Trout Fish

Pangasius

Tilapia

The fisheries sector in Khyber Pakhtunkhwa (KPK) presents new opportunities for growth and development. With its rich water resources and vast potential for aquaculture, KPK can become a hub for fish production, processing, and export.

Fisheries Potencials in KP

New Oppertunities

Researcher: Kiran Afridi

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EXECUTIVE SUMMARY

The fisheries sector in Pakistan is important for the country's economy and food security, with marine fisheries being the primary contributor. Pakistan produces a variety of fish species from inland and marine waters, and aquaculture farming is done in all provinces. However, the sector faces challenges such as overfishing, poor infrastructure, and limited access to credit and technology. In 2019, marine production was 517,000 metric tons, while inland capture fisheries production was 932,625 metric tons. The sector has potential for growth, but needs to address these challenges to ensure sustainability.

The investment required for aquaculture or fisheries sector projects in Pakistan can vary depending on the size and scope of the project, the type of fish or seafood being cultivated, and the location of the operation. Small-scale aquaculture projects may require only a few thousand to tens of thousands of Pakistani rupees, while larger commercial ventures may require several hundred thousand to millions of Pakistani rupees.

Khyber Pakhtunkhwa in Pakistan is a hub for trout farming and other popular fish species like mahseer, catfish, carp, tilapia, and snakehead. The government lends support to fish farmers in the form of technical assistance and subsidies on equipment and fish feed. The Directorate of Fisheries generates considerable revenue through fishing licenses, fish seed and fingerling sales, and technical services to farmers. In 2020-21, the trout production in KPK was recorded at 3,503.97 metric tons, worth 1,328 million Pakistani rupees. While the sector holds significant potential with its abundant water resources and diverse ecosystem, it faces numerous challenges such as overfishing, pollution, illegal fishing practices, and poor infrastructure, that require attention to ensure the sustainability of the fisheries sector and improve the livelihoods of local communities through aquaculture, value addition, export markets, research and development, and training and education.

CHAPTER 1: INTRODUCTION

Fishing, as a subsector of agriculture, contribute significantly to the national economy and food security. Fishing directly contribute to food supply, a source of livelihood for coastal residents, export revenues, and economic growth. Fisheries are mainly categorized in three types' Inland Fisheries, Marine Fisheries and fisheries through aquaculture. Pakistan is known to produce a wide variety of fishes from both inland and marine waters. The marine fisheries sector is the main category contributing about 64% as compared to inland which contributes 36% in terms of production. Marine fish is concentrated in the southern part of Pakistan including Sindh and Balochistan and inland fish is found in Sindh, Punjab and KPK including Gilgit-Balistan.

According to the latest available data from the Pakistan Bureau of Statistics, the contribution of the fisheries sector to Pakistan's Gross Domestic Product (GDP) in the fiscal year 2020-21 was 0.87%. In terms of value, the fisheries sector contributed 171.9 billion Pakistani rupees (approximately 1.1 billion USD) to the country's GDP during the same period. It's worth noting that the fisheries sector in Pakistan includes marine, inland, and aquaculture sub-sectors, and provides employment to a significant number of people, particularly in coastal areas.

According to the data from the State Bank of Pakistan, the fisheries sector's total exports in Pakistan were worth USD 451 million in the fiscal year 2020-21. In the same period, the total exports of Pakistan were worth USD 25.3 billion. Therefore, the fisheries sector's total exports represent about 1.78% of Pakistan's total exports. Fishery plays an important role in the domestic economy. The major 10 importing countries of Pakistan for Fisheries are Thailand, China, Vietnam, UAE, Republic of Korea, Malaysia, Kuwait, Japan, Saudi Arabia, & Indonesia. Over the years, Pakistan's fish imports have almost declined from 22 million in 2017 to 9 million in 2021.

According to the Food and Agriculture Organization of the United Nations (FAO), Pakistan's total fisheries production in 2019 was 3,334,268 metric tons. This included both marine and inland capture fisheries as well as aquaculture production. The marine capture fisheries production was 605,960 metric tons, while the inland capture fisheries production was 932,625 metric tons. The aquaculture production was 1,795,683 metric tons. While Khyber Pakhtunkhwa produces inland fisheries and produced 1,132 metric tons in 2019 which is only 0.03% of total production.

It's worth noting that these numbers are subject to change year-to-year based on a variety of factors, including weather, fishing practices, and government regulations. There are about 70 commercial species of fish including Sardine, Hilsa, Shark, Mackerel, Butterfish, Pomfret, Sole, Tuna, Sea Bream, Jew Fish, Cat Fish and Eel. Pakistan is 46th exporter of fish in the world. Some of the value added products of fish are fish cutlet, fish sev, fish wada, fish kheema etc. While in Khyber Pakhtunkhwa commonly found fish species are: Brown Trout, Rainbow Trout, Mahseer (Tor putitora), Snakehead (Channa spp.), Catfish (Clarias batrachus), Rohu (Labeo rohita), Silver Carp (Hypophthalmichthys molitrix), Grass Carp (Ctenopharyngodon idella), Common Carp (Cyprinus carpio), and Tilapia (Oreochromis niloticus).

CHAPTER 2: AN OVERVIEW OF FISHERIES SECTOR IN PAKISTAN

The fisheries sector is an important contributor to Pakistan's economy, providing employment opportunities for thousands of people and contributing to the country's food security. Pakistan's fisheries sector comprises marine and inland capture fisheries, as well as aquaculture production. The country has a long coastline and a number of rivers, lakes, and other aquatic habitats, which support a diverse range of fish species. Despite the potential for growth in the sector, Pakistan's fisheries industry faces a number of challenges, including overfishing, poor infrastructure, and imited access to credit and technology. In this context, it is important to take a closer look at the fisheries sector in Pakistan, its current state, and the challenges and opportunities it presents for the country. The table below indicates aquaculture fish production from 1995 to 2018 for Asian countries, although Pakistan’s production is very less than other regions but still it is a good source of employment generation in the region.

Table 1: Aquaculture Fish Production in Asian Countries

Aquaculture Fish Production in Regions (000 tonnes)							
Region/selected countries	**1995**	**2000**	**2005**	**2010**	**2015**	**2018**	**Total**
Pakistan	14.8	12.5	80.6	140.1	151.2	159.1	**558.3**
China	15,856	21,522	28,121	35,513	43,748	47,559	**192,319**
India	1,658.80	1,942.50	2,967.40	3,785.80	5,260	7,066	**22680.5**
Indonesia	641.1	788.5	1,197.10	2,304.80	4,342.50	5,426.90	**14700.9**
VietNam	381.1	498.5	1437.3	2,683.10	3,462.40	4134	**12596.4**
Bangladesh	317.1	657.1	882.1	1,308.50	2,060.40	2,405.40	**7630.6**

Source: FAO 2019

MARINE FISHERIES IN PAKISTAN

Marine fisheries are an important component of the fisheries sector in Pakistan, as the country has a long coastline along the Arabian Sea, stretching over 1,000 km. The marine fisheries industry in Pakistan is predominantly artisanal, with small-scale fishing operations using traditional fishing methods. The most commonly caught fish species in Pakistani waters include sardines, mackerel, tuna, and shrimps. However, the marine fisheries industry in Pakistan faces a number of challenges, including overfishing, illegal fishing practices, and climate change. Overfishing has resulted in declining fish stocks in some areas, and there are concerns about the sustainability of the industry in the long term. According to the Data from Ministry of Food and Security the total marine production in 2019 was 517 thousand tons.

- Pakistan’s Coastline is more than 1000 Kilometers long
- Pakistan’s Exclusive Economic Zone (EEZ) covers an area of 240,000 sq. Km
- The Maritime Zone of Pakistan extends up to 350 nautical miles from the coastline.
- A number of about 300,000 people are directly employed to the Sector

INLAND FISHERIES IN PAKISTAN

Inland fisheries are an important component of the fisheries sector in Pakistan, contributing significantly to the country's food security and providing employment opportunities for thousands of people. According to the Food and Agriculture Organization of the United Nations (FAO), Pakistan's inland capture fisheries production was 932,625 metric tons in 2019. The major inland water bodies in Pakistan include the Indus River, its tributaries, and various canals and reservoirs. The most commonly caught fish species in inland waters of Pakistan include Rohu, Catla, and Silver Carp. However, the inland fisheries industry in Pakistan also faces a number of challenges, including pollution, habitat degradation, and overfishing.

Marine has always remained high as compared to inland production in Pakistan. The trend for fish production can be seen in Figure 1 which shows the inland and marine fish production has remained

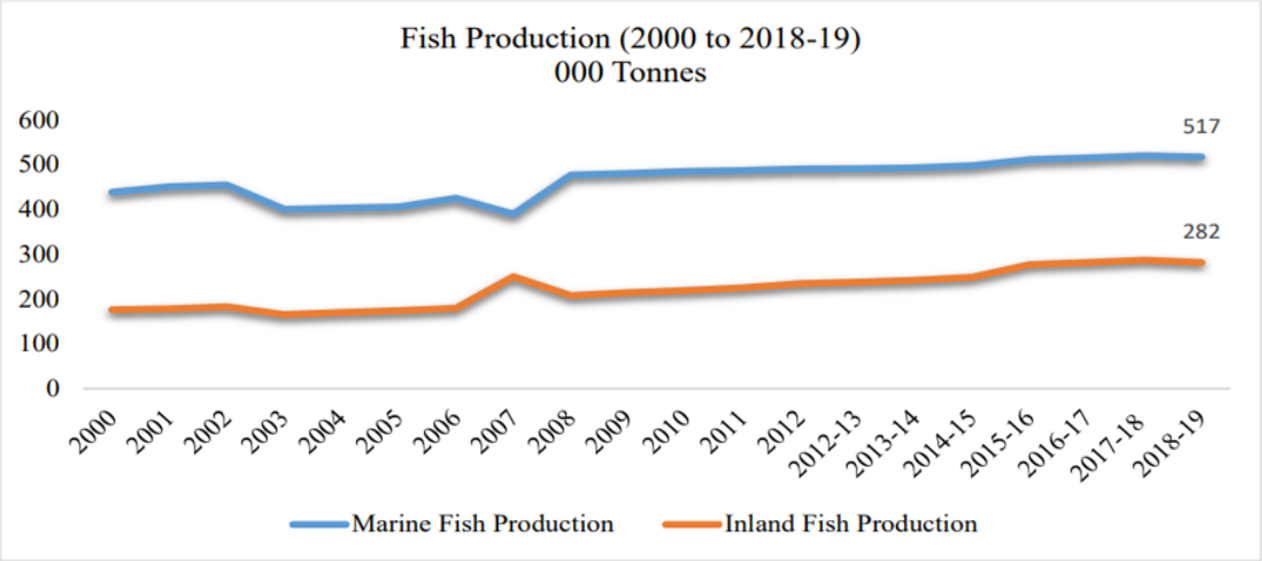
almost stagnant for a period of almost two decades from 2000 to 2019 for both categories of fish production.

Similarly, according to Ministry of Food and Security data, total inland output in 2019 was 282 thousand tonnes, which was much less than marine production. There are several reasons for this, the primary one being that Sindh province in Pakistan produces more marine fishery products. The detailed data on marine and inland fisheries production in four province of Pakistan is given in Annexure I. However, other causes include:

REASONS FOR LESS INLAND FISHERIES PRODUCTION IN PAKISTAN

1. **Limited Water Resources:** Pakistan is a predominantly arid country with limited water resources. The country has only a few large rivers and natural lakes that support freshwater fish production. The scarcity of water resources limits the potential for inland fisheries production.
2. **Climate:** The climate in Pakistan is hot and dry for most of the year. This makes it challenging to maintain the required water quality and temperature needed for fish farming. The high temperatures also cause high evaporation rates, which reduce water availability.
3. **Lack of Technology:** The inland fishery sector in Pakistan is mainly comprised of small-scale, subsistence fishers who lack access to modern fishing gear, boats, and equipment. As a result, the inland fisheries sector is less productive than the marine sector, which has a better infrastructure, modern technology, and skilled labor.
4. **Overfishing and Habitat Destruction:** Inland fisheries in Pakistan face the problem of overfishing and habitat destruction, mainly due to unsustainable fishing practices, such as using destructive gear and techniques, which lead to the depletion of fish stocks.
5. **Market Demand:** The demand for marine fish products is higher than freshwater fish products in Pakistan. This is because of the higher quality and taste of marine fish products, which fetch higher prices in the market.

Figure 1: Marine vs. Inland Production Comparison of Production



Source: Ministry of Food and Security

SPECIES FOUND IN PAKISTAN

Although more than 1,500 types of finfish and shellfish are found along the Pakistan coast, about 200 species are commercially harvested. The commercially important resources include nearly 250 demersal fish species, 50 small pelagic fish species, 15 medium-sized pelagic species and 20 large pelagic fish species. In addition to this, there are also 15 commercial species of shrimp, 12 of cephalopods and 5 of lobster. The detail of fish species found in Pakistan, their occurrence, production and categories are summarized in table below:

Table 2: Summary of Sea food/ Fisheries Species Found in Pakistan

Species	***Category***	***Occurrence***	***Production***
Pomfret	Marine	Sindh, Balochistan (Arabian Sea)	-
Prawns	Marine	Sindh, Balochistan (Arabian Sea)	22,601 metric tons
Lobsters	Marine	Sindh, Balochistan	43 metric tons

		Sindh, Balochistan (Arabian Sea)	
Crabs	Marine	Sindh, Balochistan (Arabian Sea)	1,133 metric tons
Squid	Marine	Sindh, Balochistan (Arabian Sea)	25,842 metric tons
Cuttlefish	Marine	Sindh, Balochistan (Arabian Sea)	12,023 metric tons
Barracuda	Marine	Sindh, Balochistan (Arabian Sea)	-
Tuna	Marine	Sindh, Balochistan (Arabian Sea)	22,446 metric tons
Kingfish	Marine	Sindh, Balochistan (Arabian Sea)	21,340 metric tons
Snapper	Marine	Sindh, Balochistan (Arabian Sea)	7,554 metric tons
Sardines	Marine	Sindh, Balochistan (Arabian Sea)	12,818 metric tons
Mackerel	Marine	Sindh, Balochistan (Arabian Sea)	5,450 metric tons
Catfish	Inlannd	Rivers, Lakes and Ponds Indus River Aquaculture ponds Reservoirs	65,669 metric tons

Shark	Marine	Arabian Sea	4,100 metric tons
Shrimp	Marine	Arabian Sea	86,680 metric tons
Oysters	Marine	Coastal water	152 metric tons
Clams	Marine	Arabian Sea	15,000 metric tons
Crayfish	Inland	Rivers Streams Fresh Water	50 metric tons
Sole	Marine	Arabian Sea	60,000 metric tons
Theila (Catla Catla)	Inland	Rivers Streams Fresh Water Man-made reservoirs (Punjab)	300,000 metric tons
Rohu (Labeo Rohita)	Inland	Rivers (Indus) Streams Fresh Water Man-made reservoirs (Punjab)	250,000 metric tons
Kalbans (Labeo Callasu)	Inland	Rivers (Indus) Streams Fresh Water Man-made reservoirs (Punjab)	30k-40k metric tons
Mirgal Mori	Inland	Rivers (Indus) Streams Fresh Water	30k-40k metric tons

		Man-made reservoirs (Punjab)	
Mahaseer (Barbus Eputitora)		Rivers Fresh water bodies Himalayan regions (Khuber Pakhtunkhwa)	-
Trout (Salmo Spp)	Inland	Northern regions Mountainous areas Gilgit-Baltistan Khyber Pakhtunkhwa	-
Mullee (Wallago Attu)	Inland	-	-
Murrel (Ophicephalus Morulium)	Inland	Indus River Fresh water bodies Mangla and Tarbela	-
Bhor (Barbut Tor)	Inland	Indus river Jhehlum river Chenab river Ravi river	-

Source: Pakistan Bureau of Statistics 2020

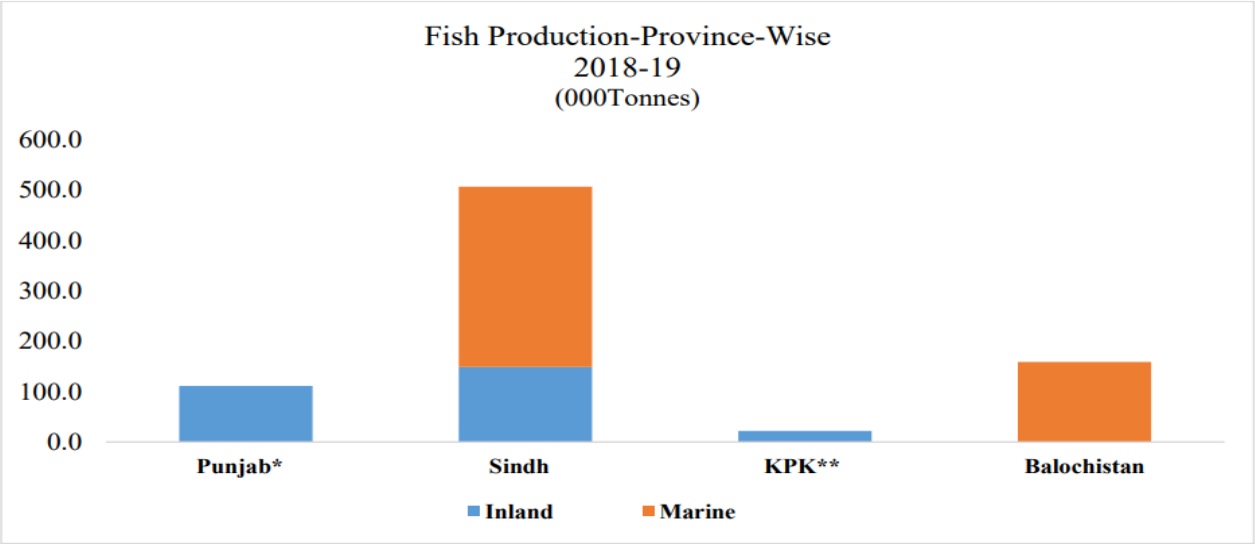
It is worth noticing that some of the species do not has exact figure for the total production of in Pakistan, as it can vary from year to year and depend on various factors such as climate, water conditions, and fishing practices. However, these species are popular and commonly consumed fish in Pakistan, and local fish farmers and fishermen harvest significant amounts of it every year.

PROVINCE-WISE FISH PRODUCTION

Pakistan is a country with a vast coastline and abundant freshwater resources, making it an ideal location for fish farming and fishing activities. The country's fish production is divided into four provinces: Sindh, Balochistan, Punjab, and Khyber Pakhtunkhwa.

1. Sindh is the largest fish producing province in Pakistan, accounting for almost 70% of the country's total fish production. The major fish species found in the province include prawns, pomfret, and lobsters. For year 2018-19 the total inland production in Sindh was 149 thousand tons while marine production was 358 thousand tons according to the data from Ministry of Food and Security Karachi. The province is producing highest number of fisheries production due to its climate and geographical location.
2. Balochistan is the second-largest province in terms of fish production, with a focus on seafood species like sardines, mackerel, and tuna. The province also has a significant fishing industry for crabs, lobsters, and prawns. For year 2018-19 the total inland production in Balochistan was null while marine was 159 thousand tons according to the data from Ministry of Food and Security Karachi.
3. Punjab, being a landlocked province, relies mainly on freshwater fish farming. The province produces a significant amount of carp, catfish, and tilapia. In recent years, the government of Punjab has invested heavily in the development of the aquaculture sector, leading to an increase in fish production. For year 2018-19 the total inland production in Panjab was 111 thousand tons while marine production were null according to the data from Ministry of Food and Security Karachi.
4. Khyber Pakhtunkhwa is a mountainous region with many rivers and streams, making it an ideal location for trout farming. The province produces a significant amount of trout, as well as other freshwater species such as catfish and carp. For year 2018-19 the total inland production in Khyber Pakhtunkhwa was 22 thousand tons while there is no data on marine production according to the data from Ministry of Food and Security Karachi. The province is producing highest number of fisheries production due to its climate and geographical location.

Figure 2: Province-Wise Fish Production in Pakistan

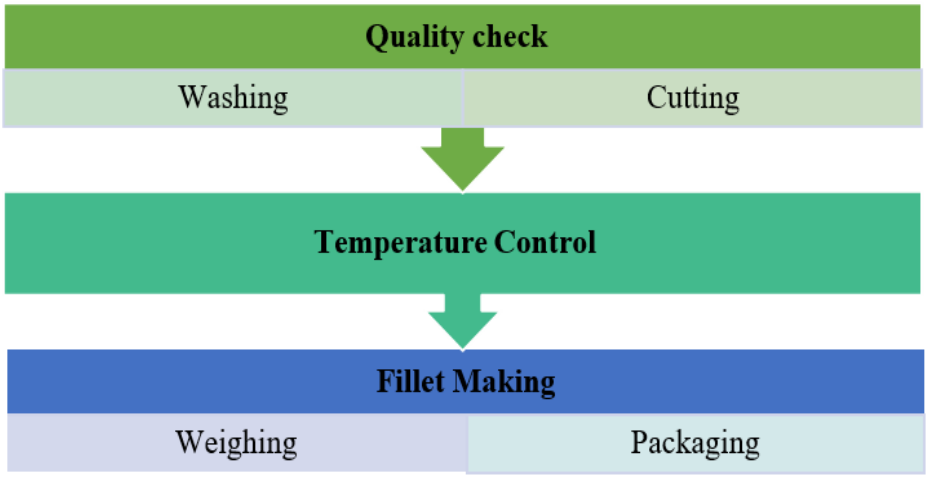


Source: Ministry of Food and Security Karachi

CHAPTER 3: PROCESSING FOR VALUE ADDITION OF FISHERIES PRODUCTS

The procedure listed below is used to create seafood items with additional value. There are, however, unique requirements for certain fish groups. Only the detailed processing of surimi and cuttlefish is shown in the diagram below.

Figure 3: Value Addition Process of Fisheries Products



Source: Qadri Noori Enterprise

The entire procedure entails three rounds of washing, cutting, and checking the weight and temperature of the collected fish. Cuttlefish scales must be manually scraped off, whereas surimi is processed entirely by machines. Cuttlefish are frozen using special chillers known as IQFs (Individual Quick Freezing Machines), which are then submerged in cold water to give them luster and color. Cuttlefish are processed by peeling them off and turning them into fillets for export, adding value.

To remove any metal fragments from fish and a variety of other tiny processors, metal detectors are utilized. After processing, blocks of minced beef measuring 10 kg each are created, which are then packaged. There are a maximum of 2 blocks per cartel. Vietnamese spring rolls, chicken nuggets, and fish balls are only a few examples of the cuisine products made using surimi that are exported to other countries. At this point, a reverse osmosis plant that controls water supply and suction is necessary. The daily requirement of cooling and freezing fish is satisfied by Ice Making Factory.

MACHINERIES REQUIRED FOR VALUE ADDITION PROCESS

The modern machines used by the top fish and seafood exporters of Pakistan for value addition are given in table below. This is the ideal scenario but most of the exporters are using traditional and labor intensive methods.

Table 3: Machineries used for Processing

Machineries	Cost
Fish Meat Separator	$1,900-$2,400
Individual Quick Freezing Machine (IQF)	$98,000-$115,000
Icing Machine	-
Metal Detector Machine	-
Contact Plate Freezer	-
Machine for Chilling	-

The minimum investment required in aquaculture or fisheries sector in Pakistan can vary widely depending on the size and scope of the project, the type of fish or seafood being cultivated, and the location of the operation.

For small-scale aquaculture projects, such as backyard fish farming or pond culture, the initial investment can be relatively low, ranging from a few thousand to tens of thousands of Pakistani rupees. On the other hand, larger commercial aquaculture ventures, such as fish farms or hatcheries, may require significant capital investment ranging from several hundred thousand to millions of Pakistani rupees.

Similarly, the investment required for fisheries sector projects such as commercial fishing vessels, processing plants or fish markets may vary depending on the scale of operation and the specific equipment and infrastructure needed.

CHAPTER 4: IMPORT AND EXPORT OF FISHERIES IN PAKISTAN

According to the data from the State Bank of Pakistan, the fisheries sector's total exports in Pakistan were worth USD 451 million in the fiscal year 2020-21. In the same period, the total exports of Pakistan were worth USD 25.3 billion. Therefore, the fisheries sector's total exports represent about 1.78% of Pakistan's total exports. Fishery plays an important role in the domestic economy. The major 10 importing countries of Pakistan for Fisheries are Thailand, China, Vietnam, UAE, Republic of Korea, Malaysia, Kuwait, Japan, Saudi Arabia, & Indonesia.

TOP FISH SPECIES EXPORTED

- Sardines
- Croakers
- Snappers
- Pomfrets
- Sharks
- Catfish
- Barracudas
- River Shad and Eels

Similarly, among the top importers of Pakistani fish and aquatic products are Thailand, China, Vietnam, UAE, and Korea, followed by Malaysia, Kuwait, Japan, Saudi Arabia, & Indonesia. Some of the top importers are also among the top 10 exporting countries to Pakistan like Thailand, Vietnam, China, etc. Over the years, Pakistan’s fish imports have almost declined from 22 million in 2017 to 9 million in 2021.

TOP FISH SPECIES IMPORTS

- Pangasius
- Tilapia.

TOP 10 IMPORTERS AND EXPORTERS FOR PAKISTAN

Among the top importers of Pakistani fish and aquatic products are Thailand, China, Vietnam, UAE, and Korea, followed by Malaysia, Kuwait, Japan, Saudi Arabia, & Indonesia. Some of the top importers are also among the top 10 exporting countries to Pakistan like Thailand, Vietnam, China,

etc. The values in table 4 are calculated on the average exported value from the year 2017 to 2021. The data is based on Trade ITC, while the detailed data is given in Annexure II.

Table 4: Top 10 Importers and Exporters for Pakistan

Top 10 Importing Countries		Top 10 Exporting Countries	
Importers of Pakistan	**Average 2017-2021 ($000)**	**Exporters to Pakistan**	**Average 2017-2021 ($000)**
China	116609.4	Viet Nam	10961.2
Thailand	106468.2	Norway	214
United Arab Emirates	33246	Thailand	390.6
Malaysia	17261.8	United Arab Emirates	82.8
Viet Nam	54167	Indonesia	20.2
Japan	12610	Sri Lanka	10
Saudi Arabia	8105.4	China	63.4
Korea, Republic of	15035.8	European Union Nes	2.4
Kuwait	10136.8	Iran	0.8
Qatar	6758.8	Colombia	0.2

Sources: ITC calculations based on Pakistan Bureau of Statistics since January, 2017.

LIST OF PRODUCTS EXPORTED BY PAKISTAN

Table 5 showing ITC calculations based on Pakistan Bureau Of Statistics statistics since January, 2017 in US Dollar thousand for molluscs, frozen fish, crustaceans, fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen, fresh or chilled, aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, and live fish.

Table 5: Product Wise Exports Value of Fish and Crustaceans, Molluscs and other Aquatic Invertebrates

Code	Product label	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021
307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, . . .	1,061	7,045	4,287	54,955	122,075
303	Frozen fish (excluding fish fillets and other fish meat of heading 0304)	267,830	287,892	335,613	171,426	114,252
306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, . . .	84,706	90,000	99,676	100,993	102,730
304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen	25,098	22,005	21,267	17,898	28,318
302	Fish, fresh or chilled (excluding fish fillets and other fish meat of heading 0304)	4,677	9,726	5,764	19,066	22,354
308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, . . .	0	39	316	5,001	6,509
305	Fish, fit for human consumption, dried, salted or in brine; smoked fish, fit for human consumption, . . .	22,925	14,621	8,041	3,791	2,904
301	Live fish	1,256	1,224	529	405	246

Source: Trade ITC

Similarly, the table 6 is showing the quantity that is exported of molluscs, frozen fish, crustaceans, Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen, fresh or chilled, aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, and live fish.

Table 6: Product Wise Exports Quantity of Fish and crustaceans, molluscs and other aquatic invertebrates

Code	Product label	Exported quantity, Tons 2017	Exported quantity, Tons 2018	Exported quantity, Tons 2019	Exported quantity, Tons 2020	Exported quantity, Tons 2021
303	Frozen fish (excluding fish fillets and other fish meat of heading 0304)	120,382	133,377	157,508	106,728	65,307
307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, . . .	554	2,836	2,142	23,715	52,501
306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, . . .	18,374	18,013	20,532	21,838	22,640
304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen	11,344	10,880	10,337	8,509	11,198
302	Fish, fresh or chilled (excluding fish fillets and other fish meat of heading	1567	11945	7535	8,266	7,064
308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, . . .		29	297	3,387	5,224
305	Fish, fit for human consumption, dried, salted or in brine; smoked fish, fit for human consumption, . . .	18,632	15,221	7230	2667	2873
301	Live fish	427	358	171	140	184

Source: Trade ITC

LIST OF PRODUCTS IMPORTED BY PAKISTAN

Table 7 showing ITC calculations based on Pakistan Bureau Of Statistics statistics since January, 2017 in US Dollar thousand for molluscs, frozen fish, crustaceans, fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen, fresh or chilled, aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, and live fish.

Table 7: Product Wise Imports Value of Fish and crustaceans, molluscs and other aquatic invertebrates

Code	Product label	Imported value in 2017	Imported value in 2018	Imported value in 2019	Imported value in 2020	Imported value in 2021
304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen	21,290	9,772	8,626	6,143	8,086
302	Fish, fresh or chilled (excluding fish fillets and other fish meat of heading 0304)	35	19	415	443	701
301	Live fish	523	525	506	183	178
305	Fish, fit for human consumption, dried, salted or in brine; smoked fish, fit for human consumption, . . .	8	2	4	10	31
307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, . . .	36	68	365	0	14
306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, . . .	42	62	60	1	2
303	Frozen fish (excluding fish fillets and other fish meat of heading 0304)	603	339	58	7	0
308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, . . .	0	0	0	0	0

Source: Trade ITC

Table 8: Product Wise Imports Quantity of Fish and crustaceans, molluscs and other aquatic invertebrates

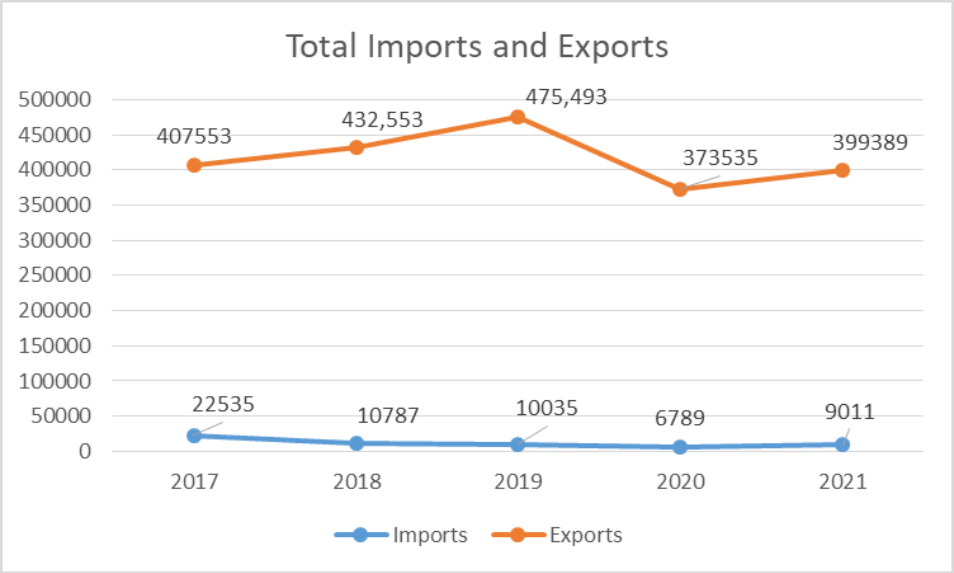
Code	Product label	Imported quantity, Tons 2017	Imported quantity, Tons 2018	Imported quantity, Tons 2019	Imported quantity, Tons 2020	Imported quantity, Tons 2021
304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen	8,365	4,976	5,097	4,153	5,192
302	Fish, fresh or chilled (excluding fish fillets and other fish meat of heading 0304)	8	4	178	158	212
301	Live fish	141	181	199	59	44
307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, . . .	11	125	116		10
306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, . . .	12	18	15	0	2
305	Fish, fit for human consumption, dried, salted or in brine; smoked fish, fit for human consumption, . . .	22	1	1	0	1
303	Frozen fish (excluding fish fillets and other fish meat of heading 0304)	223	207	37	8	

Source: Trade ITC

TRADE BALANCE

Figure 8 shows the imports and exports of Pakistan for fish and aquatic animals from the year 2017 to 2021. The trade surplus has remained in an increasing trend over the years except for the Covid-19 year 2020. Pakistan's exports of Fish and crustaceans, molluscs and other aquatic invertebrates to the world has remained quite higher than its imports from the world which is a positive sign.

Table 9: Pakistan Trade Balance Fish and crustaceans, molluscs and other aquatic invertebrates



Source: Trade ITC

CHAPTER 5: FISHERIES SECTOR OF KHYBER PAKHTUNKHWA

KPK, which stands for Khyber Pakhtunkhwa, is a province in Pakistan known for its rich natural resources, including several rivers and lakes. These water bodies provide a habitat for a variety of fish species. Some of the types of fish produced in KPK include:

1. Trout: KPK is particularly famous for its trout, which are mainly produced in the Swat Valley. Brown trout and rainbow trout are two common species of trout found in the region.
2. Mahseer: Mahseer is a type of freshwater fish that is popular among anglers in KPK. The fish is found in the Indus River and its tributaries, including the Swat, Kunhar, and Panjkora rivers.
3. Catfish: Several species of catfish are found in the rivers and lakes of KPK, including the walking catfish and the silver catfish.
4. Carp: Carp is a popular fish species for aquaculture in KPK. Common carp, silver carp, and grass carp are some of the varieties produced in the region.
5. Tilapia: Tilapia is another fish species that is commonly produced in KPK. The fish is known for its white, flaky meat and is popular among consumers.
6. Snakehead: The snakehead fish is a predatory species found in the rivers and lakes of KPK. The fish is known for its aggressive behavior and is popular among anglers.

Some of the famous fish species that are currently harvested their sizes are given in below table

Table 10: Fish Species Found in Khyber Pakhtunkhwa

Serial No.	Species of fish	Size (inches)
1	Trout	9
2	Mahasher	12
3	Rahu	12
4	Mori	12
5	Thaila	12
6	Calbans	12
7	Silver	12
8	Big head	12
9	Sole	12
10	Schizothorax sp.	10
11	Gulfaam	10
12	Eel	12
13	Sher-Mahi	5
14	Cat fishes	5

Source: Directorate of Fisheries Department KP

DISTRICT WISE FISH PRODUCTION IN KHYBER PAKHTUNKHWA

Khyber Pakhtunkhwa province in Pakistan has emerged as a significant contributor to the country's fisheries sector. There are currently 20 districts within the province that are involved in fisheries production, with a particular focus on trout farming. In 2020-21, the total production of trout in Khyber Pakhtunkhwa was recorded at 3,503.97 metric tons, which had a total value of 1,328 million Pakistani rupees. This impressive production and value of trout in the province has been achieved due to the favorable climatic conditions and the availability of suitable water resources. The government has also provided support to the farmers, such as technical assistance and subsidies on fish feed and equipment, to encourage the expansion of the sector. The growth of the fisheries sector in Khyber Pakhtunkhwa has not only contributed to the country's economy but has also provided employment opportunities to the local population. With further investment and support from the government, the fisheries sector in Khyber Pakhtunkhwa can continue to thrive and contribute to the growth of Pakistan's economy.

Table 11: District Wise Production Data of Khyber Pakhtunkhwa

Districts	2019-20						2020-21					
	Production in M.Tons			Value in Million Rs.			Production in M.Tons			Value in Million Rs.		
	Trout	Non-Trout	Total	Trout	Non-Trout	Total	Trout	Non-Trout	Total	Trout	Non-Trout	Total
Khyber Pakhtunkhwa	**67.337**	**1,065.43**	**1,132.76**	**67.337**	**266.356**	**333.693**	**603.99**	**2,899.98**	**3,503.97**	**603.99**	**724.995**	**1,328.99**
Bannu	-	30	30	-	7.5	7.5	0	35.21	35.21	-	8.803	8.803
Battagram	3.3	1.65	4.95	3.3	0.413	3.713	18.85	20.32	39.17	18.85	5.08	23.93
Buner	-	15.83	15.83	-	3.957	3.957	-	27.89	27.89	-	6.973	6.973
Charsadda	-	108.25	108.25	-	27.063	27.063	-	180.98	180.98	-	45.245	45.245
Chitral	6.55	0.55	7.1	6.549	0.138	6.686	45.61	122.35	167.96	45.61	30.588	76.198
D.I.Khan	-	158.07	158.07	-	39.518	39.518	-	450	450	-	112.5	112.5
Dir Lower	-	96.53	96.53	-	24.131	24.131	-	150.32	150.32	-	37.58	37.58
Dir Upper	42.05	3.15	45.2	42.045	0.788	42.833	65.21	69.12	134.33	65.21	17.28	82.49
Haripur	-	46.52	46.52	-	11.63	11.63	-	280.51	280.51	-	70.128	70.128
Kohat	-	89.12	89.12	-	22.279	22.279	-	210.24	210.24	-	52.56	52.56
Kohistan	1.12	0.2	1.32	1.124	0.05	1.174	51.21	25.31	76.52	51.21	6.328	57.538
Malakand	-	32.87	32.87	-	8.217	8.217	-	102.86	102.86	-	25.715	25.715
Mansehra	0.85	10.18	11.02	0.845	2.544	3.389	76.86	161.25	238.11	76.86	40.313	117.173
Mardan	-	201.58	201.58	-	50.395	50.395	-	251.39	251.39	-	62.848	62.848
Nowshera	-	54.55	54.55	-	13.638	13.638	-	249.71	249.71	-	62.428	62.428
Peshawar	-	82	82	-	20.5	20.5	-	196.23	196.23	-	49.058	49.058
Shangla	10.75	3.46	14.21	10.75	0.865	11.615	63.18	31.23	94.41	63.18	7.808	70.988
Swabi	-	20.3	20.3	-	5.075	5.075	-	130.89	130.89	-	32.723	32.723
Swat	2.72	109.43	112.16	2.724	27.358	30.082	273.82	181.85	455.67	273.82	45.463	319.283
Tor Ghar	-	1.21	1.21	-	0.301	0.301	9.25	22.32	31.57	9.25	5.58	14.83

Source: Directorate of Fisheries Department KP

DISTRICT WISE REVENUE GENERATED BY DIRECTORATE OF FISHERIES, KHYBER PAKHTUNKHWA

The Directorate of Fisheries in Khyber Pakhtunkhwa has emerged as a significant contributor to the provincial economy through the generation of revenue in the fisheries sector. In the fiscal year 2022-21, the total revenue generated by the Directorate of Fisheries was recorded at 107,332,457 Pakistani rupees. This revenue was generated through various activities such as the issuance of fishing licenses, the sale of fish seed and fingerlings, and the provision of technical services to fish farmers. The revenue generated by the Directorate of Fisheries was distributed across the 21 districts of Khyber Pakhtunkhwa, with each district contributing to the overall revenue based on their respective production capacities. The revenue generated by the Directorate of Fisheries not only contributes to the provincial economy but also supports the growth and development of the fisheries sector in the region. With continued investment and support from the government, the Directorate of Fisheries can further enhance its revenue-generating capacity and promote sustainable growth in the fisheries sector in Khyber Pakhtunkhwa. The Detailed data for which is given in Annexure III

DISTRICT WISE NUMBER OF FISHING LICENSES, ISSUED IN KHYBER PAKHTUNKHWA

In the year 2020-21, a total of 4527 fishing licenses were issued in Khyber Pakhtunkhwa. Out of these, 1332 licenses were issued for trout production, while 3195 licenses were issued for non-trout fishing. These licenses were issued district-wise, allowing individuals to fish in specific areas within the province. The issuance of fishing licenses is an important aspect of regulating fishing activities and ensuring the sustainable use of aquatic resources. By providing a breakdown of the number of licenses issued for trout and non-trout fishing, it becomes possible to identify areas where fishing pressure may be particularly high or where conservation efforts may need to be strengthened.

Table 12: District Wise Number of Fishing Licences, Issued in Khyber Pakhtunkhwa

District	2018-19			2019-20			2020-21		
	Total	Trout	Non Trout	Total	Trout	Non Trout	Total	Trout	Non Trout
KPK	**11,224**	**3,635**	**7,589**	**10,464**	**2,437**	**8,027**	**4,527**	**1,332**	**3,195**
Bannu	42	-	42	239	-	239	26	-	26
Battagram	189	-	189	344	-	344	108	-	108
Buner	70	-	70	419	-	419	74	-	74
Charsadda	199	-	199	270	-	270	165	-	165
Chitral	1129	369	760	580	85	495	179	77	102
D.I.Khan	-	-	-	508	-	508	12	-	12
Dir Lower	660	-	660	530	-	530	477	-	477
Dir Upper	226	147	79	472	410	62	72	42	30
Hangu	-	-	-	-	-	-	-	-	-
Haripur	192	-	192	348	-	348	30	-	30
Kohat	1236	-	1236	595	-	595	100	-	100
Kohistan	38	-	38	210	101	109	-	-	-
Malakand	252	-	252	364	-	364	201	-	201
Mansehra	2800	2470	330	1667	980	687	976	863	113
Mardan	156	-	156	360	-	360	78	-	78
Nowshera	144	-	144	220	-	220	61	-	61
Peshawar	111	-	111	226	-	226	41	-	41
Shangla	267	-	267	457	-	457	121	-	121
Swabi	303	-	303	292	-	292	124	-	124
Swat	3115	649	2466	2243	861	1382	1605	350	1255
Tor Ghar	95	-	95	120	-	120	77	-	77

Source: Directorate of Fisheries Department KP

CHAPTER 6: OPPERTUNITIES AND THREATS

Aquaculture farming is being done in all provinces of Pakistan. The total area of fish ponds in Pakistan is about 60.47 thousand hectares, the total number of fish farms in Pakistan are around 13,000 and the highest potential of aquaculture is in Punjab and Sindh. Catfish Farming started in Pakistan in 2011-12 after the approval of Fish Development Board.

Pangasius and Tilapia are aquaculture and can be easily farmed. According to one of the aquaculture farmers, aquaculture of these categories of catfish is easy. This fish is common in clean water and it is known all over the world for growing and producing four times more than other species of fish. A number of 8000 of Pangasius can be produced per acre yield. However, the feed and seed both are expensive, the feed and seed of Pangasius costs Rs.100-150/kg and Rs.9/kg respectively. The fish seeds/eggs of Pangasius are imported from Thailand and Tilapia seeds are imported from Malaysia.

Punjab Fisheries Department has successfully completed the process of artificial breeding of Pangasius fish in Pakistan. It is a significant development in the field of fish farming in Kasur District and fish seeds are now available in Pakistan. Fish waste is good for plants and vegetables, cabbage, tomatoes etc. and it can be grown around the fish farms. This practice of growing vegetables is being carried out at one of the aquaculture farms near Malir River.

The import duties on Pangasius and Tilapia in Pakistan is 61% which is significantly high. According to the Federal Board of Revenue Calculator, Pakistan has imposed 20% custom duties on catfish, 35% regulatory duty and additional 6% custom duty.

Figure 4: Catfish Duties

Catfish Duties	
Duties	**Rates**
Custom Duty	20%
Regulatory Duty	35%
Additional Custom Duty	6%

Source: FBR Duty Calculator

Instead of paying high amount to import duties on Pangasius and Tilapia, it can be farmed in Pakistan to fulfill the domestic demand.

NEW OPPERTUNITIES IN KHYBER PAKHTUNKHWA MARKET

Khyber Pakhtunkhwa (KPK) has a diverse and abundant aquatic ecosystem that supports a wide range of fish species. While some of these species are already being produced and sold in local markets, there are several new species of fish that have the potential to generate good revenue from the international market. Here are a few examples of such fish species:

1. Barramundi: Barramundi is a saltwater fish that is popular in Southeast Asia and Australia. However, it can also be farmed in freshwater environments, and there is potential for its cultivation in KPK. Barramundi is known for its mild, buttery flavor and is often used in high-end restaurants.
2. Pangasius: Pangasius, also known as Basa or Swai, is a type of catfish that is native to Southeast Asia. It has become a popular fish for aquaculture due to its fast growth rate and high market demand. Pangasius has a mild, sweet flavor and is often used in Asian cuisine.
3. Tilapia: Tilapia is a freshwater fish that is native to Africa but is now farmed in many parts of the world. It is a hardy fish that grows quickly and is popular for its mild, white flesh. Tilapia is often used in fish tacos, ceviche, and other dishes.
4. Rainbow Trout: Rainbow trout is a popular fish species that is already produced in KPK. However, there is potential to expand production and sell the fish in the international market. Rainbow trout has a delicate flavor and is often used in sushi, sashimi, and other raw fish dishes.
5. Sturgeon: Sturgeon is a type of fish that is known for its caviar, which is a luxury food item. Sturgeon can be farmed in freshwater environments, and there is potential for its cultivation in KPK. However, sturgeon farming requires a significant investment, and the fish can take several years to reach maturity.

These are just a few examples of new fish species that could be produced in KPK and sold in the international market. However, it is important to carefully consider the feasibility of each species, taking into account factors such as market demand, production costs, and environmental sustainability.

Khyber Pakhtunkhwa (KPK) has a significant potential for fisheries due to its abundance of water resources. The fisheries sector in KPK is already an important source of livelihood for many people, but there are several new opportunities that could help to further develop and improve the sector. Here are some of the new opportunities in fisheries in KPK:

1. Aquaculture: KPK has great potential for the development of aquaculture due to its numerous rivers, streams, and ponds. Aquaculture involves the farming of fish and other aquatic animals in controlled environments, which can help to improve yields and reduce pressure on wild fish populations.
2. Value addition: There is an opportunity for value addition in the fisheries sector, such as processing and packaging of fish products. This could help to increase the economic value of the fish caught in KPK.
3. Export markets: There is a growing demand for fish and seafood products in international markets, and KPK could take advantage of this demand by developing its export capabilities. This could help to generate more income for the local population.
4. Research and development: There is a need for more research and development in the fisheries sector to improve production and sustainability. This could involve studying the breeding and feeding habits of local fish species, and developing new technologies for fish farming and processing.
5. Training and education: There is a need for training and education in the fisheries sector, to help improve the skills and knowledge of local fishermen and fish farmers. This could involve providing training on new fishing and farming techniques, as well as on marketing and business development.

Overall, there are many new opportunities in fisheries in KPK that could help to improve the livelihoods of the local population, as well as the sustainability of the sector.

THREATS/ CHALLENGES

Here are some potential threats in the fisheries sector in Khyber Pakhtunkhwa (KPK), Pakistan:

1. Overfishing: Overfishing can lead to the depletion of fish stocks, reducing the availability of fish and affecting the livelihoods of fishing communities. This threat is particularly relevant in KPK, where many fishing activities are unregulated.
2. Illegal fishing practices: Illegal fishing practices such as using dynamite, poison, or electric shock fishing can cause environmental damage, reduce fish populations, and harm other marine life. These practices are often used by unscrupulous fishermen who prioritize short-term profits over sustainable fishing practices.
3. Pollution: Pollution from agricultural runoff, untreated sewage, and industrial activities can contaminate the water and harm fish populations. This pollution can also harm human health and reduce the quality of fishing grounds.
4. Climate change: Changes in ocean temperature, acidity, and sea level caused by climate change can affect the distribution and abundance of fish species, affecting the fishing industry. Additionally, extreme weather events such as storms and flooding can damage fishing infrastructure and equipment.
5. Lack of regulation and enforcement: The lack of effective regulation and enforcement of fishing laws can lead to unsustainable fishing practices, overfishing, and illegal fishing activities. This can also result in conflicts between different fishing communities, further destabilizing the industry.
6. Poor infrastructure: Limited access to adequate infrastructure, such as cold storage facilities, processing plants, and markets, can limit the value of fish caught by fishermen and their ability to access markets. This can further entrench poverty among fishing communities and limit the economic potential of the fisheries sector.

CHAPTER 7: CONCLUSION

In conclusion, fishing is an important sub-sector of agriculture that contributes significantly to Pakistan's economy and food security. With marine fisheries accounting for 64% of total production and inland fisheries and aquaculture contributing the rest, the sector provides employment opportunities to many people, especially those living in coastal areas. Although the contribution of the fisheries sector to Pakistan's GDP in the fiscal year 2020-21 was only 0.87%, it is still a valuable sector with an export value of USD 451 million in the same period. In addition, aquaculture farming has huge potential in Punjab, Khyber Pakhtunkhwa and Sindh with Pangasius and Tilapia being the most commonly farmed species.

The fisheries sector in Khyber Pakhtunkhwa (KPK), Pakistan has significant potential for development, with a diverse aquatic ecosystem that supports a range of fish species. Expanding the production of new fish species, developing aquaculture, value addition, accessing export markets, and investing in research and education are some of the opportunities that could improve the sector's sustainability and generate more income for local communities. However, the sector also faces several challenges, including overfishing, illegal fishing practices, pollution, and climate change, lack of regulation and enforcement, and poor infrastructure. Addressing these challenges will require a concerted effort from government, private sector, and civil society actors to ensure the long-term sustainability of the sector while benefiting local communities.

S.No	Importers	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Average	Total
	World	407,553	432,553	475,493	373,535	399,389	417,705	2,098,675
1	China	60,189	91,782	135,807	134,053	161,216	116,609	639,467
2	Thailand	84,478	115,087	161,588	81,145	90,043	106,468	554,331
3	United Arab Emirates	36,105	28,117	33,277	40,158	28,573	33,246	163,371
4	Malaysia	17,349	20,120	15,287	14,109	19,444	17,262	86,222
5	Viet Nam	118,860	87,528	42,378	9,020	13,049	54,167	206,142
6	Japan	9,057	11,796	15,006	14,715	12,476	12,610	66,603
7	Saudi Arabia	7,055	8,756	5,618	6,746	12,352	8,105	41,577
8	Korea, Republic of	21,804	14,462	13,730	13,833	11,350	15,036	68,411
9	Kuwait	9,848	8,037	11,092	10,755	10,952	10,137	50,973
10	Qatar	3,471	4,861	6,066	9,831	9,565	6,759	37,082
11	Indonesia	9,668	10,531	4,382	11,124	4,090	7,959	38,086
12	Belgium	815	1,183	1,870	4,719	4,058	2,529	14,359
13	Asia not elsewhere speci	3,978	4,677	6,108	3,949	3,524	4,447	22,705
14	United Kingdom	2,055	955	705	3,125	3,518	2,072	10,375
15	Singapore	1,282	1,058	1,160	1,658	2,841	1,600	8,317
16	Bahrain	2,091	2,184	5,569	3,240	2,435	3,104	16,532
17	Hong Kong, China	2,343	2,114	1,957	1,394	1,640	1,890	8,995
18	United States of America	3,519	5,676	1,430	1,509	1,625	2,752	12,992
19	Afghanistan	518	976	1,316	1,420	1,423	1,131	6,266
20	Bangladesh	1,047	755	1,699	1,234	1,055	1,158	5,901
21	Canada	274	531	414	453	875	509	2,782
22	Oman	1,525	703	791	659	857	907	3,917
23	Sri Lanka	3,872	4,436	3,056	2,529	378	2,854	13,253
24	Albania	174	0	52	0	363	118	533
25	Jordan	368	263	252	413	273	314	1,515
26	Cameroon	0	0	0	51	210	52	313
27	Maldives	0	10	104	122	202	88	526
28	Egypt	356	162	388	0	195	220	965
29	Lebanon	780	998	438	66	148	486	2,136
30	Liberia	0	0	0	51	137	38	226
31	Brunei Darussalam	79	51	0	0	136	53	240
32	Mauritius	262	36	0	0	72	74	182
33	Spain	1,601	1,064	81	177	70	599	1,991
34	Samoa	107	480	394	484	66	306	1,730
35	Mozambique	0	0	0	0	62	12	74
36	South Africa	21	0	0	0	44	13	57
37	Kenya	0	44	33	43	29	30	179
38	Iraq	696	1,250	1,391	165	23	705	3,534
39	Portugal	0	0	0	0	21	4	25
40	Kyrgyzstan	0	0	0	0	1	0	1
41	Australia	16	0	43	0		15	58
42	Myanmar	270	0	0	0		68	68
43	Cyprus	452	218	0	0		168	386
44	Denmark	29	0	0	0		7	7
45	Fiji	79	37	44	66		57	204
46	Ghana	0	0	0	114		29	143
47	Greece	84	89	0	0		43	132
48	Italy	384	45	0	0		107	152
49	Montenegro	0	54	82	0		34	170
50	Netherlands	236	1,426	1,652	98		853	4,029
51	New Zealand	0	0	13	0		3	16
52	Philippines	31	0	107	307		111	525
53	India	166	0	0	0		42	42
54	Türkiye	137	0	110	0		62	172
55	Tanzania, United Republ	19	0	0	0		5	5

S.No	Exporters (Pakistan)	Imported value in 2017	Imported value in 2018	Imported value in 2019	Imported value in 2020	Imported value in 2021	Average	Total
	World	22,535	10,787	10,035	6,789	9,011	11,831	48,453
1	Viet Nam	21,593	9,941	8,799	6,250	8,223	10,961	44,174
2	Norway	62	96	157	280	475	214	1,222
3	Thailand	569	536	563	154	131	391	1,775
4	United Arab Emirates	75	38	121	73	107	83	422
5	Indonesia	29	17	16	12	27	20	92
6	Sri Lanka	10	8	7	8	17	10	50
7	China	136	130	33	3	15	63	244
8	European Union Nes	0	0	0	0	12	2	14
9	Iran, Islamic Republic of	2	0	0	0	2	1	3
10	Colombia	0	0	0	0	1	0	1
11	Malaysia	0	0	1	0	1	0	2
12	United States of America	13	1	2	3	1	4	11
13	Egypt	0	0	0	0	0	0	0
14	Australia	0	0	2	2		1	5
15	Bangladesh	0	10	0	0		3	13
16	Hong Kong, China	0	2	0	0		1	3
17	Japan	0	0	8	0		2	10
18	Kenya	0	1	0	0		0	1
19	Oman	18	0	0	0		5	5
20	New Zealand	0	0	0	0		0	0
21	Nigeria	1	1	0	0		1	2
22	Philippines	7	3	1	3		4	11
23	India	0	4	325	0		82	411
24	Singapore	14	0	0	0		4	4
25	South Africa	0	0	0	0		0	0
26	Türkiye	0	1	0	0		0	1
27	United Kingdom	5	0	1	0		2	3

S.No	Partners	Balance in value in 201	Balance in value in 2018	Balance in value in 2019	Balance in value in 2020	Balance in value in 2021	Exported value in 2021	Imported value in 2021
	World	385,018	421,766	465,458	366,746	390,378	399,389	9,011
1	China	60,053	91,652	135,774	134,050	161,201	161,216	15
2	Thailand	83,909	114,551	161,025	80,991	89,912	90,043	131
3	United Arab Emirates	36,030	28,079	33,156	40,085	28,466	28,573	107
4	Malaysia	17,349	20,120	15,286	14,109	19,443	19,444	1
5	Viet Nam	97,267	77,587	33,579	2,770	4,826	13,049	8,223
6	Japan	9,057	11,796	14,998	14,715	12,476	12,476	
7	Saudi Arabia	7,055	8,756	5,618	6,746	12,352	12,352	
8	Korea, Republic of	21,804	14,462	13,730	13,833	11,350	11,350	
9	Kuwait	9,848	8,037	11,092	10,755	10,952	10,952	
10	Qatar	3,471	4,861	6,066	9,831	9,565	9,565	
11	Indonesia	9,639	10,514	4,366	11,112	4,063	4,090	27
12	Belgium	815	1,183	1,870	4,719	4,058	4,058	
13	Asia not elsewhere specified	3,978	4,677	6,108	3,949	3,524	3,524	
14	United Kingdom	2,050	955	704	3,125	3,518	3,518	
15	Singapore	1,268	1,058	1,160	1,658	2,841	2,841	
16	Bahrain	2,091	2,184	5,569	3,240	2,435	2,435	
17	Hong Kong, China	2,343	2,112	1,957	1,394	1,640	1,640	
18	United States of America	3,506	5,675	1,428	1,506	1,624	1,625	1
19	Afghanistan	518	976	1,316	1,420	1,423	1,423	
20	Bangladesh	1,047	745	1,699	1,234	1,055	1,055	
21	Canada	274	531	414	453	875	875	
22	Oman	1,507	703	791	659	857	857	
23	Sri Lanka	3,862	4,428	3,049	2,521	361	378	17
24	Albania	174	0	52	0	363	363	
25	Jordan	368	263	252	413	273	273	
26	Cameroon	0	0	0	51	210	210	
27	Maldives	0	10	104	122	202	202	
28	Egypt	356	162	388	0	195	195	0
29	Lebanon	780	998	438	66	148	148	
30	Liberia	0	0	0	51	137	137	
31	Brunei Darussalam	79	51	0	0	136	136	
32	Mauritius	262	36	0	0	72	72	
33	Spain	1,601	1,064	81	177	70	70	
34	Samoa	107	480	394	484	66	66	
35	Mozambique	0	0	0	0	62	62	
36	South Africa	21	0	0	0	44	44	
37	Kenya	0	43	33	43	29	29	
38	Iraq	696	1,250	1,391	165	23	23	
39	Portugal	0	0	0	0	21	21	
40	Kyrgyzstan	0	0	0	0	1	1	
41	European Union Nes	0	0	0	0	-12		12
42	Australia	16	0	41	-2			
43	Myanmar	270	0	0	0			
44	Colombia	0	0	0	0	-1		1
45	Cyprus	452	218	0	0			
46	Denmark	29	0	0	0			
47	Fiji	79	37	44	66			
48	Ghana	0	0	0	114			
49	Greece	84	89	0	0			
50	Iran, Islamic Republic of	-2	0	0	0	-2		2
51	Italy	384	45	0	0			
52	Montenegro	0	54	82	0			
53	Netherlands	236	1,426	1,652	98			
54	New Zealand	0	0	13	0			
55	Nigeria	-1	-1	0	0			
56	Norway	-62	-96	-157	-280	-475		475
57	Philippines	24	-3	106	304			
58	India	166	-4	-325	0			
59	Türkiye	137	-1	110	0			
60	Tanzania, United Republic of	19	0	0	0			

Districts	2018-19					
	Production in M.Tons			Value in Million Rs.		
	Trout	Non-Trout	Total	Trout	Non-Trout	Total
Khyber Pakhtunkhwa	**27.784**	**1,093.441**	**1,121.23**	**27.784**	**273.360**	**301.144**
Abbottabad	-	-	-	-	-	-

Bajaur	-	-	-	-	-	-
Bannu	0.000	38.621	38.621	-	9.655	9.655
Battagram	-	-	-	-	-	-
Buner	-	4.376	4.376	-	1.094	1.094
Charsadda	-	183.520	183.520	-	45.880	45.880
Chitral	5.402	-	5.402	5.402	-	5.402
D.I.Khan	-	104.295	104.295	-	26.074	26.074
Dir Lower	-	62.166	62.166	-	15.542	15.542
Dir Upper	7.000	33.440	40.440	7.000	8.360	15.360
Hangu	-	-	-	-	-	-
Haripur	-	258.778	258.778	-	64.695	64.695
Karak	-	-	-	-	-	-
Khyber	-	-	-	-	-	-
Kohat	-	27.906	27.906	-	6.977	6.977
Kohistan	5.246	-	5.246	5.246	-	5.246
Kurram	-	-	-	-	-	-
Lakki	-	-	-	-	-	-
Malakand	-	23.020	23.020	-	5.755	5.755
Mansehra	5.560	13.310	18.870	5.560	3.328	8.888
Mardan	-	61.730	61.730	-	15.433	15.433
Mohmand	-	-	-	-	-	-
N.Waziristan	-	-	-	-	-	-
Nowshera	-	12.500	12.500	-	3.125	3.125
Orakzai	-	-	-	-	-	-
Peshawar	-	54.800	54.800	-	13.700	13.700
S.Waziristan	-	-	-	-	-	-
Shangla	-	-	-	-	-	-
Swabi	-	58.440	58.440	-	14.610	14.610
Swat	4.576	152.489	157.065	4.576	38.122	42.698
Tank	-	-	-	-	-	-
Tor Ghar	-	4.050	4.050	-	1.013	1.013

Districts	**2019-20**					
	Production in M.Tons			**Value in Million Rs.**		
	Trout	**Non-Trout**	**Total**	**Trout**	**Non-Trout**	**Total**
Khyber Pakhtunkhwa	**67.337**	**1,065.425**	**1,132.762**	**67.337**	**266.356**	**333.693**
Abbottabad	-	-	-	-	-	-
Bajaur	-	-	-	-	-	-
Bannu	-	30.00	30.00	-	7.500	7.500
Battagram	3.30	1.65	4.95	3.300	0.413	3.713

Buner	-	15.83	15.83	-	3.957	3.957
Charsadda	-	108.25	108.25	-	27.063	27.063
Chitral	6.55	0.55	7.10	6.549	0.138	6.686
D.I.Khan	-	158.07	158.07	-	39.518	39.518
Dir Lower	-	96.53	96.53	-	24.131	24.131
Dir Upper	42.05	3.15	45.20	42.045	0.788	42.833
Hangu	-	-	-	-	-	-
Haripur	-	46.52	46.52	-	11.630	11.630
Karak	-	-	-	-	-	-
Khyber	-	-	-	-	-	-
Kohat	-	89.12	89.12	-	22.279	22.279
Kohistan	1.12	0.20	1.32	1.124	0.050	1.174
Kurram	-	-	-	-	-	-
Lakki	-	-	-	-	-	-
Malakand	-	32.87	32.87	-	8.217	8.217
Mansehra	0.85	10.18	11.02	0.845	2.544	3.389
Mardan	-	201.58	201.58	-	50.395	50.395
Mohmand	-	-	-	-	-	-
N.Waziristan	-	-	-	-	-	-
Nowshera	-	54.55	54.55	-	13.638	13.638
Orakzai	-	-	-	-	-	-
Peshawar	-	82.00	82.00	-	20.500	20.500
S.Waziristan	-	-	-	-	-	-
Shangla	10.75	3.46	14.21	10.750	0.865	11.615
Swabi	-	20.30	20.30	-	5.075	5.075
Swat	2.72	109.43	112.16	2.724	27.358	30.082
Tank	-	-	-	-	-	-
Tor Ghar	-	1.21	1.21	-	0.301	0.301
Districts	**2020-21**					
	Production in M.Tons			**Value in Million Rs.**		
	Trout	**Non-Trout**	**Total**	**Trout**	**Non-Trout**	**Total**
Khyber Pakhtunkhwa	**603.99**	**2,899.98**	**3,503.97**	**603.990**	**724.995**	**1,328.985**
Abbottabad	-	-	-	-	-	-
Bajaur	-	-	-	-	-	-
Bannu	0.00	35.21	35.21	-	8.803	8.803
Battagram	18.85	20.32	39.17	18.850	5.080	23.930
Buner	-	27.89	27.89	-	6.973	6.973
Charsadda	-	180.98	180.98	-	45.245	45.245
Chitral	45.61	122.35	167.96	45.610	30.588	76.198

D.I.Khan	-	450.00	450.00	-	112.500	112.500
Dir Lower	-	150.32	150.32	-	37.580	37.580
Dir Upper	65.21	69.12	134.33	65.210	17.280	82.490
Hangu	-	-	-	-	-	-
Haripur	-	280.51	280.51	-	70.128	70.128
Karak	-	-	-	-	-	-
Khyber	-	-	-	-	-	-
Kohat	-	210.24	210.24	-	52.560	52.560
Kohistan	51.21	25.31	76.52	51.210	6.328	57.538
Kurram	-	-	-	-	-	-
Lakki	-	-	-	-	-	-
Malakand	-	102.86	102.86	-	25.715	25.715
Mansehra	76.86	161.25	238.11	76.860	40.313	117.173
Mardan	-	251.39	251.39	-	62.848	62.848
Mohmand	-	-	-	-	-	-
N.Waziristan	-	-	-	-	-	-
Nowshera	-	249.71	249.71	-	62.428	62.428
Orakzai	-	-	-	-	-	-
Peshawar	-	196.23	196.23	-	49.058	49.058
S.Waziristan	-	-	-	-	-	-
Shangla	63.18	31.23	94.41	63.180	7.808	70.988
Swabi	-	130.89	130.89	-	32.723	32.723
Swat	273.82	181.85	455.67	273.820	45.463	319.283
Tank	-	-	-	-	-	-
Tor Ghar	9.25	22.32	31.57	9.250	5.580	14.830