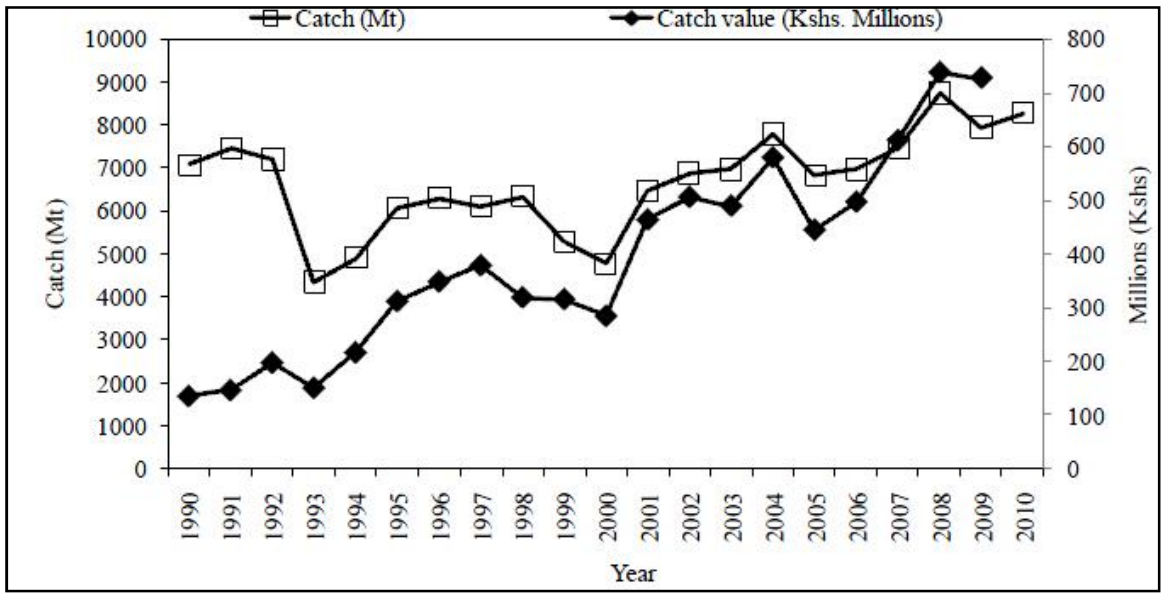


Figure 8: Annual yield of marine artisanal small, medium and large pelagic fishery, 1990 – 2010 as a proportion of annual catch; small pelagic fishery = 43.4%, medium pelagic fishery = 42.1%, and large pelagic fishery = 14.6%. (Source: Maina [2012] from FiD data)



Maina estimates that the artisanal marine fishery production has remained between 4,336 Mt 8,736 Mt annually over the last 20 years which is valued between KES135 million (USD 1.5 million) in 1990 and KES 737 million (USD 8.5 million) in 2008. There is an increased value of the catch which is attributed to increasing demand both for export and for the domestic market coupled with the improved quality of the fishery. The sale of fish to hotels, restaurants and retailers in urban centres has also contributed to fish value.

Figure 9: Quantity and value (million KES) of artisanal marine production in Kenya 1990-2010 (Source: Maina [2012])



Note: It is unclear to what extent inflation accounts for the increase in the monetary value of production.

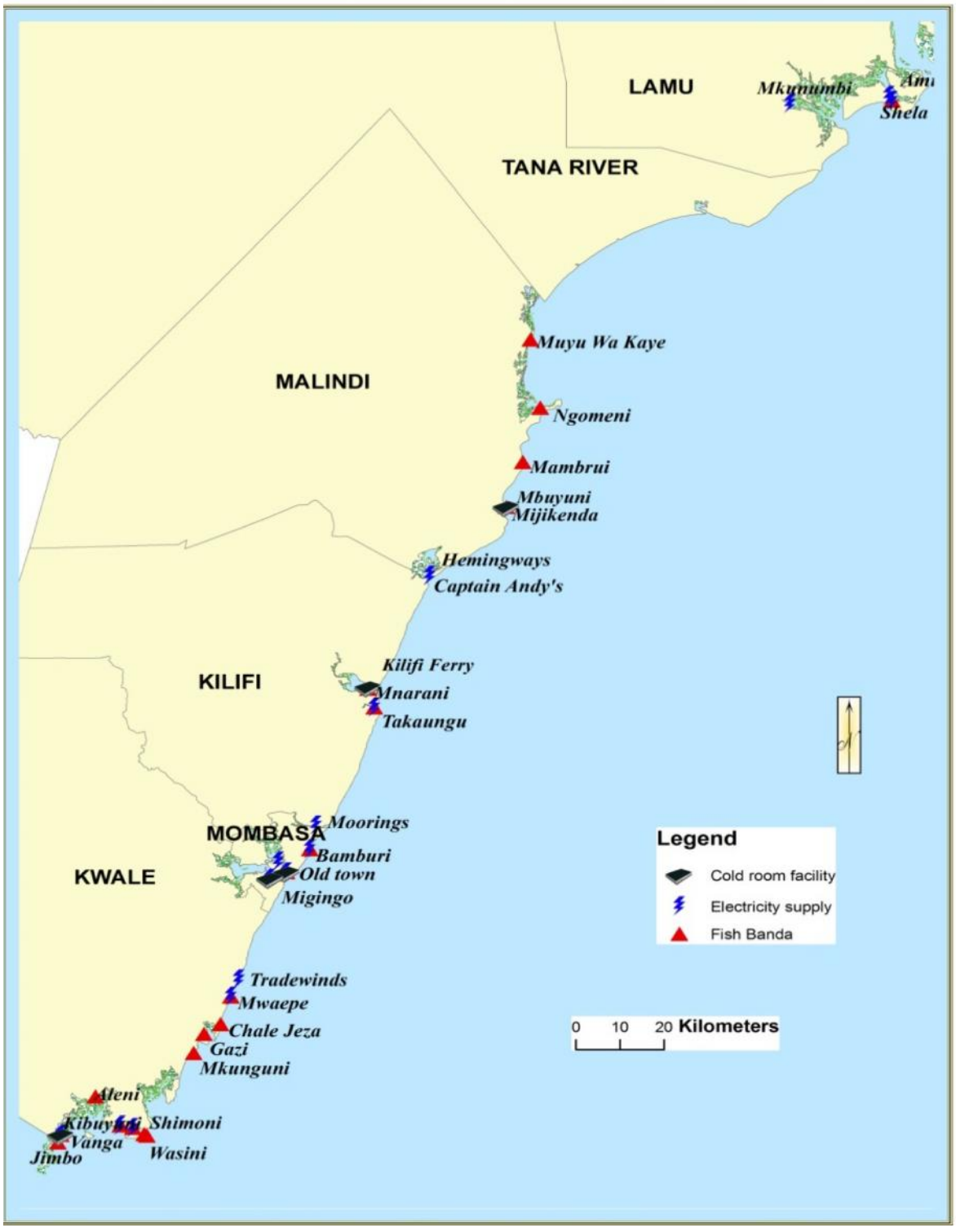
Table 4: Annual average of quantity and value of major pelagic fish groups from artisanal marine fisheries 1990-2009 (from Maina 2012)

Fish group	**Average Annual Catch (Mt) ±SE**	**Average Annual Value (KES millions)**
Mixed pelagics	222.19 ±31.22	241.44
Sardines	184.00 ±21.02	109.55
Mullets	172.46 ±10.89	158.48
Bonitos / Tunas	171.68 ±23.59	200.99
Cavalla jacks	136.55 ±10.63	136.55
Little mackerels	128.94 ±13.61	151.23
Barracudas	125.85 ±19.75	147.44
Milk fish	53.69 ± 7.75	66.56
Queen fish	49.20 ± 3.51	44.30
Dolphin fish	16.36 ± 1.77	16.75

Maina (2012) states that the bulk of marine fisheries catch enters in to the domestic market with high value fish going to tourist hotels along the coast and in Nairobi. Local demand for seafish was estimated at about 5000Mt, valued at KES 400-500 million (USD 4.7-5.9 million) in 2005 (Mwikya 2005). Pelagic fish are utilized by both the domestic and export market. The domestic fish market is not well organized and fish are purchased by small scale traders and sold to open-air markets and fish shops. The fish are sold either dried, fresh or processed for later

consumption. Artisanal processors prepare dried and smoked fish mostly for the local market while industrial fish processors freeze or chill fish for export and to a lesser extent for consumption in Kenya's urban centres. Italy and Spain are the key export destinations.

Figure 10: The location of fisheries facilities on Kenya coast (Source: FiD Frame Survey [2013])



Artisanal fishers supply lobster, molluscs and finfish for export. They are supplied with ice and insulated containers by the export establishments. These establishments have agents based in

the community, who buy and store locally. They dictate the price paid to the fisher and may pay a levy to the BMU.

Table 5: The quantity and value of marine fisheries export products from 2007 to 2011 (from Maina 2012)

Year	Export Destination	Value (KES millions)	Quantity (Mt)
2007	Italy	667.91	5961.92
	Spain	149.73	1396.81
2008	Italy	475.84	4382.90
	Spain	289.11	2788.56
2009	Spain	265.06	2196.49
	Italy	154.44	1229.68
	China	0.47	2.00
2010	Italy	328.72	2512.79
	Spain	186.86	1436.49
	Portugal	3.43	26.73
	China	4.79	13.00
	Singapore	0.10	0.05
2011	Italy	529.84	3404.68
	Spain	96.28	776.15
	China	1.62	3.40
Total		**3,145.21**	**26,131.66**

The export products mainly comprised of large pelagic fishery (85.9%) with other fisheries consisting mainly of invertebrates contributing 14.1%.

The bulk of marine pelagic fisheries products from Kenya form 2006-2011 were destined to Italy and Spain but other destinations include Portugal, Singapore, Netherlands and China. Cooked frozen yellowfin loins and cooked frozen skipjack loins were the main fishery export produce accounting for 89.6% of marine fishery products exported over this time (Maina 2012).

The Kenyan marine zone includes two main river systems, the Sabaki, just north of Malindi and the Tana about 80km further north. It is only in these areas that industrial (shrimp) fisheries have been active in the past. The prawn fishery, from which approximately 400t was landed each year was fished by commercial trawlers from the two fishing grounds. This fishery was closed in 2004 primarily due to problems between industrial and artisanal users.

2.7 Community Case Study

(10) Please characterise case study fishing activity as SSF or subsistence using the definitions provided in the previous section.

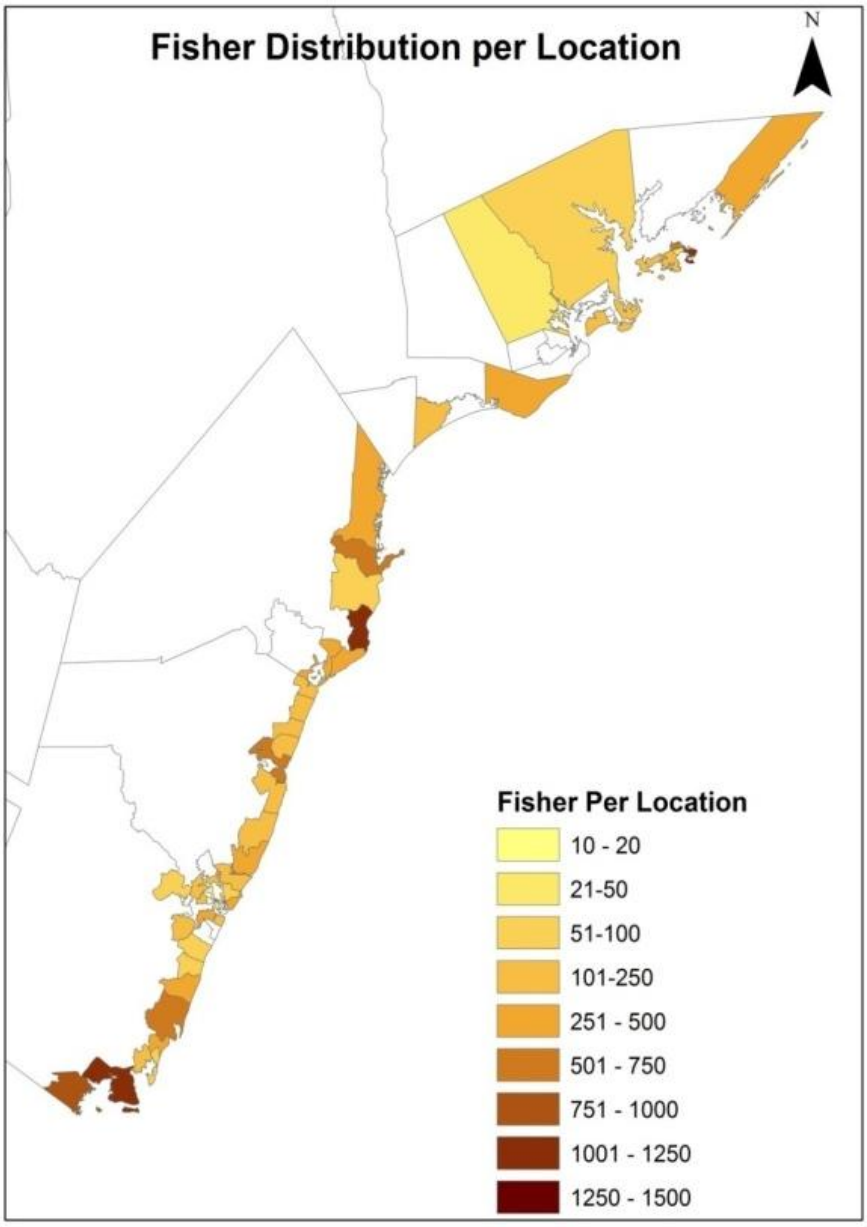
(11) Please provide the figures relating to numbers, means of production, fish landings and marketed output for the case study community.

(12) Please provide an explanation of the share system used to distribute benefits between the vessel, the owner and the crew. What do the owners and the crew think about the system?

(13) How representative is the case study community compared to other fishing communities in the country? How likely is it to be able to replicate the results?

2.7.1 Kwale County Fishery in the National Context

The community case study is based on the communities of Shimoni, Wasini and Kibuyuni in Kwale County, the southernmost coastal county in Kenya and adjoining the Tanzanian border.



The figures below, based on four frame surveys between 2004 and 2012, compare the different districts (now counties) in terms of fisher distribution and fishing craft including number of fishers fishing on foot. Kwale has one of the highest densities of artisanal fishers using traditional non-motorised vessels and fishing on foot.

Figure 11: Fisher distribution per location (Source: FiD Frame Surveys)

Table 6: Fishing craft by district (source: FiD frame surveys)

	Lamu	Tana Delta	Malindi	Kilifi	Mombasa	Kwale
Mashua	248	16	229	42	21	89
Ngalawa	5	1	8	42	1	122
Hori	187	8	110	41	8	8
Dugout	41	73	122	280	415	663
Dau	5	22	96	56	35	12
Mitori	53	-	11	5	-	15
Foot fishers	152	175	443	447	195	662
Others	-	-	2	13	6	1

Figure 12: The spatial distribution of fishing craft (Source: FiD Frame Surveys)

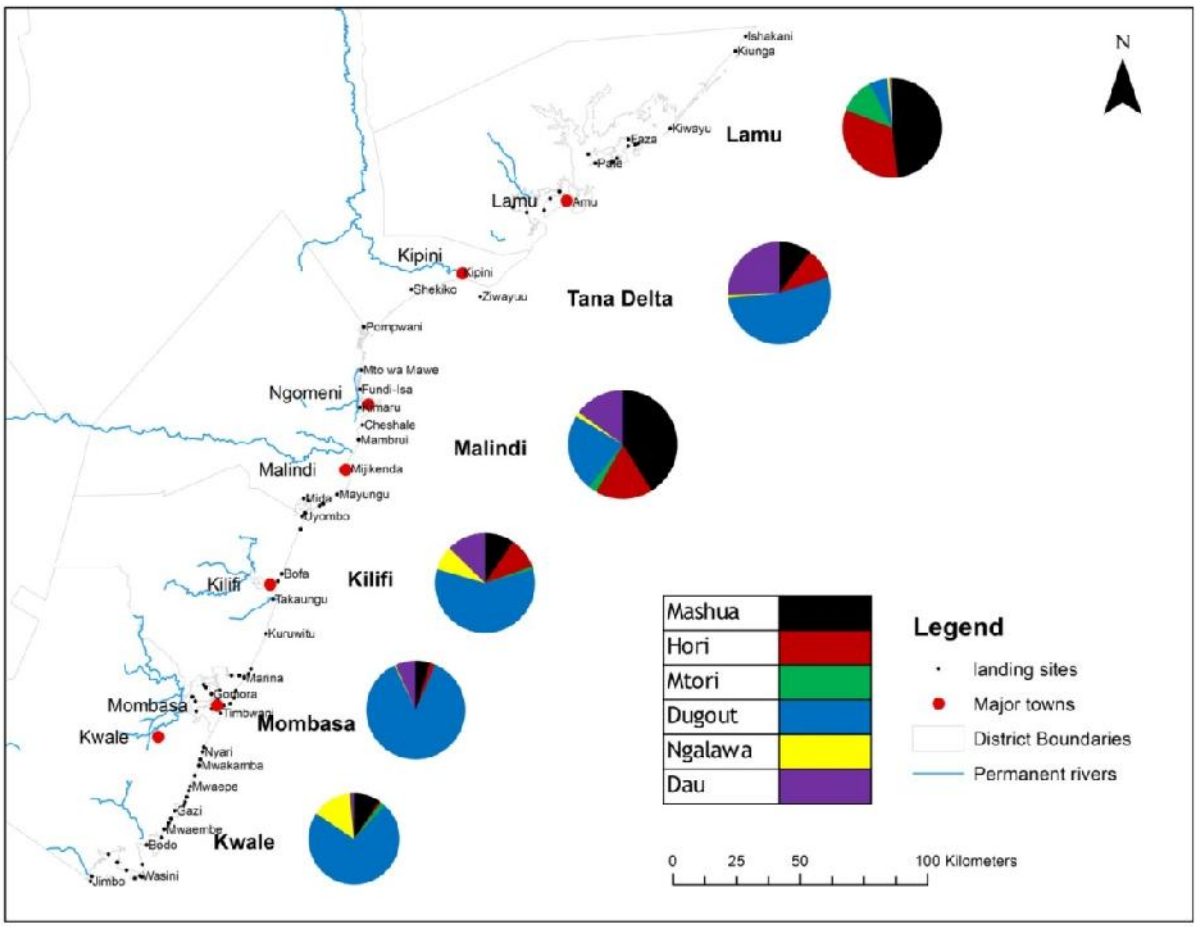


Table 7: Kwale County annual fish production by species per landing areas for the year 2012 (Source: FiD)

FISHERY	Vanga		Majoreni		Shimoni		Msambweni		Diani		Total	
	KG	**KES** (million)	**KG**	**KES** (million)	**KG**	**million KES**	**KG**	**KES** (million)	**KG**	**KES** (million)	**KG**	**KES** (million)
Demersals	465,851	35.7	103,669	10.0	165,134	25.3	156,510	18.6	55,559	7.9	**946,723**	**97.6**
Pelagics	329,495	29.2	38,942	3.8	52,579	7.7	145,927	15.4	40,890	6.4	**607,833**	**62.5**
Sharks/Rays/ Sardines/ Others	106,499	5.6	15,437	0.9	12,723	1.9	25,869	2.2	9,231	1.1	**169,759**	**11.7**
Crustacea	31,159	7.3	37,549	8.0	4,968	1.8	15,098	5.4	5,253	2.6	**94,027**	**25.1**
Bêche-De-Mer	9,069	0.9	1,491	0.9	2,572	0.3	153	0.2	3,309	0.7	**16,594**	**3.1**
Octopus	69,330	6.1	1,931	0.3	30,651	4.1	8,840	1.1	52,952	7.2	**163,704**	**18.8**
Squid	40,265	3.6	10,315	1.5	12,799	2.4	4,464	0.6	3,186	0.5	**71,029**	**8.6**
Grand Total	**1,051,668**	**88.4**	**209,334**	**25.5**	**281,426**	**43.4**	**356,861**	**43.6**	**170,380**	**26.4**	**2,069,669**	**227.3**

2.7.2 Shimoni Fishery in Kwale County Context

Data for fish landings by species for the three landing areas in Kwale County is provided in Section 6.5 for the year 2012 and the data is summarised in the preceding table and in the charts below. It can be seen that the Shimoni landing area accounted for 14% by weight of landed catch in 2012 and 19% of catch value, second only to Vanga which has a larger pelagic component. The character of the fishery is discussed in more detail below.

Figure 13: The catch weight of fish landed at different landing areas in Kwale County.

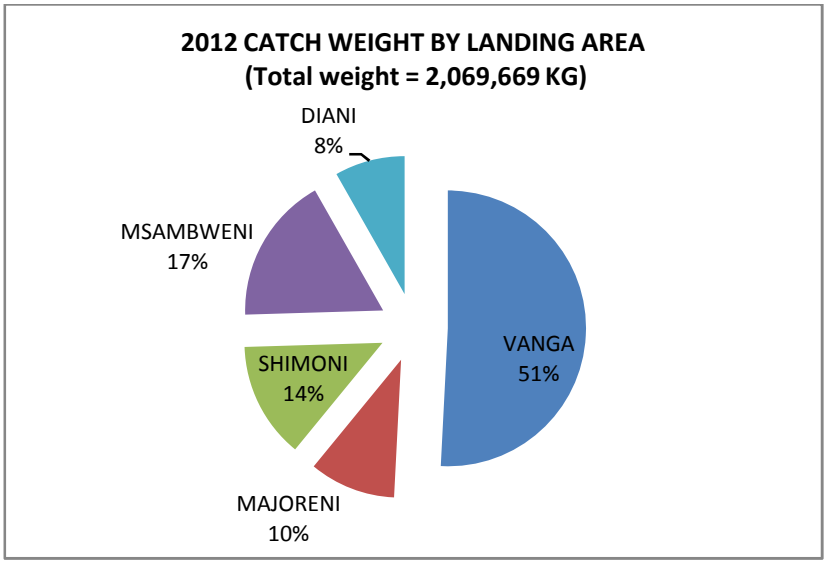
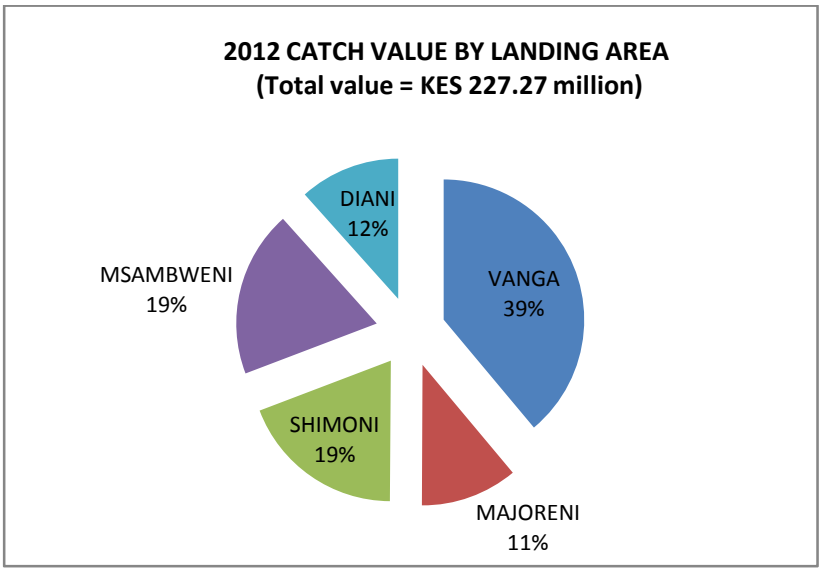


Figure 14: The catch value of fish landed at different landing areas in Kwale County.



The economic value of the different components of the FiD fishery data for 2012 is summarised in the table below by the proportional value of the total yearly catch for each fishery worth 5% or more. Demersals can be seen to represent 47% of the fishery in terms of value, with octopus comprising 9%.

Table 8: Value of each fishery in terms of % yearly value (KES227.3million) for those species contributing 5% or more of total 2012 (adapted from Fid data)

English Name	Percentage of the total catch value
Rabbit fish	18
Scavengers	13
Parrot fish	11
Octopus	9
Mixed pelagic	7
Squid	5
Snappers	5
Mixed demersal	5
Mackerel	5

2.7.3 The Case Study Fishery (Shimoni, Wasini and Kibuyuni)

The fishery is based largely on a few species. The table below shows species that make up more than 5% of the yearly catch analysed from the frame survey data (2004-2012). The most commonly caught fish are rabbitfish (*Siganidae*) and scavengers (*Lethrinidae*), followed by Parrotfish (*Scaridae*). More detailed data can be seen in Section 6.6.

Table 9: Species representing 5% or more of the 2012 catch by weight Shimoni (analysed from Fid data)

English name	Family name	Weight (Kg)	Value (KES)	Proportion of total weight
Rabbit fish	*Siganidae*	49,226	7,745,597	17.49%
Scavengers	*Lethrinidae*	36,610	5,608,830	13.01%
Parrot fish	*Scaridae*	31,383	4,676,830	11.15%
Octopus	*Octopus vulgaris*	30,651	4,100,494	10.89%
Mixed pelagics		19,663	2,886,050	6.99%
Mackerel	*Scombridae*	14,819	2,042,880	5.27%
Snappers	*Lutjanidae*	14,308	2,155,930	5.08%

For comparison purposes raw data collated from BMU record books examined during this survey is summarised below (see Section 6.7). This data shows pelagics to be a less significant part of the catch (a maximum of 16.7% July 2011) and demersals making up over 30% and up to 59% of the landed catch in Kibuyuni (Oct 2012). The octopus fishery is significant in Shimoni

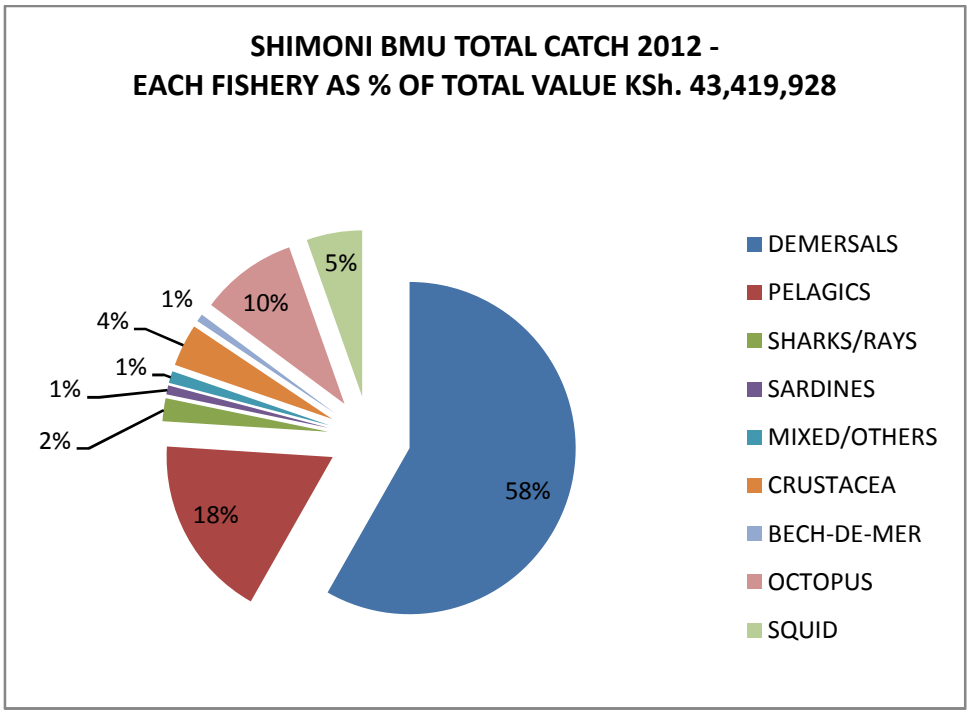
and Kibuyuni making up to 45% of the landed catch in April 2011.[5] (It should be noted that these data reflect a limited temporal range, and should be treated with caution).

Table 10: The proportional composition of landed catch at varying times at different landing sites in the study area

DATA SET	Demersals	Pelagics	Sardines	Octopus	Squids	Sharks and Rays	Sea Cucumber	Other
Shimoni April 2011	31.6	9.0	3.5	45.2	5.3	3.8		1.6
Shimoni July 2011	35.4	16.7	7.7	25.9	5.4	4.0		4.9
Kibuyuni Oct 2012	59.1	10.2		15.6	3.2	5.2		6.7
Shimoni 26 Nov 2012	55.6	7.8		15		0	9.7	11.9
Shimoni 6 June 2013	36.5	0.0		48		0	10.7	4.8

The chart below shows the proportions of the total catch by group for the Shimoni fishery in 2012 (FiD data). Demersals represent 58% of the total fishery in terms of value.

Figure 15: The percentage value of different target groups in the Shimoni fishery (Source: FiD data 2012)



[5] The octopus catch landed in Shimoni is largely caught by paid fishers visiting Mpunguti Marine Reserve (source: buying agents Shimoni)

Table 11: Percentage of gear usage for separate days (26/11/12 and 6/6/13) Shimoni BMU (n=31)

Gear	Percentage used
Handlines	27.0
Longlines	27.0
Speargun	27.0
Weir traps	5.4
Dealer (gear not detailed)	2.7
Hand picking (foot-fishing)	2.7
Basket traps	2.7
Ringnet	2.7
Scoop net	2.7

Data for trends in local catch are not available. Having reviewed a number of site-specific studies, Mallaret and King (2004) conclude that fisheries resources in the south coast are over exploited and that the catch/fisheries resource health is declining, with the Diani area being one of the most overfished and degraded reef areas in Kenya (McClanahan et al, 1996). Research carried out at the same time in Shimoni showed that the catch was still diverse and top predators were still present suggesting that the fishery was still healthy. There is a suggestion that the area is regularly replenished from currents coming from the south (Amoyo, pers. comm.). Contrastingly, interviews carried out with fishers in 1997/98 showed that the general impression of fishers was that the resource had declined. This finding was echoed in this study (4R's exercise Section 6.8) and similar point of view was held by Principal Fisheries Officer (pers. comm.)).

In terms of gear used, data examined during this survey were only available for two separate days in Shimoni (Nov 26th 2012 and June 6th 2013). On these two days gears mentioned are summarised in the adjacent / above table:

With regard to boat usage, it was apparent that every boat owner has his own arrangements but with some common arrangements as follows:

(i) A system where sharing depends on the catch sales, which are distributed as follows; an amount to cover boat fuel cost and boat hire; the remainder of the proceeds is shared between the owner of the boat and fishers who went fishing on that particular day;

(ii) Another scenario is where the owner of boat (frequently a fish dealer) provides their boat for a group of fishers (about 20 members) who then sell the fish they catch to the dealer/owner. In this case the fishers distribute the proceeds equally among each other and also cover the cost of boat fuel.

3 LEGAL AND INSTITUTIONAL ENVIRONMENT OF THE COMMUNITY CASE STUDY

3.1 Governance Framework

(14) What legislation offers local communities the opportunity to establish territorial jurisdiction over marine and inland fish resources and habitats?

Communities derive the opportunity to establish territorial jurisdiction over fish resources and habitats through:

(i) The Constitution;
(ii) Four key policies – the Oceans and Fisheries Policy (2008), the Forestry Policy (2007), The Wildlife Policy(2012) and the Land Policy (2007);
(iii) Three key pieces of legislation – The Fisheries Act (1991 rev 2012), the Forestry Act (2005) and the Wildlife (Conservation and Management Act (1976 rev 2002);
(iv) One piece of subsidiary legislation – the Beach Management Unit Regulations – is of key relevance for small scale fisheries;
(v) Additionally important, but less immediately relevant, legislation includes the Maritime Zones Act (1989) and the Environmental Management Act (1999);
(vi) Currently, two principle pieces of legislation – the Community Land Bill and the new Wildlife Conservation Bill – remain under development, the latter protractedly so;
(vii) An entirely new draft Fisheries Management and Development Bill was at an advanced stage of development in 2011, but still has not been enacted.

A. The constitution 2010

The importance of environmental protection is elevated though several articles on rights of the people and responsibilities of the state on environmental matters. Article 42 gives "every person the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures". Chapter 5, Part 2 covers environment and natural resources.

To eliminate processes and activities likely to endanger the environment, Article 69: states that:

> *1) The State shall a) ensure sustainable exploitation, utilisation, management and conservation of the environmental and natural resources, and ensure the equitable sharing of the accruing benefits; b) work to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya; c) protect and enhance intellectual property in, and indigenous knowledge of, biodiversity and the genetic resources of the communities; d) encourage public participation in the management, protection and conservation of the environment; e) protect genetic resources and biological diversity; f) establish systems of environmental impact assessment, environmental audit and monitoring of the environment; g) eliminate processes and activities that are likely to endanger the environment; and h) utilise the environment and natural resources for the benefit of the people of Kenya.*

Article 70 of the Kenyan Constitution deals with enforcement of environmental rights while Articles 71 and 72 deal with agreements relating to natural resources and legislation relating to the environment respectively

B. National Policy

National Oceans and Fisheries Policy 2008

The policy provides a coordinated framework for addressing the challenges facing the fisheries sector and guides the sustainable development of fisheries in line with the Economic Recovery Strategy (ERS), the Strategy for Revitalizing Agriculture (SRA) and the National Vision 2030. It recognizes inter-jurisdictional aspects of marine fisheries, calling for collaboration and cooperation in the management of migratory/shared stocks. It further encourages the development of specific fishery management plans.

Forestry Policy 2007 (*Sessional Paper*) (relevant to mangrove management)

The Forest Policy recognizes the long-term decline in the country's forest cover brought about in part by politically driven conflicts between local forest communities and the interests of political elites over access to Kenya's forests and their management. It sets out a target for increasing Kenya's forest cover to ten percent of the country's area, a target reflected in the new constitution. The policy embraces community-based forest management as a key strategy for achieving this through Community Forest Associations and participatory forest management, and the allocation of rights to local communities to sustainably use and manage their forests.

Land Policy 2007 (relevant to Beach Management Unit landing site access)

See section on Land

Wildlife Policy 2012

The Wildlife Policy acknowledges the long-term decline in the country's wildlife and identifies the major reasons for this decline and associated challenges in addressing the decline. Key policy statements most relevant for small-scale fisheries include the recognition of the importance of developing partnerships and linkages with communities over protected area management, and devolving wildlife user rights, sharing benefits in an equitable manner, and developing wildlife (including marine) management plans in a participatory manner. The policy sets out the need to develop a Marine Protected Area Strategy in line with the national and international integrated coastal zone management (ICZM) strategy. Finally it identifies the need to protect, maintain and restore marine species, habitats and ecosystems of national and international importance, including islands within marine protected areas.

C. Principle Legislation

Fisheries act cap 378, 1991 (rev. 2012)

The Act's objective is to provide a legal framework for the management, exploitation, utilization and conservation of fisheries resources in Kenya. It is however applied in cross-reference with other related laws. The Act restricts destructive practices and advocates for the protection of

fish breeding areas. It considers illegal use of certain nets or under-sized mesh, beach seine, spear guns and dynamite fishing. It also protects coral reef fisheries away from protected areas. The Fisheries Act also regulates licensing of local and foreign fishermen and fishing vessels, fisheries scientific research, landings and landing sites and puts restrictions on purchase of fish.

Forestry Act No. 7 of 2005 (relevant for mangrove management)

The Forests Act is an outcome of the Kenya Forest Master plan finalized in 1994. In the new Forests Act the government embraces the concept of participatory forest management. The act gives particular consideration to formation of forest community associations, which will be recognized as partners in management. Furthermore, the act opens commercial plantations to lease arrangements by interested groups to supplement government efforts. This is a radical departure from previous practice where the government assumed full management responsibilities in gazetted forest reserves. The act can improve the forest productivity and increase availability of timber and other products/services for domestic use and export.

D. Subsidiary Regulation

The Fisheries (Beach Management Units) Regulations, 2007 (Legal Notice 402)

The regulations outline the objectives of BMUs, their administrative structure, area of jurisdiction and mandate in co-management. They promote the co-operation amongst fishermen and their participation in the overall management of fisheries resources and landing areas, as is provided for in the Fisheries Act CAP 378, 1991 and its subsidiary legislations. Fishermen are given co-management rights, enshrined in by-laws, which must be approved by the Director of Fisheries.

Fisheries (safety of fish, fishery products and fish feed) regulations, 2007 (legal notice no. 170.)

The Fisheries Department (FiD) is given the responsibility for the official control of the safety of fish, fishery products and fish feed. The Competent Authority – Fisheries Department – is therefore mandated, in collaboration with other Government agencies, to oversee the implementation of regulations governing proper monitoring of fish from harvest, sorting, handling, transportation, processing, storage and market. The competent authority monitors and controls these processes to ensure that there is no risk to human health.

(15) What other legislation affects the governance of aquatic territories? (For instance, wildlife or environmental protection)

A. Legislation[6]

Wildlife Conservation Act 1977 (rev 2009)

The Wildlife (Conservation and Management) Act established the Kenya Wildlife Service, which manages national parks and reserves and prepares and implements management plans for them. The Kenya Wildlife Service is relevant to the implementation of the Fisheries (Beach Management Units) Regulations, where a management area of a Beach Management Unit

[6] Note that these sections are adapted from Maina (2012) and supplemented with further material.

overlaps with a designated marine protected area, in which case KWS becomes a BMU stake holder. The Ministry of Environment and Natural Resources (MENR) and other relevant government agencies such as the Kenya Wildlife Service (KWS) implement the legislation. Its prime objective is to ensure that wildlife is managed and conserved in such a manner as to yield benefits for the nation and individual areas (in particular) without prejudicing proper management and conservation. However, most of its provisions relate to animal wildlife issues and dryland parks and reserves, with little mention of fisheries.

Protected areas are divided into parks and reserves. The KWS is in the process of developing marine-park and reserve specific management regulations. Currently Wildlife (Conservation and Management) (National Parks) (Amendment) Regulations 2005 regulate access and fees payable for parks and reserves, with marine parks and reserves grouped under category 'C'. Within national parks, there are restrictions on extractive activities, but visitation, education and research activities are allowed. In the national reserves, controlled extraction of resources in addition to visitation, education and research activities is allowed.

Of potential relevance in the future are the new The Wildlife (Conservation and Management) (Conservancy) Regulations, 2012 that provide the basis for communities to create their own conservancies through which they may conserve and sustainably utilize its resources. Although the regulations appear most relevant for land-based conservancies, there is nothing to suggest that the regulations could not equally apply to a coastal-marine area, providing a community was able to establish its right of access to and tenure over an area.

Environmental Management and Co-ordination Act, 1999

The 1999 Environmental Management and Co-ordination Act (EMCA) creates the legal and institutional framework to manage Kenya's environment. The act allows the Minister responsible to declare protected areas. The Authority is also expressly mandated to prescribe measures for biodiversity protection. Importantly, the Act provides that "every person in Kenya is entitled to a clean and healthy environment and has the duty to safeguard and enhance the environment." As a result, the Act forms a part of the legislative framework informing fisheries management under Beach Management Units.

Maritime Zones Act, 1989

The Act consolidates the laws relating to the territorial waters and the continental shelf of Kenya. It recognizes the existence of a 200 nautical mile Exclusive Economic Zone (EEZ) from the baseline and sets out the limits of Kenya's territorial waters extending up to 12 nautical miles from the baseline. The Act gives the Minister's powers to make regulations on the exploration, exploitation, conservation and management of the maritime zones. The Act also provides a legal framework for the management and development of fisheries resources. The Act provides rules for the licensing and control of maritime service providers. This Act provides for the registration and licensing of Kenyan ships. It has a crucial role in regulating shipping activities in inshore areas and in the Kenya's EEZ. The Act has provisions for maritime safety, security, pollution control and environmental conservation.

B. Strategies and Action Plans

Integrated coastal zone management (ICZM) action plan for Kenya, 2011

The action plan aims to "conserve the coastal and marine environment and to ensure that its resources are utilised in a sustainable manner for the benefit of coastal communities and the national economy". It guides stakeholders in conservation and development of the coastal zone. It further supports institution of a legal framework and strengthening institutional framework for ICZM. The action plan hopes to ensure effective and efficient implementation of environmental plans and that they are mainstreamed into development processes.

Provincial Environment Action Plan (PEAP) for coast - 2009-2013

The Plan provides environmental management strategies and actions that integrate environmental concerns into social and economic development planning at District (DEAPs), Provincial (PEAPs), and National (NEAP) levels as per the provisions of Articles 37 and 38 of EMCA 1999. National Environment Action Plan (NEAP) highlights priority themes and activities for the country towards achieving sustainable Development.

Strategy for Revitalizing Agriculture (SRA) 2004-2014

The Strategy for Revitalizing Agriculture (SRA) 2004-2014, reiterates the interventions proposed in the Economic Recovery Strategy (ERS) paper. It proposes the promotion of the production of salt-water products such as shrimps, whilst providing for better legislation and enforcement of fishing gear, trawling and pollution control. The SRA 2004-2014 also acknowledged that high costs have prevented development of modalities for utilizing fishery resources in the Exclusive Economic Zone (EEZ). Value addition through processing is also emphasized in the SRA 2004-2014.

Vision 2030

Vision 2030 identifies fisheries alongside crop agriculture and livestock as key sectors. It proposes, *inter alia*, to raise incomes in the fisheries sector by processing thereby adding value to products before they reach the market. Innovative, commercially oriented and modern technology will be adopted in the fisheries sector. It is expected that improved fishery management will have a significant impact on efforts to achieve Millennium Development Goals (MDGs) in Kenya. Improved fisheries management is expected to assist in reducing by half the proportion of the human population that suffers from hunger and malnutrition. The challenge is to ensure that those who depend on fish for food and livelihoods, particularly coastal/marine populations, continue to get these important benefits.

(16) Which Ministry has line responsibility for fisheries management? (E.g. agriculture, environment or a separate fishery ministry)

Natural resources management in Kenya has historically been the domain of government-led agencies, which ensure resources are properly managed. However, with new thinking on resource management through participatory co-management schemes, community groups are now increasingly being involved in marine and coastal management.

Nevertheless, despite an increased emphasis on community co-management of natural resources, the Government of Kenya continues to rely on sectoral policies across different ministries, which unfortunately tend to overlap in jurisdiction or duplicate responsibilities.

A. Central Government

Following the elections in 2013, the 44 ministries under the previous government of unity have recently been reduced to eighteen larger ministries, with fisheries management now falling under the jurisdiction of three ministries:

- The Ministry of Agriculture, Livestock and Fisheries Development (MALFD) is charged with the mandate of managing all fisheries resources in a sustainable way to maximise production. It is assumed that this now falls under a Department / Directorate of Fisheries (FiD) (to be clarified).

  The Department of Fisheries[7] is a technical department of the ministry whose mandate is to provide for the exploration, exploitation, utilization, management, development and conservation of fisheries resources, and undertake research in marine and fresh water fisheries. Their stated mission (MALFD/MoD Website) is "To facilitate sustainable management and development of fishery resources and products for socio- economic development so as to maximize the contribution of fisheries to the achievement of national development objectives especially poverty reduction, food security, creation of employment and rural incomes".

  Included in the service charter of MoD are the following core activities:
  - Fisheries policy formulation and review;
  - Fisheries licensing;
  - Management and development of marine fisheries including the Exclusive Economic Zone;
  - Management and development of fresh water fisheries;
  - Commercialization including formation of fisheries groups for local fishermen;
  - Promotion of fish quality assurance, value addition and marketing;
  - Development of aquaculture;
  - Marine and Fisheries Research;
  - Promotion of recreational fisheries.

  Other non-core functions include:
  - Facilitation of ice production and cold storage at landing sites;
  - Promotion of credit facilitation to fishery sub-sector in liaison with financial Institution;
  - Promotion of affordable and safe fishing boats and appropriate gears;
  - Promotion of appropriate fishing technology.

[7] Information in this section is adapted from IOC (2012).

Table 12: A review of the status of the fisheries sector in Kenya (adapted from IOC 2012)

	Transparency	**Accountability**	**Effectiveness**	**Participation**	**Cohesion**	**Adaptability / Reactivity**	**Subsidiary Proportionality**
Policy	Good – a new constitution and strategic policy; generally transparent.	Generally poor – many changes in structures seems to confuse accountability.	Policy good in principle but implementation sluggish and inhibited by political instability (at least in the past).	Generally good – strong community base and involvement of NGOs.	Poor – many different institutions. Fresh water components seem to be more cohesive.	Policy has been recently revised – strategic plan is ambitious.	Mostly unclear – as major transition to County government under way.
Legislation / Regulations/ bylaws	Good – legislation is strong and refined from time to time; DWFN vessel licensing is irregular.	Good – implementation though is weak. DWFN licensing process is not clear.	Poor – prosecutions are limited – artisanal component around the whole coast difficult to apply legislation effectively.	Appears good with participation by interested and affected parties. Foreign licensing problematic.	Appears generally good. Strong bottom-up approach that seems to be functional. Synergy with KWS legislation problematic.	Good –change can be made to regulations relatively easily.	Responsibility mostly at the County Fisheries Officer and BMU level. Requires police intervention for arrests. Management of MPAs done under different Act and conflicts exist with fisheries legislation. Foreign vessel licensing delegated to Nairobi (unclear).
Institutions	Good within FiD	Mostly FiD. Accountability of parastatal (KMFRI) not clear	Generally weak and inhibited by capacity deficiencies	Participation by most institutions appears good but with different skills bases.	Inadequate institutions seem to work in isolation – poor communication between them (not always).	Poor – reaction to change needed is slow and appears difficult to implement given the current administrative and institutional regimes.	Not well defined. Currently FID run centrally with marine matters delegated to Mombasa office. FiD relies heavily on County Officers to manage fisheries, with BMUs playing an increasing role.
Fishery Management	Good transparency but slow to implement.	Not clear – issues dealt with mostly by FiD. Accountability of other institutions on fisheries matters vague. KWS / MPA strong.	Generally ineffective with declining stocks. Offshore fishery management ineffective	Within FiD appears good but capacity lacking.	Poor across institutions.	Poor and requires faster responses to issues. Constrained by need to involve different parties.	FiD carries responsibility - and County Officers implement - extremely challenging with capacity limitations.
National Capacity	Good – clearly lacking.	Poorly understood.	Poor.	Available capacity active but understaffed. Infrastructure lacking.	Generally adequate.	Poor and constrained by finances.	Not clear – in part because of transition to the county system.

From a governance perspective the following is critical:

- Fisheries governance is entrenched at the MoD in Nairobi (the highest authority);
- Presently the Marine and Coastal Fisheries Directorate (MCD) headquarters are in Mombasa – the Director reports to Nairobi and has little autonomy;
- County fisheries officers (CFOs) at the coast report to the County Executive and liaise through their line management with MCD;
- BMUs are primarily a county function with the CFO(s) instrumental in helping coordinate BMU activities and reporting;
- KMFRI remains semi-autonomous and is contracted through FiD, MCD or other independent groups (such as NGOs) to undertake fisheries research. KMFRI does not have direct responsibility for fisheries other than in a research and advisory capacity;
- In the new county structure, offshore fisheries will remain a responsibility of MoD (Nairobi) and Counties will be responsible for fisheries in territorial waters.

- The Ministry of Environment, Water and Natural Resources is responsible for:
  - Kenya Forestry Service (KFS) with responsibility over forestry including mangroves;
  - Kenya Wildlife Service (KWS) with responsibility over wildlife and protected areas, including marine parks;
  - The National Environmental Management Authority (NEMA) with responsibility for coordinating all environmental issues across the entire government

- The new Ministry for East African Community Affairs, Commerce and Tourism under which the Department of Tourism (DoT) falls with responsibility over all tourism-related licences (to be clarified).

It is envisaged that the Ministry of Land, Housing and Urban Development will play an important role in the future in enabling beach management units to secure improved access to the shorefront and adjacent land, including for constructing necessary facilities.

In addition, the National Museum of Kenya (NMK) is also viewed as an important stakeholder in the management of forest resources and now falls under the jurisdiction of the Ministry of Sports, Culture and the Arts.

Because of division of responsibility over fisheries and related natural resource management issues between different ministries, the enforcement of regulations and responsibility for management can be challenging. This is reinforced by overlapping mandates, and lack of systematic communication or liaison between government ministries and departments. These overlaps are apparent in Marine Protected Areas, where there is lack of harmonisation between:

- KWS and Fid with respect to fisheries and marine protection
- KWS and KFS with respect to mangrove forests,
- DoT and KWS, KFS, and the Fid with respect to tourism activities.

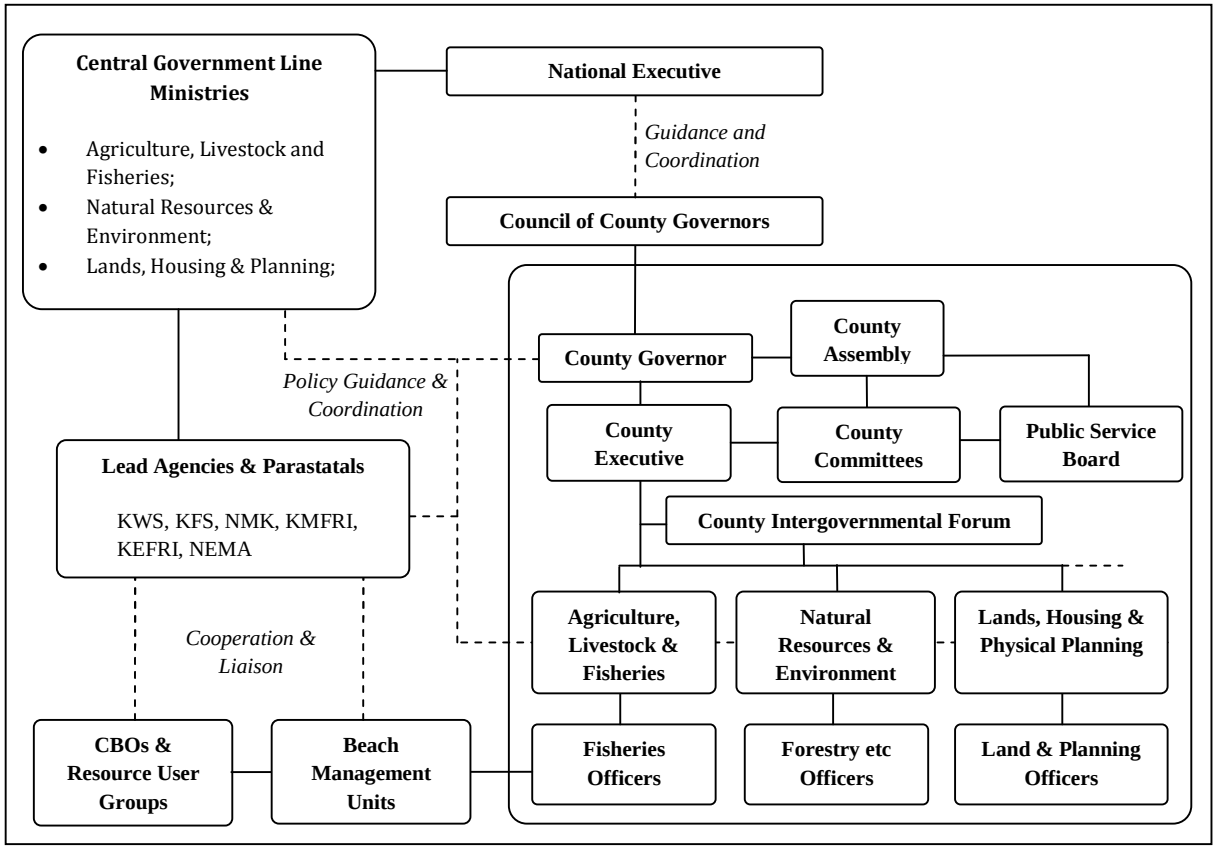
The National Environmental Management Authority is tasked with preparing a national coastal zone management plan based on coastal surveys and with reviewing these surveys regularly. Such surveys include the state of Kenya's coral reefs, mangroves and marshes, but also sources

of coastal pollution.

B. Devolution and natural resource management at county level

Development in Kenya, including NRM functions, has been decentralized from the national to the county level (previously district level). However, county planning will be carried out within policy frameworks established at the national level through National Development Plans. The County Governments Act (2012) specifies that each county shall develop a ten year plan for each sector (e.g. fisheries) which shall be reviewed every five years and updated annually. Because the new Counties are only now becoming operational, much remains to be seen as to how natural resource management is development and implemented. Thus far fisheries officers previously under district administrations have been transferred to the new county administrations.

Figure 16: The new county government structure in relation to community fisheries management



C. Intermediaries

An extensive number of NGOs play a role in funding and supporting NRM management activities in the coastal zone. There is a wide recognition that NGOs have a significant role to play in assisting the rural poor in breaking out of their condition of poverty. A major source of strength of the NGOs comes from their insistence on the empowerment of the poor as the key to the transformation of their livelihoods. This includes the need for mobilization of local communities and representatives of civil society in all matters of participatory planning and implementation

of sustainable socio-economic programmes at grassroots level.

The 1983-1993 National Development Plan recognized the efforts of NGOs in development activities and therefore strengthened their efforts through the District Focus for Rural Development (DFRD), noting that NGOs, in collaboration with the District Development Committee (DDC) groups and local authorities, could enhance the process of local participation in the development projects. However, in principle the 1997-2001 Development Plan relegates the role of NGOs to arid and semi-arid areas, development of fishing, infrastructure, development of technology and culture only, setting aside an earlier prominence given to NGOs in the context of DFRD.

(17) What are the main provisions of this legislation? (For instance, can fish landing sites establish their own local governing body to establish rules and regulations to govern fish resource exploitation in a formally-recognised area?)

The Fisheries Act 1991 (rev. 2012) gives the Director and Minister, under Sections 5, 6 and 23, the power to undertake concrete measures for promotion and management of both marine and inland fisheries. However, as this is a general regulation, there are subsidiary rules that regulate specific issues such as endangered fish species, prohibited gear, permitted fishing methods etc. These are the Fisheries (General) Regulations, Legal Notice 34/91, and Fisheries (Beach Management Unit) Regulations 2007, Fisheries (Safety of Fish, and the Fishery Products and Fish Feed) Regulations.

While the Beach Management Unit (BMU) regulations provide for collective fisheries management (see below), the regulations need to be placed in context with other fisheries regulations, which provide over-arching rules and controls over fisheries activities in BMUs.

A. Fisheries (General) Regulations

The Fisheries regulations set out rules such as the licensing of boats and fishermen, and general management measures such as

- Fishing in inland waters.
- Landing of fish.
- Prohibited fishing methods and gear.
- Buoying of fishing gear.
- Harvesting of oysters.
- Coral gathering prohibited.
- Protection of certain migratory fish species
- Prohibition on use of explosives and poison.
- Protection of breeding areas.
- Protection of marine mammals and turtles.

General licence

No person is permitted to fish in Kenyan waters unless he either possesses a valid fishing licence or is fishing for his own consumption (Section 8(1), FGR9(1)(a)). This means that many

fishermen who are members of BMUs and who sell their catch in cash or in kind to fisher traders must be licensed. A licence is obtainable, subject to the Director's approval, through application to him in the required form and on payment of the specified fees (FGR, 9(2)). Applicants must be vetted by the relevant BMU. A fishing licence is a general authorization to catch fish, but does not allow these activities to be carried out indiscriminately. The licence indicates the species of fish, fishing gear, method of fishing and area for which the licence is valid (Section 8(3)). For certain species of fish, a supplementary licence must be applied for.

Trader's licence and movement permit

A trader need not necessarily be a fisher. For purposes of trade, a trader's licence and a fish movement permit (FGR 15, 18) may be granted upon application, for fish other than crustaceans and bêche-de-mer (FGR 16, 17), as well as fish products (FGR 15(1)). The fish that are going to be sold must have been landed at a landing station designated under FGR 42 (FGR 15(5)).

Licence for specific species

The Fisheries Department has the discretion to limit or abolish activities that may negatively affect certain species or types of fish, e.g., species in danger of extinction. The harvesting of such species is subject to a specific licence for that particular species. The licence defines the terms and conditions under which that given species shall be caught.

Defined fishing season(s) and hours fishing

The Fisheries Act empowers the director (with approval of the Minister and by notice in the gazette) to declare closed seasons for designated areas, species of fish or methods of fishing. The Prawn fishery management plan (legal notice no. 20) for instance, empowers the director authority to enforce closed season from the 1st November to the 1st April every year for the Malindi, Ungwana Bay and adjoining waters. Closed season in prawn fishery is expected to reduce resource use conflicts. Trawling time may be restricted according to the Prawn fishery management plan 2010 (legal notice no. 20). The draft ringnet fishery management plan (June 2012) proposes fishing from October - April during day time hours of 6am and 6pm.

Gear size and type restrictions

There is no direct provision in the Fisheries Act on gear usage in marine waters, although poisoning and use of explosives is prohibited. However, under section 5(1)c, the director is authorized by notice in gazette, to impose limitations on the methods of gear, including mesh sizes of nets that may be used for fishing. Some of the illegal and destructive fishing gear in use by artisanal fishermen include the beach seines, undersize mesh sized gill nets, dynamite and use of scuba gear for fishing lobster and bêche-de-mer. Beach seines and spear guns have been banned by the Director (9th November 2001 Kenya Gazette notice No. 7565 Vol. CIII. No. 69), but in general enforcement or prevention of destructive gear methods remains weak.

B. The Beach Management Unit Regulations

The BMU regulations operate within the context of the General Fisheries Regulations (see above) as well as other regulations, such as the fish safety regulations, such that all by-laws and management actions implemented within BMUs must be correspondingly compliant.

The BMU Regulations objectives have been mentioned earlier (see Pg 28).

Under the Regulations, Beach Management Units have exclusive management rights over fish landing sites and consist of an assembly, an executive committee, and may also include sub-committees. They are required to provide data on catches and develop co-management plans to ensure sustainable fisheries in the BMU area. Such management plans must be approved by the Director of Fisheries and include measures such as closing certain areas to fishing, closing areas during breeding seasons, restricting fishing gear, and limiting the number of fishing vessels. Beach Management Units are required to protect the aquatic environment and cooperate with authorities to that effect. Beach Management Units must put their management plans into effect through by-laws, which are developed by each Beach Management Unit and approved by the Director of Fisheries. Such by-laws may also go beyond legislative requirements on environmental and biodiversity protection.

Beach Management Units also possess certain law-enforcement powers on gear regulations, registration of vessels, and protection of fishing grounds. Beach Management Units self-monitor performance, along with external, authorized fisheries officers in six months intervals. To defray the costs of their operations, Beach Management Units can receive funding from the Ministry of Fisheries Development. Moreover, Beach Management Units can generate their own income through membership fees, taxing migrant fishers, or vessel registration fees, for example.

The BMU regulations formally require that the BMU:

a. Form an executive committee, elected by the BMU assembly (i.e. membership)
b. Maintain and keep a register of all boat owners and their fishing equipment, fishers and BMU members operating from the beach.
c. Decide on local markings for identification of fishing gears and outboard engines by licensed fishers;
d. Participate in vetting of boat owners and fishers for licensing and, in collaboration with government officials, ensure licenses are granted to those registered with the BMU;
e. Propose fisheries co-management by-laws for endorsement and enforce them – this can include the delineation of different fishery management zones (see below);
f. Identify fish breeding areas on the basis of indigenous knowledge and identify and enforce no fishing in prohibited fishing zones;
g. Undertake Monitoring, Control and Surveillance in collaboration with the relevant authorities;
h. Assist in the collection of data for Frame Surveys, catch monitoring and socio-economic investigations, using agreed formats;
i. Inspect and record visiting boats and give permission to land where appropriate;
j. Improve sanitation and hygiene at landing sites.
k. Network with other BMUs to ensure marketing and fair pricing of fish and fish products;
l. Executive committee should be part of the development organ in their areas of jurisdiction;
m. Prepare annual work plans, budgets and financial reports and Formulate funding proposals;
n. Prepare development plans and solicit for funding

Unlike the previous top-down approach in Kenyan fisheries law, the 2007 Fisheries (Beach Management Units) Regulations create institutional linkages both horizontally and vertically. Nonetheless, the overall responsibility of monitoring and supervising Beach Management Units is still vested with MALFD.

C. Compliance and Enforcement Problems

Along the Kenyan coast, despite the regulations, there have been cases of high fishing effort in near shore fish habitats and use of destructive fishing gears (Mangi and Roberts, 2007) leading to overfishing. Compliance problems are mainly due to:

- Insufficient awareness and training on fisheries issues
- Weak fisher organisations
- Insufficient background knowledge about the fishing communities which is essential in fisheries management and development planning
- Insufficient application of technical advice to fisheries management
- Lack of sustained enforcement of fisheries regulations
- Difficulties in discouraging overfishing and disposing of acquired illegal gears
- Weak stakeholders' participation in fisheries management and enforcement
- Lack of participatory monitoring and evaluation of fisheries management and surveillance systems
- Insufficient support to alternative income generating activities to fishing
- Proliferation of migrant fishers
- Increased dependency on fisheries by previously non-fishing communities
- Resource use conflicts amongst stakeholders
- Inadequate ownership to the co-management concept in coast.
- Inadequate capacity to conduct MCS

(18) What are the operational requirements for community-based organisations?(For instance, definition of who may be a member, register of members, election of governing body, ability to establish and enforce by-laws, development of management plans, use of regulations such as no-take areas, landing fees, license fees, regulation of who may fish)

CBOs involved in coastal resource use and management can be categorized into four types of groups:

- Community-initiated self-help groups (started by local community members)
- Government-initiated groups (mandated by the government – e.g. Beach Management Units, and Community Forestry Associations – see below)
- Donor/NGO-initiated groups (no legal mandate, but often lead to improved coastal management outcomes)
- Umbrella organizations (for better coordinating the activities of CBOs and/or NGOs, and engaging in advocacy)

Table 13: The range of community-based organisations active in coastal-marine management and related issues in Kenya

Mode of group establishment	Level of legal mandate
Community-initiated CBOs [or organically-formed]	These are recognized by government as legitimate groups (despite being a grey area in law), but do not have legal mandate over NRM law. Hence, they are not able to make binding decisions on behalf of or for the community, and usually depend on their ability to persuade people to act.
Government initiated groups (CFA, BMU)	Essentially, these groups are extensions of the government at community level, established under the approach of decentralisation and devolution of management powers. • **Beach Management Units (BMUs):** By virtue of their government-established mandate, BMUs are currently the most viable structures for coastal and in-shore resource management in terms of legality and formal incorporation within government resource management structures. • **Community Forestry Associations (CFAs):** CFAs can be found across forested regions of Kenya, including along the coastal zone, having been promoted by the government as a method of sustainably managing forestry resources. Once the CFA has been registered and approved by the Director of Kenya Forest Service, it has the authority to make binding decisions about management at community level.
Donor-initiated organizations	Most of these CBOs are established in accordance with government-donor regulations to subscribe to the twin objectives of resource conservation & management and livelihood enhancement. They are given responsibilities to act upon NRM but do not have legal mandates to make decisions on behalf of the community over NRM
Umbrella groups either organically formed or externally initiated	Their legality is established by their wider community acceptance and their ability to commit members (within its jurisdiction) to subscribe to management decisions. They, however, do not have the binding legal mandate over NRM since their decisions can be overridden or have to be made in collaboration with other government structures.

BMU and CFA membership has largely been pre-determined by the government, as have the rules of operation. The powers to draw up and enforce natural resource management laws applicable at local level are an aspect that enhances the capacities of BMUs and CFAs above the

rest at the community level. However, even with such a legal mandate, the ability of government-designed BMU & CFA structures to address issues that involve multiple stakeholders, and stakeholders who command higher political favour can be very minimal, if any at all. This is particularly the case where external agents carry national legitimacy and connections to power-holders above community-level, for example, investors in tourism businesses, marine products harvesting and processing companies, or oil and gas exploration and production companies (Mwaipopo et al. 2011).

Further information on the BMU Regulations is provided in Sections 4.2 and 6.4.

(19) CRBFM is usually based on territorial use rights. The laws governing land tenure and ownership are therefore of great importance. What is the main legislation? What are the land tenure categories? (For instance, public land, private land, and communal land.)

The Constitution endeavours to clarify the land tenure system, classifying land in Kenya as public, community or private (see below). Community land tenure offers the most promising avenue for improving access to the shore for BMUs as it provides a mechanism for holding and managing land as a community, including a "community of interest". This categorization can be used to bring together the diverse stakeholders within a BMU who are motivated by a desire to improve a BMU's access to land in a collaborative way.

The definition of community land in the Constitution is pertinent for BMUs, as it includes land specifically transferred to a specific community by any process of law, or any other land declared to be community land by an Act of Parliament. As indicated above, the process of developing legislation on community land is ongoing. The envisaged Community Land Act shall provide more detailed provisions for the administration and management of community land, including procedures for registration of such land. The Constitution provides however, that any unregistered community land shall be held in trust by the county government on behalf of the relevant communities.

A. The National Land Policy

Although the National Land Policy was adopted and issued before the promulgation of the Constitution, it has been entrenched in the Constitution as the medium for implementation of the principles of land policy. Article 60(2) of the Constitution provides that the principles of land policy, "*shall be implemented through a national land policy developed and reviewed by the national government and through legislation*".

The vision of the National Land Policy is to guide the country towards efficient, sustainable and equitable use of land for prosperity and posterity. It calls for the adoption of a framework of policies and laws for land administration that shall, among other things, promote efficient and effective utilization of land and land-based resources.

The National Land Policy provides a comprehensive analysis of what it terms, "the land question" in Kenya, tracing the historical evolution of the current challenges to the land sector, identifying the key challenges and their manifestations in order to inform policy recommendations for the way forward.

It lists inadequate environmental management and conflicts over land and land based resources among contemporary manifestations and impacts of the land question. It further identifies impacts that have led to low productivity and poverty.

The National Land Policy recommends policy options and interventions by government to address these challenges. It proposes policy options for strengthening government oversight of land use, including more effective enforcement of development control. It streamlines the land tenure system, creating three categories of land holding:

1) **Public land** – that is not private or community land and any land declared by law to be public land for the purposes of government use and the public good.
2) **Community land** is land that a specific community holds, manages and uses but the ownership of which is placed in the community, while individuals have rights of use. Community land is governed by customs and traditions of different communities, which have been undermined over the years by the process of individualization of land tenure.
3) **Private land** is land owned and used by an individual or other legal body such as a company

The Land Policy commits the government to enact a comprehensive Land Act to govern all categories of land. To address the challenges of land use management, the policy commits the government to develop and implement a national land use policy that shall in turn facilitate the preparation and implementation of land use plans at local, regional and national levels, including rural land use plans.

The policy makes specific provisions for conservation and sustainable management of land based natural resources and for ecosystem protection and management. It commits the government to facilitate the participatory preparation of environmental action plans by communities living near environmentally sensitive areas and to identify, map and gazette critical wildlife migration and dispersal areas and corridors in consultation with local communities and individual landowners. With regards to ecosystem protection and management, it commits the government to undertake a survey of all critical ecosystems to determine their sustainable uses and to establish measures to ensure the protection of ecosystems through land use controls.

The National Land Policy pays particular attention to historical land injustices. It describes these as "grievances which stretch back to colonial land administration practices and laws that resulted in mass disinheritance of communities of their land, and which…have not been sufficiently resolved to date". It further states that in order to address these injustices, the Government shall establish mechanisms to resolve historical land claims arising in 1895 or thereafter. The year 1895 is when Kenya became a protectorate under the British East African Protectorate with the power to enact policies under laws under the Crown. Among the mechanisms and strategies proposed for resolving historical land injustices are the establishment of a suitable legal and administrative framework to investigate, document and determine historical land injustices and recommend mechanisms for their resolution; review of all laws and policies adopted by post-independence governments that exacerbate the historical injustices; establish a suitable mechanism for restitution of historical land injustices and claims; and specify a time period within which land claims should be made.

B. Laws implementing the National Land Policy and the Constitution

The Land Act 2012 aims to revise, consolidate and rationalize land laws and to provide for the sustainable administration and management of land and land based resources. Other laws that were passed during the same period and came into effect on the same date are the Land Registration Act and the National Land Commission Act.

The Land Act stipulates guiding values and principles of land management and administration, which mirror the principles of land policy, outlined in the Constitution and the National Land Policy, and Section Four includes sustainable and productive management of land resources and conservation and protection of ecologically sensitive areas. In Section nineteen, it further mandates the National Land Commission to make rules and regulations for the sustainable conservation of land based natural resources that shall incorporate measures that may potentially facilitate the interventions envisaged for giving effect to the recommendations of this study, including specifically the following:

i. Measures to protect critical ecosystems and habitats;
ii. Incentives for communities and individuals to invest in income generating natural resource conservation programmes;
iii. Measures to facilitate the access, use and co-management of forests, water and other resources by communities who have customary rights to these resources;
iv. Procedures on the involvement of stakeholders in the management and utilization of land based natural resources; and
v. Measures to ensure benefit sharing to the affected communities

The National Land Commission Act makes detailed provisions about the functions and powers of the National Land Commission established by Article 67 of the Constitution of Kenya, 2010 and gives effect to the principles of devolved government in land management and administration. The functions of the National Land Commission (hereafter 'Commission') include two that are of relevance to the situation for community land tenure on Kenya's coast, namely: investigating historical land injustices and recommending appropriate redress, and monitoring and having oversight responsibilities over land use planning throughout the country. The Commission shall within two years of its appointment "recommend to Parliament appropriate legislation to provide for investigation and adjudication of claims arising from historical land injustices".

Other laws are in the pipeline – such as the envisaged law on community land. In this regard, the Minister for Lands has appointed a Task Force to re-draft the Community Land Bill. The law on community lands is envisaged by Article 63 of the Constitution as well as Section 37 of the Land Act.

C. The Importance of Devolved Government

A major constraint to addressing sustainable land use in the past has been the absence of legal and administrative authority at the local level as powers over land administration and environmental conservation were centralized in institutions based in Nairobi. The county governments established by Section Eleven of the Constitution of Kenya, 2010 are in part a response to this constraint. Thus, among the objectives of devolution are: to give powers of self-

Land tenure on the Kenyan Coast

Land Tenure issues in the 10-mile coastal strip of East Africa can be traced back to before the invasion by the Omani Arabs who conquered the East Coast of Africa in 1660 A.D.. In Kenya, this area covers a strip of land of 1,420km long stretching from Vanga in the south coast to the Lamu Archipelago in the north. The ownership of land in this area has changed hands between the Sultan of Zanzibar (1660), Imperial British East African Company (IBEACO) (1885), and later the British colonial (1888) and Kenya Governments (1963). The prevailing situation in the 10-mile coastal strip is that land occupied by indigenous Kenyans is still held under communal customary tenure as most of the land has not been adjudicated to determine people's individual (or community) land rights. Areas which have been adjudicated under the Land Titles Act (1982 repealed 2012), have legal individual tenure except that most of the landowners are absentee landlords. Squatters who believe they have the right of ownership as they have lived in these localities for time immemorial occupy most of the land. In this regard land tenure issues in the 10-mile coastal strip remain one of the most sensitive land issues in Kenya as local communities feel they were cheated out of their land (see below).

When all the land in the coastal strip was ceded to the colonial British Government, all rights to land in this territory, except for the private property, were vested in the Crown. In 1908 it became necessary to adjudicate land in the 10-mile strip in order to separate private property from Government Land and the Land Titles Act, Cap 282 of 1908 was passed for this purpose. Those individuals who successfully claimed their land rights were issued with a freehold certificate of ownership or certificate of mortgage. Title deeds issued for these lands did not create new rights to land but only confirmed the existing interests of their private owners and did not pertain to new grants. In reality the adjudication all but ignored customary land holdings and claims, turning local communities into squatters, a situation that persists to this day. It is no surprise therefore that land tenure issues in the Kenyan ten-mile coastal strip remain one of the most land sensitive issues in the country as local communities feel they were cheated at the time of the Adjudication in 1908.

Adapted from Wayumba (2004)

governance to the people and enhance their participation in the exercise of the powers of the State and in making decisions affecting them; to recognize the right of communities to manage their own affairs and to further their development; and to facilitate the decentralization of State organs, their functions and services, from the capital of Kenya. The functions and powers of county governments are enumerated in the Forth Schedule to the Constitution. They include, "implementation of specific national government policies on natural resources and environmental conservation, including soil and water conservation, and forestry.

The role of devolved government in this regard shall be supported by the decentralized land administration framework introduced by the National Land Policy. This includes District Land Boards (to be renamed County Land Boards) and Community Land Boards. Functioning as agents of the National Land Commission, these local level land boards shall be composed of democratically elected community representatives. They are important as a means of ensuring effective participation by citizens in land administration, and will provide opportunities for articulating local land related challenges and designing appropriate strategies for addressing them.

(20) What are the legal requirements for managing communal land (or its equivalent)?

Because 'community land' is an entirely new legal land category hitherto unrecognised, and the corresponding legislation is remains under development. The legal requirements for managing customary communal land (barely and poorly recognised before the promulgation of the new Constitution) remain unresolved. The Government of Kenya has not had a single and clearly defined criterion for recognizing customary and community land ownership. In addition, there has not been a tangible definition of community as an entity with regard to ownership and registration of rights and interests to land. However, attempts to recognize land ownership by people living communally in informal settlements, traditional Swahili villages, or old colonial villages have been going on guided by scattered pieces of legislation such as:

- The Land (Group Representatives) Act (Cap 287; 1968) which divided pastoralist areas into group ranches, and provided for the incorporation of representatives of groups who were recorded as the land owners of each new group ranch under the Land Adjudication Act. This act essentially led to the extinguishing of customary land ownership in favour of individualization of land and the subsequent sub-division of the group ranches and their capture by local and national elites.
- The Trust Land Act (Cap 288), vested community land in the then district councils, to hold and manage on behalf of the people. This was an attempt to have land reserved for communities, but which, in practice, rarely benefited them because of the fact that communities were not adequately organized as an entity to own and manage the land on their own.

Along the coastal strip, many people live as communities in squatter villages and other informal settlements. The tendency here has been to individualize rights and interests to such land through the squatter settlement processes in the Agriculture Act or issuance of individual letters of allotment under the Government Land Act, as opposed to formal recognition of their communal rights. The process of subdivision of such land is complex and at times separates extended families against their desire. The situation is that way because both Acts have had no clear method of recognizing rights and interests to land for such communities without individualizing ownership. Both initiatives have no guidelines and regulations on how the village, as an entity, can register and manage their rights and interests to land.

The land insecurity of coastal communities spurred the development of a Community Land Rights Recognition Model (CLRR) through the SECURE project[8] under the auspices of the Government of Kenya for the recognition of community land rights as stipulated by Article 63 of the Kenyan Constitution 2010. This proposed process is a result of many months of development with four targeted pilot communities in coastal Lamu County, the county's local administration, and other stakeholders. The process commenced with a review of the current processes used by the Ministry to adjudicate land rights to coastal communities, namely the Squatter Settlement Scheme stemming from the Agriculture Act (Cap 318), and enhanced it with input from external consultants with specific experience in the recognition and delimitation of community lands in Ghana, Liberia, Mozambique, Nigeria, Uganda, Sierra Leone, Sudan, and elsewhere. Essentially,

[8] http://kenya.usaid.gov/programs/environment/476

the CLRR Model provides steps and processes that enable the divestiture of land from one category to the Community Land category. It acknowledges that community land rights may incorporate overlapping claims of land rights and therefore ensures that in the conversion of lands from their previous tenure regime to Community Lands, all layers of overlapping claims are captured while at the same time serving to provide evidence for any conflicting land claims that require special attention to be resolved. Furthermore, the Model deals with the National Land Policy's call for the establishment of Community Land Boards by incorporating steps for the establishment of an appropriately constituted land holding and governance entity to be registered and become the legal entity in which ownership of Community Lands would reside. The Model also envisages the need for a speedy, cost-effective, dispute resolution mechanism to help resolve boundary and other land-related disputes. In this regard an alternative dispute resolution (ADR) agenda is enshrined in the Model through the identification of existing local ADR mechanisms and institutions, and training and enhancement to provide community land dispute resolution services.

The Model aims to achieve three main objectives: 1) to develop a customary land tenure and property/ resource rights recognition model that, among other characteristics, is cost-effective for the Government of Kenya, affordable to beneficiaries, equitable and fair, and legally recognized; 2) to pilot principles and ideas that will inform the design of law and institutions envisaged by the Constitution and National Land Policy for securing community land rights; and 3) to build capacity among key stakeholders towards the implementation of the Constitution and the National Land Policy with regards to protection of community land rights. Finally, the CLRR Model recognises that there would be potential challenges to achieving its objectives and, therefore, endeavours to offer built-in solutions to general challenges, ranging from political manipulations to the perception that Community Lands would stymie investments in land. It also offers solutions to potential operational challenges such as the lack of clear definition of communities, cost implications of community titling to beneficiaries, and mechanisms for recognizing individual entitlements within communities.

(21) ***What is the relationship between local communities and protected areas? What role do local communities play in the management of these areas? Are local communities empowered to create their own protected areas? If so, how has this right been used?***

The establishment of Marine Protected Areas (MPAs) in Kenya was heavily propelled by interests in the tourism industry but they have also benefited local fisheries. MPAs increase the spill over of fish to adjacent fished areas (McClanahan and Kaunda-Arara, 1996; McClanahan and Mangi, 2000; Kaunda-Arara and Rose, 2004). This has led to an increase in catch per unit effort in areas closer to an MPA (Kaunda-Arara and Rose, 2004), as there is a higher abundance and species diversity of fish in the marine parks and marine reserves than in open fished areas.

Table 14: Nationally gazetted Marine Protected Areas in Kenya (Source: IUCN, 2004)

Site	IUCN Category	Size (Km2)	Date established	Management type
Malindi	II	6.3	1968	Park
Watamu	II	10	1968	Park
Malindi-Watamu	VI	245	1968	Reserve
Kisite	II	28	1978	Park
Mpunguti	VI	11	1978	Reserve
Kiunga	VI	250	1979	Reserve
Mombasa	VI	200	1986	Park
Mombasa	II	10	1986	Reserve
Diani-Chale	VI	75	1995	Reserve

However, the establishment of the MPAs has led to conflicts between stakeholders (Muthiga, 2009), especially between marine resource users and protected area managers. The Kenya Wildlife Service (KWS) is responsible for surveillance within the MPAs to prevent illegal fishing within MPAs, but this still persists. Fisher communities that interact more with the KWS have a higher compliance level.

Kisite Marine Park

The MPA is located off of Wasini Island (see Figure 16). There has been much bad feeling locally about the park, especially in the community of Mkwiro which has been severely affected by a reduction of their fishing grounds. Despite Park tickets allegedly stating that part of proceeds go to local communities, very few benefits have been seen (Mkwiro BMU). KWS is now a stakeholder in Mkwiro BMU but there is still considerable resentment.

(i) Nursery area closures, no-take zones and marine reserves where fishing is sometimes allowed

Marine Protected Areas in Kenya are considered as no-take zones and are designed to incorporate nursery areas. Within Marine Reserves, only artisanal fishing is allowed. The management of Marine Reserves has been noted to be unsustainable in terms of supporting livelihoods of local communities (Muthiga, 2009). Mpunguti MR is heavily used both for octopus and aquarium fisheries[9].

(ii) Other temporary areas closures for specific purpose

There exists no (government) temporary area closures along the Kenyan coast aimed at

[9] Conversations with octopus dealers in Shimoni reveal that they send a boat of 40 fishers to Mpunguti on a regular daily basis

protecting spawning aggregations of fish. Information on timing and location of fishing spawning aggregations is insufficient. Recent studies indicate there is targeted fishing of rabbit fish *(Siganus sutor)* and exploitation of grouper (*Epinephelus fiscoguttatus*) spawning aggregations for dive tourism in south coast Kenya (Maina et al., in prep; Samoilys et al., in prep; Robbinson et al., 2008). This could be subjected to management measures in the near future, including gazettement of these spawning sites as breeding areas. There are also community initiatives as part of CCAs to come up with community marine protected areas (see table below). Recent developments in marine conservation indicate an increasing trend of community initiatives geared towards establishment of community marine reserves, with different forms of management. Community reserves are being driven by the need to improve the health of the ecosystem, to reduce overexploitation, improve livelihood development, reduce resource use conflicts, enhance eco-tourism and habitat, and achieve species protection.

Table 15: Community marine protected areas along the Kenyan coast (adapted from Harrison and Laiser, 2009; Murage et al., 2010; Abunge, 2011; 2011; Samoilys et al., 2011)

Conservation initiative	Year formed	Size (Km^2)	Management intervention
Kuruwitu	2006	0.29	No take zone
Tiwi (Nyari)	2009	0.125	No take zone
Msambweni	In progress	0.46	Gear restriction
Wasini	2008	3	No take zone
Kibuyuni	2010	2	Gear restriction/no take zone
Mkwiro	In progress	0.155	Gear restriction
Bureni	2010	0.52	No take zone
Kanamai	2011	0.22	No take zone
Mkwakwani/Tradewinds	2009	0.118	Gear restriction
Shimoni	In progress	In progress	Gear restriction
Jimbo	In progress	In progress	Gear restriction
Vanga	In progress	In progress	Gear restriction
Majoreni	In progress	In progress	Gear restriction
Kiweni, Lamu	2010	3	Gear restriction

(22) ***Has the governance framework changed or evolved in recent times (past 10 years)? Identify and describe the major changes which have occurred over time. How can these changes be explained?***

As outlined in the preceding sections, there have been major transformative changes in the governance framework for natural resource management in Kenya, which remain a work in progress. Most importantly, the new constitution has underpinned and further strengthened a

trend over the last 10 years towards devolution of control over natural resources and associated governance institutions. This process remains far from complete and perfect, but it is a welcome step and will likely lead to major improvements in resource management practices in a context where pressure on natural resources from a much expanded and still increasing human population reliant on these resources continues to build.

Policy and legislation already passed and being implemented in support of rights-based natural resource management includes;

- The Constitution (2010)
- Land Policy (2007)
- Land Act (No 6 of 2012)
- Land Registration Act (No 3 of 2012)
- National Land Commission Act (No 5 of 2012)
- Environment and Land Court Act (No 19 of 2011)
- Forestry Act (2005)
- The Fisheries Act (1991) rev 2012
- The Fisheries (Beach Management Units) Regulations, 2007 (Legal Notice 402)
- The Wildlife (Conservation and Management) (Conservancy) Regulations, 2012
- National Oceans and Fisheries Policy 2008

Bills under development include:

- Wildlife Conservation Bill (forthcoming)
- Fisheries Management and Development Bill (forthcoming)
- Community Land Bill (forthcoming)

These changes can be most simply explained as a result of a conversion of common interests for:

(i) **Political reform** – this had been promised and has now started to be delivered as a response to a popular wish by Kenyans for greater devolution and control of their own affairs at a local level, particularly as the middle class has burgeoned and with increasing recognition of the need to divest development and decision-making away from the capital to create greater equality across the country. The popular desire for devolution was linked to the pressing need to divest power from an all powerful presidency and its clientele elite in order to address and prevent continued abuses of power that had had a major damaging impact on the country. These abuses included corruption, mismanagement of public resources and political violence.

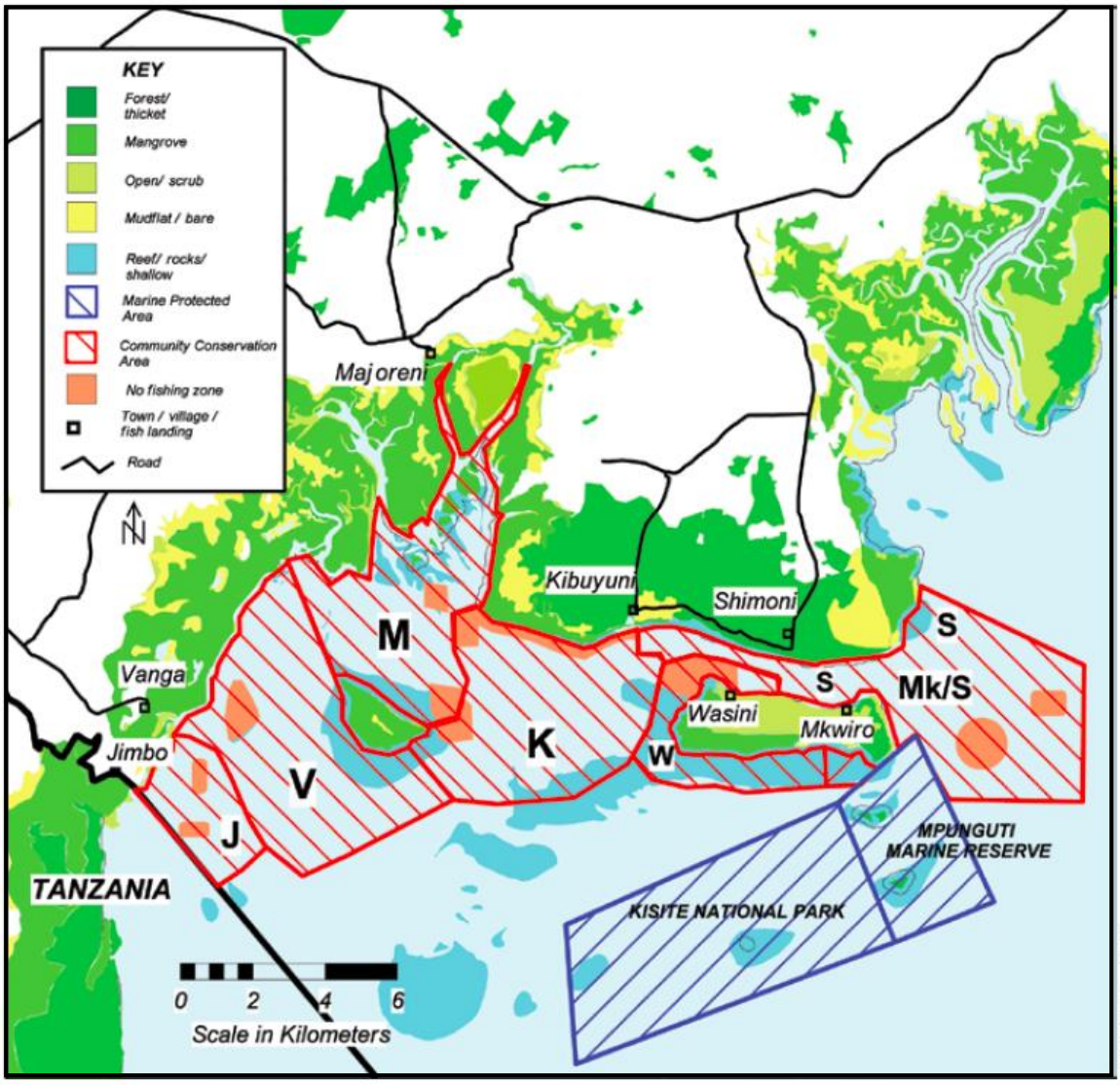
(ii) **Natural resource policy failure** – a realisation that Kenya has experienced a major decline in all its natural resources that had been heavily controlled by the central government, and often as a result misappropriated / mismanaged for elite gain. A major exception, is that natural resources have been far and away best managed on private and communal lands where land / resource holders have had the rights and/or incentives to sustainably manage their assets. As a result, there is now a major policy move towards building upon this track record and promoting

community-based and (private) landholder-based natural resource management and conservation (BMUS, CFAs, Wildlife Conservancies). An important aspect of the general redirection in natural resource management is greater enrolment of communities and the public in state conservation efforts recognising that in the past that communities and the public have often incurred substantial costs in important wildlife areas without participating in benefit sharing. In addition, there is clear recognition in the Fisheries Policy and recent amendments to the Fisheries Act of the need to actively improve the management of the offshore fisheries within the country's Exclusive Economic Zone.

4 THE CASE STUDY COMMUNITY

The location selected for the case study is at the southern extreme of the Kenyan Coast in an area comprising a cluster of six communities, each of which have their own Beach Management Unit (BMU). Administratively, the case study area is located in Lunga Lunga sub-county in Kwale County. The area is a complex of mangrove bays, estuaries and creeks close to shore, with patch and island reefs lying not far off shore. For practical reasons of time, although all the communities are contiguous and part of a larger fisheries area, three of the six BMUs were chosen for comparative study – Shimoni, Wasini and Kibuyuni. The study site was chosen in part because of the recent creation of the BMUs, providing an opportunity to understand the development of a formalised rights-based fisheries regime, the relatively well understood recent past of the communities and their fisheries practices, and the significance of recent demographic and socio-economic changes in the area.

Figure 17: A map of the case study site – Shimoni (S), Wasini (W), Kibuyuni (K), Mkwiro (Mk), Majoreni (M), Vanga (V) and Jimbo (J) Beach Management Units (Source: FFI/EAWLS)



4.1 The Nature of the Community

(23) Provide a brief description of the community – size, age structure, gender structure, dynamics (e.g. are young men tending to leave), membership (e.g. how do 'outsiders' become part of the community), religious diversity, main livelihood structure

The three selected communities lie in close proximity to each other: Shimoni and Kibuyuni communities are contiguous and Wasini village lies across the bay on Wasini Island (see map above). All three villages have active BMUs that were introduced during 2008 and 2009 by the Fisheries Department (FiD). The overall population of the six communities is estimated to be about 10,000 people (Harrison and Laiser 2009). In 2010 about 2,300 people were living in Shimoni, 1,500 in Wasini and about 590 people in Kibuyuni. According to a (previous) constituency poverty profile from 2008, 53% of the population live below absolute poverty, while 71.5% lacked access to sufficient food.

Fishing is a mainstay of the three villages, with over 80 percent of those interviewed reporting that they engaged in fishing activities. Laiser and Harrison (2009) reported that about a third of households largely depend on marine resources, in particular fishing and trade in fish and fish products, and the remaining two thirds of the population in the area[10]rely predominantly on small-holder farming for their livelihoods. In general, most household members are simultaneously involved in two or more livelihood activities that vary with season (see Figure 17). The largest proportion of total income - 67% - is derived from fishing-related activities (see Figures 18 and 19), with a diverse range of livelihood activities playing a lesser income-generating role.

Most smallholder farmers do not have title deeds; they are squatters and may be evicted at any time. The rapid increase of the population is leading to increased pressure on land and sea resources. Many households that rely on fishing for their livelihoods are reported to be landless. For example, it is reported that much of Shimoni Village's land has been allocated to local elites by the government, leaving little for villagers. Fishing communities tend to be the least well served in terms of access to primary health and education services.

Shimoni and Wasini have had growing levels of tourism and tourism investment over the last decade (no figures available) with tours to Wasini in particular, having increased. Most of the boat owners in Wasini are local community members and there is an increasing dependence on tourism (mostly daily tours are organised from hotels on Diani beach, south of Mombasa) with young men reluctant to go into the fishing industry.

Shimoni now houses the Kwale County Fisheries Office and the Kenya Wildlife Service Headquarters for the nearby Kisite Marine Park (established in 1973 and covering 26 km^2). There is a navy base on the outskirts of the village. Shimoni is also the departure point for tourists visiting the park and nearby community conserved areas (CCAs) in Wasini and

[10] The data refer to the former Kwale District which was sub-divided into Lunga Lunga and Msambweni sub-counties when it became part of the new larger Kwale County following the re-organisation of Kenya's administrative institutions and boundaries in 2011-2012 under the new constitution of 2010. The new county system has only begun to operate following the March 2013 general elections.

Kibuyuni. Shimoni has a registered landing site (the most accessible and widely used in the local area) and an anchoring point for visiting fishers. Area agents for the octopus fishery are based here and collectors for the aquarium fishery also depart from here.

There are several CBOs in Shimoni and Wasini which are managed by community members themselves and include two women's groups[11], the BMU, and two conservation groups[12]. In addition two large international aid organisations are active, and the national forestry research institute[13] have a presence. A regional coastal management project[14] was formerly active.

Kibuyuni is predominantly a fishing community. With reported declines in fish, fishing methods have changed with a former predominance of '*uzio*' (fence fish traps) set from shore; more popular methods currently are '*malema*' (basket fish traps) and '*mshipi*' (line fishing). People cultivate maize and some cultivate rice. Women also engage in trading activities, including selling local handicrafts to tourists in Shimoni from locally bought basketry materials. Seaweed farming was introduced to Kibuyuni in 2001 by KMFRI. A trial was carried out over 2001-2003 but was abandoned after this time. The idea was revisited in 2010/11 with a group of 60 (including 12 men). They were recipients of a RECOMAP grant of USD 106,000 with which they purchased boats for collecting the seaweed and also other required equipment such as ropes and materials to fence off a drying area. They have relied on KMFRI to bring them the buyers, but with no sales since December 2012 they continue to dry and store seaweed until a buyer can be found.

[11] Shimoni Women Group and Wastara Women Group
[12] Friends of Shimoni Group and Wasini Women's Group Boardwalk
[13] Kenya Forestry Research Institute (KEFRI)
[14] Regional Management for the Sustainable Management of the Coastal Zones of the Indian Ocean (RECOMAP)

Table 16: An overview of the small-scale fishery of Kibuyuni, Shimoni and Wasini. (Source: Adapted from Mallaret-King [2004] for the Vanga-Shimoni-Gazi stretch of the south Kenyan coast)

Demography & number of fishers	**Species exploited**	**Gear**	**Vessels**	**Fishing & Fishing Areas**	**Women and fishing**
Area not densely populated: between 1,100 inhabitants (Wasini-Mkwiro) and 10,000 (Vigunjini). An estimated 600 fishers in three study communities - ~13.4% of the male population involved in fishing	**Reef sea grass associated fish**: Grunter, pouter, parrotfish, black skin, rabbit fish, snappers, goat fish, groupers (mainly in dry season), unicorn fish **Pelagic**: jacks, sardines, ribbonfish, barracuda, queen fish, king fish, small mackerel, bonito, rays, sharks (rays and sharks: Vanga/Kiwegu) **Crustaceans:** prawns, lobster, crabs. **Octopus, squid, sea cucumber**.	**Nets:** (Gillnets, beach seines, cast nets) Ring nets Drift nets (not widely-used Kiwegu / Vanga) **Lines:** (hand lines) **Traps:** (traditional fish traps, tidal weirs, crab pots) **Spear guns:** **Spear and sticks:** (for octopus)	**Boats used throughout the area:** Dugout and outrigger canoes, a few motorised boats in the Shimoni and Wasini area and a few fibre glass boats	Fishing is the most important activity in most of the communities. However tourism and other activities are also present (increasingly important). **Inshore.** lagoons, creeks, shallow waters, sea grass beds **Offshore**-some fishers access deeper waters-but not outside reefs, in dry season mainly	Women involved in fishing prawns/fish, and/or octopus fishing; only on foot Women are involved in fish trading in all the area and food selling to fishers. Women farm seaweed in Kibuyuni

Figure 18: The average number of people engaged in a livelihood activity in each household for the FFI/EAWLS project area [n=120] (adapted from Harrison and Laiser 2009).

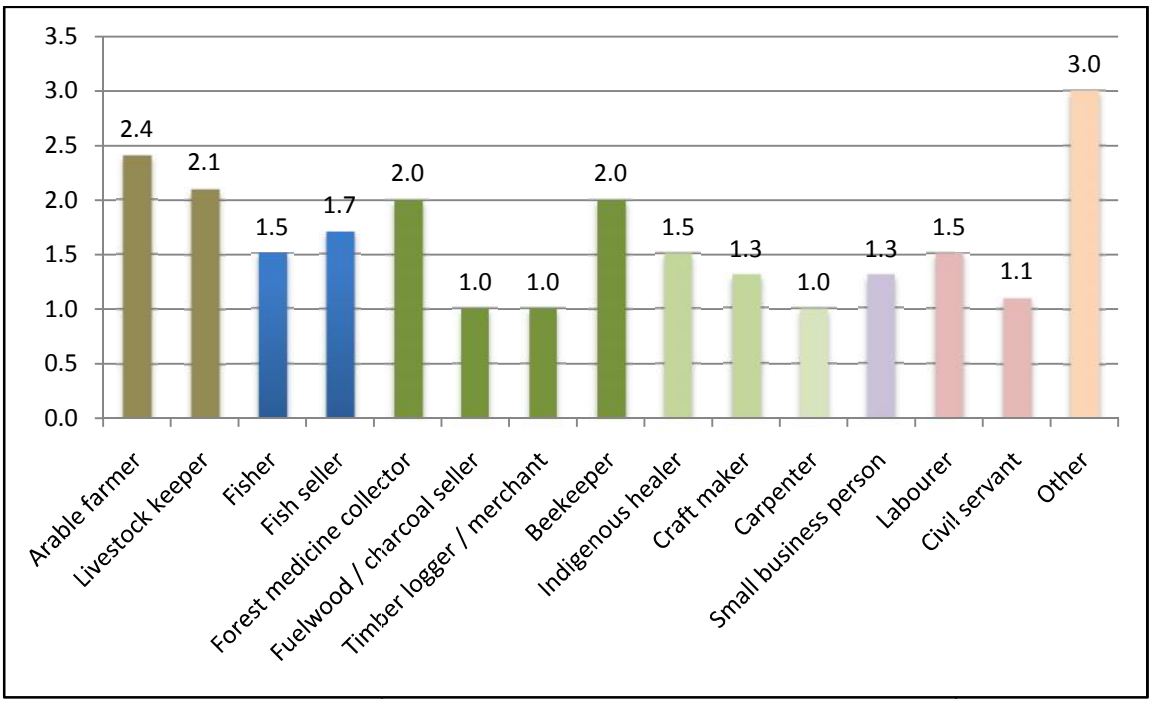
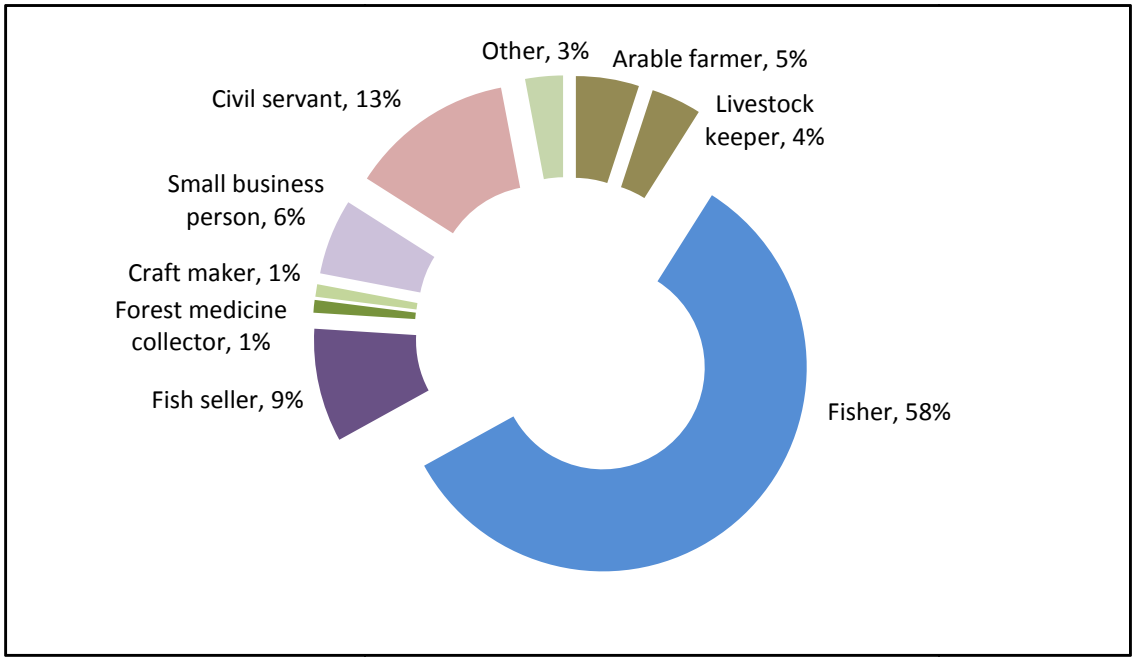
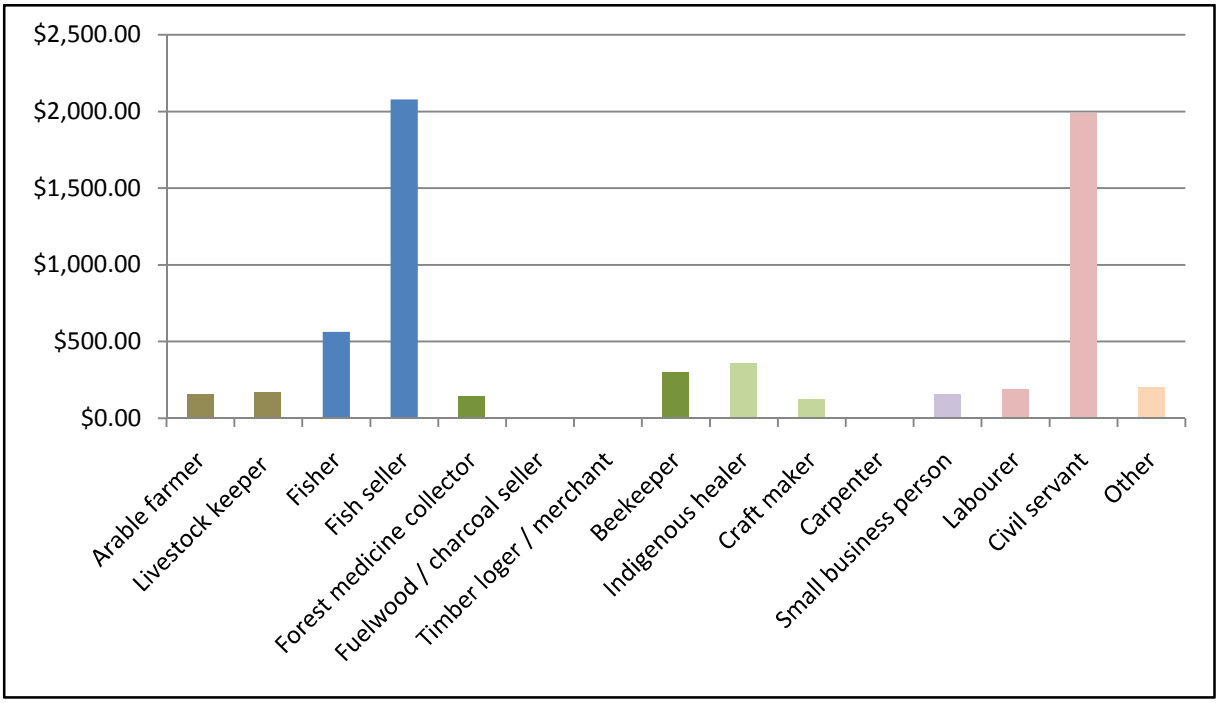


Figure 19: Percentage of total income by activity for the FFI/EAWLS project area [n=120] (adapted from Harrison and Laiser 2009).



The average household income is USD 810 per year, but this does not take into account the value of subsistence farming. Average household income amounted to barely over USD 2.20 a day with 63 % of respondents reporting that their current income level was insufficient to make a living.

Figure 20: Stated average annual income levels per person in USD per year for the FFI/EAWLS project area[n=120] (adapted from Harrison and Laiser 2009)



Fishing by the local community in the area is small-scale for both direct consumption and for sale. They employ simple vessels and traps as the acquisition of motorised vessels and modern gear is difficult for most fishers for financial reasons. Fishing is primarily carried out in the nearshore (not beyond the reef) and mangroves. 35% of the respondents[15]reported that they use fish traps which are made from local thatched materials; 25% use fishing lines; and 22% use fishing nets which are normally obtained locally. Primary data collected by KMFRI (See Section 6.1) and observed during this survey indicate that spearguns are widely used (despite a ban) and ringnets are used by some fishers (use of ringnets, destructive in nearshore waters, is currently under review by FiD). Some fishers operate on foot, mostly for octopus. Dynamite has been used in the past and there was one mention of recent use (in Kibuyuni). Dynamite is a widespread and serious problem in nearby Tanzanian waters.

Community members reported that there is a lack of market demand for fish (Harrison and Laiser, 2009). Market demand is especially limited during the rainy season (and also the low tourist season) when buyers dictate prices. The middlemen buy fish from fishing communities

[15] This data is sourced from the socioeconomic survey carried out by Harrison and Laizer (2009) for the Darwin funded project.

at a low price and sell it at a considerable mark-up in urban areas such as Mombasa and other nearby towns.

In the 1980s and 1990s, a fishers' co-operative that was set up in Shimoni bought all the fish from nearby fishing communities. For every kilo of fish brought to the co-op KES 5 (then about USD 0.10- 0.20) was put into the individual fisher's saving account (pers. comm. Kibuyuni BMU). The co-op operated for many years until it was disbanded around 1994 allegedly because of corruption. Some of the current BMUs are thinking of operating something similar to allow fishers to save.

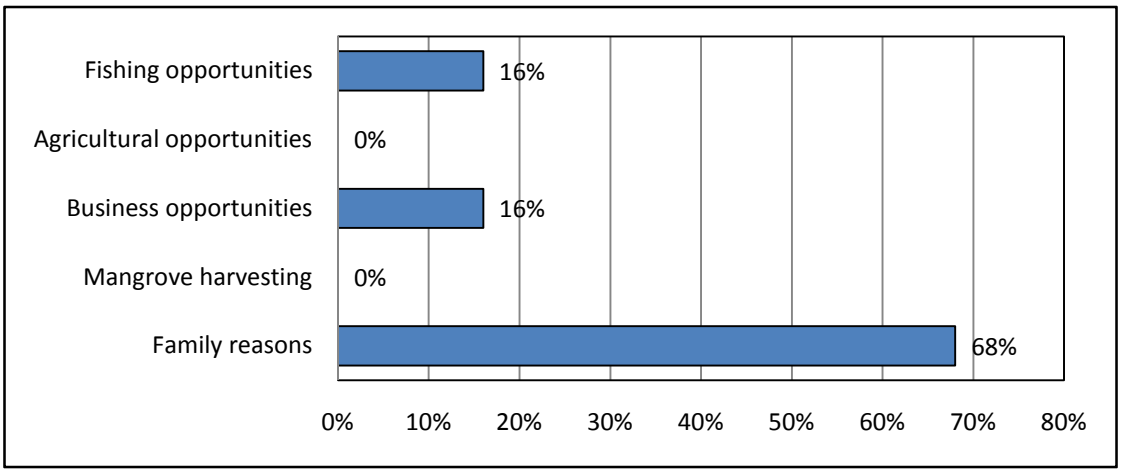
In terms of religious diversity, the large majority of local villagers are Muslim, but in Shimoni where there is recent immigration of people from other parts of the country, other religions are becoming more common.

In common with large areas of the eastern coast of Africa, migration between villages is widespread. Fishers from island and mainland communities commonly utilise seasonal fishing camps, many intermarry locally and some become permanent residents. This has resulted in communities being 'linked' up and down the coast. Villages in the Shimoni area have traditional links with Pemba (northern island of Zanzibar), Tumbatu (a smaller Zanzibar island) and Tanga.

(24) ***How long has this community existed? (Is it a 'traditional' community or a community of more recent origin (e.g. defined by the development of fishing activity in a particular location)?)***

All three communities are well established, the youngest was begun some 90 years ago (Kibuyuni), and the oldest about 600 years ago (Wasini). In common with many of the older coastal villages, Wasini can trace its origins back to Arab settlement. In the last decade there has been a substantial increase in the immigration of people from all over Kenya, for example with the 'original' community of Shimoni now estimated as comprising only30-50% of the current total population (pers. comm. Fisherfolk group). Figure 20 below provides an overview of the reasons why people have immigrated into the community. Persons interviewed during this study suggested that many new fishing gear is brought in by migrant fishers e.g. ringnets.

Figure 21: Reasons for moving to area (Source: Harrison and Laiser 2009)



4.2 Nature of the Rights

- *What rights does the community possess?*
- *Are they formally recognised? If yes, please include an appendix that provides a copy of the appropriate legislation.*
- *If they are not formally recognised, how does the community protect its rights?*
- *How were these rights developed?*
- *Does the community pay anything to the higher tiers of government in return for the rights?*
- *In what legal form are the rights held? (For instance, has an association been created?)*
- *How is membership determined?*
- *Does an executive or management committee exist? If so, how is it elected? What is the election process?*
- *What obligations does the community have to meet in the exercise of its rights? What are the statutory requirements that must be fulfilled? Does the community fulfil them?*
- *Have the rights been tested legally? For instance, has there been a court case where the community has successfully defended its rights against encroachment by outsiders? If yes, please provide some information.*
- *What is the relationship between the community and other tiers of government (local, provincial, national)?*

The Fisheries (Beach Management Unit) Regulations, 2007 (Section 6.9) have been used by FiD to guide the development of a set of formally recognised and operational by-laws for each registered community. The communities are not required to pay in return for the rights under the BMU legislation but they have certain responsibilities which are detailed below. While the framework of the resource rights is broadly the same, some of the detail varies between the communities. The by-law framework is set out below as per the adopted by-laws for Shimoni and Wasini (the by-laws for Kibuyuni were not available at the time of visiting) and with reference to the BMU regulations. Individual community accounts are then presented which include discussion on the progress of the three villages with regard to implementing their BMU rights and responsibilities.

4.2.1 BMU By-laws

Each BMU is governed by a set of agreed standard operating procedures in the form of by-laws which are in line with the Fisheries Act and its subsidiary legislation, with the purpose of governing the BMU's internal operations. The by-laws are agreed between the community and FiD and must be submitted prior to a village's application for BMU registration, and the application must be signed by at least thirty applicants. The by-laws are binding on all BMU members and nay persons present at or using the beach. The Director may refuse to register the BMU if s/he is not satisfied by the terms and will inform the community in writing of her/his reasons. The Director can decide the minimum number of fishing boats held by a community that qualifies them for registration – currently this is thirty.

The regulations define a 'Beach Management Unit' as 'an organisation of fishers, fish traders, boat owners, fish processors and other beach stakeholders who traditionally depend on fisheries activities for their livelihoods'. BMUs are established for each fish landing station (defined by the Fisheries Act) although one BMU may cover two or more landing stations. Each

BMU will have one or more areas over which it has jurisdiction and these are described in the by-laws as a number of defined fishing grounds, for example, as set out for Shimoni below:

> "AREA OF JURISDICTION
>
> When executing its mandate the BMU's area of jurisdiction shall cover the following fishing areas: Waga, Kombeni, Kimundu, Maazi Nduwa, Rambazo, Jiweni, Panga za Ngamba, Maji Chumvi, Kiphani, Kifungu, Kishori, Ndawa and the shared Chongoni/Nyuli fishing grounds"

The regulations state that where areas of fishing are used by members of more than one BMU, the authorised fisheries officer shall, following a consultative process, designate a joint co-management area in which more than one BMU shares the responsibilities for fisheries management with the Director. Shimoni has both separate and shared fishing grounds (shared with Mkwiro BMU).

Objectives of the BMU

The objectives of the BMU are stated in the by-laws and broadly follow the regulations as follows (some have been omitted below – see Section 6.9):

a. To strengthen the management of fish landing stations, fisheries resources and the aquatic environment
b. To support the sustainable development of the fisheries sector
c. To prevent and /or reduce conflicts in the fisheries sector
d. To protect the environment from over exploitation
e. To ensure beach sanitation and hygiene
f. To create awareness amongst the fishermen on good fishing practices
g. To collect fisheries data and other information

Structure of the BMU

The BMU regulations set out the following Membership categories:

(a) Boat owners - meaning the owners of fishing vessels registered at its beach:

(b) Crew members meaning such persons other than boat owners whose fishing licences authorise them to fish from its beach;

(c) "Fish traders and input suppliers" meaning persons routinely involved in fish trading or the supply of inputs and services necessary for fishing at its fish landing station;

(i) Persons who engage in the dealing of fish for sale locally on the basis of a fish trader's licence;
(ii) Persons who engage in the dealing of fish for sale to a person or persons outside the county on the basis of a fish trader's licence;
(iii) Persons who supply fishing gear, bait, ice or other inputs to boat owners in return for a first claim on landed fish and fishery products which they then sell on:
(iv) Persons who purchase fish at the beach for processing and sale at the beach or in the vicinity of the beach on the basis of a fish trader's licence;

(v) Agents or representatives of persons engaged in the large scale processing; of fish on the basis of a fish traders licence, whether or not employed by such processors; and
(vi) Persons involved, whether as employees or otherwise, in the grading, sorting, valuing, packing, and portaging of fish at that beach.
(vii) Persons involved in the supply of inputs and services necessary for fishing" include fishing vessel builders and repairers and net repairers.

A person who wishes to apply for membership of a beach management unit has to apply in writing to the relevant BMU executive committee who in turn must forward such applications to the authorised fisheries officer for approval. If the authorised fisheries officer does not object to the application, the applicant is admitted as a registered member of the BMU upon payment of the specified fee. The regulations are clear that a person can only be a member of one BMU at any time.

A person not holding a licence whose entitlement to membership of a beach management unit would require him to hold such a licence may apply for provisional membership of a beach management unit. In this regard, the Director shall not issue a licence to a person that relates to a particular Beach unless that person is a member or a provisional member of the relevant beach management unit.

However, following the grant of a licence to a provisional member by the Director of Fisheries, the member concerned shall notify the executive committee, which shall admit him to full membership.

BMU Members can:
(a) Participate in the decision-making processes of the beach management unit;
(b) Where the member is not in arrears concerning fees or charges due to the beach management unit, stand for office and participate in elections;
(c) Benefit from any services provided by the beach management unit to its members subject to the payment of any fee or charge – such as credit and savings opportunities; and
(d) Inspect the books and records required to be maintained by the beach management unit.

The membership of the BMU executive committee is also regulated by the BMU regulations such that:
(a) The executive committee of a beach management unit shall have not less than 9, nor more than 15 members as provided for in its by-laws, who shall be elected by the members of the beach management unit.
(b) The composition of an executive committee shall be specified in the by-laws of each beach management unit such that
(c) The membership should be distributed as follows
(i) boat owners — 30%;
(ii) crews — 30%;
(iii) traders — 10%;
(iv) others —30%,

(d), in as far as possible at least 3 of the executive committee should be constituted by women.
(e) Comprise a chairperson, a deputy chairperson, a secretary, a treasurer and committee members.
(f) A member of a beach management unit may be nominated to stand for election to the executive committee.
(g) A member of the executive committee:

(i) may stand for re-election for a second four-year term;
(ii) may not stand for re-election immediately at the end of a second term, but may stand again for election after leaving office for four years

(h) A beach management unit shall, through us by-laws, provide for the establishment of sub-committees depending on its particular requirements.

(i) Ordinary members of the executive committee shall be elected by the executive committee to head the sub-committees so created.
(ii) The assembly through a voting method determined by the authorised fisheries officer shall elect members to serve in the sub committees.
(iii) The chairperson of the executive committee shall be an ex-officio member of all sub-committees

The percentages of these categories can be altered by consultation with the Fisheries Officer. At least three members of the Executive Committee (in as far as is possible) should be women. Elections are held every four years and members can stand for one further term. Having stood for two terms they can only stand again once four years have passed. A quorum at a meeting of the Executive Committee is at least half of the members. There are various grounds on which a member of the Executive Committee can be dismissed by the assembly (Regulation 20) including proof that he has engaged in or condoned illegal fishing activities or has failed to perform the duties required of their office as specified in the by-laws.

The supreme authority of the BMU is vested in the assembly members, who exercise the authority in all assembly meetings which should be held at least once a year (AGM) and on other occasions at the behest of the Executive Committee or 33% of assembly members. The assembly can suspend or dispense with members of the Executive Committee in accordance with the regulations. The quorum of the assembly is half the total number of members, and a proposal to the assembly may be accepted if agreed by more than half of those present.

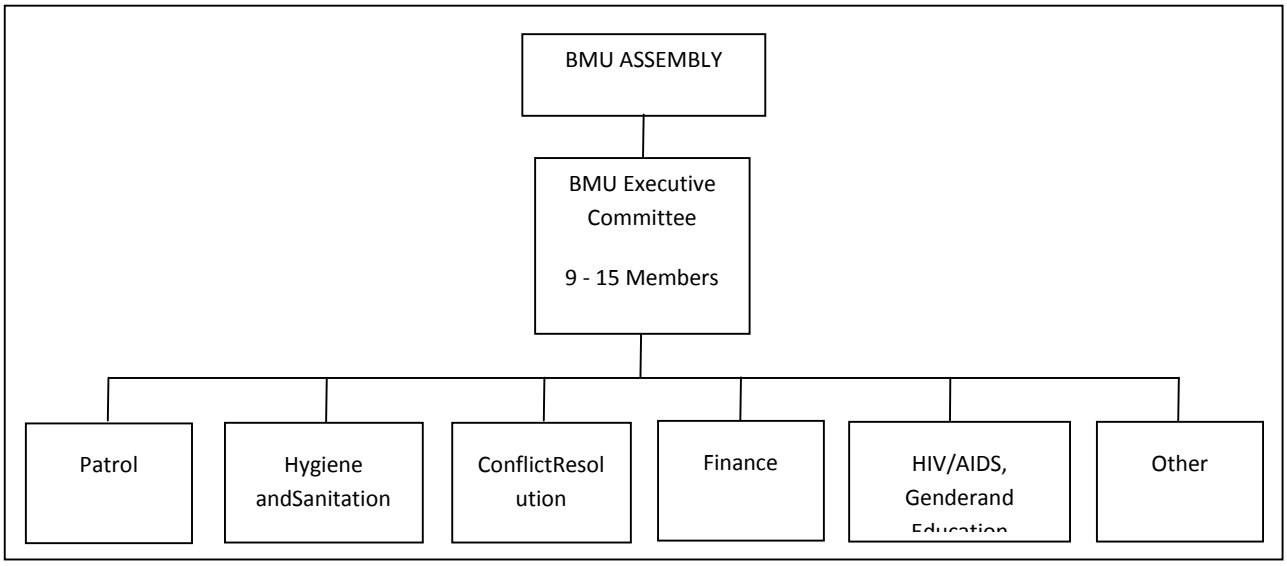
The BMU should have sub-committees, of which a patrol sub-committee is mandatory. Sub-committees adopted by the three BMUs in question are as follows (see Section 6.4 for the details):

- Patrol sub-committee
- Hygiene and Sanitation sub-committee
- Sub-committee for finance
- Sub-committee for HIV/AIDS, Gender and Education
- Sub-committee for Administration and Conflicts

Conflicts are resolved by the designated sub-committee together with village elders. If the conflict cannot be easily resolved the case is taken either to the FiD or to the police.

Other sub-committees can be convened. The chairs of the sub-committees are selected from the members of the Executive Committee. The BMU chairperson is an ex-officio member of all the sub-committees.

Figure 22: The general arrangement of the Beach Management Unit Executive Committee and its sub-Committees



The duties of the Executive Committee are to:

(a) Supervise the activities of the BMU and the implementation of the by-laws
(b) Approve the minutes of its previous meetings
(c) Supervise and review the implementation of the co-management plan
(d) Represent the BMU in relationships with third parties
(e) Convene and prepare for the meeting of assembly including the preparation of the agenda
(f) Review applications for admission to the BMU and resignation from it and to make recommendations to the assembly regarding the expulsion of members
(g) Submit the draft co-management plan and rules to the assembly
(h) Submit the draft budget to the assembly
(i) Conclude contracts in accordance with the approved budget and plans
(j) Employ and as necessary dismiss staff of the BMU
(k) Maintain accounts and registers as specified in the regulations
(l) To exchange information with other BMUs and other relevant agencies to promote the fair and transparent pricing of fish and fish products
(m) To formulate funding proposals, make financial reports and present them to the assembly for approval
(n) To inspect and record visiting fishing vessels and give permission to land where appropriate
(o) To supervise the financial management of the BMU
(p) To ensure fishing boats within the area of jurisdiction have been duly registered, have certificates of sea worthiness and are equipped with life-saving equipment and;
(q) Any other tasks specified in the regulations of the by-laws

The role of the BMU Chairperson is to:

(a) Chair the meeting of the Executive Committee and the assembly
(b) Act as the official spokesperson of the BMU
(c) Ensure timely submission of data, information and financial report by the committee to the assembly and the Director of Fisheries
(d) Arrest any person whom he has reason to believe has committed an offence
(e) Seize any fish, fishing gear, vessel or other articles which he has reason to believe has been used in the commission of the offence or in respect of which the offence has been committed
(f) Handle seized items in accordance with the Fisheries Act and the BMU Regulations

The role of the BMU Secretary is to:

(a) Convene meetings of the Executive Committee in consultation with the chairperson
(b) Act as the minute clerk at meetings of the assembly and Executive Committee
(c) Maintain correspondence of the BMU
(d) Compile monthly, quarterly and annual performance reports for submission and presentation to the Executive Committee
(e) Maintain and update all records of the assembly, members, equipments, statistics and other records.
(f) Collect and submit all data and information as may be required by the Director
(g) Coordinate activities of the meetings

The role of the BMU Treasurer is to:

(a) Prepare and make payments authorized by the executive committee
(b) Maintain the record of financial transaction entered into by the BMU
(c) Receive cash and make deposits to the BMU bank account
(d) Keep records of assets and liabilities of the BMU
(e) Prepare monthly, quarterly and annual financial reports
(f) Submit and present financial reports to the Executive Committee and the assembly for scrutiny and approval

The BMU can have employees with duties such as those described below (taken from Shimoni BMU by-laws):

- Watchman – to guard the BMU premises and to investigate and report on cases as instructed by the Executive Committee
- Cleaner – to maintain the cleanliness of the BMU premises and fish market
- Clerks - to record fish landings from fishermen and to tally fish catches with income generated.

4.2.2 Localised BMU Rules and Fishery Management Measures

The by-laws give provision for special management (including closure) of defined areas and also allow provision for prohibition of gears (over and above that defined in the Fisheries Act). The by-laws can also give protection to particular species.

Examples of fishery management measures from Shimoni and Wasini are:

(a) The BMU shall strive at all times to achieve the objectives of co-management
(b) Fish quality assurance regulations and protocols shall be followed and adhered to at all times
(c) The BMU shall encourage use of non-commercial fishing gears and methods such as *jarife*, *nyavu*, u*zio* and *malema*[16] within the inshore areas of jurisdiction
(d) All illegal fishing gears and methods such as *buruta*, *midete*[17] and ring-nets are totally prohibited.
(e) The BMU shall encourage coral breeding and avoid any type of damage to corals
(f) The BMU shall protect the mangroves, turtles, dolphins, dugong and other critical marine life living safely in their environment or breeding places
(g) Fish breeding and recreation areas shall be set aside and managed very well
(h) No person shall be allowed to deliberately contaminate or pollute the beach and the sea (Shimoni by-laws only)
(i) The BMU shall look for alternative livelihoods to fishing including fish and seaweed farming (Shimoni by-laws only)

Benefits from the women's mangrove boardwalk go directly to their own group (which was established prior to BMU) which are then dispensed according to their agreed profile (25% maintenance, 15% dividends, 35% education (nursery teacher, school fee, madrasa), 25% salary).

[16]*Jarife* – gillnet usually 6" and above; *malema* – basket traps; *Uzio* – fence trap; *nyavu*- normal reef nets three inches and above
[17]*Buruta* – seine net; *midete* – spear guns

The Development of Shimoni BMU

The BMU in Shimoni was registered in 2009.The number of members and boats at the time of the BMU's registration were as follows:

Category of BMU Member	**No.**
Fishermen	198
Dealers	38
Loaders	35
Mama karanga (fish fryers)	33
Hawkers using Bicycles	30
Boat operators	18
Tour operators	9
Boat builders	1
Others	19
Total	372
Category of Boat	**No.**
Canoes	69
Ngalawa (canoe with outriggers)	6
Other boats	8
Ring nets	1

Any member of the community who benefits or has an involvement with marine resources can apply for BMU membership. Annual membership is KES 100 (USD 1.18). There are currently 162 members of which 49 are women. There are 77 boat owners. Currently there are sub-committees on Data collection, Health and safety, Environment, Finance and Rescue. All original members received plastic ID cards and wallets.

Women fishers are few as resources along the shore have deteriorated considerably over the years (no longer any octopus fishing for example). The women members are predominantly fish processors (women who buy fish from the dealers at the market and fry and sell for local consumption) and as such are a relatively small percentage of the membership.

An executive committee was elected by secret ballot and currently consists of fifteen members of whom four are women (there is one woman post holder – the Vice-chair). Individuals put themselves up for election by submitting an application to FiD. The Executive Committee meets once per month and the assembly meets twice a year. There are five subcommittees – Security, Rescue, Education, Health and Sanitation, and Conflict Resolution.

The Executive Committee reported many illegal fishers from Pemba/Zanzibar using prohibited gear. There have not been any court cases as yet. The conflict sub-committee deals with any conflicts and the chairman is required to minute any meetings.

The major BMU landing site is at Shimoni and is located less than 0.5 km from the County Fisheries Office (there are two other minor landing sites in the BMU). Relationships between the two institutions appear reasonable although difficult to tell in the short time available for the study.

Informal rights-based management as a precursor to the BMU – Wasini

Wasini has had an unusual history of developing its own rights in that a small group of individuals championed the process of a 'no-take' zone several years prior to the BMU. This was primarily to earn revenue from tourism. The development of the BMU has had marked changes in the way natural resources are governed and there has been substantial investment of time and money by several NGOs. Prior to the BMU however there were an entrepreneurial group who worked with PACT Kenya (in the 90's) to set up a Locally Managed Marine Area to offer a cheaper alternative to the Kisite Marine Park for tourists. The promised funding did not arrive but ten people received some training. Four people were left in the group and there were many challenges in convincing fishers not to fish in the area. There was some success however after holding a community meeting with religious leaders, elders and so on to explain the benefits of the closed area both in terms of tourism but also for income. The group patrolled the area at their own cost and established buoys to mark the 3 sq.km area. They began to charge tourists USD 5 and about KES 40,000 (USD 5,000) was collected. Seven more people joined the committee and they employed persons to keep the beach and other key parts of the village clean and to collect the revenue. One hotel refused to accept the charges saying the village had no authority to close an area and collect fees. In 2009 the FiD introduced the BMU concept and the declaration of by-laws enabled the village to legitimise the fees for the closed area (this is discussed further below).

Defending community rights

Following non-payment of the chargeable fees for visiting the closed area by one hotel in particular, the case was taken (after many months) to the FiD and a meeting was held with the various stakeholders. The hotelier was made to understand the right to charge exists within the law and was obliged to pay from that point forward.

A fisher was repeatedly caught fishing in the 'closed area'. He was cautioned on two occasions but on the third occasion his fish were confiscated (7 Kilos) and he was warned that on another occasion he would be taken to the authorities. He has not subsequently returned.

The Wasini women's mangrove group which existed prior to the BMU (1979), has been charging for entry to a mangrove boardwalk (built with help of KWS). The fee was put up for tourists from KES 100 to 200 (USD 1.18 to USD 2.35) last year and some of the hotels have refused to acknowledge the increase. Other hotels have not paid their bill at all. The group has found it very hard to enforce the prices. The only solution that seems to have worked to date is through appealing for support from a higher level i.e. through FiD.

Management of benefits

Revenue from the BMU's activities including tourism payments, catch levies and membership go into a central fund. This income is used for executive committee expenses and also for community or individual needs awarded through formal application. Decisions on grants appear to be made on a case by case basis.

Kibuyuni BMU – Support from FiD

The BMU in Kibuyuni was registered in 2008, the concept having been introduced to the community by FiD in 2006. The executive committee were subsequently overturned because of corruption. 50 members of the community signed a petition which they took to FiD. They were supported and another election was held in 2010. There will be elections held again in 2013.

4.2.3 Co-management Areas, Plans and Measures

The regulations specify that the Executive committee shall assist the authorized Fisheries Officer to designate co-management areas within the BMU jurisdiction, which is an area in which the BMU shall undertake fisheries management activities jointly with FiD and other neighbouring BMUs. They shall then jointly develop a management plan for that co-management area that shall specify fisheries management measures that are to be taken to ensure the sustainable use of fisheries resources in that area as stipulated in the regulations. These areas are only effective upon the approval of the BMU Assembly and the Director of Fisheries in accordance with the regulations. These areas have been called **Community Conserved Areas** or CCAs.

Wasini BMU has the following extra by-laws in relation to co-management arrangements:

- All active CBOs that generate income from use of the community's marine and riparian resources are required to contribute 10% of their monthly income to the BMU for the purpose of project implementation in the village.
- All foreign boats anchoring in Wasini BMU jurisdiction areas pay KES 500 (USD 5.88) per day paid in advance

4.2.4 Revenue Collection and Management

Revenue Collection

The BMU by-laws allow the BMU to earn revenue set out in a schedule for each of the three communities (information only complete for Shimoni and Wasini) (see Section 6.4.1). The revenue collected is from fees levied for BMU membership, vessel registration, boat landing, fishermen and dealer licensing, boat mooring, tourism businesses and fishery produce sales levy (by kg). Revenue is also ostensibly to be collected through fines and penalties in the course of law enforcement activities as set out in the by-laws (see Section 6.9).

Revenue Management

Both Shimoni and Wasini BMU by-laws state that the funds of the BMU shall be applied only to the promotion of the stated objectives set out in by-laws (see above) as follows:

a. Patrols which will cover:
   - Rescue in the sea
   - Hire of boats and purchase of fuels
   - Monitoring
   - Awareness

b. Office administration
c. Salary
d. Allowances
e. Stationeries

In practice, income is also used for welfare and other community payments. BMU employees' remuneration is determined by the Executive Committee with approval of the BMU assembly– Shimoni BMU's by-laws set this out in detail. The treasurer is required to present monthly, quarterly and annual financial reports to the Executive Committee who shall present these to the assembly and FiD. In the case of expenditure, minor items (including welfare payments) can be approved by the Executive Committee but major expenditures must be passed by the Assembly.

4.2.5 Other Statutory Responsibilities under the BMU Regulations

The BMU regulations list a number of actions required for each BMU. These have been abstracted and are listed below (numbers refer to numbering in the legislation) the relative fulfilment by each BMU of their statutory responsibilities follows.

Table 17: An overview of the extent to which the BMUs have been able to / are implementing these rules.

Source	Detail of Requirement	Shimoni	Wasini	Kibuyuni
Reg 6 (1)	Orderly, safe and effective use, management and operation of fish landing station	Fisherfolk group (women fish processors) have responsibility for regular cleaning of market and was observed to be in good condition.	Yes although no fish landing was observed and there was no obvious fish market	The fish landing station was inactive use at the time of visit. The BMU has inherited a building previously used by FiD and is operating it as a market and office. The BMU have recently acquired title to the 0.5 ha in which it is located.
Reg 6 (2)	Gather, analyse, use, store and transmit data on quantities of fish and fishery products landed and price	A government recorder from KMFRI monitors fish catch Mon-Fri each week. 2 days of separate catch statistics were collected for Dec 12 and June 13.	No current data was observed as weighing of catch has been abandoned.	The BMU is responsible for collecting catch data. Some data sheets on Catch per Unit Effort (CPUE) were observed for Oct 2012 apparently as part of research carried out by WCS on gear usage. No other monitoring is taking place but members will assist researchers if required.
Reg 6 (3a)	Monitor seaworthiness of fishing vessels	Not checked	Not checked.	Unclear.
Reg 6 (3b)	(May) Provide rescue vessels or services	The BMU does not have a boat for this but does provide a rescue service; if there is an emergency, a member is requested to lend a boat	Rescue subcommittee but no dedicated boat	No formal rescue service or boat. Informal arrangements apply.
Reg 6 (4)	Raise awareness of its members concerning health risks	Health and Sanitation sub-committee formed – no detail of activities	Health and sanitation sub-committee but activities not known	Sub-committee for Health and Sanitation. Detail of activities not known

Source	Detail of Requirement	Shimoni	Wasini	Kibuyuni
Reg 7 (1)	Designate a co-management area	An area has been designated (see map). 'The Shimoni CCA is located at the sea front of Shimoni village extends to Waga and also includes Nyuli and Jironi areas. CCA comprises the same areas as those proposed for Mkwiro CCA. Proposed collaborative management areas include management of Nyuli and Jironi areas with Mkwiro BMU.	Wasini CCA extends from Pilipipa to Jiwe Jahari.	Kibuyuni CCA is located at the sea front of Kibuyuni village starting at Kijiweni, Kibuyuni, Mwaboma, Kiromo, Mkimu, Tzanzale to Masulini
Reg 7 (3)	Undertake specific responsibilities for patrol (of co-management area)	There is a patrol sub-committee for this, but with no dedicated boat, the BMU find this challenging. In practice, members who are out fishing report any problems to the committee who try and find a boat to take action.	No patrol boat available but some patrols are undertaken	There is a sub-committee responsible for patrol, but does not appear to be active. BMU members report back any incidents.
Reg 7 (4)	Develop a draft management plan including a. the designation of closed areas b. the designation of closed seasons c. the marking of fishing vessels d. restrictions on the type of nets or other fishing gears that may be used e. restrictions on the number of fishing vessel licences or fishing licences that may be issued	The plan has been drafted (not seen) and a closed area is under negotiation. A large part of Shimoni CCA is shared with neighbouring Mkwiro BMU. The proposed closed areas include an area used for diving and tourism and is near the Kisite Marine Park. Managing the area is under negotiation. There are no closed seasons nor any restrictions noted on the number of fishers or vessel licences in the area. The by-laws	Draft management plan is under development. Proposed collaborative management measures include designation of two main use zones (see Figure 17): gear restricted fishing zone (shaded area) and a no-take zone (red area) used mainly for visitor enjoyment and research. The gears that will be allowed in the gear restricted zone include basket traps, hand line and gill nets while fishing using spear guns, beach seine and	Draft management plan in progress. Proposed collaborative management measures include two main use zones (see map): gear restricted fishing zone (shaded area in) and two no-take zones (red area in Figure 17) used mainly for visitor enjoyment and fish breeding. The first no-take zone is Karangwa while the other combines the current LMMA and Kisizi. There are no designated closed seasons nor any restrictions on the

Source	Detail of Requirement	Shimoni	Wasini	Kibuyuni
		mention the prohibition of spear guns and the fisheries law prohibits use of scuba for fishing for lobster, but both were freely observed (discussed further below) at the BMU landing site. The KMFRI records show numerous records of spear-gun usage.	other illegal gears will not be allowed. There is no mention of restrictions on number of licences (fishing and vessels)	numbers of fishers allowed to fish.
Reg 7 (8)	Patrol sub-committee who shall undertake regular patrols within the co-management area	Limited patrol as mentioned above.	This is seen as a collective responsibility – there are no routine patrols as no is boat available. The current onus is on the village to determine how many tourists are visiting the closed area – no tickets are issued. No routine biological monitoring is taking place but individuals will assist researchers if required	No routine patrols as no boat available. Members carry out informal patrol when out fishing.
Reg 29 (1)	Management of beach management unit finances and assets including: a. open one or more bank accounts b. establish a reserve fund c. establish an appropriate financial management system	Bank account opened at time of registration. Cash at bank recorded as KES 25,698 (USD 302.33) in Jan 2013. Assets are listed. Appropriate financial system appears to be in place; EAWLS provided book-keeping training (1 week at time of registration) but Executive Committee considers this insufficient.	Bank account opened at time of registration. The BMU has made a great effort in terms of transparency of financial systems and income and expenditure sheets were displayed in the BMU building. Book keeping training.	Bank account opened at time of registration. Financial management system appeared to be in disarray and treasurer had recently resigned. There is currently an interim treasurer. Book keeping training

Source	Detail of Requirement	Shimoni	Wasini	Kibuyuni
By-laws	Keep records	EAWLS provided full set of record books. KMFRI take catch records Mon-Fri but submitted to HQ - no copy is kept either with BMU or at FiD. The BMU did have a paid data recorder but he 'gave up'.	Preparation of annual work plans, budgets and financial reports and funding proposals appear to be taking place with assistance of NGOs. BMU recently awarded KES 4.5 million grant from UNDP	Records were in disarray and the copy of the by-laws could not be found.
By-laws	Administer fines and penalties	No fines or penalties reported.	No, although there have been two cases	This is not broadly operational – there has been one recent case where a fisher was caught and his fish confiscated
By-laws	Earn revenue from fees	Income quoted at KES 300,000-350,000 (USD 3,529 – 4,117) per year. It appears that membership and renewal fees are being paid as well as anchorage fees (visiting fishers) but the catch levy is not being enforced. When questioned Executive Committee stated that due to upcoming elections they did not want to make a stand. 'Everyone is scared to bring up the problem'.	Membership fees and anchorage fees collected but catch levy has been abandoned. Tourism fees in operation in closed area.	Membership fees have been collected and there is some recent revenue from tourist visits to the 'closed area' for snorkelling. Fees from visiting fishers are collected

Source	Detail of Requirement	Shimoni	Wasini	Kibuyuni
By-laws	Prohibition of illegal fishing gear	Stated in by-laws but no evidence of any control.	Stated in by-laws but no evidence of any control.	Problematic
By-laws	Protect mangroves, turtles, dolphins, dugong and other critical marine life	Mangroves cleared from in front of BMU (probably historically). No mention of other species.	Yes, there is a women's 'mangrove group' and a turtle group is planned (to conduct nesting monitoring)	Detail not known
By-laws	Fish breeding and recreation areas shall be set aside	In negotiation.	Yes, as described above	Two 'no-take zones' area have been demarcated. There are some problems with compliance.

4.3 Scope of Rights

(25) Which resources are covered by the rights?

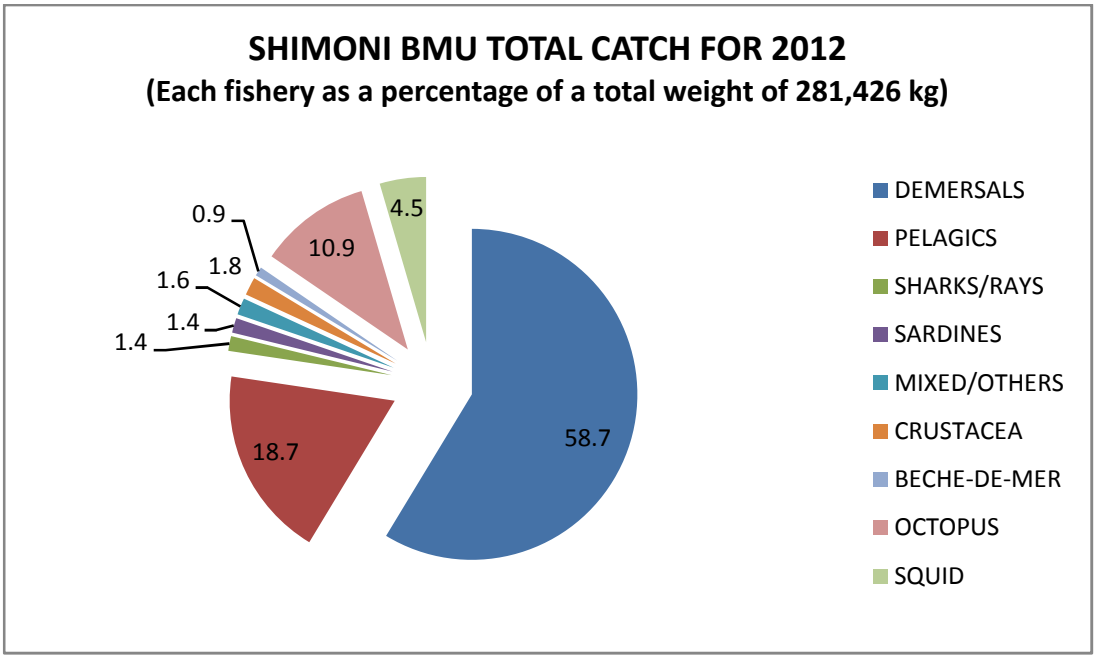
(26) Are these resources sedentary or mobile?

(27) If they are mobile, what is the percentage of the total resource covered by these rights?

(28) How do the rights fit within the overall management of the resource(s) concerned? How does the community collaborate with the line Ministry responsible for Fisheries in developing management plans to govern territorial waters and fishing? Who has the authority - local district or line office of ministry of fisheries?

All resources which are included in the demarcated Community Conserved Area are the responsibility of the corresponding BMU. This includes the beach (up to the high tide mark) the seabed, the coral reef, the mangroves and associated aquatic life. Deepwater (offshore) resources are not included within CCAs and these are directly under the Ministry at national level. There is an area of nearshore fishery (inside the reef) which is not 'covered' by any CCA – it is assumed that the management of this area will be under the jurisdiction of the newly formed combined BMU network. There are adjoining CCAs and beyond that, areas outside of village jurisdiction including areas within the EEZ outside of the reef. The BMUs are also close to the border with Tanzanian waters. There appears to be no collaboration with FiD over the management of territorial waters outside of the fringing reef. The majority of fishers do not fish outside of the reef currently. Demersal coral reef and seagrass-associated species are the dominant components of this lagoon fishery. This has been discussed in detail in Section 2.7.3. Figure 23 below shows catch data for 2012 for the Shimoni fishery. The graph shows that pelagics and migratory species together make 20.1% of the total catch. Independent data analysed during this study (summarised in Table 9) support this trend with the exception of data for July 2011 where pelagics and migratory species total 24.4% of the total catch.

Figure 23: The composition of the total catch for all fish landed in Shimoni during 2012(Source: FiD 2013)



While targeted species such as lobster can be classed as sedentary they may rely on recruitment from without the CCA.

The communities' rights are compatible with the constitution (2010) and are in line with the proclaimed government devolution strategy to the county level. The rights are recognised within the law and the BMUs are negotiated in collaboration with FiD. The local county fisheries office (authorised Fisheries Officer) is ultimately responsible for developing management plans for the BMU resources in partnership with the BMU members. This process can be supported by NGOS (in this case the East African Wildlife Society) assisting a community to develop its management plan. The management plans for all three BMUs are currently in draft form.

The relationship between the FiD and the BMUs (at least for Shimoni) appears to be generally good. For example, in Shimoni, the FiD supported the community when it was necessary to vote in a new Executive Committee in 2010.

The local county (formerly district) is the immediate authority for the BMU. Each BMU is required to have regular contact with FiD submitting monthly financial reports and minutes of all meetings. Management of territorial waters is by the Ministry at a national level. Each local Fisheries Officer has the responsibility of overseeing up to three or four BMUs. The Fisheries Officer also reports directly to the Assistant County Director who reports to the County Director who reports both to the County Governor and directly to the Ministry of Agriculture, Livestock and Fisheries Development based in Nairobi. All BMU activities are also reported to the Village Chairman who reports to the Assistant Chief, including all visitors.

4.4 Use of Rights

(29) How are the rights exercised? What is the decision-making process with respect to the rights?

(30) Is the community empowered to develop and enforce its own by-laws? If so, please provide examples of these laws in an annex.

(31) In the exercise of the rights, are controls placed on fishing by members of the community? (e.g. numbers of fishers, time spent fishing, locations that may be fished, gear that may be used etc)

(32) If there are restrictions, who decides who may and who may not fish? Do those who are entitled to fish pay anything to the community in return for this privilege?

(33) Are fishers who are not members of the community authorised to fish? If so, by whom? How are numbers of such fishers determined?

(34) Are any controls placed on processors? How do processors obtain their supplies (purchase from fishers, family relation, financing of fishing trips?)

(35) What are the main conflicts that have arisen in the use of the rights? How are such conflicts resolved? Which methods for conflict resolution have worked best?

Decision-making within the BMU is as described in Section 4.2 - the elected Executive Committee suggest decisions which are passed by the Assembly. Use of the rights is dictated by the by-laws. Leading up to registration FiD provide the BMU with a template (see Section 6.10) which is then tailored to each BMU. Any proposed change in by-laws has to be passed by the Assembly before presenting to FiD to be formally sanctioned including the associated penalties and fines. Each by-law has an associated penalty which is either a fine or a fishing ban for a

period of time. The community can enforce these by-laws and can go to FiD for assistance if needed.

The BMU decides what controls will be placed on fishing members including location and extent of 'closed areas' and which gear is prohibited. In Wasini, permitted locations for fishing are declared in the by-laws together with the types of gear that can be used (see preceding Table 17).

Shimoni is in the process of declaring one closed area ('*maeneo tengefu'*) and is considering another. Gears that are prohibited by Shimoni are spear guns, monofilament nets, use of poison, dynamite, ring-nets and scuba gear. For both Shimoni and Wasini, there are currently no controls in terms of numbers of fishers, time spent fishing or types of boat that can be used. According to the Fisheries Act a license is required for all fishing (except that for personal consumption) – the BMU must vet all fishers applying for a license or for a vessel license which must be approved before the applicant submits the application to FiD. FiD has the ultimate power to grant the license. With regard to the aquarium fishery, a license is granted by FiD – it is unclear in this case whether the BMU has to give prior approval as the companies (most are based in Mombasa) go directly to FiD.

Kibuyuni has demarcated an area of 2 sq.km closed to fishing. There is 0.5 sq. km of this with strict no-entry or passing. The initial buoys (provided by EAWLS) were removed by fishers. There was a big village meeting held which the Director of Fisheries attended and the village eventually agreed but there are still non-BMU members who are unhappy

Fishers must have a licence and belong to the BMU to be able to fish for sale. Membership is USD 2.94 (Shimoni) and USD 2.35 (Wasini) to join and USD 1.18 for annual renewal of their membership. They are also expected to pay KES 2/kilo (USD 0.02) of fish brought to market. Visiting fishers as well as dealers are also expected to pay the same amount (see Section 6.4.1). This latter charge is not implemented in Shimoni or Kibuyuni and in Wasini an open decision was taken not to implement the charge, prior to the BMU Executive Committee elections.

Fishers who are not members of the community can apply to fish and to anchor their boats. The executive committee collect the agreed fees. There are currently no restrictions on numbers of visiting fishers (it is estimated that numbers may represent up to 20% fishers in Shimoni). Some come and stay for several months. The current fees payable are KES 300 (USD 3.53) for anchorage and KES 1,500 (USD 17.64) for the right to stay and fish for a 3-month period in Shimoni, and a whole year in Wasini. In Kibuyuni, migrant fishers are allowed to stay in the village and pay a KES 500 (USD 5.88) anchorage fee (no fixed period mentioned). They are also required to pay the catch levy (KES 2/kilo fish caught) although this does not seem to be happening. In Kibuyuni, many visiting migrant fishers have family connections in the village. Like Shimoni and Wasini, there is no limit on numbers of visiting fishers and instead they are seen as a source of income (anchorage fees). The BMU is considering whether to erect accommodation for them and charge a rent as another source of income.

Fishers from nearby communities pay KES200 (USD 2.35) per day for the right to fish. Fishers from the aquarium trade pay KES 300 per day regardless of what or how much they catch. In

Wasini up to forty fishers can come to collect aquarium fish in a day. All other visiting fishers are expected to pay the KES2/kilo of catch - no-one is paying this currently.

The majority of **local processors** are women who process fish for local consumption (mainly fish-fryers). They purchase their fish directly from dealers at the market. The fisherfolk women's group report that they are restricted as to how many kilos they can buy daily. In Shimoni, **large-scale processors** are restricted to two companies[18]that purchase primarily octopus but also some lobster and larger fish. These companies have agents (one each) in Shimoni Village who buy from the fishers and store the produce in supplied freezer boxes awaiting collection by the main depot in Mombasa. Agents for the processors also have to pay a levy of KES 2/kilo of fish purchased. One agent is a boat owner who employs twenty fishers who go out daily to fish (predominantly in the Mpunguti Marine Reserve). Catches are landed at the BMU and weighed and stored until the respective companies collect the produce (every 3-5 days). They also supply local hotels and hotels in Mombasa. One agent also has representatives in other villages that collect for him.

In Kibuyuni there are about nine dealers and the community complained about the continually fluctuating prices. As a result the BMU are considering a return to the cooperative model where all fish are bought by the BMU. This would cut out the current dealers who keep changing the price.

A variety of conflicts has arisen in Shimoni Village over rights and includes the following conflicts with visiting fishers:

- Destruction of local traps (unintentionally)
- Non-payment of catch levies
- Illegal fishing at night including use of scuba gear and spear guns
- Illegal use of ring-nets

In Kibuyuni, the main conflicts that have arisen are the acceptance of the closed areas by the community and outside fishers. This is improving with time but there is frequent non-compliance particularly in the seaweed growing zone which is meant to be a non-fishing area. These conflicts are addressed by members of the sub-committee responsible for conflict resolution. Methods used are mainly traditional in that a group (including village elders) sit down with the offender and discuss a judgement and an appropriate penalty, and meeting minutes are taken. This commonly results in a series of warnings and confiscation of fish if any. In the case of a serial offender the matter might be taken to the police. In reality the police have failed to provide adequate support to the communities as described above in the 'dynamite case' in Kibuyuni (section 4.2.6). The penalties indicated in the by-laws have not been strictly applied as yet, mostly because committee members are wary of the upcoming BMU elections. In reality, fines are rarely collected, although fish confiscation may be sanctioned. The chair of the BMU can attend the conflict meetings as an ex-officio member.

In Wasini the conflicts have arisen from tourism and non-payment of dues by tourist operators. Few tourists stay in the village (although facilities do exist and are increasing); the current predominant arrangement is for tourists from hotels in Diani (and nearby) to sign up for a tour

[18]Sea Harvest (Kenya) and TransAfrica Fisheries Ltd.

which includes snorkelling in the park or CCA, lunch at a restaurant and the opportunity to visit the women's group boardwalk. Numbers are recorded and the hotel pays its dues at the end of the month. Hotels have either defaulted in payment or refused to acknowledge fee increases (see box in Section 4.2).

4.5 Results of Rights

(36) What are the main benefits obtained from the rights?

(37) How are the benefits shared amongst stakeholders? Do benefits accrue only to those involved in the activity? How do fishing households benefits? How do non-fishing households benefit?

The main benefits from the BMUs are increased rights and responsibilities for the communities including opportunities to make and implement by-laws. A PRA exercise on changes in rights, responsibilities, revenues and resources, (see Appendices) showed that the development of BMUs has come at a time where the local community recognises that there has been a major decline in their fisheries as a result of increased fishing effort, and a reduced amount of catch per fisher, vessel and gear. In this regard the communities perceive the BMUs have increased the awareness of people about rights-based fisheries management, and that the BMU has resulted in improved law enforcement and monitoring.

Communities have also benefited from the right to collect revenues which can be used to pay for BMU costs and to assist other community needs. Another important benefit is that communities have becoming increasingly involved in the management of the fisheries resource. This presents opportunities for alternative income generation such as eco-tourism, through closing reef areas which can be used by tourists for snorkelling and diving.

Monetary benefits are not shared as such between members but they benefit indirectly from better support for infrastructure, education and the representation of their interests by the executive committee. Committee members are paid an agreed sitting allowance per meeting and also are given travel costs if they have to travel on BMU business. Fishers also benefit from an agreed rescue policy where the BMU rescue sub-committee have a responsibility to assist should they receive a distress call or be alerted by the fisher's family. The BMU do not give loans but do assist in response to community welfare requests when agreed by the committee (large amounts need to be agreed by the assembly).There is a lack of transparency over allocation of the grants – the details of who is assisted are not given, only an overall total of how much money has been given out (source: Fisherfolk group); This has lead to some mistrust.

In Wasini and Kibuyuni, the amount of income gathered from BMU management has been supplemented significantly by tourism. In Kibuyuni it is oftenKES20-24,000(USD 235 – USD 280) per month. This is a major benefit for the BMU and provided a sustained incentive for maintaining the closed fishing area. Additionally the BMU had been giving loans to its members but due to non-repayment this practice has now stopped. It does still make grants however. There has been quite a lot of conflict about how these grants have been allocated and there is a perceived lack of transparency.

4.6 Changes and threats to the Rights

(38) Have the rights changed or been affected by any major changes in recent times? (past 10 years)

(39) Identify and describe the major changes, and try to explain them.

(40) What are the main perceived threats? What does the community propose to deal with these?

(41) What is the effect on the community of other rights to harvest the same resource (e.g. licensed national or foreign trawlers)

(42) What is the impact of migratory fishing effort?

(43) What is the impact of non-fishing activities in the coastal zone?

The communities' rights changed when the BMUs were established in 2010. (See the Appendices for the'3R's' exercise). Previously all fisheries were under the jurisdiction of FiD including licensing. Fishers were free to fish where they wanted and while gear was restricted, there were fewer restrictions than there are currently, as a result of outlawing certain fishing gears. Overall community fisheries rights have been improved in a major way by the inception of the BMU as explained in the preceding sections, as a result of the devolution process.

Table 18: The main threats perceived by local communities

Shimoni	Wasini	Kibuyuni
Increased population Increased number of fishers depending on same dwindling resource Inability to access the offshore fishery because of lack of appropriate gear and boats Inability to patrol through lack of dedicated boat Inability to implement by-laws through difficulty in enforcing payments etc. Conflict – this has declined but still occurs Illegal fishers	Following of the by-laws (putting villagers/family first) Pollution in terms of village rubbish Lack of ability to patrol Ability to decide on grant allocation within the village (loans are not given) Tourism marketing Lack of ability to host tourists	Following of the by-laws (putting villagers/family first) Lack of ability to patrol Resignation treasurer Non-payment loans Fundraising Co-ordination with Forestry over mangroves Market for seaweed Use of ring-nets Decline in fish numbers

Currently there is no conflict with licensed foreign trawlers within the utilised offshore fishing area, although this may arise in future if local fishers have more access to this area. Trawlers are not able to come into nearshore waters because of the reef.

Migratory fishers use large nets (including ring-nets modified for shallow waters) and effectively remove the fishery resource from local access. Numbers of migrant fishers are not limited if they pay their required fees although it is acknowledged that the fishery resource is not sufficient for all current users. As previously highlighted, migrant fishers are not paying the required levy on their catch. Migrant fishers have a long tradition in the community – to the

point where it is difficult to really differentiate residents from non-residents. Fishers have a long history of visiting from Pemba and Tumbatu in Zanzibar. Some marry locally but still migrate; others stay for periods of three to eleven months. They are allowed to access the same areas as the local fishers and therefore compete for the same resource. They often have better gear and larger boats so are able to go further afield. Their exact impact is difficult to determine. They are required to land their catch at the market and pay the KES 2 per kilo levy but as this is not enforced, there is no data on the scale of catch. There are also many reports of illegal fishers from Pemba and Zanzibar using spearguns and ringnets, also diving with tanks.

A current concern however is the impact of the aquarium trade. Dealers bring 40 or 50 fishers once a month for the period of a week. They visit the open access Mpunguti marine reserve on the eastern end of Wasini Island and use small hand nets. Licences are given by the Fisheries Department but there is no control or monitoring of the take. They take small fish but also anemones and other invertebrates for which they have no license (BMU network chair pers. comm.) and damage coral in abstracting the fish. There has been some conflict/debate over local fishers who catch small fish in the CCAs to sell to the aquarium trade. FiD acknowledges the need to assess and monitor the impact of this trade (Principal Fisheries officer pers. comm.). Okemwa (2009) undertook a study showing that the fishery does have an impact on reef ecology and made a number of key recommendations most of which have not been adopted. The Chair of the BMU network expressed major concern about this industry and recommended that collectors report to the landing station for inspection of their catch but the aquarium fishers are reluctant to do this.

Apart from the changes brought about by the BMU, another significant development over the past ten years has been the development of seaweed farming in Kibuyuni in particular. Women farmers are keen and have been active over the last couple of years but are severely hampered by lack of a buyer.

4.7 Beyond Rights

(44) If not already covered in the questions above, what informal rules and norms are important in the governance of the fishery? (Or formal rules arising from local/traditional systems.)

(45) If formal rules are not being followed or enforced, what factors explain this?

(46) (For instance does the community have the power to sanction rule-breakers? And if it does can it get the law enforcement agencies to intervene effectively?)

(47) If rights are not functioning as envisaged in their design, what factors explain this?

There were traditions governing the fishery such as annual closed days for giving offerings but these traditions are no longer observed and were abandoned many years ago. Today there do not appear to be any traditional systems that are still followed in the governance of the fishery apart from methods of conflict resolution as described in section 4.4. In Kibuyuni traditional beliefs are still observed – for example, when the leaves of a certain tree start to turn yellow, then the catch in the traps will start to increase. There are some who still give offerings at sea. Apparently traditions are being abandoned and very little customary symbolism, practice or knowledge has transferred into the formal governance of the fishery.

As described previously, payment of levies on landed fish is not occurring and also agreed fines are not being imposed. The reasons for this are many but involve:

- Members not perceiving any benefit from the payments;
- Members seeing others not paying and therefore do not want to pay;
- Committee members are unwilling to enforce payments as they are aware of upcoming BMU elections;
- Enforcement is difficult because of family connections within the community (and perhaps fear of retribution)
- The difficulty of enforcing payments on migrant fishers, and therefore local people refusing to pay their dues as a result
- Not all fish being brought to the landing site
- The challenge for community members taking on hoteliers and tourist operators.
- Lack of transparency in use of income

In terms of conflict resolution it would appear that the system of by-laws has been adopted from a template provided by FiD. There may not have been adequate consultation as to how traditional methods could be incorporated into these bylaws that are more realistic in the local setting.

Communities lack the means to patrol effectively and do not have (or do not allocate*)* enough funds to do this. In Kibuyuni, although an area was successfully designated for co-management, the rules over access rights are not functioning as envisaged in their design, and this is for reasons similar to those expressed by other communities – the major problem being a lack of enforcement of the by-laws, in particular prohibition of illegal gear. Catch data is not being kept to inform management decisions and levies are not being collected to finance the BMUs' operations.

4.8 Overall Evaluation of Rights – Successes and Failures

(48) In what ways has the rights been successful (or not) taking into account effects on men and women, on different groups, on the environment in general, on the fish resource in particular?

(49) What are the factors that have most contributed to the success (or not)?

(50) What factors outside the community (government policy, NGOs, incentives, support etc) have most contributed to the success (or have represented a barrier to success)?

(51) What things need to change for the future or should have been done differently?

Field work established that there is a strong perception among community members in Shimoni that their rights have improved with the instigation of the BMU (41% before; 67% after) together with community taking responsibility for the fisheries resource (31% before; 91% after) – see Section 6.8. Before the BMU was established all resources management decisions were taken by FiD but the community now plays a central role. Each BMU can now also plan and implement their own projects at community level.

While the fish resource is reported to have declined it is under better governance and stands to improve if the BMU operates successfully (see Section 6.8). Indeed there is some empirical evidence to suggest there has been some recovery in the health of fisheries in recent years (McClanahan pers. comm.) but this data may only cover the most recent portion of the thirty

year time period referred to by key informants. This also applies to other resources such as reefs and mangroves.

The role and voice of women in decision-making has improved through their participation in the BMUs (data from focus groups discussions – see Section 6.8).

The role of women in the BMU and in resource management generally has improved but there is still much room for improvement (ref 4R's PRA App. x). The percentage of women in the BMU varies considerably with Shimoni having no women fishers and a small number of processors. While women's participation has improved, they have not been able to secure many leadership roles at the village level because they lack the confidence and they remain insufficiently aware – for example, many women do not attend Executive Committee meetings.

The Executive Committees indicated that support by NGOs and FiD in capacity building in the early stages of establishing a BMU is extremely important in contributing to its success. Supporting NGOs have contributed in a major way to the success in operation of the BMUs mainly through organisational capacity building and training for example in financial management. This has been forthcoming over a period of four years to date[19] and NGOs[20] have helped build a strong foundation for the association. Other NGOs and state institutions[21]have helped with infrastructure (building of toilets, replacing roofs) and with training on monitoring and the benefits of establishing areas closed to fishing.

Wasini BMU identified the following achievements:

- Some illegal resource utilisation has been halted – for example sand-digging has been stopped, as well as illegal and unplanned cutting of mangroves.
- The community have reinstated their self governance and the right to deal with conflicts locally and immediately.
- An area has been successfully closed to fishing and generates revenue from tourism
- The community are educated and aware
- There is an improvement in the management of mangroves
- There has been a lot of capacity building including travel and exchange visits
- The BMU Executive Committee has the trust of the community
- The BMU Executive Committee has the support of the local administration

Kibuyuni BMU also identified the following achievements:

- They have secured their own plot of land (as a base for their operations)

---

[19] EAWLS is currently continuing to assist in the formulation of management plans. EAWLS with funding from the British Darwin Initiative gave assistance in the building of the BMU offices in Wasini and also funded the marker buoys for the closed area. They also provided one week training for 2 members in book-keeping. Currently they are assisting in management planning and annual budgets and work plans.

[20] The African Nature Organisation has assisted Wasini with writing funding proposals and has successfully helped them raise KES 4.5 million recently which will be used for coral transplants, computers, exchange visits, mobilisation and patrols, also apparently to review the by-laws.

[21] KEMFRI have assisted with research, along with WCS, as well as monitoring in the closed areas. CORDIO have also assisted with training on data collection.

- They have been allocated the former fisheries building (office and market)
- They have successfully closed an area and are earning revenue from tourism
- Communications with hotels have been established
- There is a freezer in the BMU building where people can store their fish for a charge

The collaboration of the Fisheries Department support has been appreciated by BMU leaders

> '*Tunashukuru sana; tunafurahi sana – wametusaidia sana*!'
> (We are very grateful, we are happy – they have helped us lot!)

There has been considerable overlap and lack of co-ordination between supporting NGOs and there is a need for a co-ordination body. This role ideally should be taken by FiD. The BMU executive committees expressed a need for capacity building in proposal writing in order to fund their own perceived priorities. The main challenge perceived for the future is the ability of the BMUs to implement their by-laws. The reasons for the difficulties experienced in achieving this are discussed in section 4.7. Other challenges mentioned were:

- The lack of ability to fish offshore – one of the BMUs felt that this would solve many problems in terms of dwindling resources.
- There is a need for intensive BMU capacity building particular in terms of adaptively developing and implementing management and work plans, based on a prioritised and carefully identified issues.
- There is a need for developing business plans for each BMU in order to help them to increase and better re-invest revenue collection, enabling them to achieve better functioning BMUs.
- Improving each BMU's active involvement in data collection and management.
- Reported domination of the executive committee by one person is a stumbling block and ways around this are being discussed.

The factors that were expressed by Kibuyuni BMU as having most contributed to its achievements are good relations with FiD and establishing links with tourism.

Migrant fishers continue to be a challenge. Many do not know of the existence of the CCAs and the implications. A workable and lasting solution needs to be found that effectively stops the use of illegal fishing gear. The solution needs to be realistic in order not to undermine BMU authority. There has been some debate over the banning of spear guns for example, being a highly selective gear (refs.). CORDIO recommended gradual sanctions on beach seines for example (Samoilys)

While it is acknowledged that numbers of fishers have drastically increased and that stocks of fish have gone down, there is no suggestion of limiting number of fishers in any way, even those from outside the community. While access to the sea is seen as a right and a means of earning a living when everything else has failed – there may need to be some consideration of limiting take (including possible closed seasons), along with limiting damaging gear and seeking alternative income generating activities. Limiting migrant fishers would be a difficult cultural decision as it is a well established tradition and is a means of passing information and goods between communities and intermarriage is common.

Financial management continues to be a challenge and further training is needed. For example, in Kibuyuni, the trained treasurer resigned, and a difficult-to-replace skill set has been lost. This is potentially a recurring problem for the operation of all BMUs.

As discussed previously, Wasini and Kibuyuni are considering whether to reintroduce the fisheries cooperative. When it was functioning, fishers had a guaranteed price, saved a small amount per kilo of fish sold and the cooperative was able to market the fish in bulk, avoiding unreliable and rogue dealers. There would be many advantages including recording of catch data which would be a 'by-product' of the system. This model would combine a savings and credit scheme with informed sustainable fisheries management. FiD would be in favour of supporting this (Principal Fisheries Officer pers. comm.) but how visiting fishers fit into this model would need some discussion.

4.9 "Independent" Verification

(52) For the main fish species exploited by the case-study community, have stock assessments been undertaken? If so, what types of assessment? What is the estimated state of the stocks and how does this relate to the view from the community?

Very few stock assessments have been done and the ones that have been done are restricted in their spatial and species coverage. The following assessments have been summarised from FAO statistics (FAO 2013). All fisheries are judged to be fully exploited and the lobster and sea cucumber fishery are over exploited, although there is a high level of uncertainty over the data.

Table 19: Stock assessments carried out by FAO (2013) for the Kenya coast.

Species	Year	Level of uncertainty	Empirical assessment	Catch 2009	Percentage change from previous year	Status
Demersal resources	2009	High	Expert judgement	3993t	-4	Fully exploited
Small pelagics	2009	High	Expert judgement	129t	-6	Fully exploited
Sharks and Rays	2009	High	Expert judgement	232t	+68	Fully exploited
Mullet, Barracuda and Milkfish	2009	High	Expert judgement	581t	-0.3	Fully exploited
Octopus and Squid	2009	High	Expert judgement	265t	+4	Fully exploited
Rock and Spiny Lobsters	2009	High	Expert judgement	84t	-16	Over exploited
Sea	2009	High	Expert	109t	+80	Over

Species	Year	Level of uncertainty	Empirical assessment	Catch 2009	Percentage change from previous year	Status
Cucumber			judgement			exploited

Community estimates of fishery stocks all indicated a decline over the last 30 years; specific mention was made during this study of declines in lobster, octopus and species such as 'pamamba' (grunters, *Haemulidae*), 'tafi' (rabbit fish, *Siganidae*) and 'changu' (emperor, *Lenthrinidae*) .

6 APPENDICES

6.1 Fishery Performance Indicators for Shimoni/Wasini/Kibuyuni 2012 – Fishery Profile

6.1.1 Species

(53) Describe the primary species and stocks caught, targeted and important bycatch.

(54) What is the primary fishing season?

The fishery is based largely on a few species which are predominantly demersal fish occurring on reefs and surrounding sea grass areas within the coastal lagoon, inshore of the fringing reef. The table below shows species that make up more than 5% of the yearly catch analysed from FiD data (2012) and their market value (KES).The most commonly caught fish are Rabbitfish (*Siganidae*) and Scavengers (*Lethrinidae*), followed by Parrotfish (*Scaridae*). More detailed data can be seen in Section 6.6.

Table 20: Species representing 5% or more of the 2012 catch by weight Shimoni (analysed from FiD data)

English name	Family name	Kg	KES	USD	Percentage total weight
Rabbit fish	*Siganidae*	49,226	7,745,597	91,125	17.49
Scavengers	*Lethrinidae*	36,610	5,608,830	65,986	13.01
Parrot fish	*Scaridae*	31,383	4,676,830	55,022	11.15
Octopus	*Octopus vulgaris*	30,651	4,100,494	48,241	10.89
Mixed pelagics		19,663	2,886,050	33,954	6.99
Mackerel	*Scombridae*	14,819	2,042,880	24,034	5.27
Snappers	*Lutjanidae*	14,308	2,155,930	25,364	5.08

For comparison purposes raw data collated from BMU record books examined during this survey is summarised below (Section 6.7 gives more detail). This data shows pelagics to be a less significant part of the catch (max 16.7% July 2011) while demersals make up over 30% and up to 59% in Kibuyuni (Oct 2012). The octopus fishery is significant in Shimoni and Kibuyuni making up to 45% of the landed catch in April 2011 (note this data is for limited time periods).

Table 21: Composition of the total catch at selected landing sites and dates

DATA SET	Demersals	Pelagics	Sardines– *Clupeidae*	Octopus – *Octopodidae*	Squid - *Loliginidae*	Sharks and Rays	Sea Cucumber	Other
Shimoni April 2011	31.6	9.0	3.5	45.2	5.3	3.8	-	1.6
Shimoni July 2011	35.4	16.7	7.7	25.9	5.4	4.0	-	4.9
Kibuyuni Oct 2012	59.1	10.2	-	15.6	3.2	5.2	-	6.7
Shimoni 26 Nov 2012	55.6	7.8	-	15.0	-	-	9.7	11.9
Shimoni 6 June 2013	36.5	0.0	-	48.0	-	-	10.7	4.8

In terms of value the yearly fishery for the Shimoni area 2012 is worth KES 43,419,928 (FiD data, 2012)

Mallaret and King (2004) conclude that fisheries resources in the south coast are over exploited and that the catch/fisheries resource health is declining, with the Diani area being one of the most overfished and degraded reef areas in Kenya (McClanahan et al, 1996). Research carried out at the same time in Shimoni showed that the catch was still diverse and top predators were still present suggesting that the fishery was still healthy. There is a suggestion that the area is regularly replenished from currents coming from the south (Amoyo, pers. comm.). Having said this, interviews carried out with fishers in 1997/98 showed that the general impression of fishers was that the resource had declined. This finding was echoed in this study (4R's exercise Section 6.8; and Principal Fisheries Officer, pers. comm.)

In terms of gear used, data examined during this survey were only available for two separate days in Shimoni (Nov 26th 2012 and June 6th 2013). On these two days gears mentioned are summarised in the following table:

Table 22: Proportion of different gear types used by fishermen landing at Shimoni

Gear (n=31)	Proportion used
Handlines	27.0
Longlines	27.0
Speargun	27.0
Weir Traps	5.4
Dealer (no detail of gear)	2.7
Foot	2.7
Basket traps	2.7

The fishery is dictated by season which is governed by the monsoon winds. The strong south-easterly monsoon blows from June to September ('*kusi*') and a lighter north-east wind ('*kaskazi*') blows from December to March. There are intervening periods of calm weather with the main rainy season occurring from April to June. Fishers can venture further offshore during '*kaskazi*' and the nature of the catch is influenced in this way. The following graph is taken from FiD statistics for the year 2012 and shows total catch per month for Shimoni landing area in comparison to the total for Kwale/Msambweni Districts for the same time period. The following bar chart shows catch recorded by Shimoni BMU for the same time period and shows more of an expected trend with reduced catch during the 'kusi' monsoon.

Figure 24: Total catch per month Shimoni landing area in comparison to the total for Kwale/Msambweni Districts for 2012

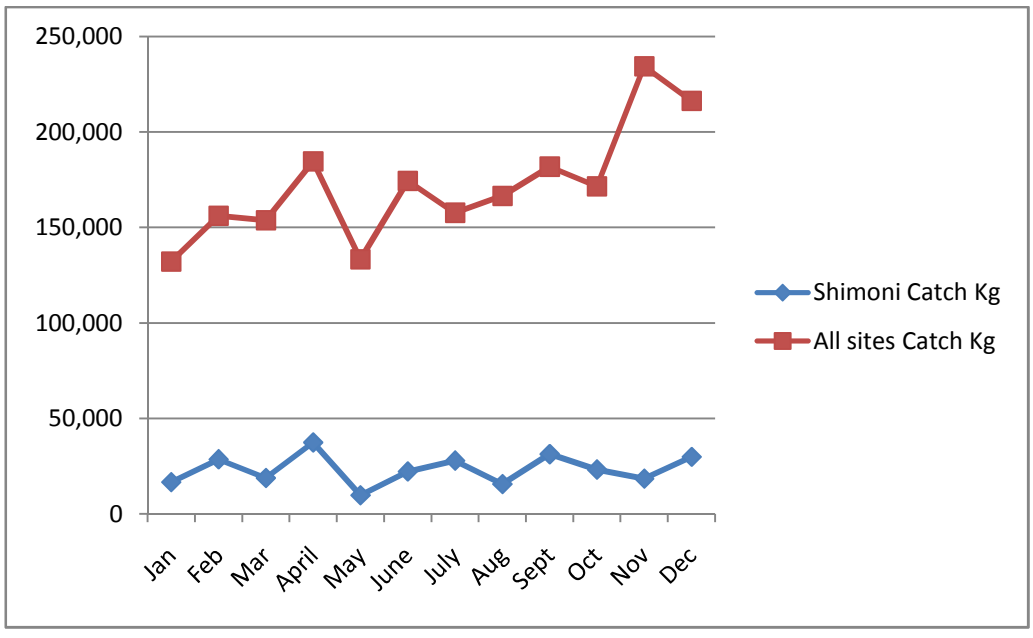
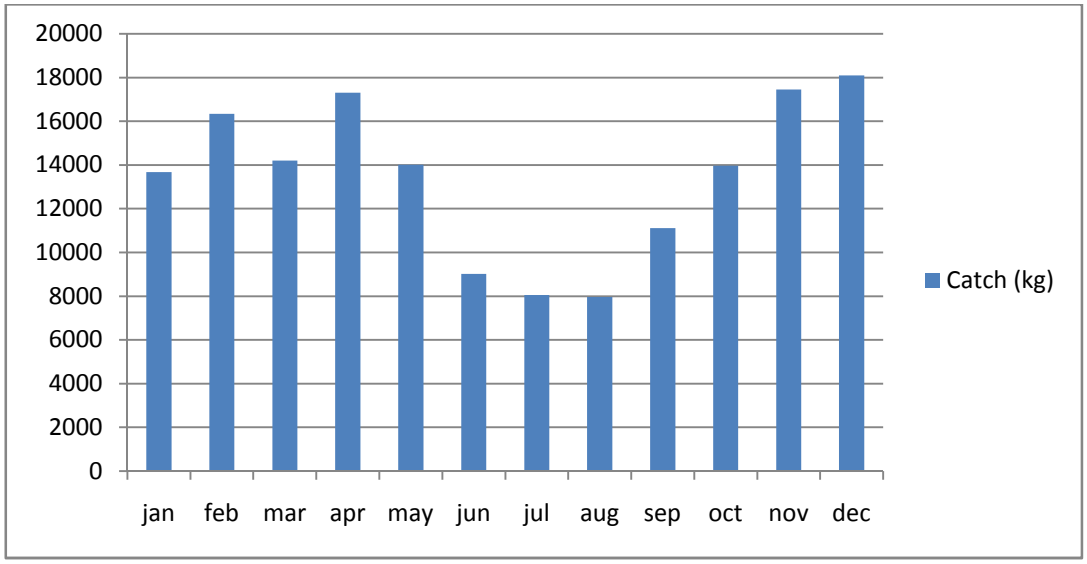


Table 23: Monthly Catch for Shimoni BMU for 2012



6.1.2 Management System

(55) Briefly describe who is responsible for establishing and enforcing management measures at each level (national, provincial, local) relevant to this fishery.

(56) What methods does management use (open access, regulated open access, regulated permit, or rights-based), including restrictions on daily landings, annual/seasonal landings (TAC),gear, space (e.g., jurisdictions, closures, sanctuaries or TURFs), size, and participation (limited access)?(Management can include both de facto and de jure measures.)

(57) What is the status of monitoring, enforcement or stocking programs?

BMUs are managing their local areas including Community Conservation Areas, while KWS manage parks and marine reserves. FiD at a county level, support and guide BMUs in establishing and enforcing management measures.

At the National level, the County Fisheries office reports to the Ministry of Fisheries Development; KWS manage parks and marine reserves.

Access is regulated open access, where users have to be licensed but there is no limitation on numbers or catch. There are designated areas where gear is either limited or there is no access for fishing. Some gears are prohibited according to national law.

Monitoring is sporadic and records are generally inaccessible. This is being addressed however by the Kenya Coastal Development Project.

Enforcement is generally poor.

Table 24: Summary of gear used and fish targeted during the 4 regular seasons on the Kenyan coast (Source: FAO 2013;with annotated scientific names taken from Frankl 2001)

1st regime: North East Monsoon (*kazikazi*), Nov-Feb.	
Weir trap (*malema*).	Scavenger, rabbitfish. *P'ono* (parrot fish or parrot wrasse), *mkundaji* (*Parupeneus spp),* lobster, kangaja (*Acanthurus leucosternon),* rockcod, fute *(Pleclorynchus spp),mileha* (nd[22]).
Line fishery (*mshipi*)	Scavenger, *Carangidae*, rockcod, sharks, *kimbasi*[23] (nd), marlin, kingfish, mackerel, *songoro* (*Rachycentron canadum)*, *fulusi* (*Coryphaena hippurus)*, rays, *mrongo*[24] (not determined), *k'ungu* (*Lutjanus gibbus)*, *sele-sele* (nd).
Beach seine and cast nets.	Mackerel, *kirongwe (Aprion virescens)*, *msusa* (*Fistularia spp)*, sardines, prawns and mixed fish.
Barricade (*usio*).	Mullet, grunter, lobster, kipepeo (*Heniochus spp*. &*Zanclus cornutus*), *kirongwe (Aprion virescens)*, garanx (nd), *kinwa* (nd), *uchi* (nd), *mninga* (nd).
2nd regime: Calm Sea (*matilai*), Mar-Apr.	
Similar gears as those used during Northeast Monsoon.	Catches are also similar to those of Northeast Monsoon, but larger catches are landed.
3rd regime: Southwest Monsoon (*kusi*) May-Aug.	
Barricade trap, (*usio*)	Grunter, fute *(Pleclorynchus spp),* blackskin (?), mullet, *runguu* (nd), mixed fish.
Gillnet (*jarife*)	Kingfish, sharks, rays, *songoro* (*Rachycentron canadum)*, lobster, mackerel, pungu (nd), *Carangidae*, marlin, queenfish, *jodari* (*Thunnus albacores)*, milkfish, *tengesi (Sphyraena spp),fume* (*Tachysurus dussumeri)*.
Line fishery (*mshipi*)	*Carangidae*, kingfish, skates and rays, *kingu* (nd), snapper and mixed fish.
Beach seine and cast nets.	*Kirongwe (Aprion virescens)*, *Carangidae*, chea (nd), *msusa* (*Fistularia spp)*, scavenger, *mkundaji* (*Parupeneus spp),puju (Naso spp.),mwatiko* (*Chanos chanos),* kidau) *Hemiramphus commersoni),wayo* (*Botihidae* or *Cynoglossidae* or *Psettodidae*)
4th regime: Calm Sea (*matilai*), Sep-Oct.	
Weir trap (*malema*)	Rabbitfish, scavenger, *puju (Naso spp.)*, parrotfish, *fute(Pleclorynchus spp)*, rockcod, *kitatange* (*Heniochus spp*. &*Zanclus cornutus*), kangaja (*Acanthurus leucosternon)* or moonfish(?).

[22]Not determined

[23]Possibly '*kaambizi*' – trevally, kingfish, king mackerel, horse mackerel

[24]Possibly '*morondoo*' –trevally, kingfish, king mackerel, horse mackerel

6.1.3 Primary Harvest Technology

(58) Describe the primary harvest technologies (gear, scale of vessels)

(59) Describe the capital investment required for fishing, as if for a new entrant. What needs to be bought, does one person/entity buy all of it, and roughly what is the cost? (New prices only appropriate if entrants would buy new.)

(60) Do capital owners typically fish, and how do they share profit?

(61) Approximately how many licenses/vessels are in the fishery, and how many are active? How many crew are on a vessel, and how are they paid?

(62) Do the same harvesters/vessels pursue other fisheries with the capital during the year, or earn other non-fishing income?

Primary gear used includes local traps ('*dema'* basket traps and *'uzio'* tidal weir traps), gill-nets, ring-nets, long line, handlines, spears and spearguns. Exact proportions of gear are not known but the chart below shows a summary of gears noted by Benards for this section of coast. FiD in conjunction with WCS is trying to encourage modified basket traps that allow smaller fish to escape unharmed.

Figure 25: Composition of gears used in the Shimoni / Diani section of coast (Source: Benards 2010)

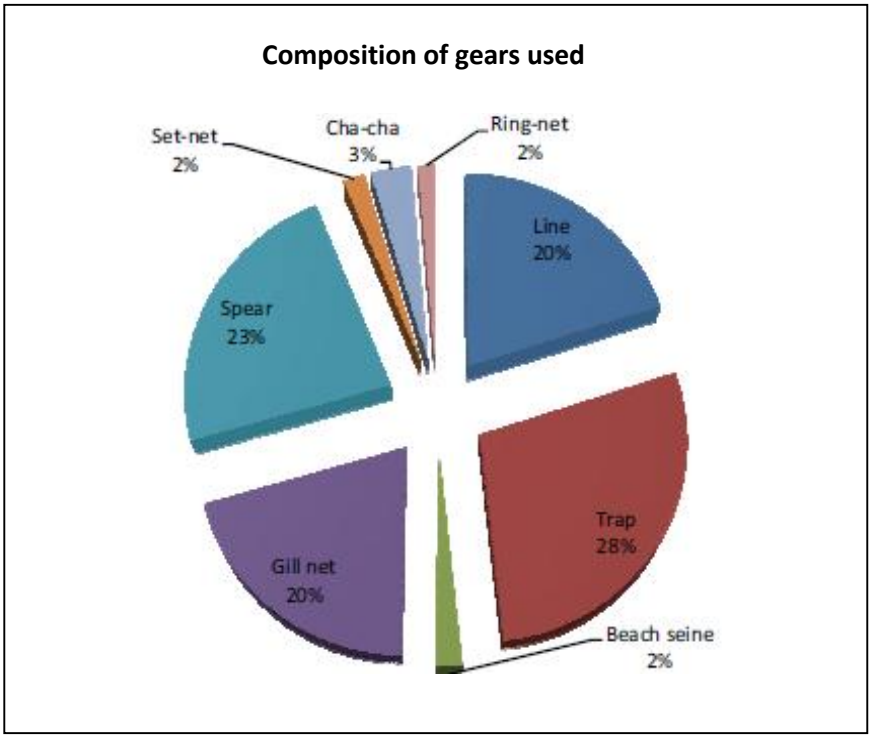


Table 25: Fishing craft by district (source: FiD frame surveys)

	Lamu	Tana Delta	Malindi	Kilifi	Mombasa	Kwale
Mashua	248	16	229	42	21	89
Ngalawa	5	1	8	42	1	122
Hori	187	8	110	41	8	8
Dugout	41	73	122	280	415	663
Dau	5	22	96	56	35	12
Mitori	53	-	11	5	-	15
Foot fishers	152	175	443	447	195	662
Others	-	-	2	13	6	1

The table above summarises data from 4 frame surveys 2004-2012 and demonstrates the high number of dugouts and foot fishers in Kwale District.

The level of investment required for fishing, as for a new entrant to the fishery, depends on the kind of fishing involved. The table below summarises costs for some of the high investment gear, including boats. Low cost gear includes handline, spears and spear guns. These gear do not also depend on access to a vessel and can be operated by an individual. Aquarium fishers use small scoop nets for fishing over reef areas.

Table 26: Some costs of the higher investment fishing regimes Shimoni 2013

Item	Unit price (KES)	Unit price (USD)	Total price (KES)	Total Price (USD)
Boat (*mashua*)	500,000	5,880	500,000	5,880
Gillnets (*jarife*) (15 pieces)	30,000	353	450,000	5,294
Boat engine (15hp-60hp)	200,000 -300,000	2,353 - 3,259	200,000 -300,000	2,353 - 3,259
Total this type of fishing			**1,150,000 - 1,250,000**	**13,529 - 14,706**
Canoe/outrigger (*dau/ngalawa*)	25,000 -40,000	294 - 470	25,000 -40,000	294 - 470
Gillnets (*jarife*) (10 pieces)	30,000	353	300,000	3,539
Total this type of fishing			**325,000 - 330,000**	**3,823 - 4,293**
Canoes/outrigger (*dau/ngalawa*)	25,000 -40,000	294 - 470	25,000 -40,000	294 - 470
Local trap (at least 10 pieces)	1000	12	10,0000	118

Total this type of fishing			**35,000 - 40,000**	**412 -588**
Boat (*mashua*)	500,000	5,880	500,000	5,880
Long line including hooks and all other items (*Mshipi*)	20,000	235	20,000	235
Total this type of fishing			**520,000**	**6,118**

Capital owners typically own vessels and employ fishers to fish on their behalf. There are various scenarios including:

- Those who own their boats where sharing depends on the catch sales, which is distributed as follows; amount to cover boat fuel cost, boat, owner of the boat and staff who went fishing on that particular day
- Another scenario is where owner of boat (more specifically fish dealer) provides the boat for a group of fishers (about 20 members) whereby upon return they sell the fish to the dealer. In this case the fishers are distributing a share to them and cover the cost of boat fuel.
  NB: the number of crew depends to the size of boat: for a big boat about 20 people and small canoe between 1-3 persons.

In terms of vessels, records for Shimoni BMU at the time of registration are as follows and are somewhat typical of the area although Wasini has an increasing number of powered boats (including fibre boats) for tourism purposes. Kibuyuni is predominantly a subsistence fishery in comparison. It was not possible to get data on registered vessels during this study.

Table 27: Types of boats registered at Shimoni BMU

Category of Boat	**No.**
Canoes	69
Ngalawa (canoe with outriggers)	6
Other boats	8
Ring nets	1

Fishers do not depend only on fishing for their livelihoods; most also practice agriculture and some families also have small retail businesses.

6.1.4 Markets and Product Forms

(63) What are the primary markets and product forms for the fishery?

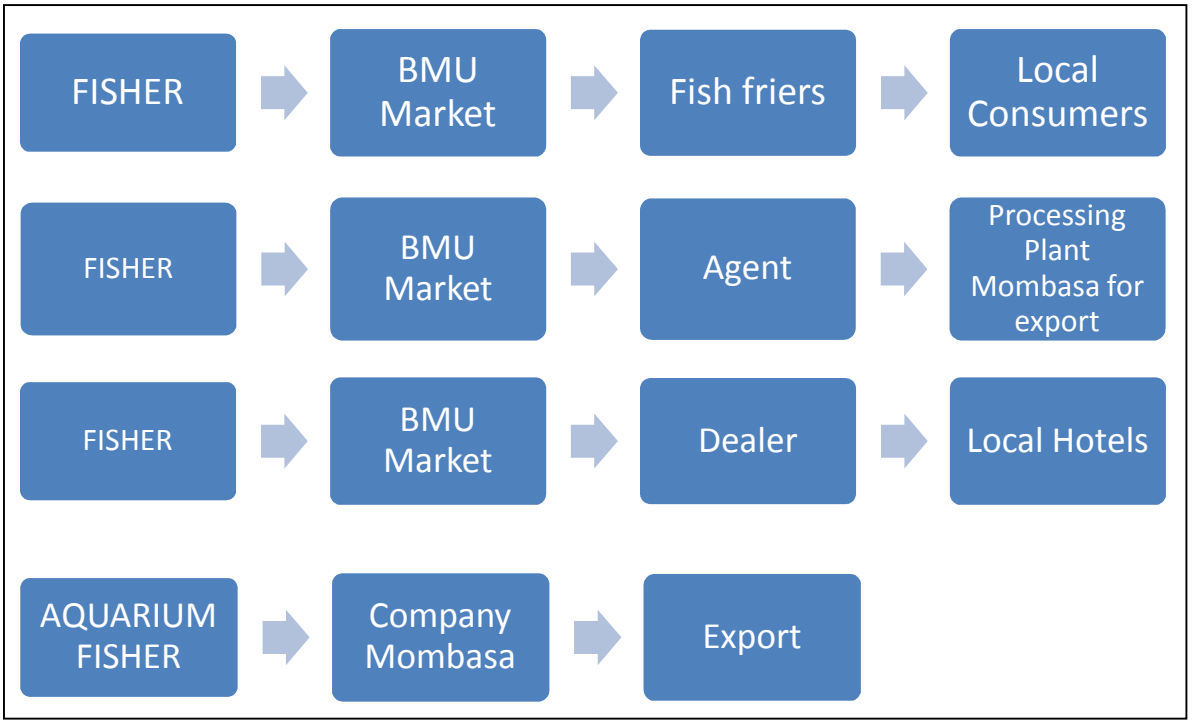
(64) What are the key points in the supply chain?

(65) Roughly how numerous/competitive are first buyers, processors and retailers?

(66) How big are the processing operations, and what else do they process?

The primary markets for the fishery are local consumption, the hotel trade (fish, lobster)and export in the case of octopus, some larger pelagics, lobster and squid (these are frozen on the BMU premises, awaiting collection). Aquarium fish are also exported. The various supply chains are presented below. Key points in the chain are the market, dealers and agents. The aquarium fishery bypasses the BMU and local agents as they transport their fish straight to their holding areas near Mombasa (there are several companies). They generally have their own fishers.

Figure 26: The different value chains for the fishery in the Shimoni – Wasini – Kibuyuni area



(67) Roughly how numerous/competitive are first buyers, processors and retailers?

There is no data available on competition between buyers although there is reportedly some dissatisfaction amongst dealers in Kibuyuni. In terms of agents for the large processing plants in Mombasa, there are two companies represented and the agents seem to work well together, sharing boats and so on. Women in Shimoni from the Fisherfolk group (fish friers for local consumption) reported that due to demand by dealers, they were being limited in terms of amounts of fish they could buy from the BMU market.

(68) How big are the processing operations, and what else do they process?

There are large processing companies for export in Mombasa but this was not investigated during this study.

6.1.5 Trends

(69) Describe trends in landings and price over the last ten years; include graphs if available.

There was no data available for trends in this local fishery. Data was not properly collected and there were no proper records. However during a group discussion the Wasini community was able to mention the catch data for May 2013 with a total weight of 1,259 kg as follows:

- Snapper 305 kg sold at KES 180-190 per kg (dealers sell on for KES 250 per kg);
- Parrotfish 25kg sold at KES 180-190 per kg (dealers sell on for KES 250 per kg);
- Rabbitfish small size sold at KES 80 per kg
- Octopus 518 kg sold at KES 60-200 per kg;
- Squid 402 kg variable price but currently sold at KES 120 (dealers sell on for 160 per kg)
- Lobster 90 kg sold at KES 1,500 per kg (dealer takes this to Mombasa);
- King fish (no catch data mentioned) but KES 250 -300 per kg (dealer takes this to Mombasa).

6.2 Fisheries Performance Indicators worksheets

The FPI worksheets can be downloaded as an MS Excel file from:
https://docs.google.com/file/d/0B4aYUJIzMr_rc1BxcGRweHVNRDQ/edit?usp=sharing

Alternatively if viewing this document in MS Word, double click on the table below to view the FPI worksheets as an Excel object (file).

Table 28: Fisheries Performance Indicators worksheets

Fishery Performance Indicators: Outputs (Measuring Wealth Accumulation)

Component	Dimension	Measure	Score System	Additional Explanation	Score	Quality	NOTES	DATA SOURCE
Ecologically Sustainable Fisheries	Fish Stock Health & Environmental Performance	Proportion of Harvest with a 3rd Party Certification	•5: 76-100% of landings are certified; •4: 51-75% of landings are certified; •3: 26-50% of landings are certified; •2: 1-25% of landings are certified; •1: No landings have third party cerfitication	The proportion of harvest (quantity) harvested under one of the recognized third party programs that certify ecological sustainability, such as the Marine Stewardship Council (MSC) certification.	1	A		
		Percentage of Stocks Overfished	•5: None overfished; •4: 1-25% of stocks overfished; •3: 26-50% overfished; •2: 51-75% overfished; •1: 76-100% overfished	Proportion of stocks in the fishery (including distinct stocks of the same species under the same management plan) whose current biomass level indicates they are overfished. Single species fisheries will be 1 or 5. (Whether they are currently recovering or being overfished further is the next question.)	2	B	Educated guess based on FAO and anecdotal information	For US fisheries: http://www.nmfs.noaa.gov/fishwatch/
		Overfishing or Rebuilding	•5: Stock is not overfished or is rebuilt •4: Growth overfished, but stable or rebuilding •3: Growth overfished and experiencing growth overfishing •2: Recruit overfished, but stable or rebuilding •1: Recruit overfished and experiencing recruit overfishing	Extent to which current effort affects stock status. For multi-stock fisheries, score each significant stock 1-5, then take a value-weighted average.	1	B		Global fisheries: http://www.fao.org/fishery/ (Choose country, then fishery sector and search for description. some
		Regulatory Mortality	•5: No regulatory mortality of the target species; •4: Regulatory mortality is less than 5% of total catch •3: 5-25% •2: 25-50% •1: For every 100lbs of fish caught, more than 50lbs are discarded	Non-landing mortality induced by regulation, such as regulatory discards	5	A		
		Selectivity	•5: There is virtually no non-target catch •4: Less than 5% of catch is of non-target species •3: 5-25% •2: 25-50% •1: For every 100lbs of fish caught, more than 50lbs are non-target species	"Non-target" species are distinct from multispecies fisheries in that the catch of non-target species does not increase the value of fishing, or imposes costs on the target fishery.	5	A	Insignificant amounts of discard	
		Illegal, Unregulated or Unreported Landings	•5: There is virtually no IUU catch •4: Less than 5% of catch is IUU •3: 5-25% •2: 25-50% •1: For every 100lbs of fish caught, more than 50lbs are IUU	Proportion of landings using illegal gear, area, methods, etc., or falling outside of the regulations. If there is no regulatory reporting requirement, that does not count as unreported for purposes of this measure.	2	B	High proportion of landings are from use of illegal gear. There is also a high percentage of unreported catch.	
		Status of Critical Habitat	•5: Critical habitat is healthy and not threatened; •4: Less than 25% is degraded or dysfunctional; •3: 25-75% is degraded or dysfunctional; •2: More than 75% of critical habitat is destroyed; •1: Nearly all critical habitat is damaged or dysfunctional	Critical habitat is defined as that playing a significant role in the life cycle of the fish. Portion damaged is based on area, and from all sources of damage including fishing damage, pollution and development.	3	B	Various papers (McClanahan et al)	
	Harvest Performance	Landings Level	•5: Harvest is less than MSY (stock is above MSY level) to increase profit; •4: Harvest is approximately at MSY; •3: Harvest reduced to promote recovery (stock is below MEY level); •2: Harvest is constraining stock recovery (stock is stable below MEY level); •1: Harvest is causing overfishing (stock is below MEY and declining)	Average annual harvest over the last three years. In practice, there are very few estimates of MEY, however where it has been calculated it is typically 5-10 percent less than maximum sustainable yield (MSY).	1	B	Harvest calculations unreliable based on fisheries data but literature suggests harvest is causing overfishing	For US fisheries: http://www.st.nmfs.noaa.gov/st1/commercial/landings/annual_landings.html
		Excess Capacity	•5: Within 5% of days required; •4: 105-120 or 90-95% •3: 120-150% or 75-90% •2: 150-200% or 50-75% •1: More than 200% or less than 50% of days required	In the absence of a fishery-specific measure of overfishing, use estimated standardized vessels-days required to catch the maximum economic yield (MEY) compared to the number of standardized vessel-days available. Days are considered not to be restricted by trip limits.				

6.3 The aquarium fishery in Shimoni

The table below presents data and findings from a 2005 study into the aquarium fishery in Shimoni.

Table 29: Species distribution by percentage of the top 20 species harvested in Shimoni from March 2004 -April 2005 (Source: Okemwa 2006)

Species		Percent of Total Collected Fish
Allard's anemone fish	*Amphiprion allardi*	10.4
African pygmy angelfish	*Centropyge acanthops*	9.0
Rainbowwrasse	*Halichoeres iridis*	7.4
Palette sturgeonfish	*Paracanthurus hepatus*	6.1
Lyretail anthias	*Pseudanthias squampinnis*	5.3
Striped sailfin tang	*Zebrassoma veliferum*	4.9
Beautiful prawn goby	*Cryprocentrus aurora*	4.2
Fire dartfish	*Nemateleortris magnifica*	4.0
Skunk anemonefish	*Amphiplion akallopisos*	3.7
Vermiculate wrasse	*Macropharyngodon bipartitus*	3.2
Pink flasher	*Paracheilinus carpenterri*	3.0
Twostripe goby	*Valencienna helsdingenni*	2.5
Midas blenny	*Ecsenias midas*	2.3
Exquisite wrasse	*Cirrhilabrus exquisitus*	2.2
Vanderbilt's chromis	*Chromis vanderbilti*	2.1
Twotone chromis	*Chromis dimidiata*	1.5
Bluestreak cleaner wrasse	*Labroides dimidiata*	1.4
Volitans lionfish	*Pterois volitans*	1.3
Emperor angelfish	*Pomacanthus imperator*	1.3
Indian Dascyllus	*Dascyllus carneus*	1.3
Total Number of fish in top 20 Rank:		**(12,355) 77**

Key findings of the study include the first true estimation of approximately 192 fish species that are harvested and exported from Kenya. Approximately 70% of the fish harvested from Shimoni during March 2004 to April 2005 belonged to 4 families namely *Pomacentridae* – damselfish, *Labridae* – wrasses, *Acanthuridae* – surgeonfish and *Gobiidae* – gobies. Ten species made up 58% of the catch, with the most harvested species for the trade being the anemone fish *Amphiprion allardi* (10%) and the angelfish *Centropyge acanthops* (9%). The aquarium fish collectors landed an average of 24-33 fish/man/day. However, differences were observed between divers and snorkelers. Results of the underwater census revealed differences in fish density, species richness and habitat characteristics between fished and protected sites, with fished sites having an overall higher density and abundance of target fish species and higher algal abundance. Among the key recommendations from the survey is the need to strengthen monitoring, to improve current regulatory mechanisms, and to promote strong stakeholder involvement in. management of the fishery.

6.4 The responsibilities of Wasini and Shimoni BMU sub-committees

The responsibilities of the BMU sub-committees for Wasini and Shimoni are formally set out in the bylaws as follows:

- **Patrol sub-committee** whose tasks are:
- Protection of the community designated fish breeding grounds
- Prevention of net and other fishing gear thefts
- Eradication of illegal fishing gears and methods
- General security of the jurisdiction area, both sea and land

- **Hygiene and Sanitation sub-committee** whose tasks are:
- Ensure proper handling of fish
- Responsible for cleanliness of the beach
- Assurance of a generally clean and acceptably environment
- Ensure the fish market is clean
- To ensure proper handling of fishing equipment

- **Sub-committee for finance** whose tasks are:
- To ensure transparency in BMU collections and expenditure
- To solicit for donors and development partners
- To write proposals for funding by the government, NGOs, CBOs and other stakeholders
- To ensure excess cash is deposited to the Bank
- To make sure that the BMU is always kept in good financial health
- To scrutinize and keep financial records

- **Sub-committee for HIV/AIDS, Gender and Education** whose tasks are:
- Responsible for awareness creation among fishermen and other stakeholders.
- Educate and disseminate all information pertaining to Gender
- Educate fishers on good and modern fishing methods
- Educate fishers and other stakeholders on ways of maximising profit from the fishing industry
- To educate stakeholders on proper fish handling practices to reduce post harvest losses

- **Sub-committee for Administration and Conflicts** resolution whose tasks are:
- Enhance cooperation amongst all stakeholders
- Settle conflicts between stakeholders
- Scrutinize, interpret and initiate amendments to the by-laws
- Interpret the spirit and letter of all BMU by-laws
- Bring together all the stakeholders for focused action on agreed issues
- General administration

6.4.1 Schedule of Fees set out in the BMU Bylaws

Table 30: Schedule of fees set out in the Shimoni, Wasini and Kibuyuni by-laws

Detail	Fee – Shimoni (KES)	Fee – Wasini (KES)		Fee - Kibuyuni *(KES)* *(incomplete)*
Membership fee per member	250	100		100
Annual membership registration fee per member	100	100		100
Annual vessel registration fee per member	100	100		
Daily landing fee per kg of fish for members	2			
Daily landing fee for non members	3			
Truck loading fee per day for members	100			
Truck loading fee per day for non members	200			
Fisherman or dealer in Bêche-de-mer (sea cucumber)/kg	10			
Fisherman or dealer in Lobster /kg	10			
Fisherman or dealer in prawns/kg	5			
Fisherman or dealer in fish/kg	2			
Dealer of fish from another landing site	1			
Dealer of lobster from another landing site	5			
Boat foreign for fishing for landing (3 months)	1000			500
Foreign fisherman landing fee per kg	3			2
Kenyan fishing boat from another landing site	300			
Tourism boat per trip	100			
Aquarium fishing boat per trip	200			
Sport fishing boat per month	300			
Cargo boat	500			
		Fisher	**Trader**	
Fish lobster/kg		5	10	
Fish Jumbo prawns/kg		5	10	
Fish white prawns/kg		3	5	
Fish Kitumbo (cocktail)/kg		1	3	
Fish squid (ngisi)		3	5	

Detail	Fee – Shimoni (KES)	Fee – Wasini (KES)		Fee - Kibuyuni *(KES)* *(incomplete)*
Fish octopus (pweza)		3	3	
Fish crab		3	3	
Fish - dry fish		1	1	
Fish - fresh fish		1	2	
Fish shark fins (large)		25	50	
Fish shark fins (medium)		10	20	
Fish shark fins (small)		5	10	
Aquarium fisher/ dealer/year		200	10	
Aquarium fish keeper per year		200		
Collector Bêche-de-mer/year		100		
Collector Oyster/year		200		
Collector/shells/year		100		
Migrant fishers/year		100		
Sport fishing /trip		1000		
Landing site user/year		1000		
Boat building.net mending/day		30		
Beach trader/day		20		
Boat transporter/day		50		
Shops/day		10		
Hawkers/vendors/day		5		

6.4.2 Schedule of Fines and Penalties set out in the BMU Bylaws

Table 31: Schedule of fines and penalties set in Shimoni, Wasini and Kibuyuni by-laws

Offence	Shimoni BMU	Wasini BMU	Kibuyuni BMU
Littering the beach compound	KES 100 and/or 1 year ban		
Dragging fish on the ground	KES 500 and/or 6 month ban		
Use of derogatory/abusive language	KES 1000 and/or 1 year ban		
Handling fish without approved clothing	KES 1000 and/or 1 year ban		
Delay of payments of charges when	KES 500 and/or 3 month		

Offence	Shimoni BMU	Wasini BMU	Kibuyuni BMU
due	ban		
Arbitrary increase in prices of fish by dealer	KES 1,500 and/or 1 year ban		
Fisherman caught stealing fish in	traps KES 2000 and/or 2 year ban		
Fishermen using illegal gears	KES 5000 and/or 2 year ban		
Dealer buying spear gun fish	KES 1000 and/or 6 month ban		
Drinking alcohol in fish market	KES 1000 and/or 6 month ban		
Taking someone's canoe without permission	KES 1000 and/or ban		
Smoking in the fish market	KES 500 and/or 1 month ban		

6.5 Wasini Community Conserved Area Charges

Table 32: Wasini Community Conserved Area entry charges

Category	Charge
Adult non-resident	USD 5
Child non-resident	USD 3
Adult resident	KES 250
Child resident	KES 150
Adult citizen	KES 150
Child citizen	KES 50
Boat and crew	No charge

6.6 Published fisheries Data for Kwale County

Table 33: Kwale County annual fish production by species for Shimoni for the year 2012 (Source: FiD Data 2012).

English Name	Family Name	SHIMONI KG	SHIMONI KES	SHIMONI USD
DEMERSALS				
Rabbit fish	*Siganidae*	49,226	7,745,597	91,125
Scavengers	*Lenthridae*	3,6610	5,608,830	65,986
Snappers	*Lutjanidae*	14,308	2,155,930	25,364
Parrot fish	*Scaridae*	31,383	4,676,830	55,022
Surgeon	*Acanthuridae*	2,544	362,500	4,265
Unicorn	*Nasobrevirosyris*	2,620	383,600	4,513
Grunter	*Haemulidae*	7,885	1,183,760	13,927
Pouter	*Cephalopholisargus*	38	5,550	65
Black skin	*Gaterinsordidus*	251	84,360	992
Goat fish	*Mulidae*	1,339	207,720	2,444
Streaker	*Aprionvirescens*	0	0	0
Rock cod	*Serranidae*	3,095	477,450	5,617
Cat fish	*Aridae*	1,636	294,000	3,459
Mixed demersals		14,199	2,090,620	24,596
SUB-TOTAL		**165,134**	**25,276,747**	**297,373**
PELAGICS				
Cavalla.j.	*Euthynnuspelamis*	4,248	991,005	11,659
Mullets	*Mulilidae*	828	126,230	1,485
Mackerel	*Kanaguta*	14,819	2,042,880	24,034
Barracuda	*Sphyranidae*	729	44,250	521
Milk fish	*Chanidae*	79	34,740	409
King fish	*Scombridae*	2,134	375,600	4,419
Queen fish	*Chorinemustol*	9	1,350	16
Sail fish	*Istiophoridae*	300	31,860	375
Bonito/tuna	*Arangidae*	6,054	704,667	8,290
Dolphin/Dorado	*Colyphaenidae*	3,716	482,240	5,673
Mixed pelagics		19,663	2,886,050	33,954
SUB-TOTAL		**52,579**	**7,720872**	**90,834**
Sharks/rays	*Carcharhinidae*/others	4,057	971,873	11,434
Sardines	*Clupeidae*	4,059	382,280	4,497
Mixed/others		4,607	504,350	5,934
SUB-TOTAL		**12,723**	**1,858,503**	**21,865**
CRUSTACEA				
Lobsters	*Penulirusspp.*	1788	1324030	15,577
Prawns	*Paenusspp.*	617	161830	1,904
Crabs	*Scyllaridae*	2563	296445	3,488
SUB-TOTAL		**4968**	**1782305**	**20,968**

English Name	Family Name	SHIMONI KG	SHIMONI KES	SHIMONI USD
MISCELLANEOUS				
Oysters		0	0	0
Bêche-de-mer	*Holothuroidae*	2,572	329,267	3,874
Octopus	*Vugarisspp.*	30,651	4,100,494	48,241
Squids	*Sepia oligo*	12,799	2,351,740	27,668
SUB-TOTAL		**46,022**	**6,781,501**	**79,782**
GRAND TOTAL		**281,426**	**43,419,928**	**510,823**

6.7 Fisheries Data Collected during the Study Collated from BMU Records

Responsibilities for collecting fisheries catch data for the 3 BMUs differ, with KMFRI responsible for Shimoni and the BMUs themselves responsible for collecting data for Wasini and Kibuyuni. In practice it was very difficult to examine catch data for the fishery. KMFRI data is sent to the head office of KMFRI (with no copy kept) and Wasini and Kibuyuni do not collect reliable data. The following table summarizes the data found during field work.

Table 34: Meta-description of fisheries data collected during field work.

BMU	Statistics collected	Year	Time period	Notes
Shimoni	Vessel, Crew no., site, Gear used, Species, Weight, Sample length (3 individuals)	2012	November 26th	KMFRI tally sheet for one day
Shimoni	Vessel, Crew no., site, Gear used, Species, Weight	2013	June 6th	KMFRI tally sheet for one day
Shimoni	Weight, Species	2011	April	Records existed for Jan to September, some months incomplete – only April and July analysed
Shimoni	Weight, Species	2011	July	
Shimoni	Total Weight/month	2012	Jan-Dec	Summary of monthly catch for whole year recorded in BMU record book
Kibuyuni	Vessel, gear, crew, hours, species, number, weight	2012	1, 2 and 3rd Oct	CPUE data collected with WCS. Only one days data analysed

Figure 27: Data on fish catch by family for Shimoni landing site for 6th June 2013

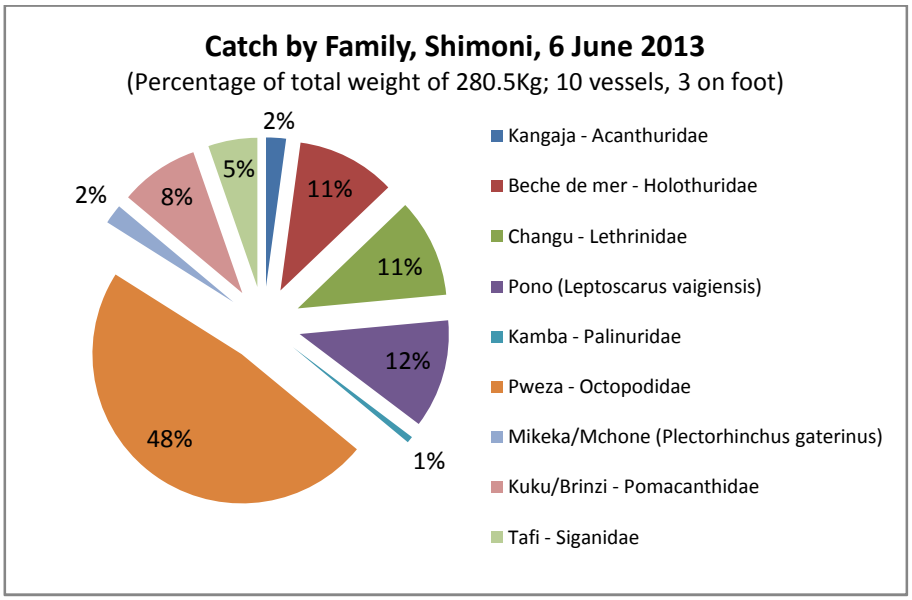


Figure 28: Data on fish catch by family for Shimoni landing site for 26th November 2013

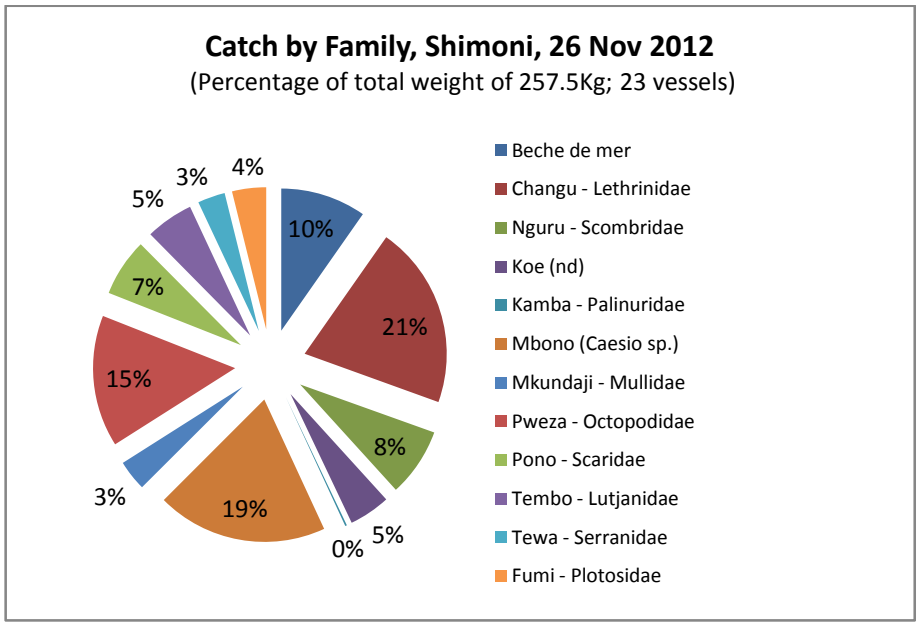


Figure 29: Data on fish catch by family for Kibuyuni landing site for 1st October 2012

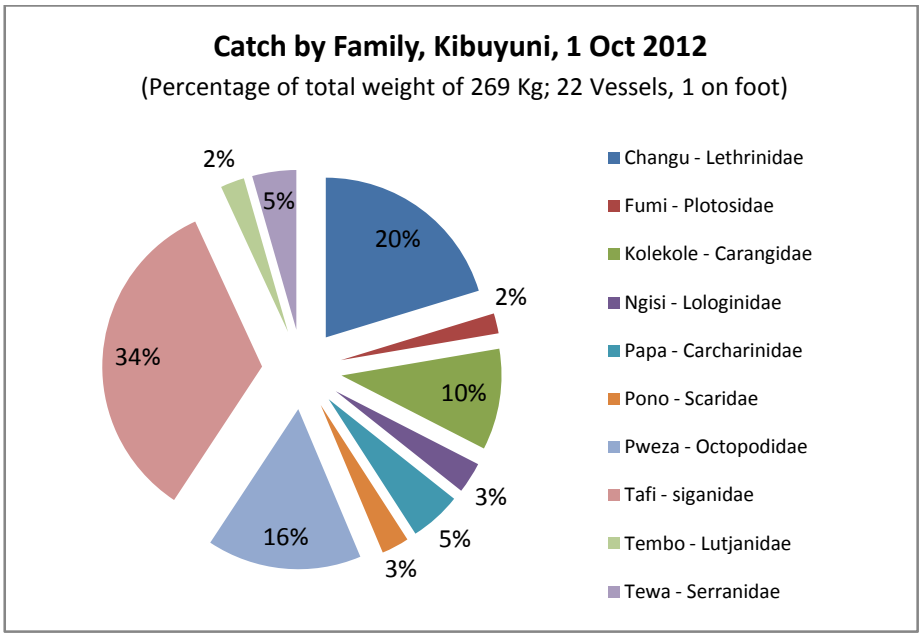


Figure 30: Data on fish catch by family for Shimoni landing site for the month of April 2011

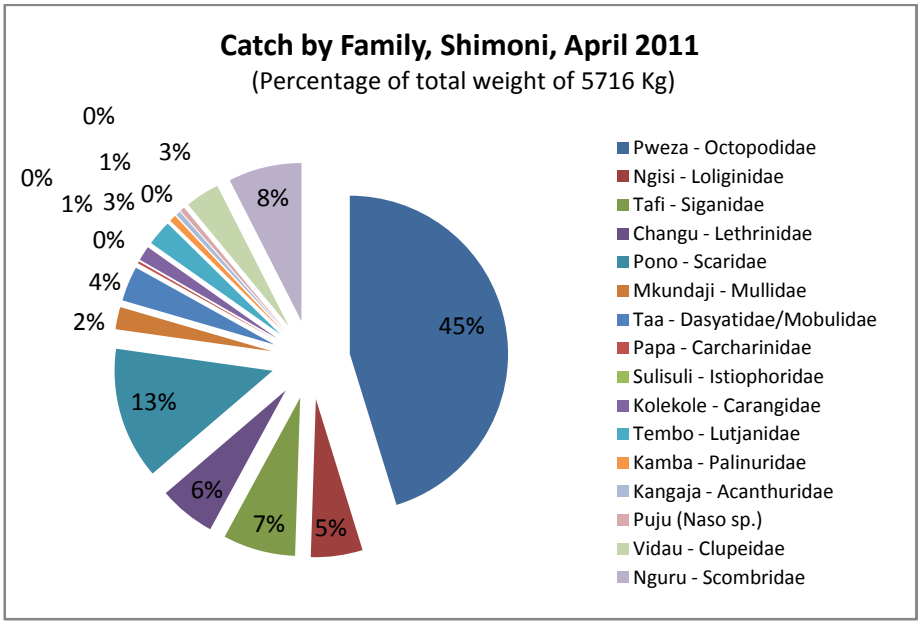


Figure 31: Data on fish catch by family for Shimoni landing site for 26th November 2013

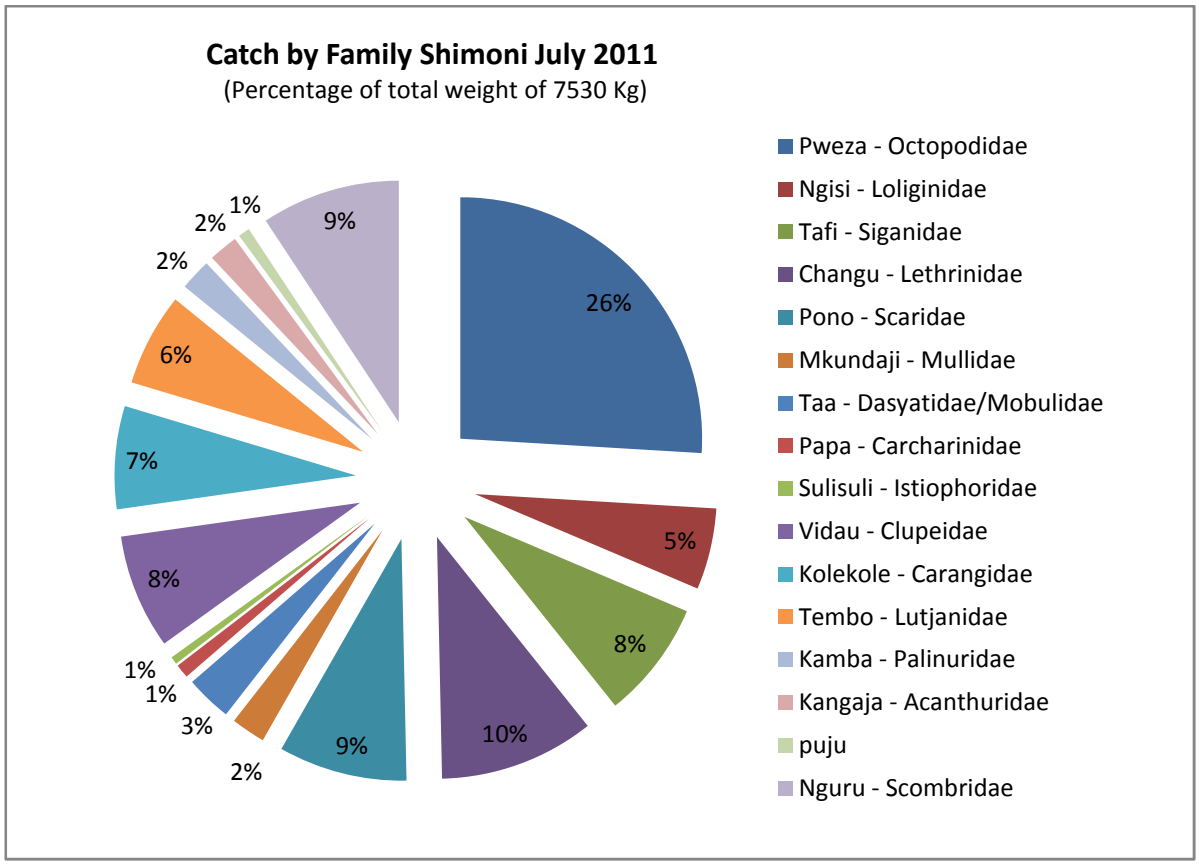
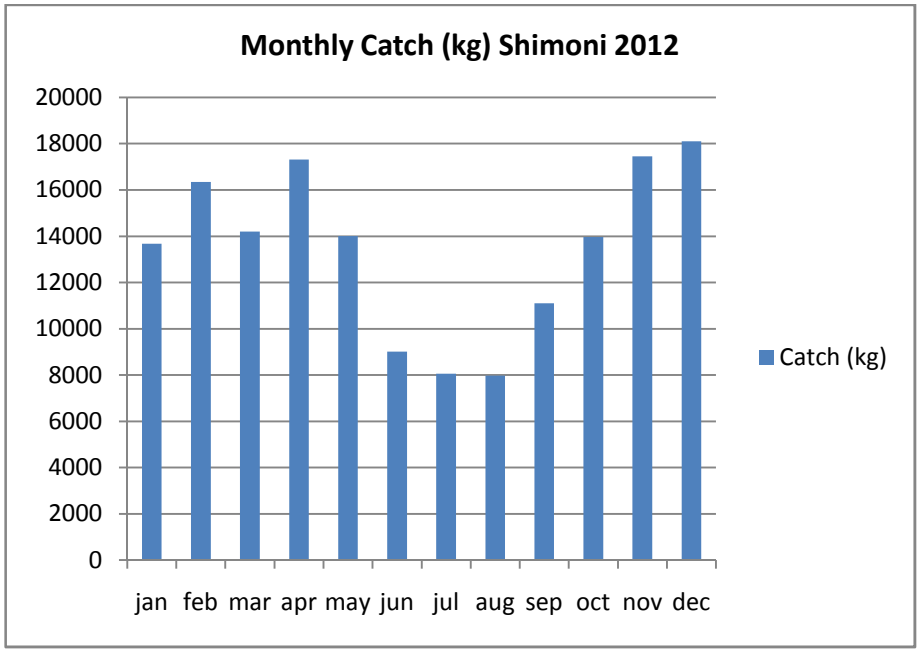


Figure 32: Monthly total catch for Shimoni landing site for 2012



6.8 Perceptions of changes in rights, responsibilities, revenues and resources (4 R's exercise)

Perceptions of changes in rights, responsibilities, revenues and resources (4 R's exercise) 4R's Exercise July 2013

Two groups in each community took part in this PRA exercise as follows:

- Shimoni BMU (5 Executive committee members and 4 Assembly members; total 9)
- ShimoniFisherfolk group (6 women 'fish-friers')
- Wasini BMU (5 Executive committee members and 6 Assembly members; total 11)
- Wasini Women's Group (5 members of this well established group)
- Kibuyuni BMU (5 Executive committee members and 4 Assembly members; total 9)
- Kibuyuni Seaweed Farmers (5 women members)

Each group were asked to brainstorm changes in FM rights, FM responsibilities, household revenue and marine resource health, in years before the BMU (10 years before) and after the BMU (now). Wasini and Kibuyuni BMUs added an extra category of '30 years before the BMU' as they felt the situation was significantly different at that time. Each participant was then given 10 counters (beans) and asked to judge the level of each category (rights/responsibilities/revenue/resources) in each time period, where 10=more and 0=less.

4 R RANKING FOR SHIMONI BMU: 9 participants			
SITUATION <u>BEFORE</u> BMU ESTABLISHMENT			
Rights	**Responsibilities**	**Revenues and benefits**	**Resources**
- Freedom to fish everywhere and every species of fish - Freedom in use of gear - All rights in enforcement are under FiD - Fishery managers have rights on landing sites - Rights of selling and buying fish is controlled by cooperative - Fishers were free to sell their catch to anybody after collapse of the cooperative - Long time open and closed system was practiced by	- Awareness & Education carried out by FiD - Inspection of gear done by FiD - Mangroves were protected and managed by Forestry Dep. - Vessel registration by FiD - Fishers from outside were licensed by FiD - Cooperatives were responsible for by-law formulation in collaboration with community before their collapse - Monitoring was done by FiD - Conflicts were resolved by	- Good catch - Good income (sufficient for household needs) - Octopus were plenty and no market for them - At least 100KES per day per fisher - 1975-1980 there were excessive fish catches - Cooperative was buying fish from fishers and deducted fees from each pound weighed. - Plenty of lobster - Cooperatives gave loans to fishers community	- Fish of different types including lobster, king fish, octopus, grouper, prawns and other were available everywhere in the sea and could be easily caught. - Corals were good except in some areas they were harvested by communities - Communities were given licences' to collect coral rock - Fish start to disappear from 1998 due to illegal fishing, increased population and fishing pressure - About 2% of fish were consumed by

ancestors	community leaders - Rescue was carried out by FiD - Provision of loan for fishing gears-FiD - All controls were top-down (FiD to communities)		Shimoni communities while 98% were sold outside - Mangroves were cut without proper management
SITUATION <u>AFTER</u> BMU ESTABLISHMENT			
Rights	**Responsibilities**	**Revenues and benefits**	**Resources**
- Community given rights to manage the fisheries resources - Community have to make decision on how to manage and control their resources - Community have rights to plan the place and type of fishing	- Law enforcement by BMU - BMU have taken responsibilities to manage the fishery in their areas - Mangroves are managed in collaboration between BMU and department of Forestry - Gear inspection by community (BMU) - Awareness and education is carried out by everybody including FiD, communities, other NGOs - BMU approves licensing while FiD issue licences to fishers - BMU is responsible for rescuing fishers and other community members whenever vessel sinks - BMU look after all fisheries resources	- Income is not sufficient to satisfy households - Increased number of fish traps - Decreasing catch per fisher and vessel (20kg-0.5kg per day) - Octopus size can reach up to 300gms - Decreasing income from fish catch	- Mangrove are managed through open and closed system - Decreasing octopus catches - Healthier coral reefs - Healthy mangroves (not cut as before) - King fish are caught in plenty (200K per day)

Ranking Summary (including scores):

Rights: Before 37 (41%): After 60 (67%)

It is strongly perceived that community has more rights in the management of their resources in comparison to previously, although there are more restrictions. The level of rights ranges from making decision and type of preferred management system. Before BMUs all the decisions on resources management were made by FiD.

Responsibilities: Before 28 (31%): After 82 (91%)

Perceived improved level of responsibilities given to communities in comparison to 10 years before BMU. FiD were said to deliver orders and commands for execution by communities (top down approach).

Revenues and benefits: Before 90 (100%): After 38 (42%)

Due to abundant fishery resources including variety of species and large size, the fish catch per fisherman was very high in compared to now. Also the household income was sufficient for all household needs in comparison with currently where the catch and income per fisher is not sufficient for household needs.

Resource status: Before 44 (48%): After 90 (100%)

Community explained that due to increasing household population, fishing pressure, number fishermen, vessels, technology and number of gears and fish trade as well, it causes competition for fishing area, as reduced amount of catch per fisher, vessel and gear as well.

This has an influence to decreasing income per household. While resources are not in good condition, condition is improving with management

The total score for each category was converted to a percentage based on the highest possible score considering the number of participants taking part in the exercise. The results for Shimoni BMU are given below as an example and typify the results for other groups also. Percentage scores for each group are displayed in the bar charts below and are discussed in the body of the report. A main difference between women's and predominantly men's groups was perception of revenue. Women generally thought they have more access to revenue now although it is insufficient for their needs. They also feel that they have more of a right to speak out in the current climate.

Figure 33: Perceived level of rights in fisheries management before and after the creation of BMUs in Shimoni, Wasini and Kibuyuni.

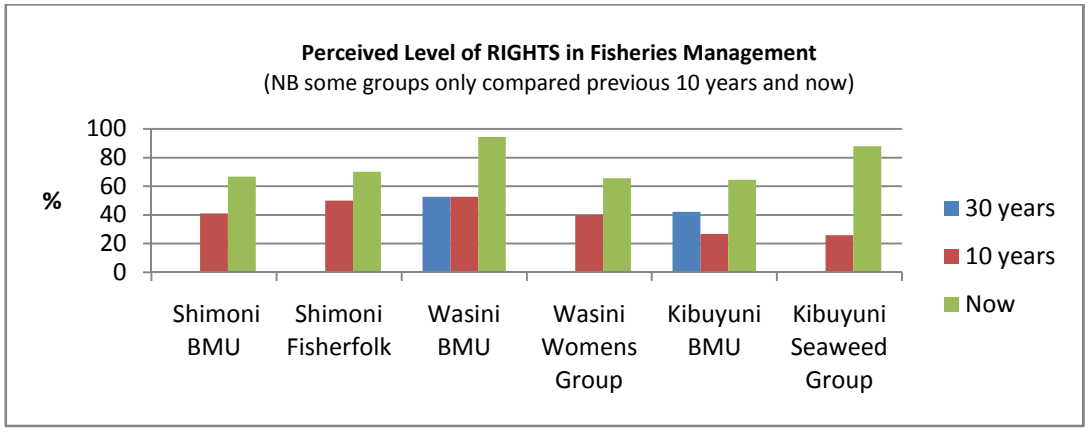


Figure 34: Perceived level of responsibilities in fisheries management before and after the creation of BMUs in Shimoni, Wasini and Kibuyuni.

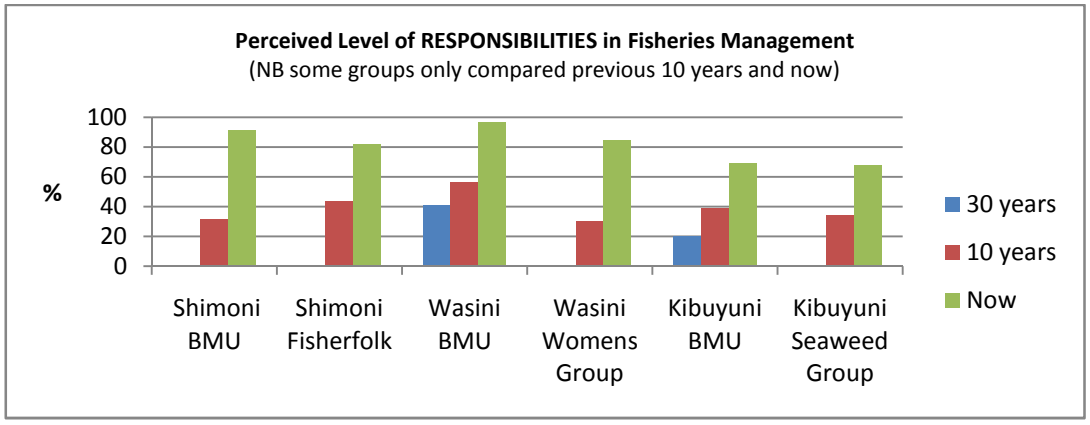


Figure 35: Perceived health of the marine resource base before and after the creation of BMUs in Shimoni, Wasini and Kibuyuni.

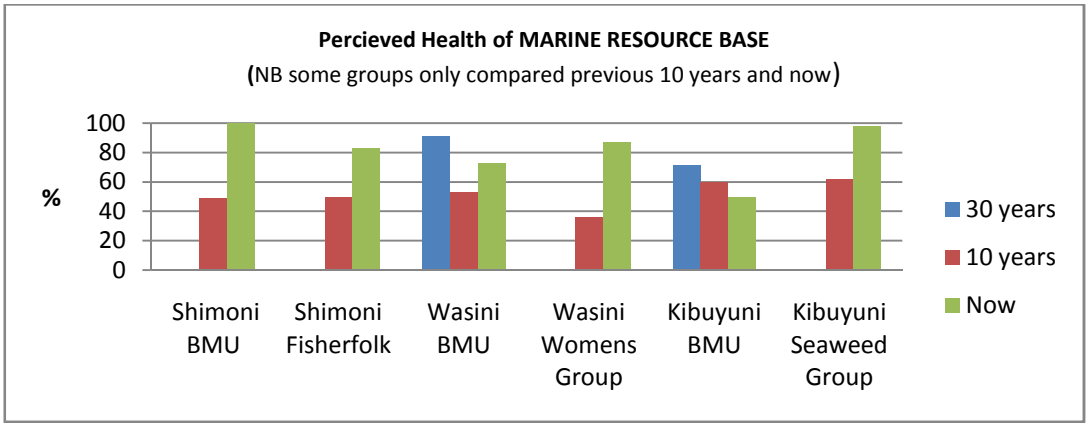
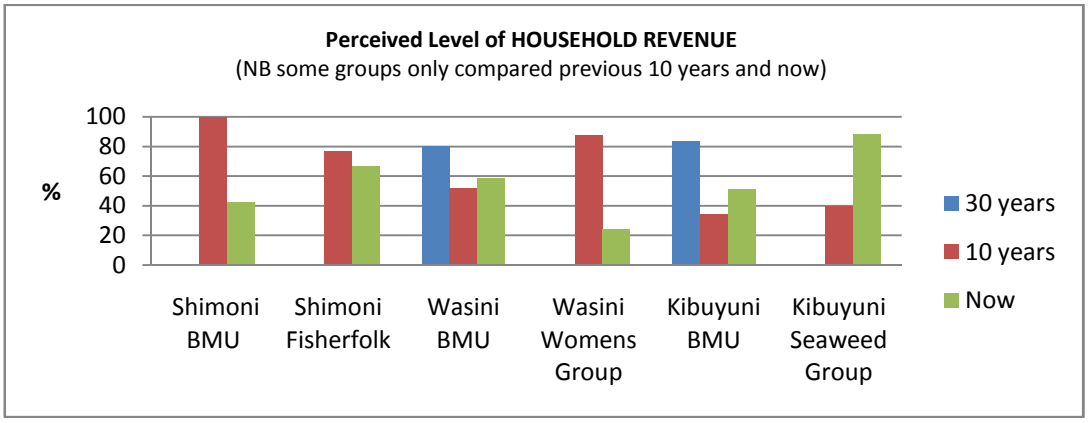


Figure 36: Perceived level of household income before and after the creation of BMUs in Shimoni, Wasini and Kibuyuni.



6.9 BMU Regulations (2007)

LEGAL NOTICE No. 402

THE FISHERIES ACT (cap. 378)

THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATIONS, 2007

ARRANGEMENT OF SECTIONS PART I—PRELIMINARY

Section

THE FISHERIES ACT (Cap. 378)

IN EXERCISE o the powers conferred by section 23 (2) (f) of the Fisheries Act, the Minister for Livestock and Fisheries Development makes the following regulations:

— THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATIONS, 2007

PART I—PRELIMINARY

1. Citation.

These Regulations may be cited as the Fisheries (Beach Management Units) Regulations, 2007.

2. Interpretation.

In these Regulations, unless the contest otherwise requires-

"assembly" means a meeting of registered members of a beach management unit convened pursuant to the provisions of these regulations;

"authorized fisheries officer" means a person of or above the rank of assistant fisheries officer appointed in the public service, having administrative jurisdiction over a beach management unit;

"beach" means the defined geographical area of jurisdiction of a beach management unit established under regulation 5;

"beach management unit" means an organization of fishers, fish traders, boat owners, fish processors and other beach stakeholders who traditionally depend on fisheries activities for their livelihoods;

"by-laws" means the internal administrative rules of a beach management unit approved by the assembly and the authorised fisheries officer;

"chairman" means the chairman of the assembly and executive a committee of a beach management unit elected in accordance with these regulations;

"co-management plan" means a plan for the co-management of a particular fishery or geographical area adopted pursuant to regulation 7;

"Director" means the Director of Fisheries;

"executive committee" means a committee of beach management unit members elected en office pursuant to the provisions of regulations 14 and 15;

"fish landing station" means a fish landing station established by the director in accordance with the provisions of the Act;

"member" means a member of a beach management unit; and

"presiding officer' means the authorised fisheries officer or any other person nominated by him in writing to supervise or conduct beach management unit elections.

PART II—BEACH MANAGEMENT UNIT OBJECTIVES STRUCTURE, AREA OF JURISDICTION AND MANDATE IN CO-MANAGEMENT

3. (1) The Director shall facilitate the establishment of a beach management unit for each fish landing stations. Provided that in appropriate cases one beach management unit may be set up for two or more fish landing stations in accordance with administrative guidelines issued by the Director.

(2) The beach management unit shall be a son-political and nonreligious body.

(3) The objectives of a beach management unit shall he to—

(a) strengthen the management of fish-landing stations, fishery resources and the aquatic environment;

(b) support the sustainable development of the fisheries sector;

(c) help alleviate poverty and improve the health, welfare and livelihoods of the members through improved planning and resource management, good governance, democratic participation and self- reliance;

(d) recognise the various roles played by different sections of the community, including women, in the fisheries sector;

(e) ensure the achievement of high quality standards with regard so fish and fishery products;

(f) build capacity of the members for the effective management of fisheries in collaboration with other stakeholders; and

(g) prevent or reduce conflicts in the fisheries sector.

4. Administrative structure.

A beach management unit shall consist of—

(a) an assembly;

(b) an executive committee; and

(c) such sub-committees as may be specified in the by-laws of the beach management unit.

5. Beach management unit's area of jurisdiction.

(1) Each beach management unit shall have jurisdiction over the area for which it is established under rule 3.

(2) The Director shall, is consultation with the relevant agencies, prior to the establishment of a beach management unit, cause the relevant land area of a fish landing station to be surveyed and its boundaries clearly delineated and marked.

(3) For the purpose of ensuring safety of fish and fishery products, a specific area of the fish landing station shall be delineated, marked and assigned for the exclusive purposes of landing and selling fish and fishery products.

(4) Activities not directly related to fish landing or trading in fish and fishery products that are, or have been, customarily undertaken at that beach, including, but not limited to —

(a) the washing of clothes;

(b) the watering of cattle;

(c) the abstraction of water for domestic use, and

(d) the provision of services for the purposes of tourism or recreation,

shall he assigned a separate area of the beach away from the area provided for under paragraph (3) above.

(5) A description of the beach, which shall include a plan and a geo-reference description of any area identified for the exclusive purpose of landing or selling fish and fishery products, shall be included in the by laws of each beach management unit

(6) A bench management unit shall be entitled to issue by-laws which shall be binding upon its members and any persons present at or
using the beach.

(7) A beach management unit may stipulate in its by-laws that specified activities as its beach may only be undertaken by its members or by members of other beach management units in accordance with any applicable co-management plan.

(8) A beach management unit shall exercise its jurisdiction over a beach in a fair, equitable and non-discriminatory manner

(9) A beach management unit shall display in a prominent locution on the beach -

(a) a notice stating that the bench is managed by the beach management unit, which shall be identified by name; and

(b) a copy of its by-laws.

6. Mandate of a Beach Management Unit.

(1) A head, management unit shall be responsible to its members and to the Director for ensuring the orderly, safe and effective use, management and operation of the fish landing station over which it has jurisdiction, to which end it shall—

(a) ensure that the fish landing station, together with any structures or buildings situated thereon, is kept in a clean, tidy and hygienic condition;

(b) ensure the security of the fish landing station and any fishing vessels, nets or other equipment or structures within its boundaries;

(c) ensure compliance with applicable hygiene standards in connection with the landing storage and sate of fish and fishery products;
(d) in conjunction with other relevant agencies maintain safety and order at the fish landing station; and
(e) maintain and, as necessary, repair any buildings or structure on the fish landing station.

(2) A beach management unit shall gather, analyse, use, store and transmit such information and data as may be specified in writing by the Director from time to time concerning the landing and sale of fish and fishery products, including, but not limited to—
(a) the quantities of fish and fishery products landed; and
(b) the prices at which they are sold.

(3) A beach management suit shall seek to ensure the safety of those of its members engaged in fishing, and, to that end—
(a) shall monitor the seaworthiness of fishing vessels, and shall take measures to ensure that they comply with applicable safety regulations including provisions relating to the use of personal safety equipment; and
(b) may organise or provide rescue vessel(s) or services.

(4) A beach management unit shall take measures to raise the awareness of its members and their families concerning health risks and measures so minimise and prevent to malaria and HIV-Aids and other diseases.

(5) A beach management unit may provide training to its members is fishing techniques, the marketing and processing of fish, personal financial management and other areas relevant to fisheries and shall support the activities of cooperatives and fishers' self help groups within its jurisdiction.

(6) A beach management unit may seek to regulate and promote the marketing of fish including the construction and supply of marketing facilities and the organisation of fish auctions but shall not in any circumstances have the right to determine or dictate the prices at which fish or fishery products are to be sold

(7) A beach management unit may, with the written permission of the Director, erect such structures or buildings as may be necessary for the discharge of its functions.

(8) A beach management unit may is order to improve the economic situation of its members –
(a) promote and facilitate investments in the fish landing station and in fishing activities undertaken from there;

(6) support the development of sustainable alternative livelihood strategies for its members that may reduce pressure on fishery resources including, but not limited to, the provision of sustainable services to tourists.

(9) A beach management unit may—

(a) organise, or facilitate the supply of fishing gear, ice or other necessary equipment or inputs to its members; and

(b) provide savings and credit facilities to its members but it may not offer these services in competition to similar or equivalent services that are already provided at that beach.

7. Co-management areas.

(1) The authorised fisheries officer shall, following a consultative process, designate at respect of each beach management unit a co-management area which shall be an area in which the beach management unit shall undertake fisheries management activities jointly with the Director.

(2) In the case of fisheries or areas in which fishing is undertaken by the members of more than one beach management unit, the authorised fisheries officer shall, following a consultative process, designate a joint co-management area in which more than one heath management unit shall share responsibilities for fisheries management with the Director.

(3) The Director shall in the circumstances specified in paragraph (2) designate areas in which each individual participating beach management unit shall have specific responsibilities particularly as regards the undertaking of patrols.

(4) Following the designation of a co-management area the authorised fisheries officer shall, in consultation with relevant beach management units, develop a draft co-management plan for that co-management area, specifying fisheries management measures that are to be taken to ensure the sustainable utilization of fisheries in that area, including, but not limited to—

(a) the designation of closed areas In which all fishing activities or specified fishing activities are prohibited;

(b) the designation of closed seasons either throughout the Co. management area or in respect of specified areas;

(c) the marking of fishing vessels;

(d) restrictions on the type of nets or other fishing gears that may be used; and

(e) restrictions on the number of fishing vessel licences or fishing licences that may be issued.

(5) Each co-management plan shall be agreed upon between the authorised fisheries officer and the beach management unit and shall -

(a) give effect to applicable national and regional policies and plans, and

(b) comply with existing fisheries legislation, and

(c) specify the roles and responsibilities of the concerned beach management unit or units and the Director with regard to its implementation and enforcement.

6) The authorised fisheries officer shall forward the co-management plan to the Director for approval.

(7) A beach management unit shall give effect to an agreed co-management plan through its by-laws.

(8) A beach management unit shall constitute a patrol sub-committee who shall in collaboration with the Director undertake regular patrols within the co-management area, or within the designated patrol area in the case of a joint co-management area, in order to ensure compliance with the Act and any applicable co- management plan and applicable by-laws.

(9) The authorised fisheries officer and the executive committee(s) of the concerned beach management unit or units shall supervise the implementation of the co-management plan and shall periodically review its contents and revise it as necessary,

(10) If the authorised fisheries officer suspects that a beach management unit is not taking sufficient steps to give effect to a given co-management plan, such officer shall consult with that beach management unit as so the reasons for this.

(11) If, following consultations, the authorised fisheries officer is of the opinion that the relevant beach management unit is still failing to take sufficient steps to give effect to the co-management plan such officer may serve a notice to show cause why that co-management plan should not be revoked and if.

(a) the relevant beach management unit, fails to show cause within 14 days of the date of receiving the notice; or

(b) the authorised fisheries officer is not persuaded by the response of the beach management unit, he may suspend or cancel the co-management plan and after notifying the beach management unit or units concerned in writing he shall forward his decision to the Director who shall within 14 days approve or vary the decision.

(12) A beach management unit that is aggrieved by a decision to suspend or cancel a co-management plan pursuant to paragraph (11) of this regulation may within 14 days of the date of notification appeal to the Director, whose decision shall be final.

(13) The executive committee of a beach management unit whose co-management plan has been cancelled shall stand suspended and an interim Committee put in place pursuant to the provisions of regulation 21.

8. Environmental protection.

(1) A beach management unit shall seek to protect the aquatic environment within its co-management area and shall cooperate with the responsible authorities to that effect.

(2) A beach management unit may include in its by-laws provisions concerning the protection of the aquatic environment in its co-management urea.

PART III - MEMBERSHIP OF A BEACH MANAGEMENT UNIT AND ELECTIONS

9. Membership.

(1) Membership of a beach management unit shall be open to those persons who –

(a) depend directly or indirectly for their income or livelihoods on fisheries activities undertaken at the beach within the jurisdiction of that beach management unit;

(b) fall within one of the membership categories specified in regulation to; and

(c) would be directly adversely affected by the temporary or permanent closure of fisheries activities at that Beach.

(2) A beach management unit may provide in its by-laws that specified activities at the fish landing station over which it has jurisdiction may only be undertaken by its members.

(3) A person shall not be simultaneously a member of more than one beach management unit.

(4) A body corporate, acting through a representative notified in writing to the executive committee, may be a member of a beach management unit.

(5) In the case of a jointly owned fishing vessel, the co-owners shall determine who between them is to be a member of the beach management unit to represent their interests, and shall jointly notify the executive committee accordingly.

(6) Persons below the age of 18 years shall not under any circumstances be eligible to be registered as beach, management unit members and shall not be assigned any duties there for.

10. Membership categories.

(1) A beach management unit shall have the following categories of members –

(a) boat owners, meaning the owners of fishing vessels registered at its beach:

(b) Crew members meaning such persons other than boat owners whose fishing licences authorise them to fish from its beach;

(c) “fish traders and input suppliers” meaning persons routinely involved in fish trading or the supply of inputs and services necessary for fishing at its fish landing station; and

(2) For the purpose of this regulation “persons involved in fish trading include –

(a) persons who engage in the dealing of fish for sale locally on the basis of a fish trader’s licence;

(b) persons who engage in the dealing of fish for sale to a person or persons outside the district on the basis of a fish trader’s licence;

(c) persons who supply fishing gears, bait, ice or other inputs to boat owners in return for a first claim on landed fish and fishery products which they then sell on:

(d) persons who purchase fish at the beach for processing and sale at the beach or in the vicinity of the beach on the basis of a fish trader’s licence;

(e) agents or representatives of persons engaged in the large scale processing; of fish on the basis of a fish traders licence, whether or not employed by such processors; and

(f) persons involved, whether as employees or otherwise, in the grading, sorting, valuing, packing, and portaging of fish at that beach.

(3) For the purpose of this regulation "persons involved in the supply of inputs and services necessary for fishing" include fishing vessel builders and repairers and net repairers.

(4) Where a person's membership of a beach management unit is dependent on that person holding a licence -

(a) a suspension of that licence shall have effect of his right In membership of the beach management unit for an equivalent period;

(b) a revocation of that licence shall have the effect of revoking his right to membership of the beach management unit.

11. Joining Procedure.

(1) A person who wishes to apply for membership of a beach management unit shall apply in writing to the concerned executive committee.

(2) The executive committee shall forward such applications to the authorised fisheries officer for approval.

(3) If the authorised fisheries officer does not object to the application within 14, an applicant who complies with the criteria set in regulation 10 shall upon payment of the specified fee be admitted to membership of the beach management unit through the inclusion of his name in the register of members and the allocation of a member.

(4) A person not holding a licence whose entitlement to membership of a beach management unit would require him to hold such a licence may apply for provisional membership of a beach management unit.

(5) An applicant shall be entitled to be granted provisional membership unless -

(a) such person has previously been expelled from that or another beach management unit;

(b) the relevant co-management plan specifies a maximum limit on the number of licences to be issued at that Beach which maximum limit has been reached; or

(c) the person has a criminal record.

(6) In the event that there are more applications for provisional membership than there are available licences pursuant to the relevant co-management plan, such applications shall be dealt with on an equitable basis giving priority to the poor and disadvantaged and those with families to support in the BMU jurisdictional urea of the beach management unit.

(7) The Director shall not issue a licence to a person that relates to a particular Beach unless that person is a member or a provisional member of the relevant beach management unit.

(8) Following the grant of a licence to a provisional member that member shall notify the executive committee, which shall admit him to full membership through the inclusion of his name in the register of members and the allocation of a member registration number and membership card.

12. Resignation and expulsion of a member of beach management unit.

(1) A member of a beach management unit may resign his membership at any time by notifying the executive committee in writing, but such resignation shall not affect the liability of that person to pay any outstanding fees or charges to the beach management unit.

(2) A person may be expelled from membership of a beach management unit by a decision of the assembly on the proposal of the executive committee on one or more of the following grounds:

(a) he has been convicted in a court of law of a fisheries related offence;

(b) he has been convicted in a court of law of any other criminal offence and sentenced to imprisonment for a period exceeding six months; or

(c) he has persistently engaged in behaviour contrary to the objectives of the beach management unit or its by-laws and has ignored three written cautions issued by the executive committee.

(3) The dismissal of a member shall be approved by a simple majority of the beach management unit members in a meeting duly convened by the chairperson.

(4) Following the expulsion of a person from a beach management unit, the Director shall cancel any licence, registration or permit held by him that relates to the relevant beach.

(5) A person who has been expelled from a beach management unit may not be re-admitted to membership for a period of two years from the date of the expulsion.

(6) A person who is aggrieved by a decision to expel him from a beach management unit may appeal in writing to the Director within a period of 14 days of the date of the expulsion, and the decision of the Director shall be final,

13. Rights and obligations of beach management unit members.

(l) A member of a beach management unit may -

(a) participate in the decision making processes of the beach management unit;

(b) where the member is not in arrears concerning fees or charges due to the beach management unit, stand for office and participate in elections;

(c) benefit from any services provided by the beach management unit to its members subject to the payment of any fee or charge; and

(d) inspect the books and records required to be maintained by the beach management unit.

(2) A member of a beach management unit shall –

(a) comply with the by-laws;

(b) comply with the provisions of the Fisheries Act;

(c) ensure that any licences issued to him under the Act are kept up to date;

(d) comply with the lawful instructions of an authorized fisheries Officer or an official of the beach management unit;
(e) promptly pay any fees or charges due to the beach management unit;
(f) not damage any property owned or used by the beach management unit;
(g) promptly provide information to the beach management unit regarding the landing or sale of fish and fishery products as may be requested.

14. The executive committee.

(1) The executive committee of a beach management unit shall have not lets than 9, nor more than 15 members as provided for in its by-laws, who shall be elected by the members of the beach management unit.

(2) The composition of an executive committee shall be specified in the by-laws of each beach management unit, which may provide-

(a) that the membership shall be distributed as follows
(i) boat owners — 30%;
(ii) crews — 30%;
(iii) traders — 10%;
(iv) others 30%,
(b) that not withstanding subparagraph (a), in as far as possible at least 3 of the executive committee should be constituted by women.

(3) It shall be the duty of each member of the executive committee to seek to represent the best interests of the beach management unit as a whole in the fulfilment of his duties rather than the interests of the membership category to which he belongs.

(4) The executive committee shall consist of a chairperson, a deputy chairperson, a secretary, a treasurer and committee members.

15. Election to the executive committee.

(1) A member of a beach management unit may be nominated to stand for election to the executive committee provided:
(a) he is a citizen of Kenya and holds a National Identity Card or valid passport or driving licence;
(b) with the exception of candidates for the elections that take place at the establishment of the beach management unit, he has been a member of the beach management unit for more than one year;
(c) he is of sound mind;
(d) he does not have a criminal record;
(e) he has not been found to have breached the by-laws or rules of the beach management unit;
(f) he does not owe any outstanding fees or charges to the beach management unit;
(g) his candidacy is proposed and seconded by ten other members of the beach management unit who shall be in the same membership category in FORM FD/NF/1 as set out in the Third Schedule of these Regulations;

(h) he is able to read and write, except for the secretary and treasurer who must possess at least a primary education certificate.

(2) The presiding officer shall announce the start of campaign period of not more than seven clear days before the dale of the election

(3) A beach management unit shall specify in its by-laws whether

(a) candidates are to stand for direct election to the positions of chairperson, deputy chairperson, secretary and treasurer; or

(b) whether they are to stand for election to the executive committee with elections to such positions being undertaken by and from among the members of the executive committee.

(4) Elections to the executive committee shall be by secret ballot.

(5) Upon counting and announcing the election results the presiding officer shall immediately submit the results to the Director in FORM FD/ ER as set out in the Fourth Schedule of these Regulations.

(6) A member of the executive committee:

(a) shall hold office for one further term;

(b) may stand for re-election for a second four-year term;

(c) may not stand for re-election immediately at the end of a second term, but may stand again for election since leaving office after four years

16. Formation of and election to sub-committees.

(1) A beach management unit shall, through us by-laws, provide for the establishment of sub-committees depending on its particular requirements.

(2) Ordinary members of the executive committee shall be elected by the executive committee to head the sub-committees so created.

(3) The assembly through a voting method determined by the authorised fisheries officer shall elect members to serve in the sub committees.

(4) The chairperson of the executive committee shall be an ex-officio member of all sub-committees

PART IV - ADMINISTRATION OF THE BEACH MANAGEMENT UNIT

17. Meetings of the beach management unit members.

(1) A meeting of the Beach Management Unit members convened pursuant to the provisions of these regulations shall constitute the assembly of the beach management unit.

(2)The assembly shall be held at least once a every three months, at an annual general meeting or more frequently as may be specified in the by-laws.

(3) Additional meetings of the beach management unit members may be called by the executive committee when necessary and shall be called at the written request of one tenth of the members of the beach management unit.

(4) The by-laws shall specify whether decision making at the assembly shall take place by –

(a) show of hands;

(b) show of hands, save for elections which shall be by secret ballot;

(c) show of hands, or by secret ballot in particular cases upon the decision of the assembly; or

(d) secret ballot.

(5) Each participant in the assembly shall be entitled to one vote.

(6) Unless it is otherwise provided for in these regulations, a proposal to the assembly shall be deemed to have been accepted it if is approved by more than half of those present.

(7) The quorum of an assembly shall be half the total numbers of members.

(8) An assembly where quorum is not achieved shall be adjourned for a period of not more than ten days.

(9) The assembly shall be chaired by the chairperson of the executive committee or in his absence the deputy chairperson of the executive committee.

(10) On the decision of the chairperson, persons who are not members of the beach management unit or who are beach management unit members but are not entitled to vote in its meetings may be invited to address the assembly.

(11) The authorized fisheries officer or any person delegated by him shall be entitled to attend the assembly.

18. Convening the assembly.

(1) The executive committee shall, at least 30 days before convening the assembly display a notice

prominently at the beach, at the offices of the beach management unit and other public places in the vicinity as will enable beach management unit members to be aware of the planned assembly.

(2) A notice of the type referred to paragraph (1) shall indicate the date, time and place of the assembly and the draft agenda of the assembly.

19. Meetings of the executive committee.

(1) The executive committee shall meet at least once a month.

(2) The quorum for meetings of the executive committee shall be at least half of the members.

(3) Decisions of the executive committee shall be made by consensus, failing which a vote may be held with each member holding one vote.

(4) Additional meetings of the executive committee may be called by the chairperson when necessary and shall be called at the request of one third of its members.

An authorised fisheries officer or a person nominated in writing on his behalf shall have the right to attend meetings of the executive committee as an observer.

20. Dismissal of executive committee members by the assembly.

(l) The assembly may dismiss a member of the executive committee, or any sub-committee, on the grounds that he -

(a) is proven to be of unsound mind;

(b) has failed without reasonable cause to attend three consecutive scheduled meetings; (c) has engaged in or condoned illegal fishing activities;

(d) has failed to perform the duties required of his office as specified in these regulations or the by-laws; or

(e) is convicted of a criminal offence.

(2)An assembly to consider the dismissal of any member of the executive committee shall be convened in response to a written request signed by one-third of the beach management unit members, citing the grounds for dismissal.

(3)A decision to dismiss a member of the executive committee shall be taken by secret ballot requiring a simple majority of votes in favour of dismissal, and shall he confirmed by the authorised fisheries office in writing.

(4) A member of the executive committee who has been dismissed pursuant to sub-section (1) of this

regulation may within 14 days of the relevant assembly appeal in writing by notice to the Director stating the basis for the appeal.

(5) The Director shall determine any such appeal within 14 days by of receipt of the notice of appeal and shall promptly inform the beach management unit and the authorised fisheries officer.

In the event that or more two-thirds or more of the executive committee is dismissed from office by the assembly, then the entire executive committee shall stand dissolved and the authorised fisheries officer shall appoint an interim committee and call for fresh elections within ninety days of the dismissal.

21. Suspension of the executive Committee by the Director.

(1) The Director or an authorized fisheries officer, having reason to believe that an executive committee or any of its members are engaged in or are condoning proscribed fishing practices, shall immediately in writing suspend the committee or the member and in their place appoint an interim committee or an interim committee member.

(2) When an authorized fisheries officer, other than the Director, makes such suspension, the officer shall report the case in writing detailing reasons for the suspension to the Director.

(3) Any committee or committee member aggrieved by the decision of an authorized fisheries officer may, within fourteen days of communication to them of such suspension, appeal so the Director.

(4) The Director may confirm, vary or reverse the decision, and shall accordingly issue instructions to the authorized fisheries officer.

(5) The decision of the Director under paragraph (4) shall be final.

(6) If the Director recommends dismissal then the authorized fisheries officer shall call for fresh elections to replace the committee or committee member so removed within ninety days of the Director's decision.

(7) The dismissed executive committee or individual committee thereof member shall return she authority card issued under these Regulations to the issuing officer.

22. Employees of the beach management unit.

(1) A beach management unit may employ such part time or full time staff as it requires in accordance with its approved budget including, but not limited to, a manager, an accountant, a coxswain, security personnel and cleaners.

(2) An employee of a beach management unit shall not be entitled to stand for elected office in that beach management unit

PART IV - RESPONSIBILITIES OF THE BEACH MANAGEMENT UNIT ORGANS AND OFFICERS

23. Responsibilities of the assembly.

(1) The responsibilities of the assembly of a beach management unit shall be to –

(a) approve any management plan for the beach;

(b) approve any draft co-management plan;

(c) approve the draft badges and work-plan of the beach management unit; (d) adopt the annual report and accounts of she beach management unit;

(e) approve she level of any fees or charges payable by the members of the beach management unit; (f) adopt sew by-laws and amend existing by-laws:

(g) elect the members of any sub-committees;

(h) as necessary remove from office she members of the executive committee: and

(i) undertake such other tasks as may be specified in these regulations or the by-laws.

(2) The assembly of a beach management ant shall not seek, either directly or indirectly, to interfere in, re-order or otherwise modify economic relationships between members who are in different membership categories.

(3) With regard to the adoption and amendment of by-laws -

(a) any amendments to the by-laws approved at the date of establishment of she beach management unit shall enter into effect only on receipt of the Director's written approval:

(b) a copy of any additional by-laws, or any amendments thereto, shall within 14 days of the date of adoption be transmitted to the Director for approval;

(c) if the Director does not respond within 21 days of the date of receipt of the by-laws then the by-laws shall be deemed to have been approved;

(d) the Director may within 21 days of the date of receipt notify the relevant beach management unit in writing that he does not approve the by-laws or amended by-laws, stating the reasons for his decision, in which case they shall be suspended;

(4) The Director may only refuse to approve by-laws or amended by-laws submitted to him on the grounds that:

(a) they are not in compliance with the Fisheries Act, these regulations or any other legislation then in force;

(b) they in his/her opinion frustrate the objectives of the beach management unit.

(5) Within 14 days of the receipt of a notice pursuant to sub- paragraph (4)(d) of this regulation a beach management unit may appeal in writing to the Minister, whose decision thereon shall be final.

24. Responsibilities of the executive committee.

The duties of the executive committee shall be—

(a) to supervise the general management of the beach management unit's activities and the implementation of its by-laws;

(b) to approve the minutes of its previous meetings;

(c) to supervise and review the implementation of the co-management plan;

(d) to represent the beach management unit in relationships with unit;
(e) to convene and prepare for the assembly, including the preparation of the agenda;
(f) to review applications for admission to the beach management unit and resignation from it and to make recommendations to the assembly regarding the expulsion of members;
(g) to submit the draft co-management plan and any rules to the assembly; (h) to submit the draft budget to the assembly;
(i) to conclude contracts in accordance with the approved budget and plans; (j) to employ and as necessary dismiss staff of the beach management unit; (k) to maintain accounts and registers as specified in these regulations;
(l) to exchange information with other beach management units and other relevant agencies to promote the fair and transparent pricing of fish and fish products;
(m) to formulate funding proposals, make financial reports and present them to the assembly for approval;
(n) to inspect and record visiting fishing vessels and give permission to land where appropriate;
(o) to supervise the financial management of the beach management unit;
(p) to ensure that fishing boats within their areas of jurisdiction have certificates of seaworthiness and are equipped with life-saving equipment; and
(q) to undertake such other tasks as may specified in these regulations or the by-laws.

25. Powers and duties of the chairperson.

(1) The chairperson of a beach management unit shall -
(a) chair the assembly and meetings of the executive committee;
(b) act as the official spokesperson of the beach management third parties;
(c) ensure timely submission of data, information and financial reports by the committee to the assembly and the Director;
(d) for purposes of implementing the Act and any regulations made there under have powers to arrest any person whom he has reason to believe his committed an offence;
(e) seize any fish, fishing gear, vessel, or other items which be has reason to believe has been used in the commission of an offence, or in respect of which an offence has been committed;
(f) hand over to an authorized fisheries officer as soon as is reasonably practicable, any person arrested or item seized under the provisions in this regulation; and
(g) undertake such other tasks as may be specified in these regulations or the by-laws.

(2) Without prejudice to any provision in these regulations the chairperson's powers shall be limited to his areas of jurisdiction as guided by the Director.

26. Duties of the secretary.

The secretary of a beach management unit shall -
(a) convene meetings of the executive committee consultation with the chairperson;
(b) act as the minute clerk of the assembly and at meetings of the executive committee;
(c) maintain the correspondence of the beach management unit;
(d) compile monthly, quarterly and annual performance reports for submission and presentation to the executive committee.

(e) maintain and update all records of the beach management unit members, equipment, statistics and other records;
(f) collect and submit all data and information as may be required by the Director; and
(g) undertake such other duties as may be assigned by the chairperson.

27. Duties of the treasurer.

The beach management suit treasurer shall -

(a) prepare and make payments authorized by the executive committee;
(b) maintain the record of financial transactions conducted by the beach management unit; (c) receive cash and make deposits to the beach management unit's bank account;
(d) keep records of assets and liabilities of the beach management unit;
(e) prepare monthly, quarterly and annual financial reports;
(f) submit and present financial reports to the executive committee and the assembly for scrutiny and approval; and
(g) undertake any other duty as may be assigned by thc chairperson.

PART V - BEACH MANAGEMENT UNIT FINANCES AND FINANCIAI, MANAGEMENT

28. Beach management unit funding.

A beach management unit may with the prior written approval of the Director, levy fees and charges against its members and other users of the beach in respect of services that it provides in connection with the operation and management of the beach and its participation in co-management activities pursuant to regulation 7.

(2) Fees and charges of the type referred in sub-regulation (1) may include –

(a) membership fee payable by all members;
(b) an annual registration fee for fishing vessels;
(c) a joining fee for new members;
(d) landing fees payable by fishing vessels that land fish or fishery products at the fish landing station;
(e)charges for the use of facilities and services provided by the beach management unit;
(f) a rental fee in respect of buildings and constructions located on the fish landing station; and
(g) a marketing fee payable by persons involved in the trading of fish.

(3) Other sources of income of a beach management unit may include grants or donations from the Government, private persons, non-Governmental organisations or other donor bodies.

29. Management of beach management unit finances and assets.

(1) In connection with the management of its finances and assets, a beach management unit shall –

(a) open one or more bank accounts, the signatories to which shall be the chairperson and the treasurer and such other persons as may be so designated in writing from time to time by the executive committee;
(b) establish a reserve fund to cover the costs of unforeseen events; and
(c) under the guidance of the Director, establish an appropriate financial management system to support its financial operations.

(2) A beach management unit shall maintain the following books and records -
(a) a register of members, which should be reviewed, and, as necessary, updated every three months that should contain the name, address and membership category of each member;
(b) a register of vessels sad gear owned by members of the beach management sail members;
(c) a record of duet, feet and charges owed and paid;
(d) a record containing the minutes of the assembly;
(e) a record containing the minutes of the meetings of the executive committee; (f) a record of transactions and contracts.
(g) an inventory of assets owned or used by the beach management unit; and
(h) financial accounts in accordance with regulation 30.

30. Financial Accounts.

(1) A beach management unit shall maintain full accounts of receipts and expenditures and shall prepare an annual balance sheet and income and expenditure statement in a format specified by the Director.

(2) The assembly on the proposal of the executive committee shall adopt the annual balance sheet and income and expenditure statement annually.

(3) The executive committee of each beach management unit shall within 120 days of the end of its financial year file an annual return with the Director, in the specified format, together with a copy of its annual balance sheet and income and expenditure statement together with the stipulated filing fee.

PART VI - ESTABLISHMENT REGISTRATION, SUPPORT AND SUPERVISION, AND DISSOLUTION OF BEACH MANAGEMENT UNITS

31. Procedure for Establishment and gazettement of a Beach management unit.

(1) A group of persons intending to be registered and qualify as a beach management unit shall submit an application for the establishment of a beach management unit to the Director in FORM FD/A5 as set in the First Schedule to these regulations and provided, amongst other category of members, it is signed by al least 30 boat owners.

(2) Following the survey and delineation of the beach pursuant to regulation 5(2) of these regulations, the authorised fisheries officer shall cause to be placed in prominent places on and around the beach notices calling upon potential members of the beach management unit to register their interest in becoming members within a period of 30 days.

(3) Following the expiry of that 30-day period the authorised fisheries officer shall cause to be displayed at the beach a list of persons who consider themselves potential members and shall invite comments on the list.

(4) Based on the comments received the authorised fisheries officer shall finalise the list of potential members.

(5) The authorised fisheries officer shall call a meeting of the potential members from all proposed membership category to elect between five to ten interim representatives

(6) The authorised fisheries officer shall work with the interim representatives to determine and draft the by-laws of the beach management unit.

(7) Following the preparation of an agreed draft of the by-laws, the authorised fisheries officer shall cause a meeting to be held at which the potential members of the proposed beach management unit shall discuss and approve the draft by-laws.

(8) Following the conclusion of the meeting, the Authorised fisheries officer shall forthwith submit the following documents to the Director;

(a) the minutes of the potential members' meeting;

(b) the approved draft by-laws;

(c) an application for establishment of Beach Management Unit in FORM FDIAS as set out in the First Schedule to these regulations.

(9) The Director shall assess the documents submitted to him under paragraph (8) and may -

(a) approve the application if he is satisfied that the application and supporting documents are in order;

(b) return the application and supporting documents to the Authorised fisheries officer with his reasons in writing, if he is not satisfied.

(10) Any party aggrieved by a decision of the Director pursuant to paragraph (9) may appeal to the

Minister in accordance with the provisions of Regulation 34 of the Fisheries (General) Regulations.

(11) On granting approval loan application the Director shall by notice in the Kenya Gazette establish the beach management unit and issue a certificate of registration (FORM FD/CR3) as set out in the Second Schedule to these regulations.

32. Registration.

(1) The Director shall establish and maintain a register of beach management units which shall Contain the following details of each beach management unit -

(a) the name;
(b) the principal office;
(c) the number of members
(d) the names, addresses and telephone numbers (if any) of the chairperson and the members of the executive committee; and
(e) the date of filing of the most recent annual return, together with a copy of that return.

(2) The Register of beach management units shall be open to public examination during normal office hours.

33. Support and supervision of beach management units.

(1) The Director shall be responsible for supporting the establishment and operation of beach management units and for supervising their technical, legal and financial performance.

(2) An authorized fisheries officer shall in respect of a beach management unit –

(a) act as the presiding officer in its elections;
(b) routinely attend the meetings of the executive committee;
(c) facilitate the provision of technical and other assistance;
(d) provide general guidance and support; and
(e) undertake such other tasks as are specified in these regulations;

(3) An authorized fisheries officer may cause the annual accounts of a beach management unit to be subject to an annual audit by such suitably qualified and responsible person as he may with the approval of the Director appoint.

(4) An authorized fisheries officer may routinely request from a beach management unit –

(a) copies of the accounts together with copies of books and records required to be maintained in accordance with these Regulations;
(b) information concerning the discharge by them of their tasks;
(c) information and documentation concerning the implementation of co-management plans; and
(d) such other information as he may reasonably require to be able to satisfy himself and that the beach management unit is functioning lawfully.

(5) An authorized fisheries officer may make enquiries into the counduct of the affairs of a beach management unit during the course of which he may inspect its books and records and interview its members -

(a) on the credible evidence of three or more members of that beach management unit who allege misconduct; or

(b) if, having reviewed a copy of the annual return and accounts of that beach management unit, there is in the opinion of the Director, prima fade evidence of financial malpractice or other irregularities.

(6) If, following the conduct of an audit or such farther enquiries an authorised fisheries officer finds prima fade evidence of financial malpractice, misconduct or that the beach management unit has not been operating in accordance with the provisions of these regulations he may require the executive committee to convene the assembly where he may present his findings to the members of the beach management unit.

(7) If the executive committee fails to convene the assembly within 30 days, the authorised fisheries officer may suspend its committee and call such a meeting himself and shall forthwith notify the Director of the suspension.

(8) If the executive committee is suspended or removed in accordance with the foregoing paragraph, the authorised fisheries officer may appoint a temporary manager to run the beach management unit until fresh elections are held.

(9) A member of the executive committee who is aggrieved by a decision of an authorised fisheries officer to remove the executive committee may within fourteen days appeal in writing to the Director, whose decision shall be final

(10) If the Director approves the decision of the authorised fisheries officer, he shall call for fresh elections to replace the committee or committee member(s) so removed within ninety days of the Director's decision.

34. Dissolution of beach management units.

(1) The Minister may by notice published in the Kenya Gazette dissolve a beach management unit on one or more of the following grounds -

(a) the tasks of the beach management unit no longer exist;

(b) the beach management unit is not able to practically fulfil its tasks;

(c) the beach management unit is insolvent;

(d) the members of the beach management unit have repeatedly engaged in criminal activity; or

(e) the continued existence of the beach management unit is no longer required for any other reason.

(2) Following the publication of a decision to dissolve a beach management unit the Minister shall appoint a liquidator to wind up its affairs.

PART VII- GENERAL PROVISIONS

35. Obstruction.

No person shall -

(a) wilfully obstruct an officer of a beach management unit from carrying out official duties within his area of jurisdiction and in accordance with the provisions of these regulations; or

(b) refuse or fail to answer any questions or furnish any information or produce any document relevant to the provisions of these regulations when requested to do so by any member of the executive committee or an authorized fisheries officer.

36. No person shall falsify or unlawfully alter, destroy, erase or obliterate any declaration, certificate, identification label or any other document made or issued under these regulations.

37. Penalty.

Any person who contravenes the provisions of these regulations shall be guilty of an offence and liable to a fine not exceeding one hundred thousand shillings or imprisonment for a term not exceeding two years or both.

FIRST SCHEDULE THE FISHERIES ACT (Cap. 378)

THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATIONS, 2007FORM FD/A5 r.31(l)
APPLICATION FOR THE REGISTRATION OF BEACH MANAGEMENT UNIT PART I

1. We the undersigned hereby apply for the registration of …….. (Name) Beach Management Unit and hereby attach the by-laws for the proposed Beach 4
Management Unit.

2. List of applicants (at least 30 of the applicants must be boat owners).

1 Name of Applicant ID Number Membership Category Address and Residence Signature

1.
2.
3.
4.
5.
6.
7.
8.
9.

3. Mailing address of the proposed Beach Management Unit

……..……
……

Telephone No ……

4(a) Other than fisheries and beach management activities, is the organization going to be involved in other activities? Yes/No.
(b) If the answer to (a) above is yes, please list the activities:

……
……
…….

5. Does the applying organization own any movable or immovable assets? Yes/No.

If the answer is yes please specify the assets here below and insert details of certificates of ownership stating the nature of the person who is keeping the documents (i.e. the custodian):

Name or description of the asset Official ownership Number Custodian

6. We, whose signatures are appended against our names in paragraph 2 above, declare that the information and particulars supplied by us herein are true, accurate and correct in every respect. We clearly understand that discovery of any false information provided by us will render this application invalid. This declaration is herewith witnessed by;

Signature of Representative ……. Date……..
Name and Address of the Representative……..
……
ID/NO ……..

7. This is to certify that the above named persons are known to me and are residents of …… (Location) and the information given by them is true to the best of my knowledge and I hereby witness their declaration;

Signature of Chief……
Name of Chief……..
Dated this ……. Day of ……. (Month) ……..… (Year)
Stamp ……

8. This is to certify that I have studied this application and I am satisfied/not satisfied with this application and therefore recommend/do not recommend the application.

Signature of Authorised fisheries officer

…….

Name of the Officer ……
Official Stamp …… Date
……

PART II
OFFICIAL USE ONLY

I have studied the application for the registration of …….. Beach Management Unit and I am satisfied/not satisfied with this application and therefore approve/do not approve the application.

Signature …… Date ……
Name ……..

SECOND SCHEDULE THE FISHERIES ACT (Cap. 378)

THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATIONS, 2007
FORM FD/CR3

CERTIFICATE OF REGISTRATION FOR THE BEACH MANAGEMENT UNIT (BMU)

1. (a) Name of the Beach Management Unit ……
(b) Names(s) of landing site(s) covered the BMU ……
……
……

(c) Postal Address of the BMU ……
……

2. Physical Location of the offices of Beach Management Unit:
District ……. Division/Town …….. Location ……
Sub-Location ……. Village ……

This is to certify that ……. Beach Management Unit is duly registered as a beach management unit under the provisions of these regulations and for the purpose of management and development of fishery resources within its area(s) of jurisdiction in accordance with the provisions of these regulations and contingent to the conditions specified hereunder:
……
……
……
……

Date of Registration: ……

Signature ……

Name ……..

Official Stamp ……
DIRECTOR OF FISHERIES

THIRD SCHEDULE THE FISHERIES ACT (Cap. 378)

THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATIONS, 2007

FORM FD/NF/1 r. 15(1)(g)

NOMINATION FOR ELECTIONS FORM

We the undersigned, being registered members, nominate the under mentioned person as a candidate for the position of ……..

Candidates Name ID/No. Place of Residence Occupation Membership Number Membership Category

Age Sex Marital Status signature

We, the undersigned, being registered members, support the foregoing nomination. Name BMU/Registration No. Membership Category Licence No Sign

1

2.

3.

4.

5.

6.

7.

8.

9.

10.

Comments of the Presiding officer

……

……

……

……

Name of Presiding officer ……

Signature ……..

6.10 BMU By-laws template

REPUBLIC OF KENYA

MINISTRY OF FISHERIES DEVELOPMENT

THE DEPARTMENT OF FISHERIES

BY-LAWS MODEL

FOR

BEACH MANAGEMENT UNITS IN KENYA

THIS BY LAWS MODEL HAS BEEN DEVELOPED IN CONFORMITY WITH THE FISHERIES ACT CAP 378 AND THE FISHERIES (BEACH MANAGEMENT UNIT) REGULATION 2007.

BY-LAWS STRUCTURE

1. Name of the Beach Management Unit

The Beach Management Unit shall be called ……

……..

hereinafter referred to in these By-Laws as the 'BMU'.

2. Registered office and postal Address.

The registered office of the BMU shall be situated in ……. Beach and its postal address shall be ……

Any change of address of the BMU shall be furnished to the Director of Fisheries and to the members of the BMU.

3. Preamble, interpretation and definitions

(1) Preamble

Upon the registration, these by-laws shall bind the BMU and the members therefore to the same extent as if they were signed by each member and contained covenants on the part of each member to observe all the provisions of the by – laws

(2) Interpretation

In these By-laws, unless the context otherwise requires, words or phrases shall be defined / interpreted in accordance with the Fisheries Act Cap 378 and the Fisheries (Beach Management Units) Regulations 2007 made there under, hereinafter referred to as 'the Act' and 'the Regulations' respectively and which shall include their subsequent amendments

(3). Definitions

(a) ……..
(b) ……
(c) ……..
(Any Terms used in a by-law and is not covered by the Act or the Regulations)

4. Area of jurisdiction

When executing its mandate the BMUs area of Jurisdiction shall cover ……..

……
……

(UseLand Marks bordering the neighboring BMUs to state the area of jurisdiction and if need be actual distance inshore).

5. Objectives

The objectives of the beach management unit shall be:

(a) to strengthen the management of fish-landing stations, fisheries resources and the aquatic environment
(b) to support the sustainable development of the fisheries sector
(c) to prevent and/or reduce conflicts in the fisheries sector
(d) ……..
(e) …….
(f) ……
(g) …….
*(Include any objective **but** must not contravene provisions of the Act/Regulations)*

6. Administration

(1) Membership

Members of the BMU shall consist of;

a. Original members who signed the application for the registration of the BMU and meets all other membership requirements
b. New members subsequently admitted in accordance with these by-laws and the BMU regulations and whose names are entered in the Members' Register.

(2) Eligibility

In addition to the provisions of the regulations new applicants should

a. …….
b. …….
c. ……

(The BMU can set joining criteria that is unique to their location but do not contravene the Act /Regulations)

(3) Withdrawals and Disqualifications AND DISQUALIFICATIONS

(a). A member wishing to withdraw his or her membership shall inform the Executive Committee in writing. His request will be granted upon him/her paying any outstanding fees owed to the BMU and subject to the following conditions;

i. ……
ii. ……
iii. ……..

(Outline conditions of withdrawal)

(b). Membership to the BMU shall cease with effect from the date a member

i. Dies.
ii. Is disqualified from the BMU by the assembly in a accordance with the Regulations
iii. ……
iv. …….

(Outline conditions unique to the BMU)

(4) Structure of the BMU

(a) The BMU shall have the assembly as the supreme decision making organ

(b) The Executive committee which shall comprise of ……..members shall be responsible for implementing the decisions of the assembly.

(c) The BMU shall have Sub Committees, which shall comprise a minimum of……and a maximum of …..members to perform tasks as outlined below;

i. Patrol Sub Committee

- *Protect the breeding grounds*
- *Prevent net theft*
- ……..
- ……..
- ……..
- ……

ii Hygiene and Sanitation Sub Committee

- *Ensure proper Handling of fish*
- *Responsible for cleanliness of the Beach*
- ……..
- ……..

iii……..

(Any other Sub committees as approved by the assembly)

(5) Meetings

(a) The supreme authority of the BMU shall be vested in the General Meetings of the assembly members.

(b) Such meetings shall be held as follows

i. The Annual General meeting shall be held every year pursuant to the provisions of the regulations.

ii. Monthly BMU executive meetings and quarterly (every three months) BMU assembly meetings

iii. A special general meeting shall be held:-

- When convened by the Executive Committee Chairperson
- Within 21 days of receipt of a written demand by the committee from at least ……. Assembly members who have affixed their signatures
- If on demand, the committee does not convene the meeting, then any member with the support of ……number of Assembly members with the approval of an Authorized Fisheries Officer shall convene the meeting.

(6) The Executive Committee

(a) Elections to the committee shall be through secret ballot

(b) The Executive Committee shall be constituted by elected representatives as follows;

i. Boat owners…… *(30% of Number of the Executive)*
ii. Crew …… *(30% of Number of the Executive)*
iii. Traders……. *(10 % of Number of the Executive)*
iv. others category……. *(30% of Number of the Executive*)

(c) Where there are significant variations in numbers of the respective categories then alteration can be made on percentages in consultation with the Authorized fisheries officer

(d) The general assembly shall then elect the following office bearers from the Executive Committee

i. Chairperson
ii. Vice Chair person
iii. Treasurer
iv. Secretary
v. Vice Secretary
vi. ……..
vii. ……..

(e) …….. number of slots(*at least three*) shall be reserved for women

(And any other Office bearer that the assembly shall approve)

(7). Suspension and disqualification from the Executive Committee shall be done by the assembly in accordance with the provisions of Section 20 of the BMU regulations.

(8)**.**Duties and powers/roles

(1) The duties of the executive committee shall be:

(a) to supervise the activities of the BMU and the implementation of these by-laws;
(b) to approve the minutes of its previous meetings;
(c) to supervise and review the implementation of the co-management plan;
(d) to represent the Beach Management Unit in relationships with third parties;
(e) to convene and prepare for the meetings of assembly including the preparation of the agenda;
(f) to review applications for admission to the Beach Management Unit and resignation from it and to make recommendations to the assembly regarding the expulsion of members;
(g) to submit the draft co-management plan and any rules to the assembly;
(h) to submit the draft budget to the assembly;
(i) to conclude contracts in accordance with the approved budget and plans;
(j) to employ and as necessary dismiss staff of the beach management unit;
(k) to maintain accounts and registers as specified in the Regulations;
(l) to *exchange information* with other beach management units and other relevant agencies to promote the fair and transparent pricing of fish and fish products;
(m) to formulate funding proposals, make financial reports and present them to the assembly for approval;
(n) to inspect and record visiting fishing vessels and give permission to land where appropriate;
(o) to supervise the financial management of the Beach Management Unit;
(p) to ensure fishing boats within our areas of jurisdiction have certificates of seaworthiness and are equipped with life saving equipment; and
(q) Any other tasks specified in the regulations or these by-laws.

(2) The BMU chairperson shall:

(a) chair the meetings of the executive committee and the assembly;
(b) act as the official spokesperson of the BMU;
(c) ensure timely submission of data, information and financial reports by the committee to the assembly and the Director;
(d) arrest any person whom he has reason to believe has committed an offence
(e) seize any fish, fishing gear, vessel, or other articles which he has reason to believe has been used in the commission of the offence, or in respect of which the offence has been committed.
(f) handle seized items in accordance with the Fisheries Act and the BMU Regulation.

(3).The BMU secretary shall:

(a) convene meetings of the executive committee in consultation with the chairperson

(b) act as the minute clerk at meetings of the assembly and the executive committee;
(c) maintain the correspondence of the beach management unit;
(d) compile monthly, quarterly and annual performance reports for submission and presentation to the executive committee;
(e) maintain and update all records of the assembly members, equipment, statistics and other records;
(f) collect and submit all data and information as may be required by the Director; and
(g) ……..

(4). The treasurer shall:

(a) prepare and make payments authorized by the executive committee;
(b) maintain the record of financial transactions entered into by the beach management unit;
(c) receive cash and make deposits to the beach management unit's bank account;
(d) keep records of assets and liabilities of the beach management unit;
(e) prepare monthly, quarterly and annual financial reports
(f) submit and present financial reports to the executive committee and the assembly for scrutiny and approval; and
(g) ……

(9).Employees

The BMU shall have the employees whose duties shall be as follows;

(1) *Watchman*

(a) Guarding

(b)……

(2) *Cleaner*

(a) Cleaning the banda

(b)……

(c) ……..

(3) ……
(a)……..

(b)……

(State the employees and their Duties)

7. Fisheries Management measures

(1) ……

(2) ……..

(3) ……

(4) ……

(5) ……

8 Finances and Financial Management

(1) The financial year of the BMU shall commence on the 1st of the month of …….. and end on the Last day of the Month of ……

(Recommended Financial year is January to December)

(2) The funds of the BMU shall be drawn from:-

(a) Membership fee of KESs ……. per member
(b) Annual membership Registration Fee of KESs ……. per member
(c) Annual vessel registration fee of KESs ……. per member
(d) Daily landing fee of KESs …… per kg for members and KESs …… per Kg for non members

(e) Trucks loading fee of KESs …….. per day for members and KESs …….. per day for non members

(f) ……
(g) ……
(Outline all the fees as approved by the BMU assembly)

(3) The funds of the BMU shall be applied only to the promotion of the stated objects set out in by law 5 and will cover the following areas:-

(a) Patrols which will cover,
i……
ii…….
(b) Office administration
(c) ……
(d) ……. ……..

(As guided by the Financial Management Module)

(4) The Chairman, Treasurer and a member of the executive committee shall be the signatories to the BMU accounts. The treasurer's signature is mandatory for every withdrawal.

(5) The BMU shall keep the following books and records;

(a) a register of members which should be reviewed and, as necessary, updated every three months that should contain the name, address, membership category of each member;
(b) a register of vessels and gear owned by beach management unit members;
(c) a record of dues and charges owed and paid;
(d) a record containing the minutes of the meetings of the assembly;
(e) a record containing the minutes of the meetings of the executive committee;
(f) a record of transactions and contracts;
(g) an inventory of assets owned and/or used by the beach management unit;
(h) a copy of these bylaws
(i) a copy of the Fisheries Act CAP 378, and
(j) a copy of The Fisheries (Beach Management Unit) Regulation 2007
(k) a certificate of registration of the BMU visibly displayed in the office
(l) cash book giving details of all monies expended by the BMUs
(m) a ledger containing records of transactions of the business of the BMU
(n) copies of the approved final accounts (balance sheet, income and expenditure report)
(o) copies of quarterly financial statements
(p) ……

(6) The management of the BMU finances shall be in accordance with the provisions set in the BMU Regulations, to this extent:

(a) The treasurer shall present monthly, quarterly and annual financial reports

to the executive committee,

(b) The executive committee shall present these financial report to the assembly and the fisheries department.

9 Dispute Resolutions

Any dispute arising out of these by-laws shall be resolved by the Executive committee and any appeal referred to the Authorized fisheries officer for arbitration.

10 Fines/penalties

(1) The executive committee shall mete the following fines and penalties for the following offences;

(a) Littering the beach compound; *Fine/penalty*……..

(b) Dragging fish on the ground; *Fine/penalty*…….

(c) Use of abusive language; *Fine/penalty*…….....

(d) Handling fish without approved fish handling clothing; *Fine/penalty*…….

(e) ……; *Fine/penalty*…….

(f) ……; *Fine/penalty*……

(g) ……; *Fine/penalty*…….

(h) ……; *Fine/penalty*…….

(i) ……; *Fine/penalty*……

(BMU to set fines/penalties for those contravening agreed norms)

11. Miscellaneous

(1) Remuneration

The BMU employees remuneration shall be determined by the executive committee with the approval of the assembly.

(2) Allowances *(approved by the assembly)*

A member on official duty shall be paid the following allowances;

(a) Meeting allowance ……..

(b) …… ……..

(c) …… …….

(Identify and outline the allowances for particular duties that may be paid after approval by the assembly)

(3) By-law amendment procedures

The executive committee may propose amendment to the bylaw to the general assembly for approval, but no amendment shall become effective until it is ratified by the department of fisheries in accordance with the regulations.

(4) Rubberstamps

The rubberstamps of the BMUs shall have the following information;

(a) Name of the BMU……..

(b) Address……..

(c) Telephone No.

(d) Date……

12. Acceptance

We the undersigned executive committee, do herein accepts and adopts these by law for and on behalf of the members of ……BMU.

	Name	**signature**
Chairman	……	…….
Vice chairman	……	……..
Secretary	……..	……..
Treasurer	…….	…….

Certified that the following by law of …….. BMU have been approved by me and duly registered.

GIVEN UNDER MY HAND AT …… THIS ……DAY OF …….20….

DIRECTOR OF FISHERIES

7 REFERENCES

Benards, O. (2010) Artisanal Fisheries of Kenya's South Coast. A transdisciplinary case study of a socio-ecological system in transition. A doctoral dissertation submitted to the University of Bremen.

Frankl, P.J.L. (2001) Preliminary Lists of Swahili Names for Fishes of the Western Indian Ocean together with Related Topics. Manuscript.

GoK (2009) State of the Coast Report. Towards Integrated Management of Coastal and Marine Resources in Kenya. National Environmental Management Authority (NEMA), Nairobi, 88pp.

GoK (2012) http://planipolis.iiep.unesco.org/upload/Kenya/PRSP/Kenya%20PRSP.pdf

GoK (2008) Fisheries Development Policy http://uploads.agro-info.net/uploads/38/13/e21bc85c062197b8f7ca7eab8ce2daeb/OCEANSANDFISHER.pdf

Harrison, P. And Laiser,J. (2009) Livelihoods on the South Coast: A socio-economic background for the development of Community Conservation Areas within Shimoni-Vanga, Kenya.

Hoorweg,J and Muthiga, N. (2009) (Eds) Advances in Coastal Ecology: People, processes and ecosystems in Kenya. African Studies Centre. African Studies Collection, vol 20. Leiden 2009. ISBN: 978-90-5448-090-7

IMF (2005) Poverty Reduction Strategy Paper 2005. International Monetary Fund Country Report No. 05/11 Kenya:

IMF 2012 Poverty Reduction Strategy Paper January 2012: Progress Report. International Monetary Fund Kenya: Country Report No. 12/10

IOC (2012) Kenya Fisheries Governance. Programme for the implementation of a Regional Fisheries Strategy for the Eastern and Southern Africa and Indian Ocean Region. Report SF 2012/9. Smart Fish.

Kamau, E.C., Wamukota, A. and Muthiga, N. (2009). Promotion and Management of Marine Fisheries in Kenya. In: Winter, G. Ed. Towards Sustainable Fisheries Law. A Comparative Analysis.pp 83-138. IUCN, Gland, Switzerland. xiv + 340 pp.

Kanyange, N. (2013) Primary Survey of Beach Management Units (BMUs) in the Kenya Coastal Marine Fisheries. Smartfish Working Papers No. 017

Kaunda-Arara, B. and Rose, G.A. (2004a) Out-migration of tagged fishes from marine reef National Parks to fisheries in coastal Kenya. *Environmental Biology of Fishes*, **70**:363–72. (in McClanahan

Kaunda-Arara, B. and Rose, G.A. (2004b) Effects of marine reef National Parks on fishery CPUE in coastal Kenya. *Biological Conservation*, **118**: 1–13.

KCDP (2013) http://www.kcdp.co.ke/main-menu/component-1-fisheries-development

Laiser, J. (2012) Socio-economic assessment survey on the Conservation and sustainable management of Kenya's marine and coastal resources. Survey carried out for EAWLS and FFI.

LTRU (2011) Community Land Rights Recognition (CLRR) Model for the Recognition, Protection and Registration of Community Rights to Land and Land Based Resources. Land Reform Transformation Unit, Nairobi: Ministry of Lands.

Maina, G.W. (2012) A baseline report for the Kenyan small and medium marine pelagic fishery. Ministry of Fisheries Development, South West Indian Ocean Fisheries Project (SWIOFP) and EAF-Nansen Project.

Malleret-King, D., King,A., Mangubhai, S., Tunje,J., Muturi,J., Mueni,E. and On'ganda,H. (2004) Understanding Fisheries Associated Livelihoods and the Constraints to their Development in Kenya and Tanzania. Annex 1.2: Review of Marine Fisheries Resources for Kenya:FMSP Project R8196.

McClanahan T.R., and Mangi, S.C. (2004) Gear-based management of a tropical artisanal fishery based on species selectivity and capture size. Fisheries Management and Ecology, 2004, 11, 51-60

McClanahan, T.R. (2006) Management of Area and Gear in Kenyan Coral Reefs. Chapter 8: Fisheries Management: Progress Towards Sustainability

Mwaipopo, R., Fisher, E., Wanyonyi, I., Kimani, P., Tunje, J., Msuya, F., Bashemerewa, V. (2011) *The Relationship Between Community-Based Organisations and the Effective Management of Coastal and Marine Resources in the WIO Region*. A report for the Marine Science for Management Programme of the Western Indian Ocean Marine Science Association. xii + 85pp.

Ngige, Z.N. and Jaeckel, A. (2012) Legal Aspects of Achieving the Aichi Biodiversity TargetsKenya, Fisheries (Beach Management Units) Regulations, 2007. International Development Law Organization (IDLO)

Odhiambo, M. (2013)Policy, legal and institutional context and options. In: The Abandoned Lands of Laikipia: Land Use Options Study. Ed. Williams A.J. Laikipia Unity and Land Initiative. Laikipia Wildlife Forum, Zeitz Foundation, The Nature Conservancy, African Wildlife Foundation and Maliasili Iniatiatives.

Okemwa, G.M., Fulanda, B., Ochiewo, J. and Kimani, E. N. (2006) Exploitation of Coral Reef Fishes for the Marine Aquarium Trade in Kenya. Final Technical Report WIOMSA Contract 19/2004.

Okwema, E.N., Ruwa, R.K., and Mwandotto, P.A.J (1998) Integrated coastal zone management in Kenya: Initial experiences and progress. Ocean and Coastal Management, 37, 3, 319-349.

Samoilys, M. Osuka, K. and Maina G.W. (2011b) Artisanal fishing in Kenya what are the effects. SWARA Magazine

Samoilys, M.A., Maina, G.W. and Osuka, K. (2011a) Artisanal fishing gears of the Kenyan coast. Mombasa: CORDIO/USAID.

Signa D., Tuda, P. & Samoilys, M. (2008) Social, Economic and Environmental Impacts of Beach Seining in Kenya - an information review and field study. Beach Seining Study in Kenya for FAO

Smith-Vaniz, W.F. 1986 Carangidae. p. 815-844. In P.J.P. Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen and E. Tortonese (eds.) Fishes of the north-eastern Atlantic and the Mediterranean. UNESCO, Paris. vol. 2.

Swan, J. (2011) Preparation of Draft Kenya Fisheries Management and Development Bill. Programme Smartfish Report SF/2011/23

USAID (2013) County Map Sourced: http://kenya.usaid.gov/kenya-map

Watson, M. (1996) The Role of Protected Areas in the Management of Kenyan Reef FishStocks. DPhil thesis, University of York.

Wayumba, G. (2004). A review of special land tenure issues in Kenya. Department of Surveying, University of Nairobi, Kenya.