

**REPUBLIC OF KENYA**



**MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES &  
COOPERATIVES**



**STATE DEPARTMENT FOR FISHERIES AND THE BLUE  
ECONOMY**



**KENYA FISHERIES SERVICE**



**FISHERIES ANNUAL STATISTICAL  
BULLETIN 2020**

August 2021

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## 1.0 INTRODUCTION

Kenya is endowed with both marine and inland water resources. The inland water resources include lakes, dams and rivers of varying sizes. Some of the major lakes include: Lake Turkana (6,405 Km<sup>2</sup>), Lake Victoria-Kenyan side (6% of the whole lake =4,128 km<sup>2</sup>), Naivasha (210 Km<sup>2</sup>), Baringo (129 Km<sup>2</sup>) and Lake Jipe (39 Km<sup>2</sup>). Major rivers include Tana (700 Km), Athi/Galana/Sabaki (530 Km), Ewaso-Ngiro North (520 Km), Kerio (350 Km), Suam-Turkwel (350 km), Mara (280 km), Nzoia (240 km), Voi (200 km), Yala (170 km), Ewaso-Ngiro-south (140 km), Sondu (105 km), Malewa (105 km) and Kuja (80 km). Across the country are also dams stocked with fish and in areas like Uasin Gishu, Narok and Laikipia, where fish production is quite substantial.

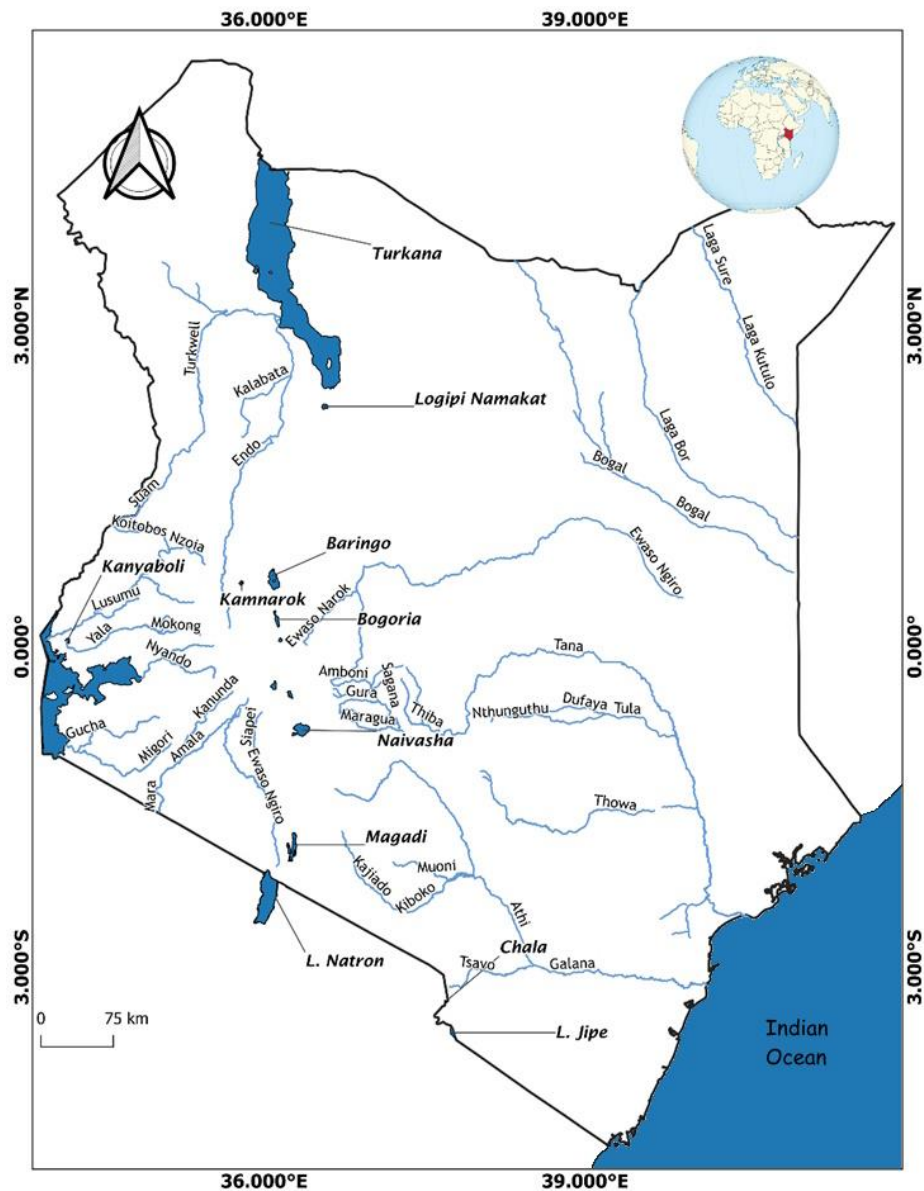


Fig 1. 1 Figure showing the water resources in Kenya.

Further to these inland water resources, Kenya also enjoys a vast coastline of 640 km on the Western Indian Ocean, besides a further 200 nautical miles Exclusive Economic Zone (EEZ) under Kenyan jurisdiction. The total area of the territorial waters is 9,700 Km<sup>2</sup> while the Kenyan EEZ is 142,400 Km<sup>2</sup>. Kenya also lays claim to extended EEZ reaching 350 km with an extra area of approximately 103,320 Km<sup>2</sup>. The total area for exploitation by the country is a massive 255,420 Km<sup>2</sup> which is about half of the Kenyan land cover area.

The Kenyan fishery is mainly artisanal with very few commercial/industrial vessels targeting mainly shallow water shrimps, deep water shrimps and lobsters. The country has been developing the industrial fleet and is currently having four longliners and six purse seiners mainly targeting Tuna and Tuna like species in our Economic Exclusive Zone (EEZ). The artisanal fishery accounts for most the inland and marine water catches reported here and consequently it is currently the most important fishery in the country, even though our EEZ which is predominately for commercial fishing is under exploited with an estimated potential of between 150,000 to 300,000 metric tonnes (Commonwealth secretariat report 2003 by Dr. George Habib). The fisheries sector plays a significant role in employment and income generation. During the year 2020 the sector supported a total of 65,000 people directly as fishermen and 70,000 fish farmers with 149,000 stocked fish ponds.

The sector supports about 1.2 million people directly and indirectly, working as fishers, traders, processors, suppliers and merchants of fishing accessories and employees and their dependents. Besides being a rich source of protein especially for riparian communities, the sector is also important for the preservation of culture, national heritage, and recreational purposes. In 2020, the total fish production was 149,722 metric tons worth 26.25 billion Kenya shillings. The production was 0.3% increase compared to 149,320 tons worth 23.65 billion Kenya shillings in landed in 2019. Increase in the value was mainly due to the catches from industrial vessels and the increase in prices for areas with less production based on the demand and supply impacts on the fish prices.

As has been the trend in the past, most of the production was from inland capture fisheries amounting to 104,074 metric tons with an ex-vessel value of Ksh. 14.28 billion. The fish production from marine and aquaculture was 25,741 and 19,945 metric tons worth Ksh. 5.66 and 6.30 billion shillings respectively.

Inland capture fisheries contributed 69% of Kenya's total fish production, with the principal catches coming from Lake Victoria. The lake accounted for 86,656 metric tons which was a 5% drop in catches compared to 90,743 MT. the decline in catches was mainly due to the effect of flooding during the first half of the years 2020 which led to submerging of several landing sites. The Covid-19 pandemic also affected the initial phase when night fishing was not possible due to the curfew hours. Lake Turkana, Kenya's largest freshwater body produced 13,190 metric tons of fish during the year under review. This amounted to 88% increase compared to 7,031 MT caught in 2019. This increase is mainly due to revision of the dry and salted fish to the original wet weight. Lake Turkana fish has mainly been traded dry and has been reported so which in essence is different from reporting from other water bodies. Other freshwater-bodies of commercial

importance whose catches declined in 2020 were lakes Naivasha, Baringo and Kanyaboli. The catches from the lakes in 2020 were 2,216 MT, 162 MT and 264 MT respectively compared to 3,087 MT, 203 MT and 300 MT in 2019. The decline was 12% for Kanyaboli, 22% for Lake Baringo and 28% for Lake Naivasha. Lake Naivasha and Baringo were heavily affected by the flooding leading to relocation of the fishers from their flooded homes. The impacts of flooding on Lake Jipe and Lake Kenyatta were minimal. The two lakes on the contrary produced more fish in 2020 compared to 2019. Lake Jipe catches increase to 197MT compared to 157 MT while in Lake Kenyatta, the catches increased from 140 MT to 167 MT. This was good for Lake Kenyatta which had completely dried in 2016.

Tana River dams and the Tana River delta catches declined in 2020 and this can be attributed to the floods effect. The catches in both water bodies declined to 283 MT and 63 MT respectively compared to 394 MT and 94 MT in 2019. The highest increase in production was noted in Turkwel with catches increasing to 107 MT in 2020 compared to 50 MT in 2019. Turkwel Dam filled to the brim in 2020 attracting people who were not fishing there previously to be engaged in fishing. The new fishers included women who have never been involved in fishing. Catches from rivers increased from 380 MT in 2019 to 411 MT in 2020 while those from small dams decreased from 459 MT in 2019 to 358 MT in 2020. Many of these dams were affected by spillover due to flooding which also led to loss of fish to the lacustrine ecosystem.

Marine artisanal production declined from 25,670 MT worth 4.48 billion in 2019 to 23,646 MT worth 4.84 billion in 2020. The value of the catch increased due to scarcity of the fish in the market leading to higher prices. The Covid-19 curfew affected many fishers who undertake night fishing as the timing of their fishing expedition was interrupted. The same was noted for fishers who leave early morning in search of baits when the curfew hours extended to 5 AM and this is the ideal hour for their bait searching. Marine industrial fishing increased for the deep water trawling and deep-water crab potting but decreased for shallow water trawling and longlining. Deep water trawling is undertaken from November to March while shallow water trawling commences from April to October. Deep water trawl catches increased from 646 MT to 943 MT while deep water crab catches increased from 38 MT to 86 MT. Shallow water trawling catches reduced to 273 MT from 535 Mt while longline catches declined to 670 MT from 735 MT.

Table 1.1: Quantity and Value of fish landings 2017 – 2020

Year	2,017		2,018		2,019		2,020			Price per Kg	
	M. Tons	Value '000 Kshs.	M. Tons	Value '000 Kshs.	M. Tons	Value '000 Kshs.	M. Tons	Value '000 Kshs.	weight		Value
Lake Victoria	92,722	14,302,388	98,150	14,487,492	90,743	11,640,537	88,223	12,687,298	-4.5	6.55	143
Lake Turkana	4,021	486,540	7,587	564,739	7,031	645,107	13,190	1,177,193	87.59	82.48	89
Lake Naivasha	1,689	222,579	2,287	287,194	3,087	391,719	2,216	238,638	-28.22	-39.08	108
Lake Baringo	155	46,606	145	43,442	203	49,499	162	39,502	-20.2	-20.2	244
Lake Jipe	112	21,756	131	38,260	157	45,957	197	57,549	25.48	25.22	292
Lake Kanyaboli	127	26,346	203	29,656	300	43,826	264	60,201	-12	37.36	228
Lake Kenyatta	45	3,473	14	1,330	140	5,844	167	16,671	19.29	185.27	100
Tana River Dams	422	84,500	297	37,373	394	60,571	283	50,960	-28.17	-15.87	180
Tana River Delta	115	9,296	46	5,069	94	14,476	63	10,984	-33.17	-24.12	175
Aquaculture	12,356	3,691,046	15,120	4,480,875	18,542	5,581,142	19,945	6,303,617	7.57	12.94	316
Turkwel	35	9,905	34	9,822	35	9,905	107	16,112	114	25.39	151
Riverline	10	2,368	320	86,400	380	106,371	411	115,049	8.16	8.16	280
Small Dams	300	75,120	339	42,015	459	126,455	358	95,022	-22	-24.86	265
<b>Total Fresh Water</b>	<b>112,109</b>	<b>18,981,923</b>	<b>124,673</b>	<b>20,113,667</b>	<b>121,565</b>	<b>18,721,409</b>	<b>125,586</b>	<b>20,868,796</b>	2.01	9.94	166
Marine (Artisanal)	23,286	4,375,822	24,221	4,457,809	25,670	4,477,577	23,684	4,831,948	-7.74	7.91	204
Mariculture	51	1,530	64	1,920	76	1,895	85	2,119	11.84	11.82	25
<b>Industrial (Marine)</b>											
Shallow prawn trawl fishery	346	115,486	520	189,605	535	185,900	273	177,446	-48.97	-4.55	650
Deep water trawl fishery	41	9,102	141	42,341	626	170,089	943	518,385	50.64	204.77	550
Deep water crab pottery	-	-	1	251	38	19,072	86	71,295	126.32	273.82	829
Deep sea longlining	62	1,788	508	20,362	795	30,759	670	26,855	-15.72	-12.69	40
<b>Total Industrial</b>	<b>449</b>	<b>126,376</b>	<b>1170</b>	<b>252,559</b>	<b>1994</b>	<b>405,820</b>	<b>1972</b>	<b>793,981</b>	-1.1	95.65	403
Marine Aquarium		28,701		42,414		38,575		34,516		-10.52	
<b>Total Marine</b>	<b>23,786</b>	<b>4,532,429</b>	<b>25,455</b>	<b>4,754,702</b>	<b>27,740</b>	<b>4,923,867</b>	<b>25,741</b>	<b>5,662,564</b>	<b>-7.2</b>	<b>15</b>	<b>220</b>
<b>Grand Total</b>	<b>135,895</b>	<b>23,514,352</b>	<b>150,128</b>	<b>24,868,369</b>	<b>149,305</b>	<b>23,645,276</b>	<b>151,327</b>	<b>26,531,360</b>	0.3	10.99	175
<b>EXPORTS</b>											
Fish and fish products	3,554	2,253,644	7,250	2,974,980	8,821	3,407,548	8,387	2,740,678	-4.92	-19.57	327
Aquarium fish (Nursery)	323,691	22,866	366,776	34,241	297,367	31,219	272,696	27,583	-8.3	-11.65	
Aquarium invertebrates	176,130	5,835	191,672	8,173	133,844	7,356	124,856	6,933	-6.72	-5.75	
<b>TOTAL</b>		<b>2,282,345</b>		<b>3,017,394</b>		<b>3,446,123</b>		<b>2,775,194</b>		-19.47	
<b>Imports</b>	19,127	1,568,565	26,383	2,974,678	22,813	2,798,951	19,892	2,251,861	-12.8	-19.55	113
<b>Balance of Trade</b>		<b>713,780</b>		<b>42,716</b>		<b>647,172</b>		<b>523,333</b>		-19.14	



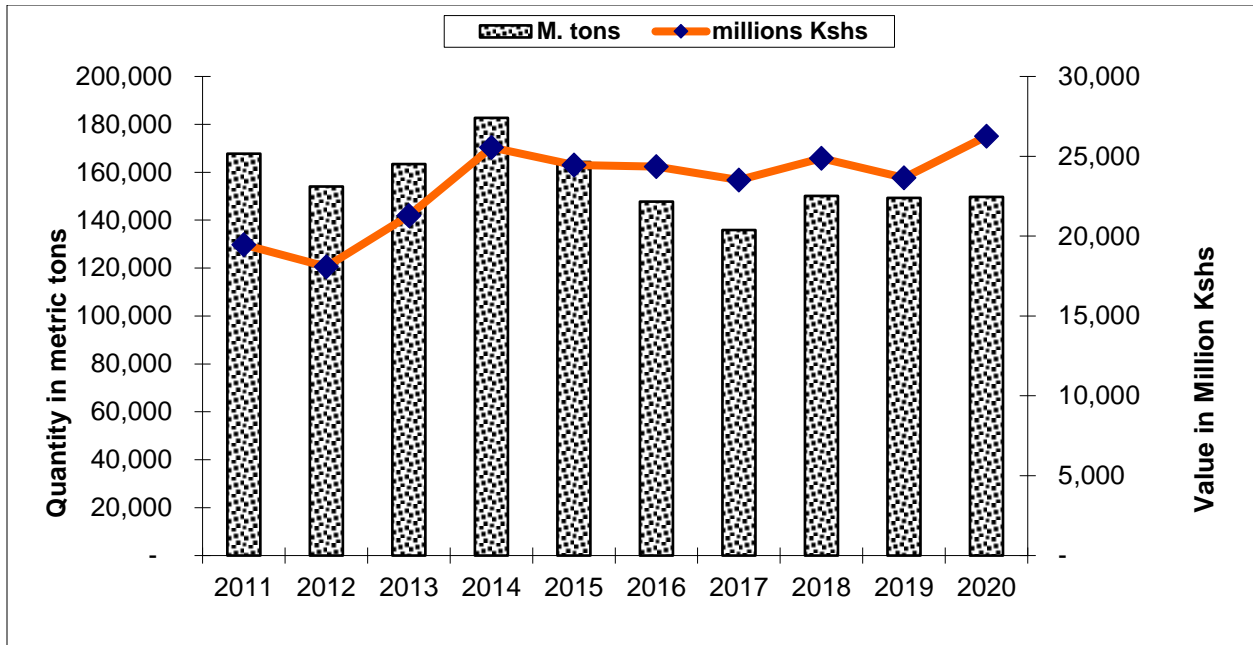


Fig 1. 1 Quantity and Value of fish landings 2011 – 2020

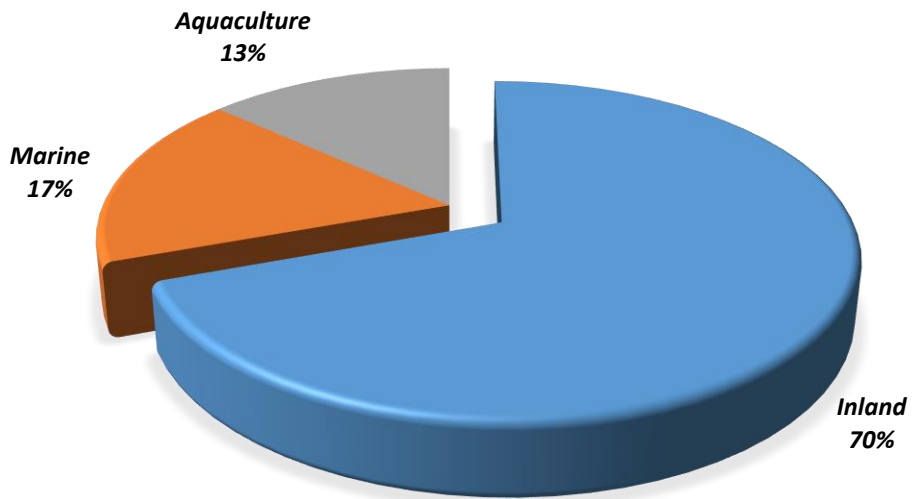


Fig 1. 2 Pie chart indicating the major types of Fishery in the country

## 1.1 LAKE VICTORIA FISHERY

Lake Victoria's accounted for 86,656 metric tons which was a 5% drop in catches compared to 90,743 MT in 2019. The decline in catches was mainly due to the effect of flooding during the first half of the years 2020 which led to submerging of several landing sites. The Covid-19 pandemic also affected the initial phase when night fishing was not possible due to the curfew hours. Capture fisheries of Lake Victoria are a source of livelihood to many people employed directly as boat owners, fishermen, fish traders, fish processors, etc. and indirectly as fishing gear manufacturers, boat builders, and ice producers among others. Lake Victoria is a multi-species fishery with many of known species, but only *Rastrineobola argentea* (Omena) 54,021MT, *Lates niloticus* (Nile perch) 18,708MT, *Caridina niloticus* 5,586 MT and *Oreochromis niloticus* (Nile tilapia) 4,732MT are of major economic significance which contributed combined catch of 86,886MT out of the total catches of 90,743MT from the lake (Kenyan side) which is makes 95.75% of the catches from the lake during the year under review (table 1). This has been the case for a number of years. However, for the last few years there have seen a rapid decline of fish stocks in Lake Victoria thereby creating a wide gap between supply and demand for fish in the country. In response to this undesirable situation, the government has taken concrete steps to promote aquaculture development in the country to bridge the existing supply demand gap. Cage farming in the Lake Victoria has also been supplementing the dwindling catches from the lake.

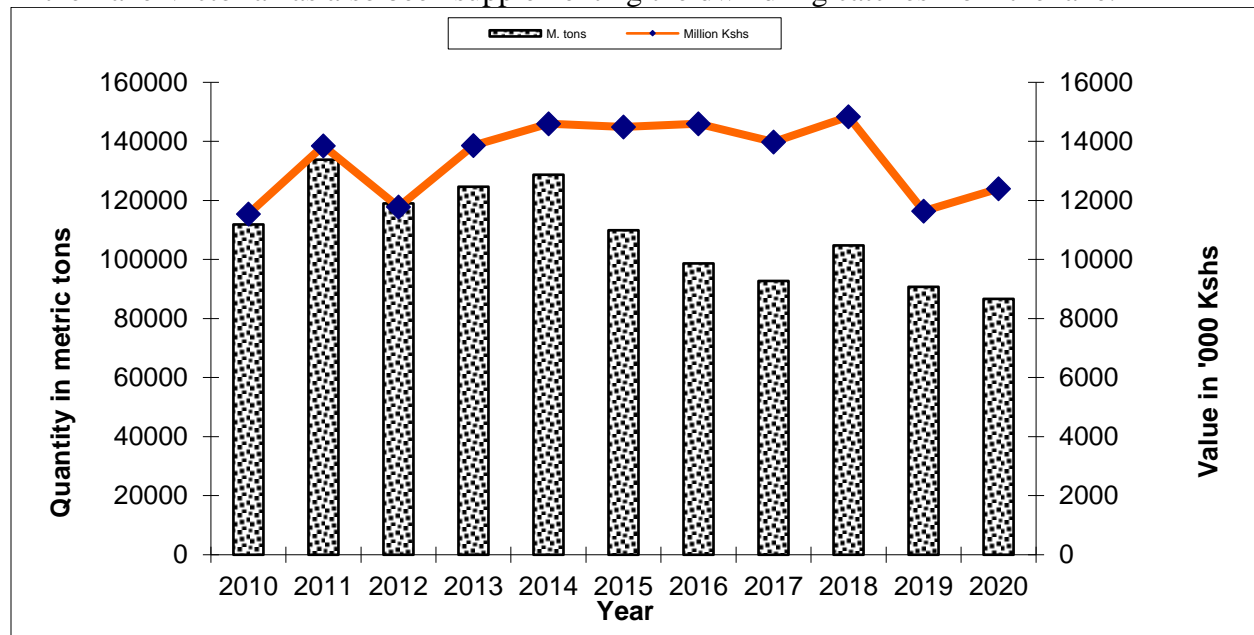


Fig 1. 2 Trends in annual fish landings from Lake Victoria fishery 2010-2020

During the year 2020, fish production from Lake Victoria decreased to 86,656MT with an ex-vessel value of Kshs.12,403 million compared to 90,743 Mt with an ex-vessel value of Kshs.11,641 million landed in 2019. This year's figures translate into a decrease of 5 % in quantity and 6.6% increase in ex-vessel value as compared to the previous year (figure 1.4).

In terms of species contribution to the total weight of fish landed from the lake, *Rastrineobola argentea* took the lead with 62%, *Lates niloticus* 22%, *Caridina niloticus* 6%, *Tilapia niloticus* 5% *Clarias* 1%, *Haplochromis* 1%, and the other species combined contributed 3% (figure 1.5). Homa Bay County contributed 60%, Siaya 33%, Busia 4% while Migori 3%, of the total Lake Victoria catch this year 2020 catch as shown in figure 5 below.

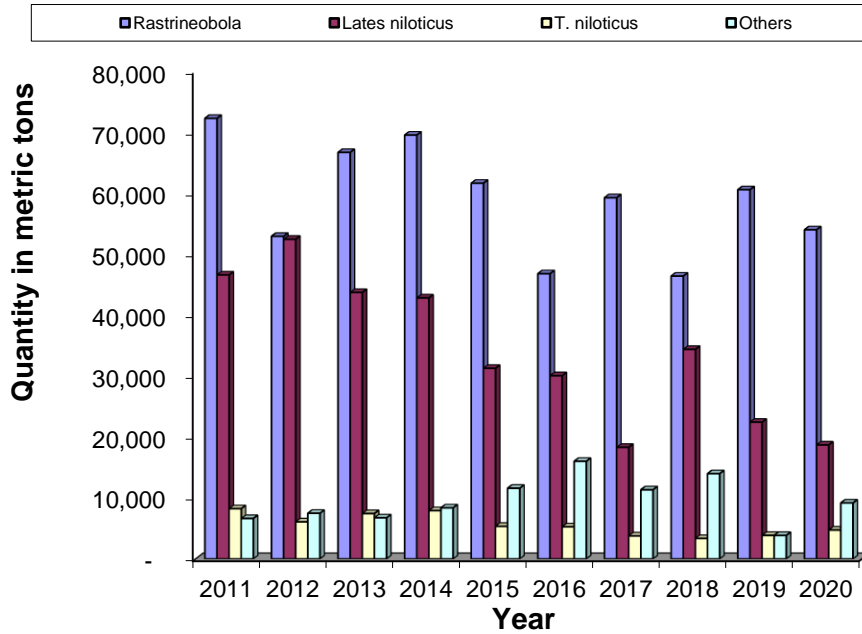


Fig 1. 3 Lake Victoria species catch composition 2011-2020

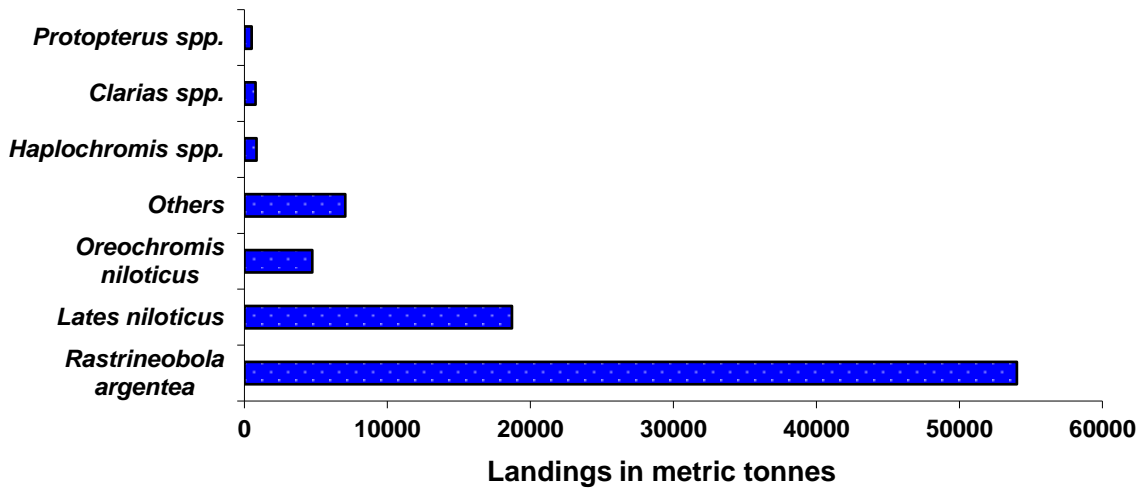


Fig 1. 4 Lake Victoria fish landings by species 2020

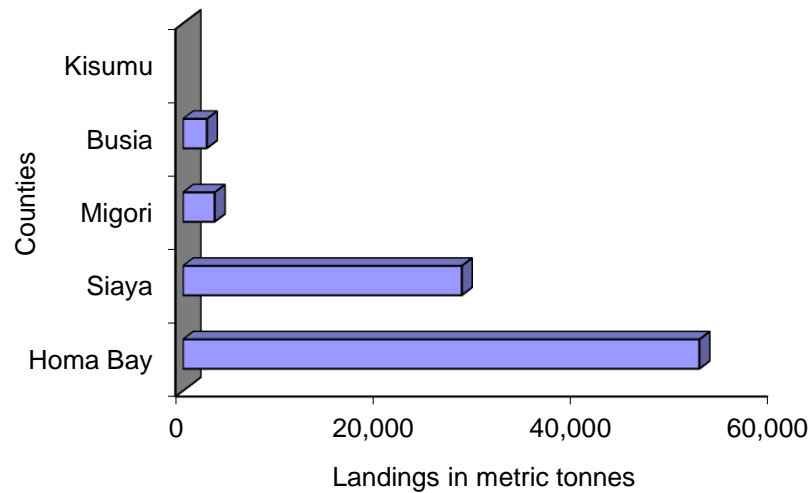


Fig 1. 5 Lake Victoria fish landings by Counties 2020

Challenges facing Lake Victoria fishery:

- i. The declining trend in catches of *Lates niloticus*, *Rastrineobola argentea* and *Oreochromis niloticus*, an indicator of reduced fish stocks in Lake Victoria;
- ii. Infestation of the lake by aquatic weeds i.e. Water Hyacinth and the Hippo grass;
- iii. The major challenge afflicting the fisheries of Lake Victoria is attributed to over fishing and habitat degradation;
- iv. Increase in illegal fishing gears and methods;
- v. Lack of appropriate fish handling and preservation facilities;
- vi. Weak and unfavorable fish marketing systems along the fish landing sites;
- vii. Inadequate resources (human and funds) to ensure efficient Monitoring, Control and Surveillance for sustainability.

Table 1. 1 Lake Victoria Monthly fish landings by Species, Weight (MT) 2020

MONTH	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTALS
SPECIES	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	
Alestes	98	341	395	229	243	429	448	713	188	254	99	90	3,527
Bagrus	1,038	3,188	1,785	2,221	3,358	4,225	3,149	3,093	4,434	2,611	2,009	1,661	32,773
Barbus	65	111	146	192	315	387	162	161	214	123	55	190	2,121
Clarias	66,404	81,739	76,420	85,897	73,843	72,521	64,136	56,408	51,911	56,935	44,550	47,936	778,700
Rastreonobola	8,484,333	8,174,536	8,621,134	7,587,070	7,811,065	4,435,925	2,124,473	1,836,339	1,283,587	1,246,132	1,156,580	1,259,733	54,020,908
Labeo	5,297	5,102	1,836	2,929	1,812	980	839	2,372	1,216	1,217	961	1,081	25,640
Haplochromiines	65,406	132,713	157,368	106,542	79,894	58,949	57,673	52,421	34,092	36,244	39,926	26,032	847,260
Lates niloticus	2,505,646	2,137,423	2,048,098	1,622,179	1,973,759	1,883,947	1,763,715	1,202,846	851,383	988,514	834,980	895,250	18,707,738
Momyrus	3,621	1,936	2,449	938	465	720	588	587	560	556	606	640	13,667
Protopterus	32,662	43,609	40,924	50,608	54,633	49,497	50,643	40,212	38,285	41,617	30,344	32,630	505,662
Synodontis	60,530	91,240	72,189	192,393	63,977	164,072	203,997	50,384	53,260	54,549	41,153	39,891	1,087,635
Tilapia niloticus	583,622	486,466	390,123	343,937	436,480	357,834	377,266	334,615	341,123	309,198	362,068	409,354	4,732,087
Tilapia others	978	898	788	857	687	4,938	567	595	294	220	1,127	1,049	12,998
Unspecified	90,098	35,907	26,293	15,189	15,924	22,935	21,995	23,361	11,657	22,021	6,295	7,049	298,725
Caridina niloticus	681,616	577,166	459,057	440,345	434,568	409,383	388,711	471,825	458,959	486,949	333,317	444,444	5,586,340
Schilbe mystes	-	2	-	9	22	8	-	-	-	2	5	-	48
<b>TOTAL</b>	<b>12,581,413</b>	<b>11,772,376</b>	<b>11,899,005</b>	<b>10,451,536</b>	<b>10,951,043</b>	<b>7,466,751</b>	<b>5,058,361</b>	<b>4,075,935</b>	<b>3,131,163</b>	<b>3,247,142</b>	<b>2,854,075</b>	<b>3,167,029</b>	<b>86,655,828</b>

Table 1. 2 Lake Victoria Annual fish landings by Species, Weight, Value and by Counties 2020

County	KISUMU		MIGORI		BUSIA		SIAYA		HOMA BAY	
	Metric		Metric		Metric		Metric		Metric	
Species	Tonnes	000 Kshs	Tonnes	000 Kshs	Tonnes	000 Kshs	Tonnes	000 Kshs	Tonnes	000 Kshs
<i>L. niloticus</i>	56	15,993	1,166	240,703	629	130,148	8,715	1,874,258	8,143	1,922,835
<i>R. argentea</i>	110	12,994	1,010	96,532	2,012	120,709	9,672	707,257	41,217	5,351,667
<i>O. niloticus</i>	31	9,595	82	17,958	382	62,920	3,340	836,820	898	253,410
<i>Clarias spp.</i>	35	7,252	0	80	-	-	410	97,072	332	45,803
<i>Protopterus spp.</i>	26	6,557	1	338	3	604	258	53,059	217	28,979
<i>Haplochromis</i>	32	4,292	13	1,484	71	7,104	176	31,090	555	66,678
<i>Caridina niloticus</i>	-	-	-	-	-	-	5,583	272,429	-	-
<i>Others</i>	81	8,781	150	15,021	118	11,717	118	15,256	1,013	76,732
<b>Total</b>	<b>371</b>	<b>65,464</b>	<b>2,422</b>	<b>372,118</b>	<b>3,216</b>	<b>333,202</b>	<b>28,273</b>	<b>3,887,240</b>	<b>52,375</b>	<b>7,746,105</b>

## 1.2 LAKE TURKANA FISHERY

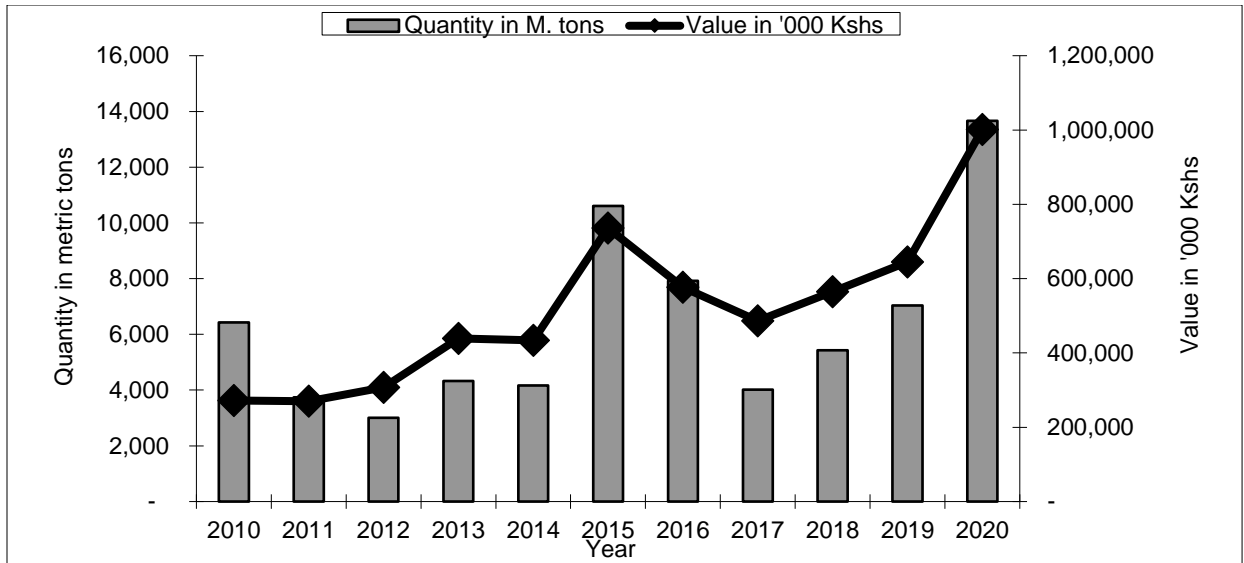
Lake Turkana is Africa's fourth largest lake by volume and Kenya's largest inland lake measuring about 249 km long by 48 km at its widest part, with a delta extending into Ethiopia. It lies in a closed basin 365 meters above sea level. The lake has three volcanic islands namely the north, central and south islands. The central island has three saline crater lakes known for endemic species of tilapias. The islands are listed as UNESCOs world heritage sites.

Over 90% of the annual water discharge by volume is from river Omo originating from the Ethiopian highlands while the rest is from seasonal rivers Kerio and Turkwel. River Omo drains a large portion of the south western highlands of Ethiopia and therefore influences fluctuations in the lake's water level, which in turn affects the amount (or abundance) of fish stocks and hence fish production from the lake. With no surface outlet, the water budget is a balance between river inflow and evaporation which imposes special physical chemical conditions making the lake saline. Therefore, any activities dealing with water abstraction or damming that interferes with the natural discharge rates of river Omo has a negative effect on the lake volume levels.

The lake has about 48 species of fish with a dozen supporting a commercial fishery. The species exploited commercially include, Nile perch (*Lates niloticus*), Tilapia (*Oreochromis niloticus*), Catfish (*Clarias gariepinus*), *synodontis schall*, *Hydrocynus forskalii*, *Labeo horie*, *Bagrus spp*, *Distichodus niloticus*, *Citharinus spp*, *Barbus spp* and *Alestes spp*. The fishery is characterized by bust cycles in fish landings associated with fluctuations in lake levels due to the dynamics of the climatic conditions especially precipitation leading to filling and drying up of the Ferguson's gulf. The filling up of the Ferguson's gulf is associated with boom in fish catches especially tilapias.

*Table 1. 3 Lake Turkana Annual fish landings by Species, Weight, Value (Ksh '000) in 2020*

MONTH	Species	Alestes	Labeo	Nile perch	Others	Tilapia	Totals
JAN	Weight (Kgs)	166,474	45,461	8,896	33,488	1,419,056	1,673,375
	Value (Ksh.)	6,111,559	3,658,665	745,750	1,485,995	33,460,805	45,462,774
FEB	Weight (Kgs)	54,352	48,490	4,137	38,716	1,013,362	1,159,057
	Value (Ksh.)	2,413,090	4,230,086	851,010	1,208,445	27,780,205	36,482,836
MAR	Weight (Kgs)	80,401	23,311	1,999	1,560	155,754	263,025
	Value (Ksh.)	7,173,723	3,246,980	522,050	198,200	17,812,820	28,953,773
APR	Weight (Kgs)	93,699	41,092	3,162	3,193	1,640,189	1,781,335
	Value (Ksh.)	7,446,457	4,565,370	722,750	236,490	108,775,385	121,746,452
MAY	Weight (Kgs)	50,342	47,864	5,459	2,277	2,216,566	2,322,507
	Value (Ksh.)	3,644,260	5,054,405	1,100,090	245,760	220,856,380	230,900,895
JUN	Weight (Kgs)	36,195	65,044	7,090	30,221	1,174,534	1,313,084
	Value (Ksh.)	2,689,650	5,656,237	1,605,940	3,002,430	71,550,350	84,504,607
JUL	Weight (Kgs)	48,358	23,622	29,344	8,699	838,630	948,652
	Value (Ksh.)	3,988,780	3,206,810	5,371,600	851,320	75,293,310	88,711,820
AUG	Weight (Kgs)	64,871	42,187	31,290	13,476	1,095,416	1,247,240
	Value (Ksh.)	4,724,750	3,799,869	5,736,030	1,190,563	95,430,836	110,882,048
SEPT	Weight (Kgs)	38,826	21,259	33,137	15,516	487,283	596,020
	Value (Ksh.)	3,186,560	2,311,840	6,041,210	2,171,370	43,172,128	56,883,108
OCT	Weight (Kgs)	54,476	39,433	23,317	13,959	562,778	693,963
	Value (Ksh.)	4,408,795	3,567,720	4,253,130	1,703,245	50,266,439	64,199,329
NOV	Weight (Kgs)	65,226	52,796	13,474	12,401	648,904	792,801
	Value (Ksh.)	5,140,950	4,156,630	2,443,750	1,235,120	58,874,110	71,850,560
DEC	Weight (Kgs)	38,626	40,448	23,030	14,584	756,378	873,066
	Value (Ksh.)	2,830,624	5,308,285	4,102,270	1,435,460	46,936,355	60,612,994
TOTALS	Weight (Kgs)	791,846	491,006	184,335	188,089	12,008,849	13,664,124
	Value (Ksh.)	53,759,198	48,762,897	33,495,580	14,964,398	850,209,123	1,001,191,196



*Fig 1. 6 Trends in annual fish landings from Lake Turkana fishery 2010-2020*

During the year under review, a total of 13,664 MT of fish were landed with an ex-vessel value of 1,001,191 Thousand from both sides (Turkana and Marsabit counties) of the lake. This years' production was an increase of 94% in quantity and a 55% increase in value compared to 2018 production of 7, 031MT with an ex-vessel value of Kshs.645, 107 thousand. The trends in annual fish catches from Lake Turkana are determined by the lakes' water level and for that the catches have been unpredictable for a long time.

### **1.2.1 SPECIES COMPOSITION**

In terms of species contribution to the total weight of fish landed from the lake, *Tilapia niloticus* took the lead with 88%, *Alestes* 6%, *labeo* 4% and *Lates niloticus* 1%, while all other species accounted for 1% of the annual 2020 catch as shown in figure 1.9 below.



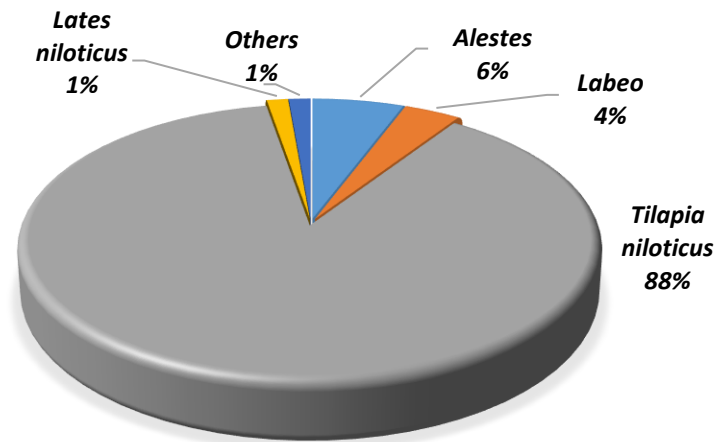


Fig 1. 7 Species composition (Kgs) in catches of Lake Turkana Fishery 2020

Some of the main challenges facing Lake Turkana fishery which need to be addressed include the following:

- Lack of appropriate fish handling and preservation facilities that usually lead to post harvest losses and poor quality of fish and fishery products;
- Poor state of landing site access roads, which make marketing impossible at some landing sites.
- Weak and unfavorable fish marketing systems along the fish landing sites;
- Insufficient resources for training Beach Management Units.
- There is an urgent need to develop a sound management plan for Lake Turkana fishery to strengthen community participation in Fisheries resource management, utilization, and conservation in the entire lake.

### 1.3 LAKE BARINGO FISHERY

Lake Baringo is one of the Rift valley lakes with a surface area of 130 Km<sup>2</sup> and a mean depth of 5.6 meters. The lake has rivers El Molo, Perkerra and Ol arabel as the main inlets but with no obvious outlet and the waters are assumed to seep through to the underground bedrock which is believed to be volcanic. The fishery of Lake Baringo is currently based on four species including *Oreochromis niloticus* (Tilapia), *Barbus gregorii*, *Clarias mossambicus* and *Protopterus aethiopicus* which was introduced in the lake.

During the year under review a total of 162MT of fish with an ex-vessel value of Kshs.39, 138 thousand were landed. This was a 40% increase in quantity and 14% increase in value compared to last year's production of 203MT with an ex-vessel value of Kshs.49499Thousands. The species catch composition was dominated by *Protopterus aethiopicus* contributing 71% (114 metric tonnes) followed by *Tilapia niloticus* 14 % (23 metric tonnes), *Barbus* 8% (13 metric tonnes) and *Clarias* with 7 % (11metric tonnes), figure 1.11 and table 1.5

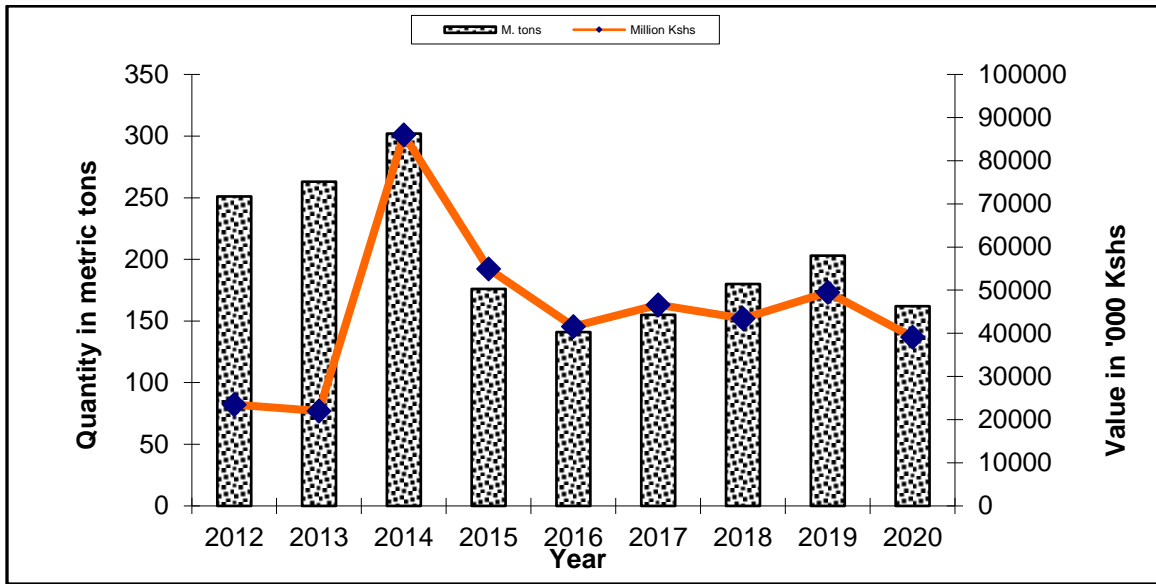


Fig 1. 8 Trends in annual fish landings from Lake Baringo fishery 2012-2020

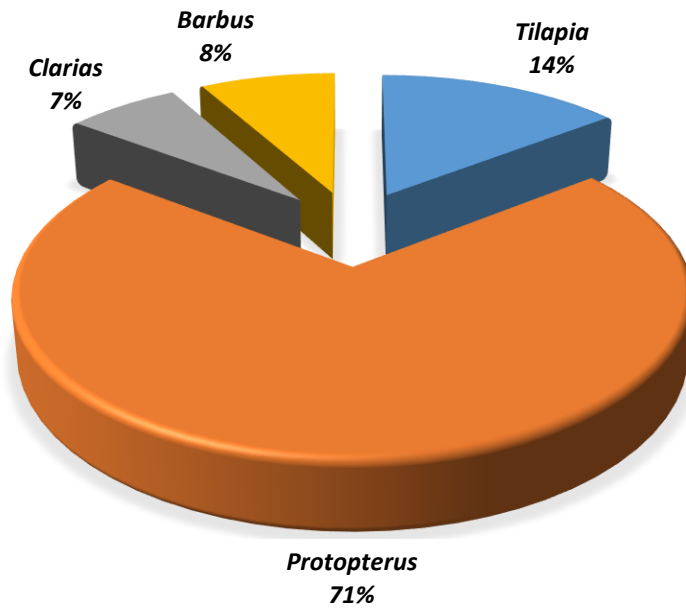


Fig 1. 9 Species composition in catches of Lake Baringo Fishery 2020

Table 1. 4 Lake Baringo Monthly fish landings by Species, Weight and Value in 2020

Month	SPECIES	Barbus	Clarias	Protopterus	Tilapia niloticus	TOTAL
Jan	Kgs	911	884	11,907	1,456	15,158
	Kshs	220,692	214,142	2,884,615	352,704	3,672,153
Feb	Kgs	666	759	10,176	1,295	12,896
	Kshs	161,236	183,910	2,465,401	313,655	3,124,202
Mar	Kgs	349	572	7,279	2,184	10,384
	Kshs	84,649	138,562	1,763,520	529,056	2,515,788
Apr	Kgs	1,019	884	11,141	1,047	14,092
	Kshs	246,893	214,142	2,699,194	253,695	3,413,923
May	Kgs	1,071	788	10,146	2,346	14,352
	Kshs	259,489	190,964	2,458,095	568,357	3,476,906
Jun	Kgs	1,725	789	9,255	2,496	14,265
	Kshs	417,954	191,216	2,242,190	604,636	3,455,996
Jul	Kgs	1,283	1,017	10,285	1,456	14,041
	Kshs	310,883	246,389	2,491,602	352,704	3,401,579
Aug	Kgs	1,019	934	10,967	1,768	14,688
	Kshs	246,893	226,234	2,656,869	428,284	3,558,280
Sep	Kgs	1,742	707	11,219	2,704	16,372
	Kshs	421,985	171,313	2,718,089	655,022	3,966,409
Oct	Kgs	914	582	5,905	1,664	9,065
	Kshs	221,448	141,082	1,430,467	403,090	2,196,087
Nov	Kgs	1,300	1,017	9,024	2,496	13,837
	Kshs	314,914	246,389	2,186,261	604,636	3,352,200
Dec	Kgs	1,009	1,839	7,060	2,496	12,403
	Kshs	244,374	445,415	1,710,363	604,636	3,004,787
Total	Kgs	13,008	10,772	114,365	23,406	161,552
	Kshs	3,151,411	2,609,758	27,706,668	5,670,474	39,138,310

#### 1.4 LAKE NAIVASHA FISHERY

The present fish population of Lake Naivasha comprises of the introduced species including largemouth bass (*Micropterus salmoides*) which was introduced in 1927, 1951 and 1956 from the United States of America, *Tilapia zilli* introduced from Lake Victoria in 1956. The introduction of *Tilapia zilli* also contained *Oreochromis leucostictus* and other tilapine species which are presently not encountered in the lake. The exotic rainbow trout (*Onchorhynchus mykiss*) occasionally strays into the lake from river Malewa while *Barbus amphigramma* migrates between the lake and river Malewa. The Louisiana red swamp crayfish (*Procambarus clarkii*) was introduced in 1970 as a source of food for the bass. The *Procambarus clarkii* and *Barbus amphigramma* are not under commercial exploitation currently in the lake.

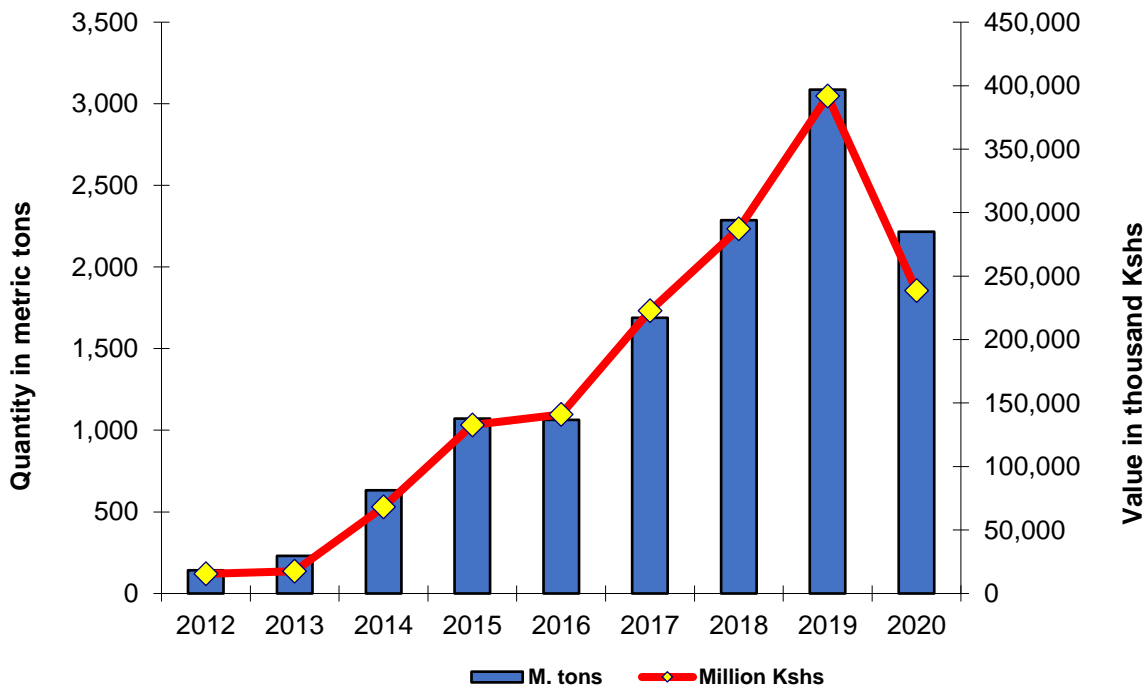
The recent accidental introduction of Common carp (*Cyprinus carpio*) has created a shift in the fish production from the lake. The *Cyprinus carpio* is believed to have come through river Malewa from Nyandarua highlands during the El-Nino period of 1998-1999.

Species composition in the catches from the lake has drastically changed since the year 2002 where total catches were dominated by the *tilapiines*. However, over the last thirteen years, *Tilapiines* contribution in catches has declined with the introduced *Cyprinus carpio* assuming greater prominence in the catches. The status has however changed lately with the restocking of the lake with tilapia where the species has now regained its prominence in the landings.

It is imperative for management and research to understand the implications of the *Cyprinus carpio* on the other fish species in the ecosystem. Besides, it is also important to understand the effects of the feeding habits of the *Cyprinus carpio* on the breeding grounds/nests of the *tilapine* in the fishery.

During the year under review, a total of 2,216 tons of fish with an ex-vessel value of Kshs. 238,638 thousand were landed from Lake Naivasha. This was an 28% decline in quantity and an decline in value compared to 2019 landings of 3,087 tons valued at Kshs. 391,719 thousand. Nile tilapia (*Oreochromis niloticus*) dominated at 87% of the total catch. Common carp (*Cyprinus carpio*) the next most dominant species accounting for 11% and *Clarias gariepinus* 2% of the total catch. The monthly fish catches peaked in September 2020.

Fig 1. 10 Trend of Lake Naivasha annual catches from 2012-2020



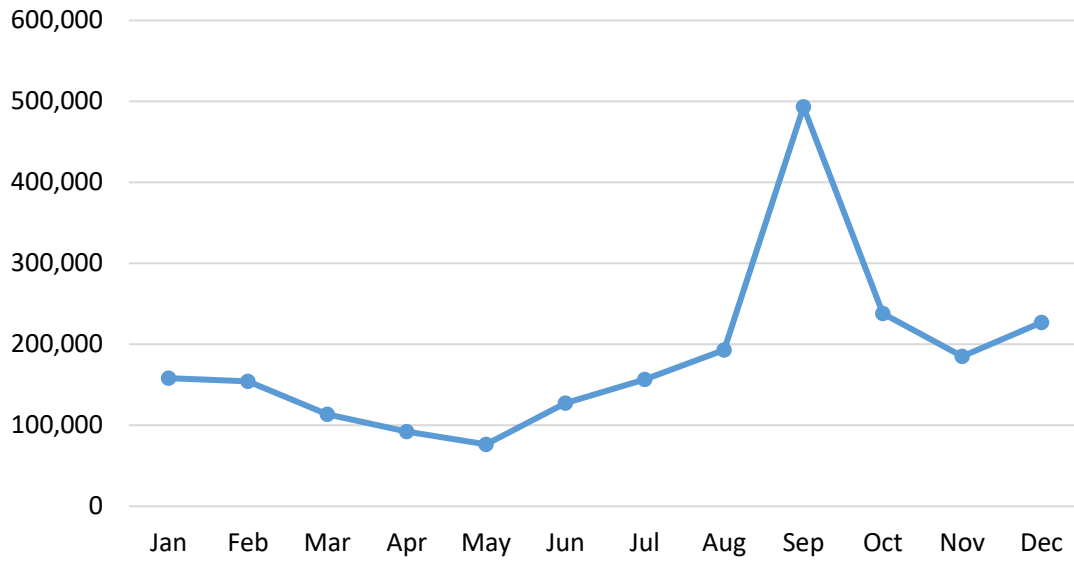


Fig 1. 11 Lake Naivasha monthly catches in Kgs 2020

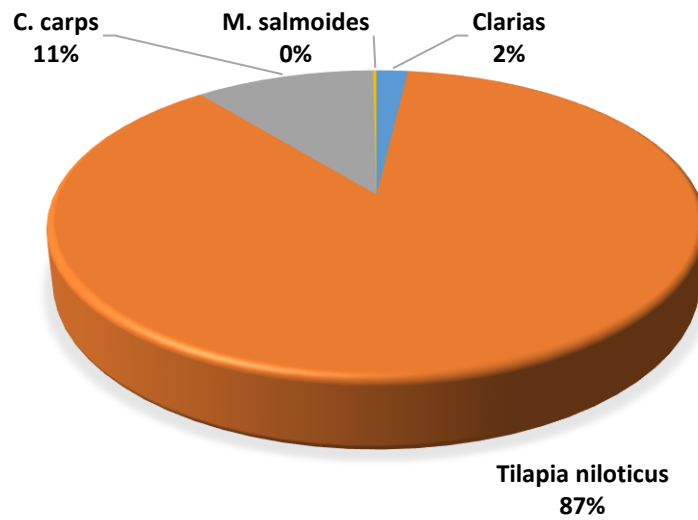


Fig 1. 12 Lake Naivasha species composition landings in metric tonnes 2020

Table 1. 5 Lake Naivasha Monthly fish landings by Species, Weight and Value 2020

Month	Species	Clarias	Tilapia spp	Carps	M. salmoides	M. carp	Total
Jan	Kgs	4,727	130,893	22,645	27.5	120	<b>158,413</b>
	Kshs	203,958	14,086,151	1,281,228	5120	13,170	<b>15,589,627</b>
Feb	Kgs	3,738	136,261	14,181	3	179	<b>154,362</b>
	Kshs	307,660	16,975,642	1,120,580	300	16,060	<b>18,420,242</b>
Mar	Kgs	2,129	102,447	8,898	-	221	<b>113,695</b>
	Kshs	159,060	8,765,193	613,010	-	25,550	<b>9,562,813</b>
Apr	Kgs	3,222	80,322	5,322	13.5	3,222	<b>92,102</b>
	Kshs	265,050	6,882,345	376,421	2,115	16,500	<b>7,542,431</b>
May	Kgs	747	68,635	7,065	7	39	<b>76,493</b>
	Kshs	27,171	7,537,075	499,465	800	2540	<b>8,067,051</b>
Jun	Kgs	3,201	111,195	12,625	240	140	<b>127,401</b>
	Kshs	337,002	15,545,400	1,077,815	1,850	10,112	<b>16,972,179</b>
Jul	Kgs	21	121,819	30,708	3,696	585	<b>156,829</b>
	Kshs	2,350	16,200,325	2,959,878	307,786	35400	<b>19,505,739</b>
Aug	Kgs	3,213	149,902	39,037	90	780	<b>193,022</b>
	Kshs	73,046	23,042,937	3,722,182	8230	82390	<b>26,928,785</b>
Sep	Kgs	4,205	456,038	32,219	73	652	<b>493,187</b>
	Kshs	296,642	25,318,262	2,859,955	7200	63820	<b>28,545,879</b>
Oct	Kgs	5,150	207,559	25,218	24	308	<b>238,259</b>
	Kshs	315,169	30,238,243	1,960,609	2500	27610	<b>32,544,131</b>
Nov	Kgs	6,383	159,453	18,738	0	434	<b>185,008</b>
	Kshs	453,660	25,135,791	1,724,641	0	0	<b>27,314,092</b>
Dec	Kgs	4,476	209,842	12,606	0	0	<b>226,924</b>
	Kshs	315,127	26,232,366	1,097,310	0	434	<b>27,645,237</b>
Total	Kgs	<b>41,212</b>	<b>1,934,366</b>	<b>229,262</b>	<b>4,174</b>	<b>6,680</b>	<b>2,215,694</b>
	Kshs	<b>2,755,895</b>	<b>215,959,730</b>	<b>19,293,094</b>	<b>335,901</b>	<b>293,586</b>	<b>238,638,206</b>

## 1.5 LAKE JIPE FISHERY

Lake Jipe watershed is an important transponder wetland ecosystem between Kenya and Tanzania. It covers approximately 30Kms square bordered by Tsavo-West national park to the southeast, Mt Kilimanjaro to the south, and North Pare Mountains to the west. The lake is fed by river Limu which originates from Mt Kilimanjaro slopes and River Muvulani from Pare Mountains. The lake Outflows into River Ruvu. The lake Jipe is experiencing severe catchment degradation mainly due to anthropogenic activities that lead to eutrophication, siltation and pollution.

During the year 2020, a total of 197 metric tons of both Tilapia and Clarias with an ex-vessel value of Kshs 57,549 thousand were landed from Lake Jipe. This reflected 25% increase in quantity compared to previous year 2019 production of 157 metric tons valued at Kshs 45,957 thousand. There are only two species (Tilapia and Clarias) caught in the lake. Tilapia contributed 85% and Clarias 15%.

Table 1. 6 Lake Jipe Monthly fish landings by Species, Weight and Value 2020

Month	Species	Clarias	Tilapia niloticus	Tilapia hunteri	Total
Jan	Kgs	2,530	12,901	323	15,754
	Kshs	632,500	3,870,300	96,900	4,599,700
Feb	Kgs	2,375	12,524	430	15,329
	Kshs	593,750	3,757,200	129,000	4,479,950
Mar	Kgs	2,158	12,182	158	14,498
	Kshs	539,500	3,654,600	47,400	4,241,500
Apr	Kgs	2,143	12,131	560	14,834
	Kshs	535,750	3,639,300	168,000	4,343,050
May	Kgs	2,188	12,623	349	15,160
	Kshs	547,000	3,786,900	104,700	4,438,600
Jun	Kgs	2,322	12,870	680	15,872
	Kshs	580,500	3,861,000	204,000	4,645,500
Jul	Kgs	2,521	13,211	498	16,230
	Kshs	630,250	3,963,300	149,400	4,742,950
Aug	Kgs	2,342	13,318	680	16,340
	Kshs	585,500	3,995,400	204,000	4,784,900
Sep	Kgs	2,401	13,524	779	16,704
	Kshs	600,250	4,057,200	233,700	4,891,150
Oct	Kgs	2,532	13,957	1,905	18,394
	Kshs	633,000	4,187,100	328,500	5,148,600
Nov	Kgs	2,702	14,428	2,049	19,179
	Kshs	675,500	4,328,400	614,700	5,618,600
Dec	Kgs	2,861	14,772	1,560	19,193
	Kshs	715,250	4,431,600	468,000	5,614,850
Total	Kgs	29,075	158,441	9,971	197,487
	Kshs	7,268,750	47,532,300	2,748,300	57,549,350

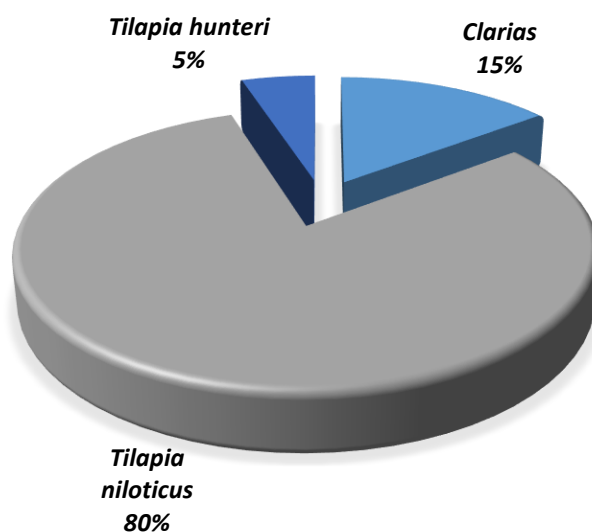


Fig 1. 13 Percentage composition of annual fish species catch in Lake Jipe 2020

The challenges which faced capture fisheries in Lake Jipe during the year under review include;

- Floating vegetation continued to stand out as the biggest problem faced by the fishers. The vegetation abstracts fishing crafts motion besides serving as hiding ground for the fish hence impacting substantially on fish conservation and the low production;
- Siltation – there is high rate of silt deposition in the lake’s bed which is caused by among others sand harvesting activities on the banks of River Lumi and increased agricultural activities along the river course. The siltation has contributed to creation of a shallow inlet point in the lake which eventually brings about diversion of the river course off the lake and the water ends up in Nyumba ya Mungu reservoir in Mwanga district of Tanzania.

## 1.6 TURKWEL DAM

Turkwel Dam is one of the major Hydro Electric Power Station in Kenya. It is situated in Northwest of Kenya, in the border of Turkana, West Pokot and Pokot North Sub-Counties. The dam was constructed under the control of Kerio Valley Development Authority (KVDA) from 1986 to 1991 and is still under the management of KVDA.

During 2020 a total of 107 MT of fish with an ex-vessel value of Kshs 16, 112Thousands were landed from the dam. This was a 138% increase in quantity and 23% increase in value of the fish landed compared with 2019 figures of 45MT with a value of Kshs 13,050Thousands. The fisheries of the dam are comprised of two species: Tilapia (*Oreochromis niloticus*) and *Clarias spp.* Tilapia landings contributed 91% (98 metric tonnes) while *Clarias* contributed 9% (9 metric tonnes) during the review period. The monthly catches are shown in figure 1.15 and Table 1.8.

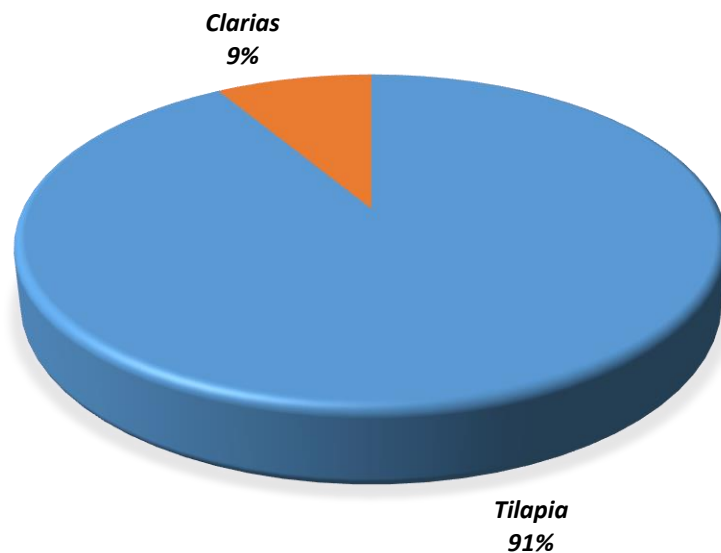


Fig 1. 14 Percentages composition of species catch in Turkwel dam 2020



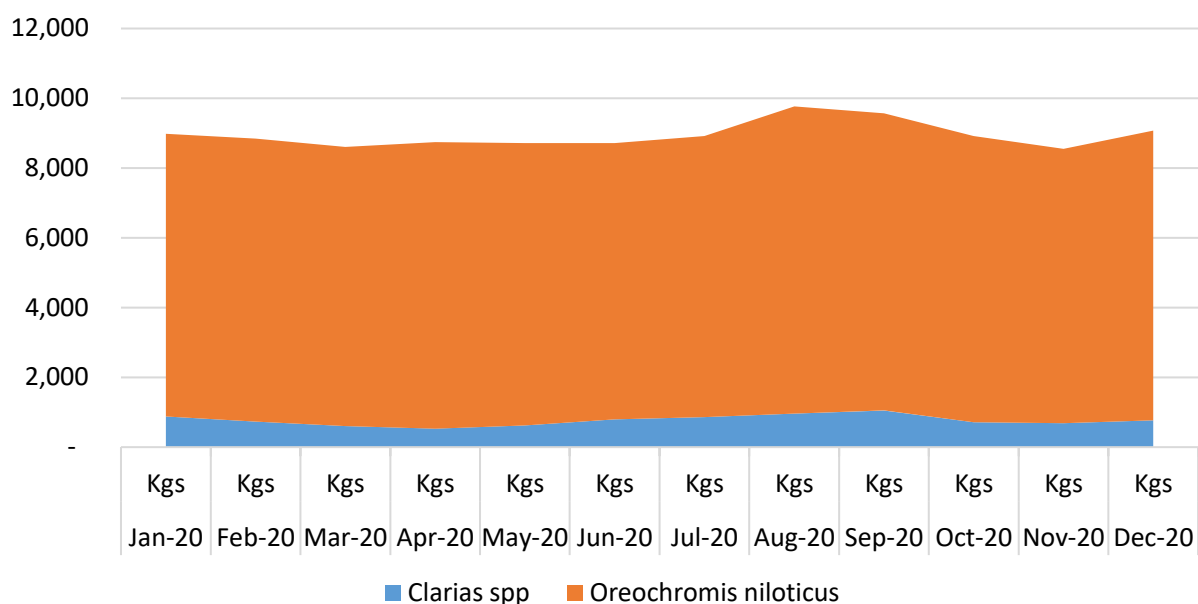


Fig 1. 15 Turkwel dam monthly fish catches in metric tonnes 2020

Table 1. 7 Turkwel dam Monthly fish landings by Species 2020

Months	units	<i>Clarias spp</i>	<i>Oreochromis niloticus</i>	Total
Jan-20	Kgs	882	8,100	8,982
	Kshs	132,300	1,215,000	1,347,300
Feb-20	Kgs	729	8,115	8,844
	Kshs	109,350	1,217,250	1,326,600
Mar-20	Kgs	604	8,000	8,604
	Kshs	90,600	1,200,000	1,290,600
Apr-20	Kgs	528	8,213	8,741
	Kshs	82,200	1,231,950	1,314,150
May-20	Kgs	618	8,101	8,719
	Kshs	92,700	1,215,150	1,307,850
Jun-20	Kgs	799	7,918	8,717
	Kshs	119,850	1,187,700	1,307,550
Jul-20	Kgs	862	8,056	8,918
	Kshs	129,300	1,208,400	1,337,700
Aug-20	Kgs	966	8,801	9,767
	Kshs	144,900	1,320,150	1,465,050
Sep-20	Kgs	1,049	8,517	9,566
	Kshs	157,350	1,277,550	1,434,900
Oct-20	Kgs	715	8,200	8,915
	Kshs	107,250	1,230,010	1,337,260
Nov-20	Kgs	687	7,859	8,546
	Kshs	103,050	1,178,870	1,281,920
Dec-20	Kgs	771	8,305	9,076
	Kshs	115,650	1,245,750	1,361,400
Total	Kgs	9,210	98,185	107,395
	Kshs	1,384,500	14,727,780	16,112,280

## 1.7 RIVERINE

During the year 2020, fish landings from Riverine amounted to 411 tons with an ex-vessel value of Kshs 115,365 thousand. The riverine fishery consists of both permanent and seasonal river network in the country as tabulated below in table

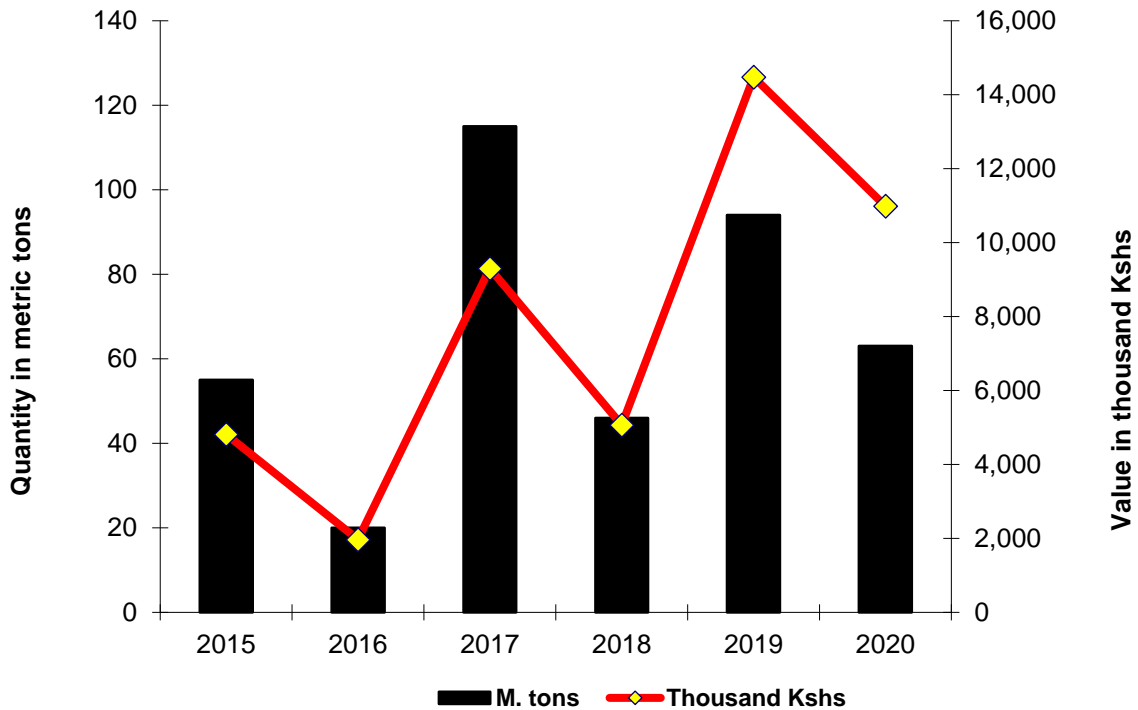
Table 1. 8 Riverine fish catch weight and value by species in Kgs 2020

RIVERS	Units	Clarias spp	Oreochromis niloticus	Tilapia others	Trout	Carps	Others	Totals
R. MATHIOYA	Kgs		-	-	23	-	-	23
	Kshs	-	-	-	9,204	-	-	9,204
R. MERT & GARB(KERIO)	Kgs	1,559	-	-	-	-	-	1,559
	Kshs	457,159	-	-	-	-	-	457,159
R. EWASO NYIRO	Kgs	1,185	1,575	-	348	-	-	3,108
	Kshs	718,620	639,324	-	317,007	-	-	1,674,951
R. TANA.	Kgs	9,174	29,810	-	1,692	1,350	567	42,592
	Kshs	2,783,502	9,045,054	-	1,198,113	409,932	286,740	13,723,341
ATHI RIVER	Kgs	43,657	134,187	-	-	6,081	-	183,925
	Kshs	8,831,238	40,716,018	-	-	1,353,165	-	50,900,421
RIVER NZOIA	Kgs	14,830	45,581	-	-	2,065	-	62,475
	Kshs	3,749,745	13,830,426	-	-	480,378	-	18,060,549
SONDU/KUJA	Kgs	3,889	11,951	-	-	541	-	16,380
	Kshs	983,235	3,626,199	-	-	136,733	-	4,746,167
TURKWEL	Kgs	5,110	15,705	-	-	-	712	21,527
	Kshs	1,292,100	4,765,194	-	-	-	-	6,057,294
NYANDO	Kgs	6,335	19,471	-	-	882	-	26,688
	Kshs	1,601,850	5,907,900	-	-	223,020	-	7,732,770
YALA	Kgs	2,530	7,780	-	-	354	-	10,664
	Kshs	640,740	2,362,950	-	-	89,385	-	3,093,075
KERIO	Kgs	3,490	10,724	-	-	-	4,865	19,079
	Kshs	882,340	-	-	-	-	984,120	1,866,460
OTHERS	Kgs	5,770	17,735	-	-	803	-	24,308
	Kshs	1,458,923	5,381,154	-	-	203,108	-	7,043,184
TOTAL	Kgs	97,527	294,516	-	2,063	12,076	6,144	412,326
	Kshs	23,399,452	86,274,219	-	1,524,324	2,895,720	1,270,860	115,364,575

Year	Quantity (MT)	VALUE (000 Kshs)
2015	11	4212
2016	5	3500
2017	10	2368
2018	320	86400
2019	380	106371
2020	411	115049

## 1.8 TANA RIVER DELTA

Fresh water fish landings from Tana River delta in Tana River County during the year under review amounted to 63 MT with an ex-vessel value of Kshs.10, 984 thousand. This was a 32% decline in quantity and a 24.5% increase in ex-vessel value compared to 94 MT with an ex-vessel value of Kshs.14476 thousand landed in 2019.



*Trends in annual fish landings from Tana River Delta fishery 2015-2020*

## 1.9 LAKE KENYATTA FISHERY

During the year under review a total of 166 tons of fish with an ex-vessel value of Kshs. 16,671 thousand were landed from Lake Kenyatta in Lamu County of the coast province. This was an 18.6 % increase in quantity of the fish landed compared with 2019 figures of 140 tons with an ex-vessel value of Kshs 5,845 thousand.

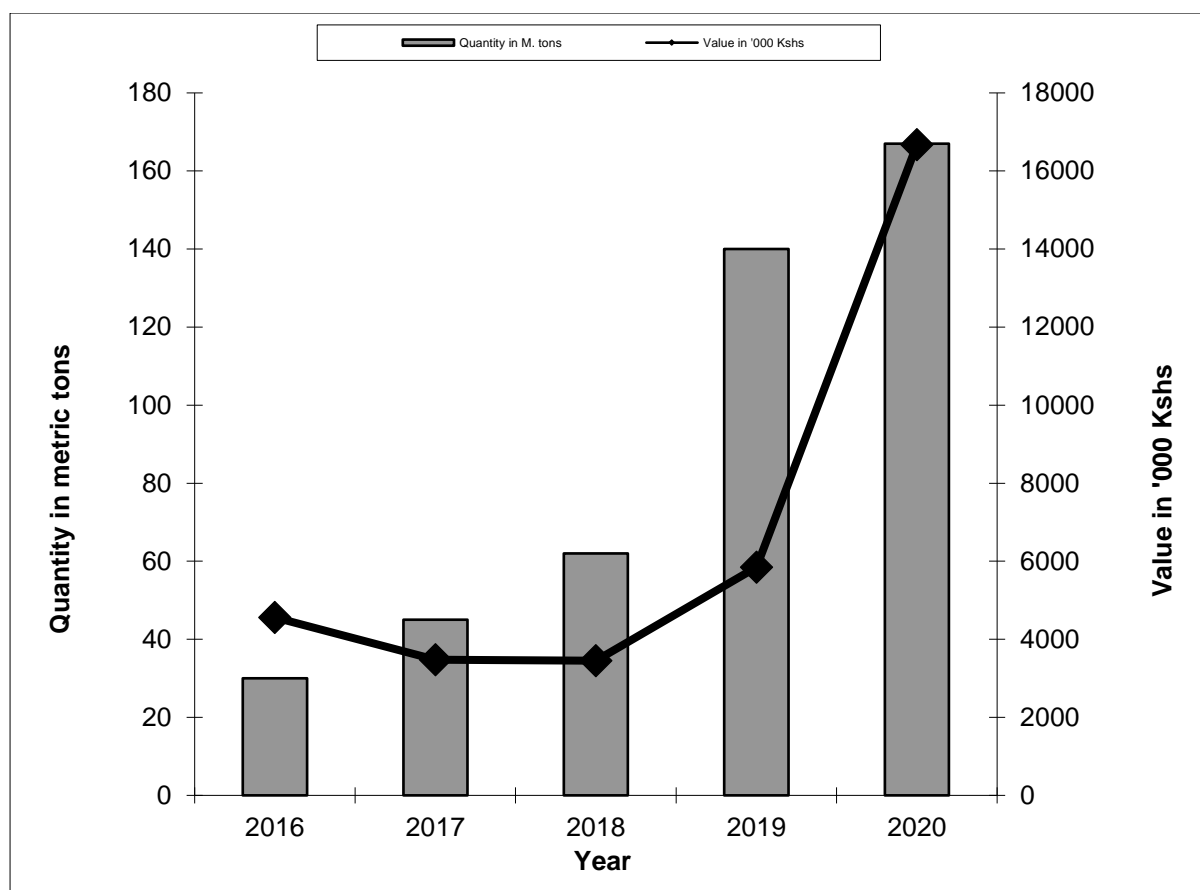


Fig 1. 16 Lake Kenya fish catch trends in metric tons 2016 – 2020

Table 1. 9 Lake Kenya Monthly fish landings by Species 2020

Months	SPECIES	Tilapia	Clarias	Protopterus	Others	Sub-total
January	WT(KGS)	8,143	5,727	2,385	430	<b>16,685</b>
	VAL(SHS)	814,300	572,700	238,500	43,000	<b>1,668,500</b>
February	WT(KGS)	7,470	5,065	1,966	310	<b>14,811</b>
	VAL(SHS)	747,000	506,500	196,600	31,000	<b>1,481,100</b>
March	WT(KGS)	6,852	4,435	1,778	114	<b>13,179</b>
	VAL(SHS)	685,200	443,500	177,800	11,400	<b>1,317,900</b>
April	WT(KGS)	6,317	3,496	1,553	72	<b>11,438</b>
	VAL(SHS)	631,700	349,600	155,300	7,200	<b>1,143,800</b>
May	WT(KGS)	6,620	5,799	1,401	96	<b>13,916</b>
	VAL(SHS)	662,000	579,900	140,100	9,600	<b>1,391,600</b>
June	WT(KGS)	7,185	6,407	1,486	122	<b>15,200</b>
	VAL(SHS)	718,500	640,700	148,600	12,200	<b>1,520,000</b>
July	WT(KGS)	7,075	6,436	1,517	157	<b>15,185</b>
	VAL(SHS)	707,500	643,600	151,700	15,700	<b>1,518,500</b>
August	WT(KGS)	7,227	6,259	1,436	123	<b>15,045</b>
	VAL(SHS)	722,700	625,900	143,600	12,300	<b>1,504,500</b>
September	WT(KGS)	6,837	5,819	1,346	88	<b>14,090</b>
	VAL(SHS)	683,700	581,900	134,600	8,800	<b>1,409,000</b>
October	WT(KGS)	6,503	5,615	1,208	47	<b>13,373</b>
	VAL(SHS)	650,300	561,500	120,800	4,700	<b>1,337,300</b>
November	WT(KGS)	6,324	5,292	772	-00	<b>12,388</b>
	VAL(SHS)	632,400	529,200	77,200	-00	<b>1,238,800</b>
December	WT(KGS)	5,922	5,048	433	-00	<b>11,403</b>

	VAL(SHS)	592,200	504,800	43,300	-00	1,140,300
Totals	WT(KGS)	82,475	65,398	17,281	1,559	166,713
	VAL(SHS)	8,247,500	6,539,800	1,728,100	155,900	16,671,300

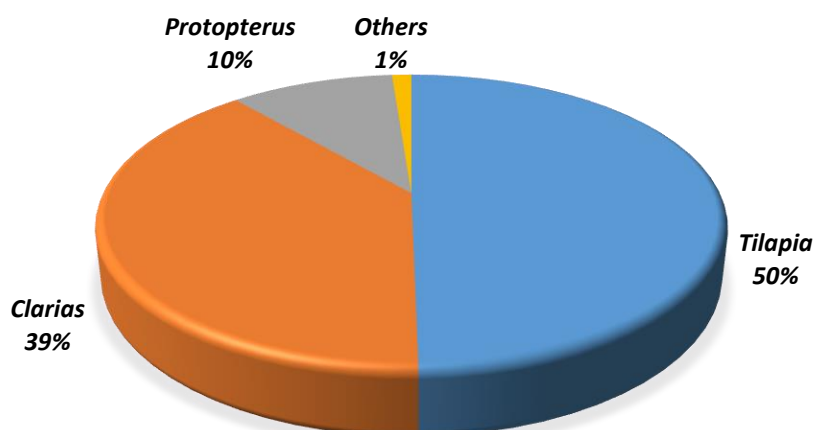


Fig 1. 17 Lake Kenyatta Monthly fish landings by Species 2020

### 1.10 TANA RIVER DAMS FISHERY

In 2020, a total of 283 metric tons of fish with an ex-vessel value of Kshs 50,960 thousand were landed from the main fishery water bodies of the Tana River dams of Masinga, Kamburu, and Kiambere. This was 28% decline in quantity and 15.9% increase in value compared to 2019 landings of 394 metric tons valued at Kshs 60,571 thousand.

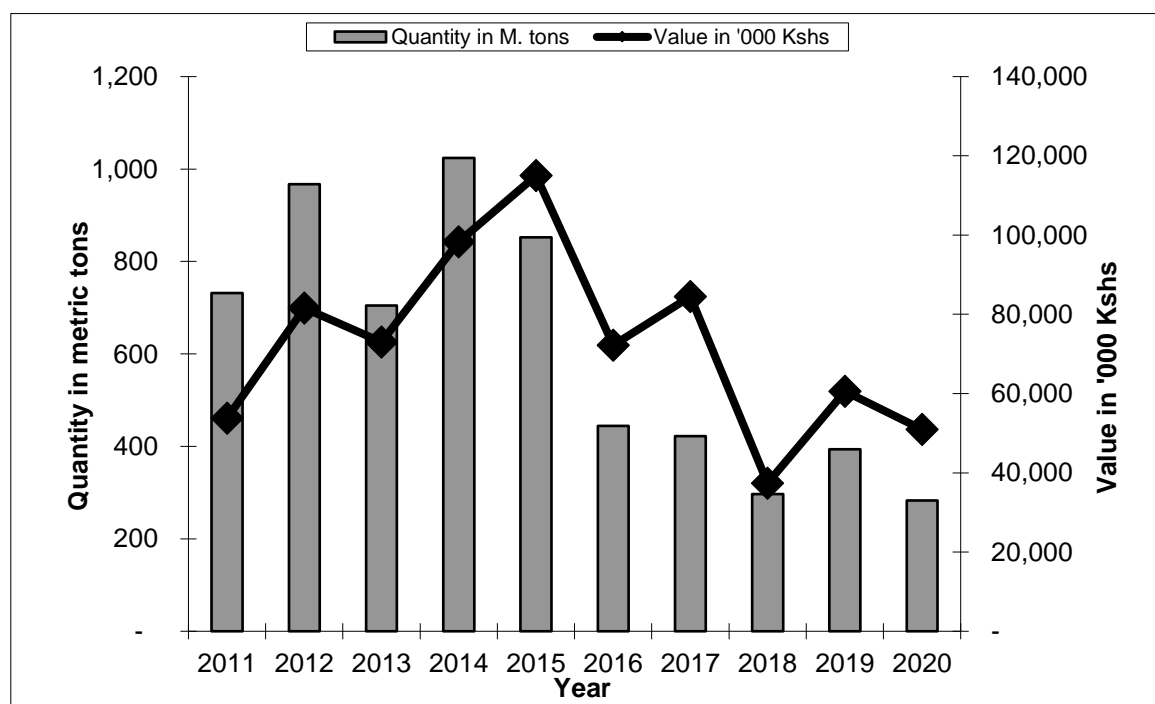


Fig 1. 18 Tana River Dams fish catch trends in metric tons 2011 – 2020.

Table 1. 10 Tana River Dams Monthly fish landings by Species 2020

Months	Species	Clarias	Tilapia niloticus	Carps	Total
Jan	Kgs	7,965	8,803	6,288	23,056
	Kshs	1,400,074	1,547,450	1,105,322	4,052,846
Feb	Kgs	10,061	12,157	12,995	35,213
	Kshs	1,768,515	2,136,955	2,284,331	6,189,801
Mar	Kgs	10,480	3,773	12,576	26,829
	Kshs	1,842,203	663,193	2,210,643	4,716,039
Apr	Kgs	12,995	7,965	13,414	34,374
	Kshs	2,284,331	1,400,074	2,358,019	6,042,425
May	Kgs	7,546	4,611	13,414	25,571
	Kshs	1,326,386	810,569	2,358,019	4,494,975
Jun	Kgs	5,659	6,288	12,157	24,104
	Kshs	992,333	1,105,322	2,136,955	4,234,610
Jul	Kgs	3,773	4,611	9,642	18,025
	Kshs	795,832	1,812,727	3,389,653	5,998,212
Aug	Kgs	5,659	4,024	4,653	14,337
	Kshs	992,333	707,406	817,938	2,517,677
Sep	Kgs	8,594	5,659	3,354	17,606
	Kshs	1,510,606	994,789	589,505	3,094,901
Oct	Kgs	7,126	5,030	9,222	21,379
	Kshs	1,255,154	884,257	7,369	2,146,780
Nov	Kgs	6,288	5,450	10,061	21,798
	Kshs	1,105,322	957,945	1,768,515	3,831,782
Dec	Kgs	3,312	6,498	10,899	20,708
	Kshs	582,136	1,142,166	1,915,891	3,640,193
Total	Kgs	89,457	74,869	118,675	283,000
	Kshs	15,855,225	14,162,855	20,942,161	50,960,240

## 1.11 LAKE KANYABOLI FISHERY

Lake Kanyaboli is one of the satellite lakes of Lake Victoria and it is located in Siaya County. The fisheries of the lake are comprised of the following fish species: *Oreochromis niloticus*, *Protopterus aethiopicus*, *Haplochromis* and *Clarias spp.*

During the year under review, a total of 264 metric tons were landed from the lake. This was a 12% decline in quantity of the fish landed compared with 2019 figures of 300 metric tons.

Table 1. 11 Lake Kanyaboli Monthly fish landings by Species 2020

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Species	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)	Wt (Kg)
Clarias	2,601	2,043	3,395	5,308	4,426	2,264	3,170	3,993	4,180	3,299	2,319	2,851	39,848
Haplochromis	1,857	2,592	2,189	2,471	2,592	5,853	1,806	2,961	1,920	2,920	1,940	2,026	31,125
Protopterus	1,578	2,080	2,645	9,110	7,064	7,388	6,689	4,862	4,445	4,812	3,145	2,523	56,340
Tilapia niloticus	11,525	13,908	11,698	10,073	14,182	11,495	13,236	7,837	10,521	9,299	11,051	11,863	136,688
<b>TOTAL</b>	<b>17,562</b>	<b>20,622</b>	<b>19,926</b>	<b>26,961</b>	<b>28,264</b>	<b>27,000</b>	<b>24,901</b>	<b>19,652</b>	<b>21,065</b>	<b>20,329</b>	<b>18,455</b>	<b>19,262</b>	<b>264,000</b>

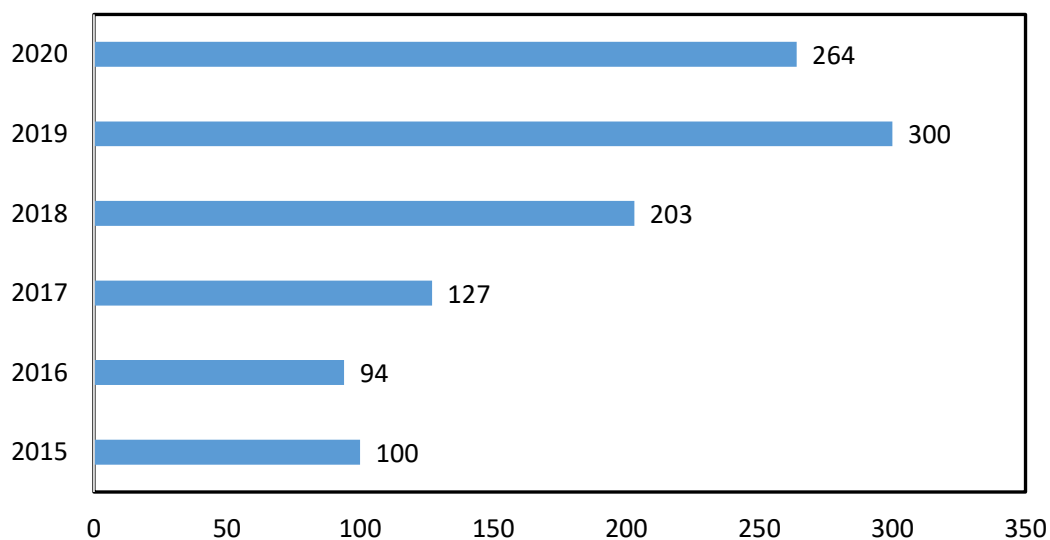
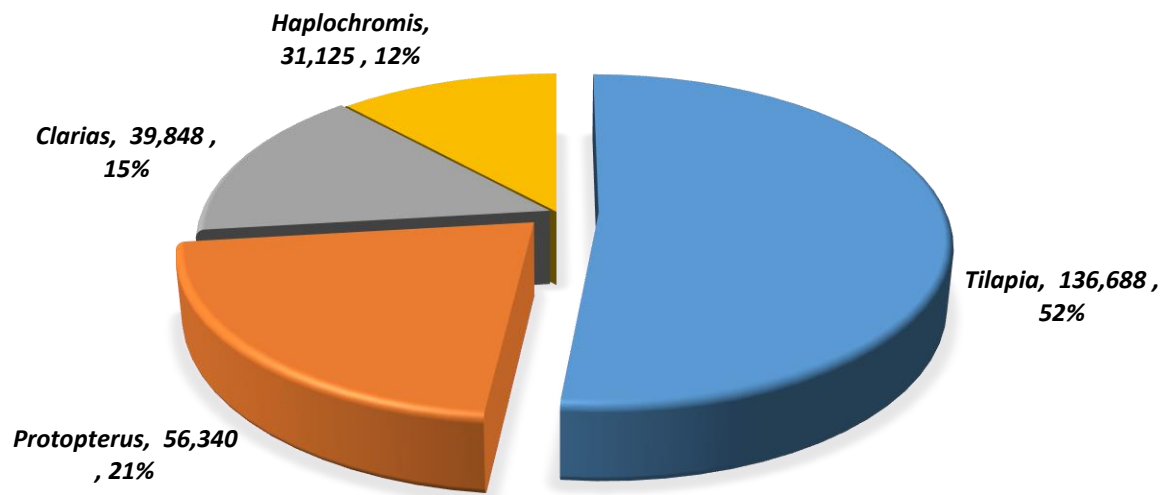


Fig 1. 19 Lake Kanyaboli fish catch trends in metric tons 2014-2020



*Fig 1. 20 Lake Kanyaboli species composition by weight (kgs)*



## 1.12 SMALL DAMS

Table 1. 12

Months	Species	Black bass	Clarias	Tilapia niloticus	Tilapia others	Trout	Carps	Unspecified	TOTAL
Jan	Kgs	-	12,922	14,601	70	255	1,652	30	29,530
	Kshs	-	3,872,050	4,408,540	33,000	255,000	495,500	15,000	9,079,090
Feb	Kgs	-	13,598	13,565	15	257	1,904	-	29,339
	Kshs	-	3,958,350	3,797,390	4,500	257,000	571,000	-	8,588,240
Mar	Kgs	98	8,188	12,771	262	82	1,607	10	23,018
	Kshs	800	2,384,350	3,628,460	126,600	82,000	481,750	5,200	6,709,160
Apr	Kgs	5	6,414	11,950	6	130	1,757	-	20,262
	Kshs	2,000	1,738,750	3,402,630	1,800	130,000	527,900	-	5,803,080
May	Kgs	-	7,094	12,749	20	152	1,314	73	21,402
	Kshs	-	1,859,900	3,404,400	8,000	152,000	397,000	1,500	5,822,800
Jun	Kgs	10	6,423	13,801	10	70	1,510	-	21,824
	Kshs	4,000	1,647,850	3,719,360	4,000	70,000	453,004	-	5,898,214
Jul	Kgs	15	7,293	14,923	606	75	3,146	-	26,058
	Kshs	6,000	1,873,400	4,115,200	301,800	75,000	513,900	6	6,885,306
Aug	Kgs	-	14,304	14,952	2	7	972	3,000	33,237
	Kshs	-	4,040,400	4,230,000	800	7,000	294,450	-	8,572,650
Sep	Kgs	-	14,602	17,900	219	9	941	12	33,683
	Kshs	-	4,175,800	3,635,090	108,900	9,000	283,100	6,000	8,217,890
Oct	Kgs	-	14,146	14,922	297	30	925	5	30,325
	Kshs	-	4,060,850	4,197,240	146,800	30,000	276,650	2,500	8,714,040
Nov	Kgs	40	15,634	14,482	3	75	1,018	-	31,252
	Kshs	16,000	4,438,800	3,535,740	1,200	75,000	306,750	-	8,373,490
Dec	Kgs	10	33,737	22,691	402	40	1,179	-	58,059
	Kshs	4,000	5,097,650	6,689,060	170,800	40,000	356,600	-	12,358,110
Total	Kgs	178	154,355	179,307	1,912	1,182	17,925	3,130	357,989
	Kshs	32,800	39,148,150	48,763,110	908,200	1,182,000	4,957,604	30,206	95,022,070

## 2.0 AQUACULTURE (FISH FARMING)

### 2.1 INTRODUCTION

Freshwater aquaculture development in Kenya in recent years has been fast growing. This has been mainly the result of a nationwide fish farming mass campaign as part of the Economic Stimulus Programme launched by the Government of Kenya (GoK) during the period 2009-2013 and currently the Aquaculture Business development project. As a result, the area of fishponds has increased and other support has been provided along different aquaculture value chains.

Aquaculture sector is gaining momentum as production from catch fisheries decreases and demand increases due to population growth. There is already a significant gap (12,356MT in 2017), between the projected demand and production of fish, which is expected to increase and is projected to be 360,000MT/year by 2025. This lack of supply has resulted in a continuous decline of per capita average consumption, due to rising prices and limited availability. This shows the significant domestic growth potential of the aquaculture sector. The GoK is looking into ways of promoting aquaculture and using fish products for food relief programmes as a means to enhancing food security and improving health.

Mariculture production of seaweeds practiced commercially, mainly at Kibuyuni in south coast and planned for uptake in other areas as it has demonstrated that seaweed production can succeed in Kenya.

In 2020, fish farming production was 19,945 metric tons with a farm gate value of 6,303million Kenya Shillings compared to 18,542 metric tons valued at 5,581 million Kenya shillings in 2019. This production reflected an increase of 7.5 % in Quantity and an increase of 12.9% in value. The total production from Mariculture was 85 MT valued at 2119 Million. This production reflected an increase of 11.8% in total catch and value from last year's (2019) production of 76 MT valued at Kshs1.89 Million.

*Table 2. 1 Fish landings by Weight and Value from Aquaculture, mariculture and cage culture 2016-2020*

Years	Aquaculture		Mariculture		Cageculture	
	weight in MT	Value in '000 Kshs.	weight in MT	Value in '000 Kshs.	weight in MT	Value in '000 Kshs.
2016	14,952	4,253,844	35	1,050	-	-
2017	12,356	3,691,046	51	1,530	228	79,656
2018	15,320	4,480,875	64	1,920	963	279,838
2019	18,542	5,581,142	76	1,895		
2020	19,945	6,303,617	85	2,119		

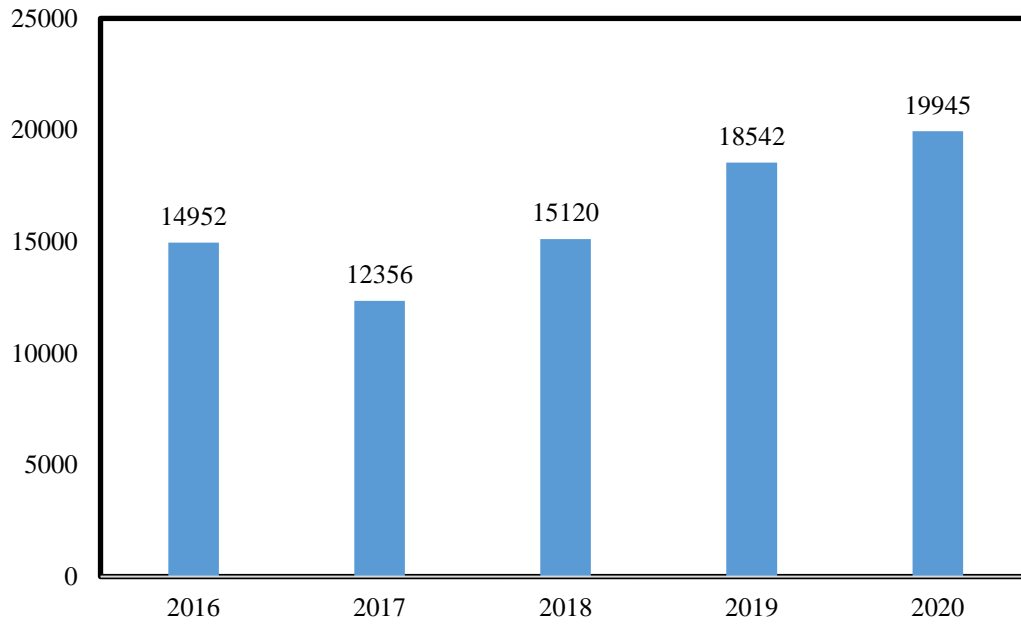


Fig 2. 1 Trends of Aquaculture, cageculture and mariculture fishery 2016-2020

In terms of species composition of harvested fish in various fresh aquaculture establishments, the proportion are; Oreochromis niloticus 75%, clarius gariepinus 17% and Onchorynchus mykiss 5% of the total quantity harvested.

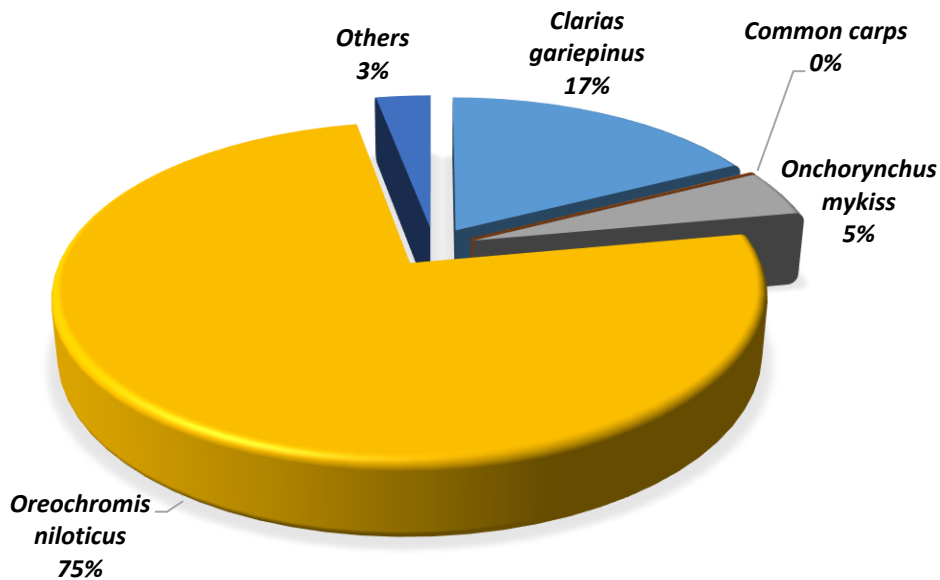


Fig 2. 2 Aquaculture production by Species 2020

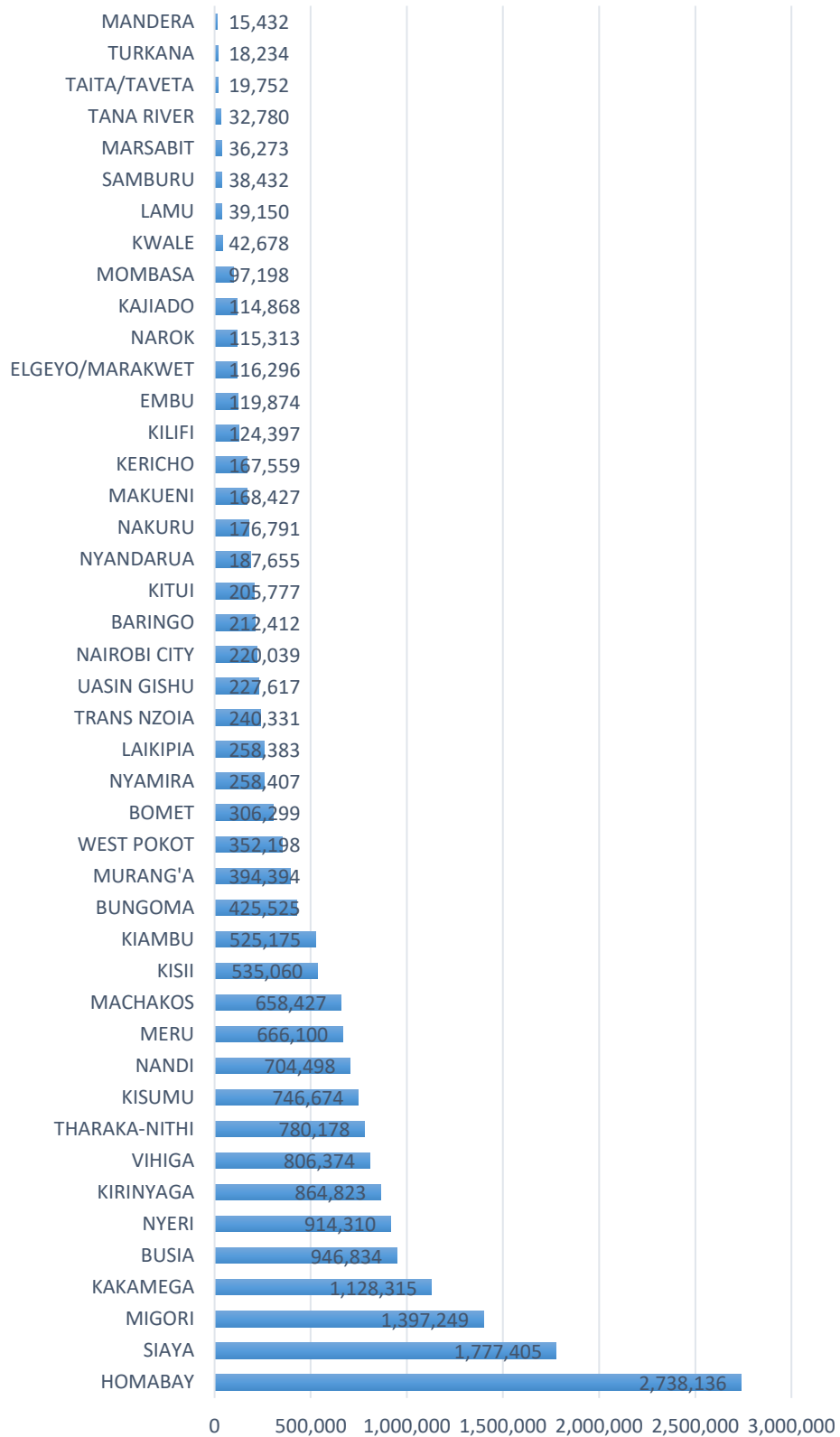


Fig 2. 3 Aquaculture production by counties 2020

### 3.0 MARINE FISHERY

During the year 2020 total production of marine landings was 25,741 metric tons with an ex-vessel value of 5,663 million Kenya shillings. This was a decline of 7.2% in quantity and 15% increase in value compared to 2019 figures of 27,740 metric tons with an ex-vessel value of 4923 million Kenya shillings.

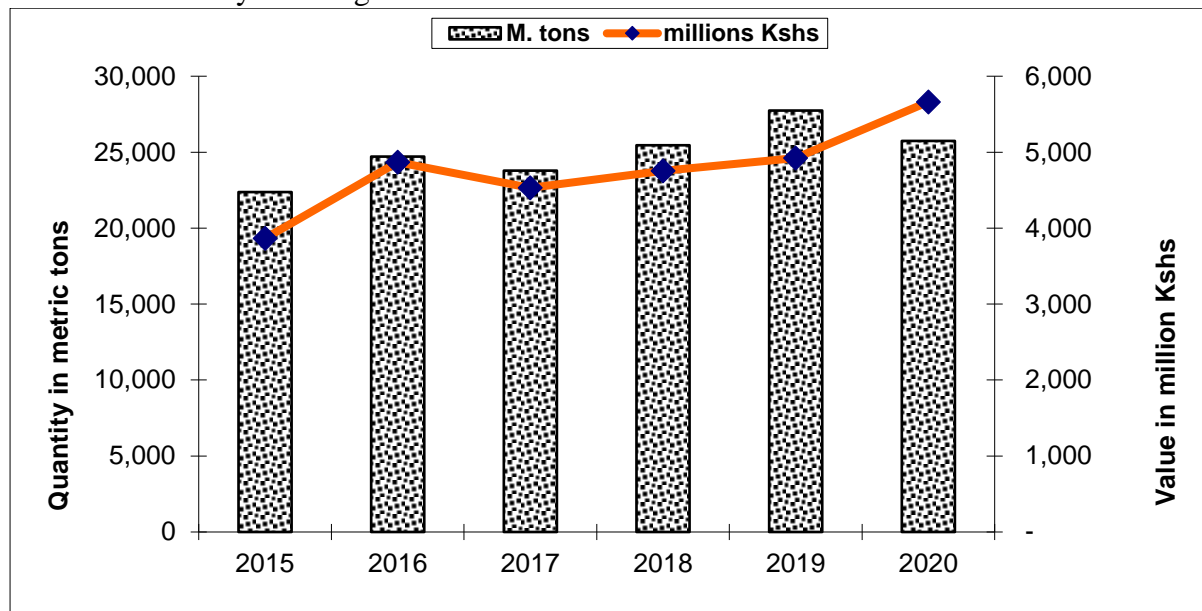


Fig 3. 1 Trends of marine fish production by quantity and value 2015-2020

### 3.1 MARINE ARTISANAL LANDINGS

During the year under review total production of artisanal marine landings was 23,646 metric tons with an ex-vessel value of 4,835 million Kenya shillings. This was a decline of 7.8% in quantity and 7.9% increase in value compared to 2019 figures of 25,670 metric tons with an ex-vessel value of 4,478 million Kenya shillings.

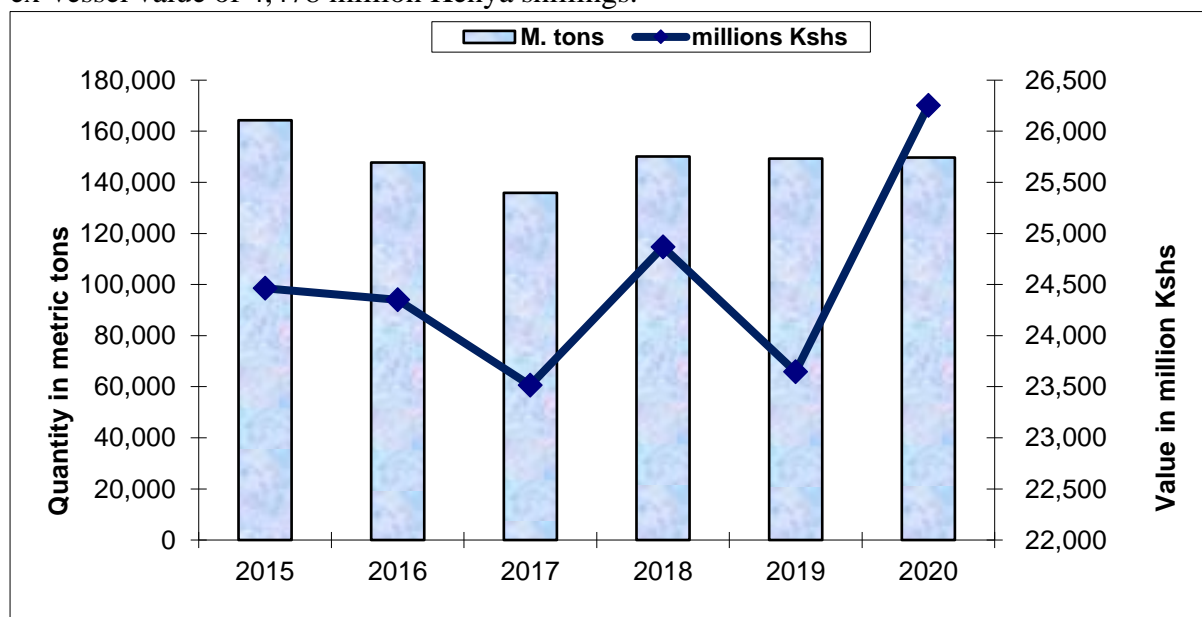


Fig 3. 2

In 2020, Demersals dominated artisanal marine fisheries catch accounting for 53% (12,544 metric tons) of the total landings. Pelagics contributed 23% (5,398 metric tons), miscellaneous accounted for 8% (1,925 metric tons), Crustaceans contributed 8% (1,591 metric tons) and Sharks & Rays and sardines accounted for 9% (2188 metric tons).

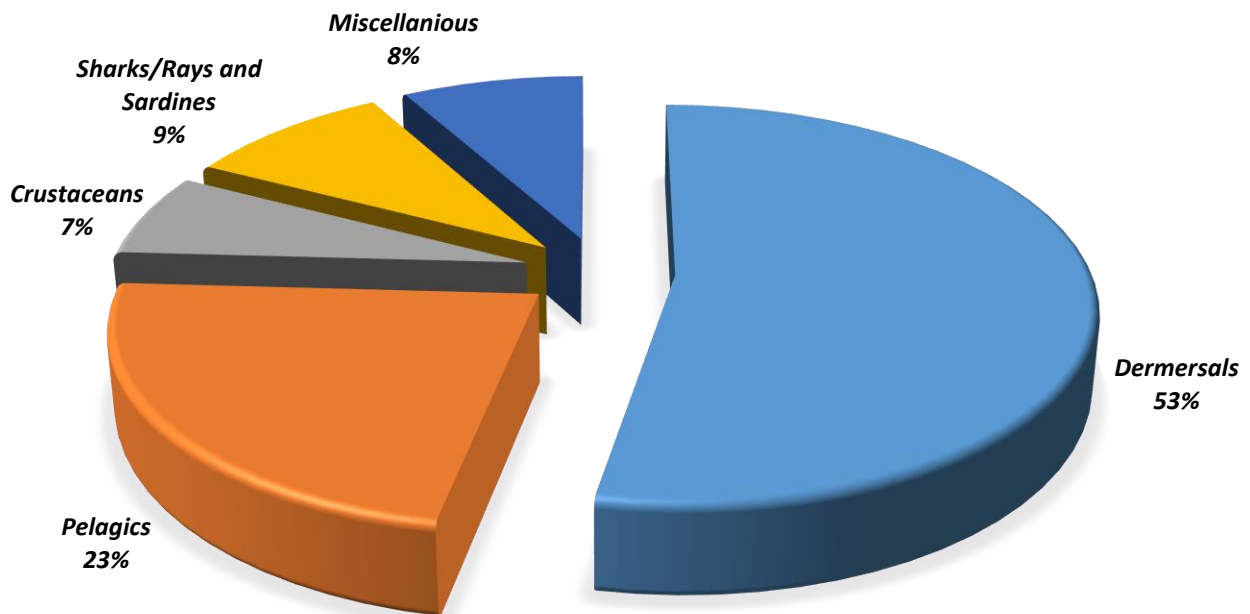


Fig 3. 3 Percentage contribution of marine fish species groups 2020

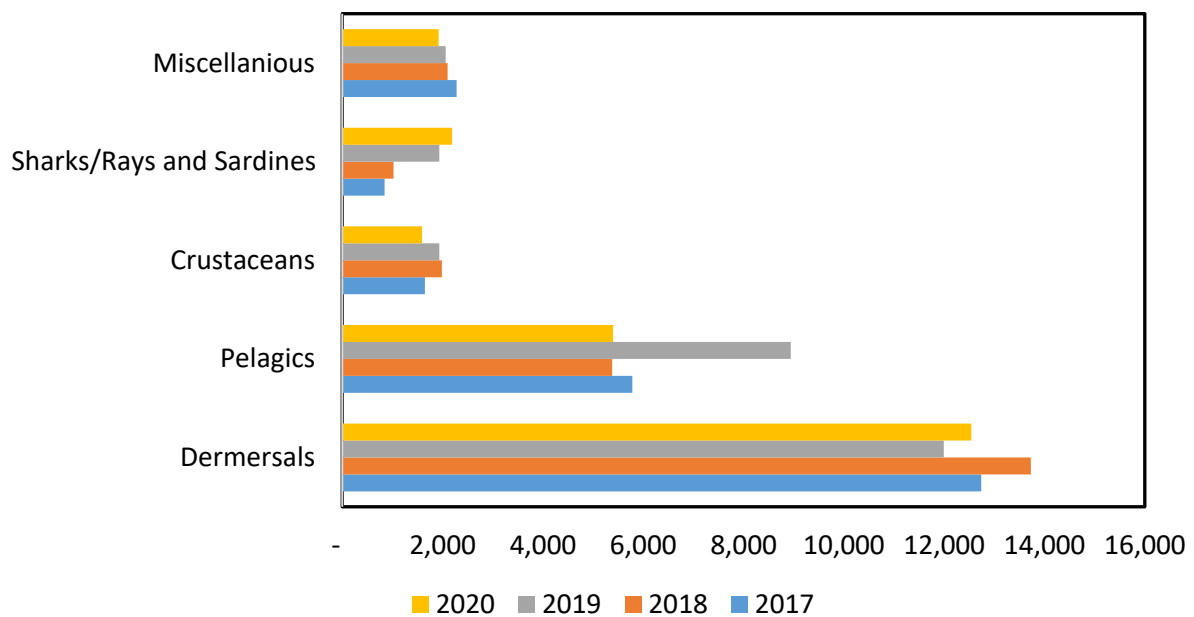


Fig 3. 4 Trend of landing of marine fish species groups 2017-2020

In this reporting period, Kwale county contributed the highest quantity of marine artisanal landing of 9,462 MT (40% of the total landings) with an ex-vessel value of Ksh.1,307 million. Lamu county contributed 7,089 MT (30%) with ex- vessel value of Ksh1,207 million, followed by Kilifi county with 4,452 MT (18.8%) with ex- vessel value of Ksh.1, 273 Million. Mombasa contributed 1,997 MT (8.4%) with ex-vessel value of Ksh.918 Million with Tana River county contributing the least, 646 MT (2.7%) with ex-vessel value of Ksh.129 Million. See Figure 5 below.

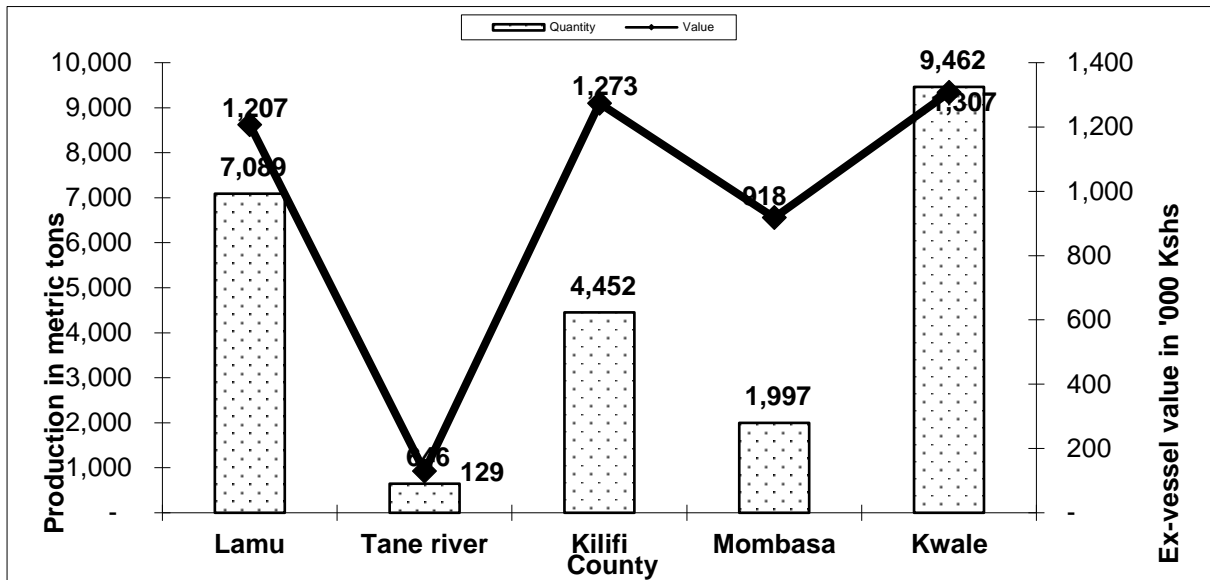


Fig 3. 5 Marine fish production by Quantity, Value and Counties 2020

Table 3. 1 Marine fish landings by species, weight and value 2017-2020

SPECIES		2017		2018		2019		2020	
Demersals		Catch (Mt)	000 Kshs	Catch (Mt)	000 Kshs	Catch (Mt)	000 Kshs	Catch (Mt)	000 Kshs
Siganidae	Rabbit fish	1,985	325,139	2,006,205	268,879,471	1,859	288,036	2,479,485	395,659,665
Lutjanidae	Scarvenger	1,476	233,327	1,369,450	193,955,728	726	113,280	1,983,972	276,776,208
Lethrinidae	Snapper	1,912	334,255	1,958,613	235,796,823	1,849	258,568	1,196,411	152,614,173
Scaridae	Parrot fish	1,588	189,654	1,769,841	185,076,591	1,483	162,695	1,937,386	222,498,644
Serranidae	Rock cod	608	144,041	631,295	104,598,399	479	86,805	707,541	85,532,579
Haemulidae	Black	852	126,494	1,305,744	197,975,491	1,013	167,094	1,008,616	158,546,106
Mugilidae	Mulletts	489	60,589	623,648	77,011,126	698	88,565	683,253	155,638,022
Acanthuridae	Surgeon	673	102,613	839,757	142,587,404	649	108,047	790,196	72,909,471
Nemipteridae	Threadfin	-	-	-	-	-	-	-	-
Mullidae	Goat fish	321	56,803	329,471	54,823,622	280	49,300	392,599	60,649,854
Mixed demersa	Mixed	1,763	187,460	2,021,105	301,890,053	2,126	230,845	1,041,278	190,531,344
Gerreidae	Pouter	455	60,983	379,344	67,569,668	380	73,941	570,343	70,293,731
Scatophagidae	Streaker	157	15,332	313,474	74,094,166	258	72,505	89,153	7,888,384
Ariidae	Cat fish	457	54,376	179,377	22,707,819	194	22,898	347,342	45,326,315
<b>TOTAL</b>		<b>12,736</b>	<b>1,891,066</b>	<b>13,727,324</b>	<b>1,926,966,361</b>	<b>11,994</b>	<b>1,722,579</b>	<b>13,227,573</b>	<b>1,894,864,497</b>
<b>PELAGICS</b>									
Belonidae	Needle fishes	0	0	0	0	0	0	-	-
Scombridae	Little	2,077	411,329	1,894,481	323,291,822	2,737	363,699	1,952,565	444,091,455
Carangidae	Cavalla	899	147,141	942,939	174,412,458	1,553	170,879	820,164	174,893,737
Sphyrnaeidae	Barracudas	729	115,885	609,959	141,505,600	1,187	98,456	487,246	104,054,180
Hemiramphidae	Halfbeaks	-	-	-	-	-	-	-	-
Clupeidae	Sardines	543	62,344	634,163	70,108,336	2,015	148,480	1,151,953	81,556,379
Engraulidae	Anchovies	-	-	-	-	-	-		
Istiophoridae	Sail fish	200	35,462	175,962	28,552,294	201	25,858	122,613	31,235,920
Xiphiidae	Swordfishes	43	11,328	-	-	-	-	136,840	23,152,983
Chirocentridae	Wolf Herrings	-	-	-	-	-	-		
	Mixed Pelagics	768	106,951	610,256	95,182,045	756	154,276	958,553	189,502,014
Chanidae	Milk fish	228	29,231	265,646	51,347,915	292	31,932	153,561	34,188,389
Menidae	Moonfish	0	125	-	-	-	-		
Congridae	Eel	4	466	-	-	-	-		
Coryphaenidae	Dolphin fish	287	7,810	247,867	36,346,700	191	20,991	82,932	14,931,580
<b>TOTAL</b>		<b>5,778</b>	<b>928,072</b>	<b>5,381,273</b>	<b>920,747,170</b>	<b>8,932</b>	<b>1,014,571</b>	<b>5,866,427</b>	<b>1,097,606,635</b>
<b>SHARKS &amp; RAYS</b>		842	147055	770489	128870132	564	103399	758,336	156,169,984
Mixed species		0	0	253,389	39,362,858	179	24,770	278,365	60,919,815
<b>TOTAL</b>		<b>842</b>	<b>147055</b>	<b>1023878</b>	<b>168232990</b>	<b>743</b>	<b>128169</b>	<b>1036701</b>	<b>217089799</b>
<b>CRUSTACEANS</b>									
Palinuridae	Lobsters	300	382,870	423,899	407,971,399	347	426,966	448,541	391,072,123
Penaeidae	Crabs	584	249,399	664,407	266,601,460	641	287,424	666,730	289,376,857
Portunidae	Prawns	763	284,675	899,178	377,961,630	946	412,343	475,397	238,317,048
<b>TOTAL</b>		<b>1,647</b>	<b>916,944</b>	<b>1,987,484</b>	<b>1,052,534,489</b>	<b>1,934</b>	<b>1,126,733</b>	<b>1,590,668</b>	<b>918,766,028</b>
<b>MISCELLANEOUS</b>									
Octopodidae	Octopus	1,469	244,389	1,429,559	261,685,572	939	224,547	962,041	186,793,946
Loliginidae	Squids	661	99,254	553,639	148,880,211	614	147,290	441,183	107,906,819
Sepiidae	Cuttlefish	-	-	-	-	-	-	-	-
Holothuridae	Beche-de-mers	86	47,692	81,828	28,276,031	356	96,212	216,560	230,472,150
	Oysters	41	5,970	35,989	3,818,516	155	17,474	189,048	40,164,614
	Marine shells	25	585	-	-	-	-	116,624	142,046,429
<b>TOTAL</b>		<b>2,282</b>	<b>397,890</b>	<b>2,101,015</b>	<b>442,660,330</b>	<b>2,064</b>	<b>485,523</b>	<b>1,925,456</b>	<b>707,383,958</b>
<b>TOTAL MARINE</b>		<b>23,285</b>	<b>4,281,027</b>	<b>24,220,974</b>	<b>4,511,141,340</b>	<b>25,667</b>	<b>4,477,575</b>	<b>23,646,826</b>	<b>4,835,710,918</b>



**Table 8: Marine fish landing by species, weight, value and by counties 2020**

Zoological	Kilifi		Kwale		Lamu		Mombasa		Tana River		Total	
	Catch (MT)	Value(,000)	Catch (MT)	Value(,000)	Catch (MT)	Value(,000)	Catch (MT)	Value(,000)	Catch (MT)	Value(,000)	Catch (MT)	Value(,000)
Demersals												
Rabbit fish	559	163,075	713	56,309	1,008	116,249	181	56,706	18	3,321	2,479	395,660
Scavenger	140	43,599	488	37,768	1,195	138,446	146	54,209	15	2,754	1,984	276,776
Snapper	84	26,635	281	16,772	753	87,687	45	14,264	33	7,256	1,196	152,614
Parrot fish	135	29,024	475	28,191	1,214	132,025	88	28,020	26	5,238	1,937	222,499
Surgeon fish	69	13,543	393	6,971	9	970	56	18,373	17	2,647	544	42,504
Unicorn fish	53	9,566	147	7,524	7	705	26	10,191	13	2,419	246	30,406
Grunter	38	9,904	93	7,280	145	16,461	40	12,808	17	2,973	333	49,426
Pouter	58	18,319	258	17,607	226	25,413	27	8,721	2	234	570	70,294
Black skin	79	20,863	134	7,936	323	39,349	129	38,859	11	2,113	675	109,120
Goat fish	70	22,241	148	11,232	138	16,631	22	7,530	15	3,016	393	60,650
Steaker	0	60	69	4,563	4	373	-	-	16	2,893	89	7,888
Rock cod	91	23,820	350	10,860	187	22,737	66	25,288	14	2,827	708	85,533
Cat fish	39	8,054	83	4,319	90	9,629	5	1,270	130	22,054	347	45,326
Mixed demersals	295	68,694	301	15,075	338	39,912	73	60,601	35	6,250	1,041	190,531
<b>TOTAL</b>	<b>1,711</b>	<b>457,397</b>	<b>3,932</b>	<b>232,407</b>	<b>5,636</b>	<b>646,586</b>	<b>903</b>	<b>336,840</b>	<b>361</b>	<b>65,995</b>	<b>12,544</b>	<b>1,739,226</b>
<b>PELAGICS</b>												
Cavalla jacks	102	33,093	489	108,503	207	24,891	14	6,942	8	1,464	820	174,894
Mullets	318	103,559	135	23,332	214	25,305	4	1,138	13	2,303	683	155,638
Little mackerel	274	65,486	372	53,669	-	-	23	6,522	15	2,750	685	128,427
Barracudas	113	31,036	220	41,585	83	9,666	55	19,048	15	2,719	487	104,054
Milk fish	32	8,924	45	7,808	30	3,596	31	10,726	16	3,135	154	34,188
King fish	230	69,650	193	52,169	26	3,305	16	5,272	13	2,761	478	133,157
Queen fish	39	8,599	42	5,949	39	4,578	7	2,074	9	1,953	137	23,153
Sail fish	55	16,623	27	5,686	19	2,722	11	3,432	11	2,771	123	31,236
Bonitos/Tuna	380	101,332	293	61,385	96	15,673	1	204	20	3,913	789	182,507
Dolphins	19	3,706	64	11,225	-	-	-	-	-	-	83	14,932
Mixed Pelagics	576	122,984	295	54,559	46	5,606	1	129	41	6,224	959	189,502
<b>TOTAL</b>	<b>2,138</b>	<b>564,994</b>	<b>2,176</b>	<b>425,870</b>	<b>760</b>	<b>95,343</b>	<b>163</b>	<b>55,488</b>	<b>161</b>	<b>29,993</b>	<b>5,398</b>	<b>1,171,688</b>
Sharks & Rays	151	48,804	317	45,137	116	12,670	159	46,208	15	3,350	758	156,170
Sardines	48	10,730	1,068	63,860	-	-	24	5,038	11	1,928	1,152	81,556
mixed fish/Others	-	-	111	18,341	-	-	157	40,771	10	1,808	278	60,920
<b>TOTAL</b>	<b>199</b>	<b>59,535</b>	<b>1,497</b>	<b>127,338</b>	<b>116</b>	<b>12,670</b>	<b>340</b>	<b>92,017</b>	<b>36</b>	<b>7,086</b>	<b>2,189</b>	<b>298,646</b>
<b>CRUSTACEANS</b>												
Lobsters	49	73,770	114	86,900	123	181,347	153	41,456	9	7,599	449	391,072
Prawns	47	21,689	414	155,528	50	24,801	136	82,392	20	4,966	667	289,377
Crabs	28	10,906	194	52,808	220	164,856	21	6,797	12	2,951	475	238,317
<b>TOTAL</b>	<b>125</b>	<b>106,365</b>	<b>722</b>	<b>295,236</b>	<b>392</b>	<b>371,004</b>	<b>311</b>	<b>130,645</b>	<b>41</b>	<b>15,516</b>	<b>1,591</b>	<b>918,766</b>
<b>MISCELLANEOUS</b>												
Oysters	4	768	154	32,804	-	-	31	6,593	-	-	189	40,165
Beche-de-mer	4	1,153	60	21,013	30	59,217	123	149,088	-	-	217	230,472
Octopus	202	56,251	593	101,562	120	17,971	12	3,383	35	7,627	962	186,794
Squids	68	26,813	329	71,567	22	3,179	10	2,613	12	3,735	441	107,907
Cowries	-	-	-	-	8	601	-	-	-	-	8	601
Shells	-	-	-	-	5	405	103	141,040	-	-	109	141,445
<b>TOTAL</b>	<b>278</b>	<b>84,985</b>	<b>1,136</b>	<b>226,946</b>	<b>185</b>	<b>81,373</b>	<b>279</b>	<b>302,718</b>	<b>47</b>	<b>11,362</b>	<b>1,925</b>	<b>707,384</b>
<b>TOTAL MARINE</b>	<b>4,452</b>	<b>1,273,275</b>	<b>9,462</b>	<b>1,307,797</b>	<b>7,089</b>	<b>1,206,977</b>	<b>1,997</b>	<b>917,708</b>	<b>646</b>	<b>129,953</b>	<b>23,647</b>	<b>4,835,711</b>

## 3.2 MARINE INDUSTRIAL LANDINGS

### Trawling

The prawn fishery sector is significant to the national economy of Kenya as well as the coast region by contributing to employment, food security and income generation through local and export markets. To optimize and sustain the benefits from the fishery a management plan was developed and gazetted in 2010.

### Shallow water prawn trawl fishery

During the year under review, the semi-industrial fleet had 4 licensed trawlers. A total of 273 tons of prawns, assorted fin fish species, others and trash were landed by the industrial trawlers (Table 3.2.). This production reflected 48% decline in total catch from last year's (2019) production of 535 tons. The landed catch comprised of prawns, assorted fin fish species, others and trash were landed by the industrial trawlers (Table 3.2). The other species consisted of octopus, squids, cuttlefish, lobsters and Crabs.

*Table 3. 2 Monthly fish catch from shallow prawn trawl fishery, 2020*

<b>Shallow Prawn Trawlers</b>	
Prawns (Kg)	67,871
Fin Fish (Kg)	186,863
Octopus (Kg)	8
Squids (Kg)	1,431
Cuttlefish (Kg)	280
Lobsters (Kg)	48
Crabs (Kg)	36
Others (Kg)	37
Trash (Kg)	16,420
	<b>272,994</b>

### Deep water trawl fishery

#### Catch, Effort, Species Composition and Value of Landings in 2020

##### Fishing Effort

A total of 5 industrial trawl vessels were licensed to fish for deep water fish resources in 2020. While 3 of the vessels fished during shallow water off season, two vessels fished from January to December.

##### Species Composition and Value of Landings in 2020

During the year under review, a total of 942.5 tons which was an increase compared to a total of 625.8 tons caught in 2019. This could be attributed to the fact that deep water trawlers carried out their fishing operations throughout the year in 2020.

Table 3. 3 Monthly fish catch from trawl fishery off Malindi-Ungwana Bay (deep sea), 2020

<b>Deep water prawn trawlers</b>	
Prawns (Kg)	93,716
Fin Fish (Kg)	800,776
Octopus (Kg)	80
Squids (Kg)	6,774
Cuttlefish (Kg)	2,450
Lobsters (Kg)	153
Crabs (Kg)	40
Others (Kg)	0
Trash (Kg)	38,530
	942,519

### Deepwater crab pot fishery

Two deep water crab longline pot vessels were licensed to fish beyond 12 nm. These vessels target deep water crab fishery of the species *Chaceon fenneri* . The total number of traps deployed were 147,366. During 2020, a total of 171.8 tons of deep water crabs were caught.

Table 3.4: Total catch from the deep-sea pot-crab fishery, 2020

Table 3. 4 Quantity of crabs caught by traps and by species

CRAB POTTING DATA				Totals	
Species	Chaceon Fenneri	Crabs	Crabs		
No. of traps	30568	0	43115	73683	147366
Crab Kgs.	35587	7409	42901	85897	171,794

### Industrial longline fishery

#### Longlining

The longline fishery is conducted beyond the 12 nautical miles, within the 200 nautical miles in the Kenya's Exclusive Economic Zone (EEZ) and the high seas. Within the year under review, three industrial longline vessels were licensed to fish in the Kenya EEZ. The fishing effort was based on number of days fished, the number of hooked deployed, average length of setline and hours fished per set. During the year 2020, 668,546 Kgs of assorted fish landed as tabulated below (table 3.5).

Table 3. 5 Quantity of fish landed by industrial longlining

Species	Pieces	Weight (Kgs)
Barracuda	124	788
Bigeye tuna	1,406	68,694
Blue sharks	1,961	64,207
Common dolphinfish/ Dorado	20	152

Indopacific sail fish	283	5,027
Mako sharks	280	21,226
Oil fish/ Escolar	131	845
Other marlins	612	19,345
Other sharks	2	53
Other species	1,229	8,918
Silky sharks	355	7,342
Sword fish	16,235	331,604
Sail fish	286	5,044
Yellowfin Tuna	3,687	131,899
Bonito	1	21
Cochinilla	527	3,381
		<b>668,546</b>

## 5.0 EXPORTS OF FISH AND FISHERY PRODUCTS

During the period under review, a total of 8,372 metric tons of fish and fishery products were exported earning the country Kshs. 2.7 billion in foreign exchange. This was a 5.1% decline equivalent to 449 metric tons from the previous year of 8821 metric tons. The main markets for the marine ornamental fishes were the EU, USA, China and Japan

*Table 5. 1 Destination of exports by weight and value.*

Country	Exports (Kgs)	Value (Kshs)
Italy	861,968	435,459,574
Uganda	78,824	379,809,504
Netherlands	818,299	371,363,642
Spain	694,431	282,973,362
Hong Kong	112,655	266,518,896
Israel	349,990	197,181,414
Thailand	64,405	142,323,529
China	600,294	119,377,381
Portugal	245,855	108,293,114
Democratic Rep Of Congo	3,240,160	79,758,841
United Arab Emirates	274,078	69,161,513
Reunion	89,537	37,781,149
Rwanda	79,874	30,870,475
France	18,839	22,467,660
Greece	44,074	22,372,636
Qatar	29,803	22,224,623
Japan	155,806	20,512,747
United States Of America	125,625	18,960,944
Others	487,169	107,105,042
<b>TOTAL</b>	<b>8,371,686</b>	<b>2,734,516,046</b>

## 6.0 IMPORTS OF FISH AND FISHERY PRODUCTS

In 2020, Kenya imported 19,891 metric tons of fish and fishery products worth Kshs 2.25 billion (Table 6.1). The value of imported fish was 0.48 billion Kenya shillings less than the exported fish. The imports originated largely from Asian countries, notably China, Korea and Vietnam with most of the *Oreochromis niloticus* was imported from China, Tanzania and Uganda

Table 6. 1 Origin of import by weight and value

Country	Imports Kgs	Value (Kshs)
CHINA	13,514,707	1,596,520,400
KOREA REPUBLIC (SOUTH KOREA)	1,428,100	162,787,579
TANZANIA	3,136,473	130,758,388
THAILAND	525,362	96,913,327
UGANDA	212,694	71,276,003
NORWAY	133,281	40,849,366
VIETNAM	47,405	36,351,568
OMAN	356,540	35,514,204
TAIWAN	144,000	15,889,391
INDIA	126,270	15,829,651
UNITED KINGDOM	14,589	9,377,873
SOMALIA	69,583	6,203,977
PAKISTAN	24,000	5,394,657
ARGENTINA	28,000	5,103,005
UNITED ARAB EMIRATES	28,418	3,952,787
INDONESIA	15,892	3,105,958
ITALY	10,753	3,037,354
DJIBOUTI	39,372	3,020,499
JAPAN	24,000	2,612,750
NETHERLANDS	4,222	1,746,868
FRANCE	1,652	1,302,479
SINGAPORE	1,114	1,214,941
OTHERS	5,357	3,098,336
<b>TOTAL</b>	<b>19,891,783</b>	<b>2,251,861,361</b>