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Ichthyofaunal Diversity and Conservation Status of Fish at Mangrol, Gujarat: A Comprehensive Study

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ABSTRACT

The coastline of Gujarat is 2340.62 km long and possesses rich marine biodiversity. During the present study, a total of 113 fish species belonging to 60 families and 25 orders were identified from the different fish landing sites of Mangrol fish landing centre Gujarat, India. From September 2022 to March 2023, data were gathered from a variety of places in various regions with the assistance of local, knowledgeable fish growers and fishermen. Fish identification was conducted on the basis of freshly collected specimens to ensure accuracy. Typical taxonomic keys were used to identify them. The fish that were gathered underwent species-level identification. The checklist contains 3 species Critically endangered; 7 species were Near Threatened, 10 species were Data deficient, 6 species were endangered, 66 species were Least concern, 7 species were Vulnerable, and 10 species were Not evaluated. Additional studies are required to enhance the understanding and conservation of these species.

Keywords: *Ichthyofauna, Fish Biodiversity, Mangrol, Saurashtra, Arabian Sea, Gujarat.*

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Introduction

Marine environments are characterized by a variety of genetics, taxonomy, and ecology. More than 99% of the surface of the Earth is covered by oceans and large seas, with a coastline of about 1.6 million km. This provides ample room for life in the ecosystem [7]. Coastal and marine environments can be found in 123 different countries [30]. Pisces are a vital component in Asian diets and one of the most significant food and nutrition sources [18]. Ichthyofaunal diversity comprises approximately half of all vertebrate species worldwide, with 35,797 confirmed fish species [10]. The distribution of fish species is not uniform across the world, with some regions being more diverse than others. tropical areas of the globe, particularly those in the Indo-Pacific, are known to be the most diverse for fish species [3]. In contrast, the Polar Regions and deep-sea habitats few fish species due to the harsh environmental conditions.

The Indian Ocean occupies over 29% of the total oceanic area, making it the third largest ocean in the world [32]. The Arabian Sea is an important region for marine fish diversity, as it is home to a wide range of fish species adapted to its warm, saline waters. The Arabian Sea is part of the larger Indian Ocean is bounded by several countries, including India, Pakistan, Oman, Yemen, and Somalia. The fishes of the Arabian Sea are characterized by a mix of tropical and subtropical species, with some species extending into the temperate waters of the northern Arabian Sea. Some of the most commercially Significant fish species found in the Arabian Sea include tuna, mackerel, barracuda, and sardines [9]. The Arabian Sea is also home to a number of endemic fish species, which are found nowhere else in the world. For example, the Arabian scad [*Trachurus indicus*] is a small pelagic fish that is found only in the Arabian Sea and adjacent waters [23].

India ranks as one of the world's 12 mega biodiversity countries, accounting for 7.8% of all documented species despite having only 2.5% of the land area [33;22]. India has 2456 species of fish, 930 of which are found in freshwater environments and 1526 of which are found in marine environments [15]. India is a mega-diversity rich country noted for its species richness [12]. India's coastal geography spans approximately 8,118 kilometres, with Gujarat state alone accounting for approximately 1600 kilometers of coastline [1]. The Indian mainland coastline is divided into two parts - Eastern and Western coastline. Gujarat state has the longest coastline of about 1,650 km, which accounts for 21% of the total coastline and 32% of the total continental shelf of India. It has diverse coastal habitats located on the western part of India [16]. Gujarat has experienced remarkable development in the marine capture fisheries sector [11]. Gujarat has a wealth of marine fisheries resources by nature, with 306 species of marine and coastal fishes, including significant supplies of osteichthyes and elasmobranchs [21;29;16;27;28;06]. Gujarat's coastline stands out from other coastal regions in India due to its unique characteristics. It features a shallow coastal zone, an expansive continental shelf, and extensive saline and tidal mudflats. Along the Saurashtra coast, the continental shelf extends gradually, reaching a depth of 60 meters over a span of approximately 350 kilometers [26]. The coastline of Gujarat can be arbitrarily divided into four coastal stretches, namely the Gulf of Kachchh, Saurashtra Coast, Gulf of Khambhat, and South Gujarat Coast [16]. The Gulf of Cambay, Gulf of Kachchh, and Saurashtra peninsula have several major and minor fish landing centers.The Saurashtra coast is distinguished by its rocky, sandy, and muddy introduction zones, which support a broad range of plants and Animals [25].

The Saurashtra-peninsular region of Gujarat covers the largest part of the total coastline, around 750 km, and has around 7 major and several minor fish landing centers [4]. Gujarat is home to a variety of marine habitats, including coral reefs, mangroves, and estuaries. Gujarat state ranks top in Fisheries since it is located on the west coast of India includes an exclusive economic zone and one-fifth of the nation's coastline [8]. It accounts for around 20% of overall marine production. Gujarat comes third in fish production, after Andhra Pradesh [29.47%] and West Bengal [12.58%], with a total production of 8.59 lakh tonnes, accounting for 6.06% of India's total fish production in 2019-20 [13]. In the nearby study area, several notable studies have been conducted, including research on crabs by [24], An examination of the community structure of marine macrofauna along the Diu coast by [5], and an evaluation of the variety of intertidal micro benthic plants and animals in the coastal region of South Saurashtra.

Mangrol is a town by the sea in the Junagadh district of Gujarat, and it is one of the major harbours in the state. It is situated on the southern shore of the Saurashtra peninsula and is known for its fishing industry [2]. The harbour is an important hub for the fishing boats that operate along the coast of Gujarat. Mangrol is the fourth highest contributor to the total fish catch in Gujarat. This means that it plays a crucial role in the fishing industry of the state. The fishermen of Mangrol use traditional fishing techniques such as trawling and gill netting to catch a variety of marine species. In terms of boat arrivals, Mangrol is the second highest contributor after Veraval. The arrival of fishing boats at the harbour is an important indicator of the level of fishing activity in the region. The fact that Mangrol has a high number of boat arrivals highlights its significance in the fishing industry of Gujarat [19]. Mangrol, along with Veraval and Porbandar, accounts for nearly half of the total fish catch in Gujarat [19]. This highlights the importance of Mangrol in the fishing industry of the state.

The harbour provides a livelihood for thousands of fishermen and is a significant source of seafood for the people of Gujarat.

Materials and Methods

Study area

The current research was carried out along the coastal waters of Mangrol.[21° 06' 45.92" N 70° 05' 34.18" E], Which is located in western coast of Gujarat, India .

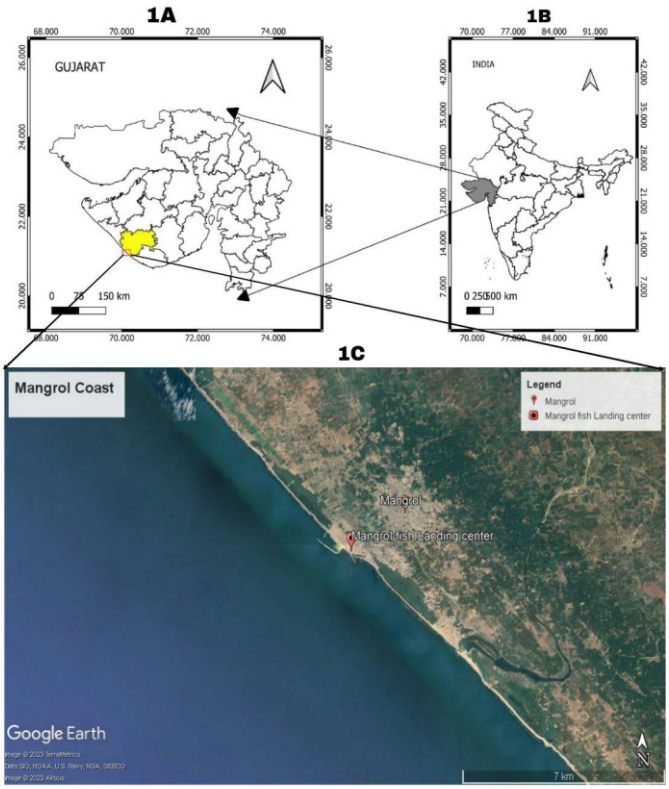

Figure:1 Map of Study area along the coast of Mangrol, Gujarat, India

Data collection

Data for ichthyofaunal diversity were collected from landing sites of Mangrol [Figure 1]. Data were obtained with the assistance of local fisherman landings and by visiting Mangrol new and old jetty, Mangrol bandar, new and old fish markets, which is situated in Mangrol taluka of the Junagadh district in the state of Gujarat, India.

Sampling was carried out every two weeks interval at the beginning of study from September 2022 to March 2023. .A variety of facing gears, including gil nets, hook and line, trawl nets, and purse seines with varying mesh sizes, were used to gather samples. Extensive photography is been used for the data collection.

Identification of fishes

The collected specimen had been cleaned properly. Informative photographic documentation had been done before preservation. Identification of the species was carried out using morphological features and morphometry. Morphological identification was done to discover the recognizable characters of individual species as each fish species has a couple of specific characters which separate it from others.

Identification of fish was done with the help of various standard taxonomic keys viz., Talwar and Jhingran [1991] [31], Handbook for field identification of Fish species occurring in the Indian seas [FSI 2009], Training manual of species Identification [ICAR-CMFRI 2017], Field Guide for the identification of major demersal fishes of India by Wilson and his colleagues [34], Identification of Groupers and Snappers Available in Indian Water by Nair Rekha J. [2022] [20].

The authentication of the identified fish specimens was done with the help of available keys like www.fishbase.org, a verified and certified website of the Food and Agricultural Organization, talk about Fishes a Malaysian fish database, Fish Base of India and Eschmeyer's Catalog of Fishes https://researcharchive. calacademy.org/research/ichthyology/catalog/fishcatmain.asp. The ICUN red list [14] was employed to ascertain the studied species' conservation status. The categories are as follows: NE, not evaluated; DD, data deficient; LC, least concern; NT, near threatened, VU, vulnerable; EN, endangered; CR, critically endangered. Table 1 displays the species checklist and common names for the species under study.

Results and Discussion

A total of 113 finfish species, representing 60 families in 25 orders from the coast of Mangrol were identified. [Table 1]

Table 1: Fish diversity of Mangrol Fish landing centre [Gujarat]				
NO.	**Scientific name**	**Common name**	**Family**	**IUCN red list**
Order: Rhinopristiformes				
1	*Rhynchobatus djiddensis* [Forsskål, 1775]	Giant guitarfish	Rhinidae	CE
2	*Rhina ancylostomus* [Bloch & Schneider, 1801]	Bowmouth guitarfish		CE
3	*Rhinobatos punctifer* [Compagno & Randall, 1987]	Spotted guitarfish	Rhinobatidae	NT
Order: Torpediniformes				
4	*Torpedo fuscomaculata* [Peters, 1855]	Blackspotted torpedo	Torpedinidae	DD
Order*:* Myliobatiformes				
5	*Aetobatus flagellum* [Bloch & Schneider, 1801]	Longheaded eagle ray	Aetobatidae	EN
6	*Aetobatus narinari* [Euphrasen, 1790]	Whitespotted eagle ray		EN
7	*Mobula mobular* [Bonnaterre, 1788]	Devil fish	Mobulidae	EN
8	*Gymnura poecilura* [Shaw, 1804]	Long-tailed butterfly ray	Gymnuridae	VU
9	*Pateobatis bleekeri* [Blyth, 1860]	Bleeker's whipray	Dasyatidae	EN
10	*Maculabatis sp.* [Gray, 1851]	Short-tail whipray		EN
11	*Himantura sp.* [Gray, 1851]	Leopard whip ray		EN
Order: Carangiformes				
12	*Atropus atropos* [Bloch & Schneider, 1801]	Cleft belly trevally	Carangidae	LC
13	*Megalaspis cordyla* [Linnaeus, 1758]	Torpedo scad		LC
14	*Caranx sexfasciatus [*Quoy & Gaimard, 1825]	Bigeye trevally		LC
15	*Decapterus russelli* [Rüppell, 1830]	Indian scad		LC
16	*Carangoides malabaricus* [Bloch & Schneider, 1801]	Malabar trevally		LC
17	*Decapterus macrosoma [*Bleeker, 1851]	Shortfin scad		LC
18	*Parastromateus niger* [Bloch, 1795]	Black pomfret		LC
19	*Trachinotus baillonii* [Lacepède, 1801]	Small spotted dart		LC
20	*Decapterus macrosoma* [Bleeker, 1851]	Shortfin scad		LC
21	*Alectis indica* [Rüppell,1830]	Indian threadfish		LC
22	*Scomberoides tol* [Cuvier, 1832]	Needlescaled queenfish		LC
Order: Carangiformes				
23	*Scomberoides commersonnianus* [Lacepède, 1801]	Talang queenfish	Carangidae	LC
24	*Istiompax indica* [Cuvier 1832]	Black marlin	Istiophoridae	DD
25	*Coryphaena hippurus* [Linnaeus, 1758]	Common Dolphin fish	Coryphaenidae	LC
26	*Remora remora* [Linnaeus, 1758]	Shark sucker	Echeneidae	LC
27	*Rachycentron canadum* [Linnaeus, 1766]	Cobia	Rachycentridae	LC
Order: Tetraodontiformes				
28	*Mola mola [Linnaeus, 1758]*	Ocean sunfish	Molidae	VU
29	*Odonus niger* [Rüppell, 1836]	Red-toothed triggerfish	Balistidae	LC
30	*Abalistes stellaris* [Anonymous, 1798]	Starry triggerfish		LC
31	*Canthidermis maculata* [Bloch, 1786]	Rough triggerfish		LC
32	*Aluterus monoceros* [Linnaeus, 1758]	Unicorn leatherjacket filefish	Monacanthidae	LC
Order: Carcharhiniformes				
33	*Galeocerdo cuvier* [Péron & Lesueur, 1822]	Tiger shark	Galeocerdonidae	NT
34	*Sphyrna lewini* [Griffith & Smith, 1834]	Scalloped hammerhead	Sphyrnidae	CE
35	*Mustelus mosis* [Hemprich & Ehrenberg, 1899]	Arabian smooth-hound	Trakidae	NT
36	*Carcharhinus limbatus* [Valenciennes, 1839]	Blacktip shark	Carcharhinidae	VU
37	*Scoliodon laticaudus [Müller & Henle, 1838]*	Spadenose shark		NT
38	*Carcharhinus melanopterus* [Quoy & Gaimard, 1824]	Blacktip reef shark		VU
39	*Carcharhinus macloti* [Müller & Henle, 1839]	Hardnose shark		NT
Order: Perciformes				
40	*Lethrinus nebulosus* [Forsskål, 1775]	Spangled emperor	Lethrinidae	LC
41	*Mene maculata* [Bloch & Schneider, 1801]	Moon fish	Menidae	NE
42	*Platycephalus indicus* [Linnaeus, 1758]	Bartail flathead	Platycephalidae	DD
43	*Eleutheronema tetradactylum* [Shaw, 1804	Four finger threadfin	Polynemidae	NE
44	*Leptomelanosoma indicum* [Shaw, 1804]	Indian threadfin		NE
45	*Epinephelus malabaricus* [Schneider, 1801]	Malabar grouper	Serranidae	LC
46	*Epinephelus diacanthus* [Valenciennes, 1828]	Spiny cheek grouper		LC
47	*Epinephelus areolatus* [Forsskål, 1775]	Areolate grouper		LC
48	*Epinephelus coioides [Hamilton, 1822]*	Orange-spotted grouper		LC
49	*Epinephelus sp.*			
50	*Cephalopholis formosa* [Shaw, 1812]	Blueline hind	Epinephelidae	LC
51	*Cephalopholis sonnerati* [Valenciennes, 1828]	Tomato hind		LC
Order: Anguilliformes				
52	*Congresox talabonoides* [Bleeker, 1853]	Indian pike conger	Muraenesocidae	LC
53	*Muraenesox cinereus* [Forsskål, 1775]	Silver conger eel		LC
54	*Murena sp.*		Muraenidae	
Order: Centrarchiformes				
55	*Terapon jarbua* [Forsskål, 1775]	Jarbua terapon	Terapontidae	LC
Order: Pleuronectiformes				
56	*Pseudorhombus arsius* [Hamilton, 1822]	Largetooth flounder	Paralichthyidae	LC
57	*Pseudorhombus elevatus* [Ogilby, 1912]	Deep flounder		LC

58	*Cynoglossus lingua* [Norman, 1928]	Long tonguesole	Cynoglossidae	LC
59	*Cynoglossus sp.*			
60	*Aesopia cornuta* [Kaup, 1858]	Unicorn sole	Soleidae	NE
61	*Zebrias quagga* [Kaup, 1858]	zebra sole		LC
Order: Tetradontiformes				
62	*Lagocephalus inermis* [Temminck & Schlegel, 1850]	Smooth blaasop	Tetraodontidae	LC
63	*Lagocephalus spadiceus* [Richardson, 1845]	Half-smooth golden pufferfish		LC
64	*Arothron sp.*	*puffer fish*		
Order: Acanthuriformes				
65	*Drepane punctata* [Linnaeus, 1758]	Spotted sicklefish	Drepaneidae	LC
66	*Pomacanthus annularis* [Bloch, 1787]	Bluering angelfish	Pomacanthus	LC
67	*Roa modesta* [Temminck & Schlegel, 1844]	Brown-banded butterflyfish	Chaetodontidae	LC
68	*Acanthurus mata* [Cuvier, 1829]	Elongate surgeonfish	Acanthuridae	LC
Order: Acanthuriformes				
69	*Platax teira* [Forsskal, 1775]	Longfin batfish	Ephippidae	LC
70	*Scatophagus argus* [Linnaeus, 1766]	Spotted scat	Scatophagidae	LC
Order: Holocentriformes				
71	*Sargocentron sp.*	squirrel fish	Holocentridae	LC
72	*Myripristis sp.*	Pinecone soldierfish		LC
Order: Scombriformes				
73	*Lepturacanthus savala* [Cuvier, 1829]	Savalai hairtail	Trichiuridae	NE
74	*Trichiurus lepturus* [Linnaeus, 1758]	Largehead hairtail		LC
75	*Scomberomorus guttatus* [Bloch & Schneider, 1801]	Indo-Pacific king mackerel	Scombridae	DD
76	*Scomberomorus lineolatus* [Cuvier, 1829]	Streaked seerfish		LC
77	*Rastrelliger kanagurta* [Cuvier, 1816]	Indian mackerel	Scombridae	DD
78	*Katsuwonus pelamis* [Linnaeus, 1758]	Skipjack tuna		LC
79	*Euthynnus affinis* [Cantor, 1849]	Little tuna		LC
80	*Auxis thazard* [Lacepède, 1800]	Frigate tuna		LC
81	*Thunnus tonggol* [Bleeker, 1851]	Long tail tuna		DD
82	*Thunnus obesus* [Lowe, 1839]	Big eye tuna	Scombridae	VU
83	*Rastrelliger faughni* [Matsui,1967]	Island mackerel		DD
84	*Pampus argenteus* [Euphrasen, 1788]	Silver pomfret	Stromateidae	VU
85	*Pampus chinensis* [Euphrasen, 1788]	Chinese silver pomfret		NE
Order: Syngnathiformes				
86	*Fistularia petimba* [Lacepede, 1803]	Red cornetfish	Fistulariidae	LC
Order: Mulliformes				
87	*Upeneus moluccensis* [Bleeker, 1855]	Goldband goatfish	Mullidae	LC
Order: Ophidiiformes				
88	*Bortula sp.* [Bloch and Schneider, 1801]	Bortula	Ophidiidae	LC
Order: Beloniformes				
89	*Parexocoetus brachypterus* [Richardson 1846]	Sailfin flyingfish	Exocoetidae	NE
90	*Strongylura leiura* [Bleeker, 1850]	Banded needlefish	Belonidae	NE
91	*Tylosurus crocodilus* [Péron & Lesueur 1821]	Hound needlefish		LC
Order: Scorpaenoidei				
92	*Pterois miles* [Bennett, 1828]	Devil firefish	Scorpaenidae	LC
Order: Carcharhiniformes				
93	*Mustelus mosis* [Hemprich & Ehrenberg,1899]	Arabian smooth-hound	Triakidae	NT
Order: Siluriformes				
94	*Plicofollis dussumieri* [Valenciennes, 1840]	Blacktip sea catfish	Ariidae	LC
95	*Osteogeneiosus militaris* [Linnaeus, 1758]	Soldier catfish		NE
96	*Netuma thalassina* [Rüppell, 1837]	Giant catfish		LC
Order: Clupeiformes				
97	*Tenualosa ilisha* [Hamilton, 1822]	Hilsa shad	Dorosomatidae	LC
98	*Tenualosa toli* [Valenciennes, 1847]	Toli shad		VU
Order: Eupercaria				
99	*Protonibea diacanthus* [Lacepède, 1802]	Blackspotted croaker	Sciaenidae	NT
100	*Nibea maculata* [Bloch & Schneider, 1801]	Blotched croaker		LC
101	*Johnius dussumieri* [Cuvier, 1830]	Sin croaker		LC
Order: Eupercaria				
102	*Otolithes cuvieri* [Trewavas 1974]	Lesser tigertooth croaker	Sciaenidae	LC
103	*Otolithoides biauritus* [Cantor, 1849]	Bronze croaker		DD
104	*Otolithes ruber* [Bloch & Schneider, 1801]	Tigertooth croaker		LC
105	*Priacanthus hamrur* [Forsskal, 1775]	Moontail bullseye	Priacanthidae	LC
106	*Scarus sp..* [Randall & Hoover, 1995]	Parrotfish	Scaridae	DD
107	*Pomadasys maculatus* [Bloch, 1793]	Saddle grunt	Haemulidae	LC
108	*Lutjanus johnii* [Bloch, 1792]	John's snapper	Lutjanidae	LC
109	*Acanthocepola indica* [Day, 1888]		Cepolidae	NE
Order: Carangaria				
110	*Sphyraena jello* [Cuvier,1829]	Pickhandle barracuda	Sphyraenidae	LC
111	Sphyraena obtusata *[Cuvier, 1829]*	Obtuse barracuda	Sphyraenidae	LC
112	*Lactarius lactarius* [Bloch & Schneider, 1801]	False trevally	Lactariidae	DD
Order: Scorpaeniformes				
113	*Lepidotrigla dieuzeidei* [Blanc & Hureau, 1973]	Spiny gurnard	Triglidae	LC

The dominant orders are displayed in terms of species count and percentage composition in [Figure 5]

With 16 species, the order Carangiformes is the most prevalent, followed by Scombriformes [13], Perciformes [12], Eupercaria [11], Myliobatiformes [7], Carcharhiniformes [7], Pleuronectiformes [6], Acanthuriformes [6], Tetraodontiformes [5], Rhinopristiformes [3] Anguilliformes [3], Tetradontiformes [3], Beloniformes [3], Siluriformes [3], Carangaria [3], Holocentriformes [2], Clupeiformes [2], Torpediniformes [1], Centrarchiformes [1], Syngnathiformes [1], Mulliformes [1], Ophidiiformes [1], Scorpaenoidei [1], Carcharhiniformes [1], Scorpaeniformes [1]. [Figure 5] According to a price analysis of the Mangrol fish market, the cost of the fish ranges from 10 to 15 000/kg. Fish such as Jew fish [ghol], silver pomfret, tunas, sharks, ribbon fish, Herrings, dara, and others were the most expensive in the market.

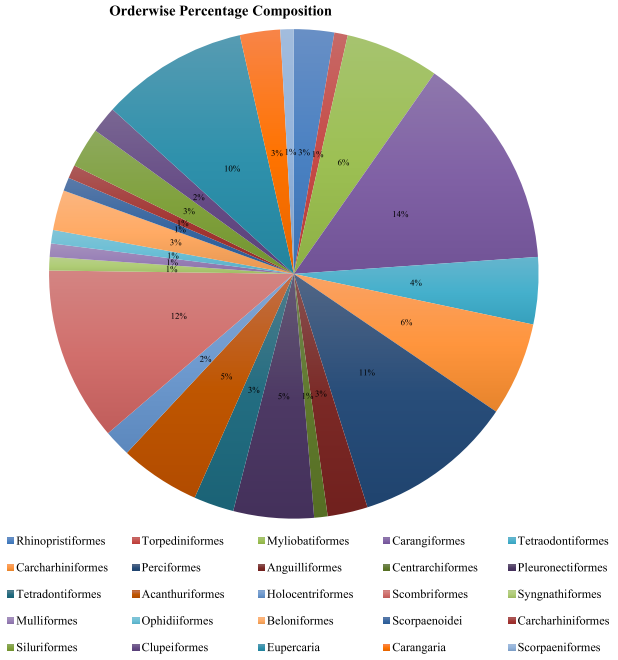

Figure 2: An illustration of the order-wise percentage composition -Mangrol, Gujarat, India from September 2022 to March 2023

There was total 60 families of finfish species were reported in this research. Among the Carangidae is the family that contributes the most finfish species [12 spp.]., followed by Scombridae [9 spp.], Serranidae [5 spp.], Carcharhinidae [4 spp.], Dasyatidae, Balistidae, Tetraodontidae, and Ariidae [3 spp.], Rhinidae, Aetobatidae, Polynemidae, Epinephlidae, Muranenesocidae, Paralichthyidae, Cynoglossidae, Soleidae, Holocentridae, Trichiuridae, Stromateidae, Belonidae, Dorosomatidae and sphyraenidae [2 spp.] Each of the remaining 37 families reported one species of fish diversity [Figure 3].

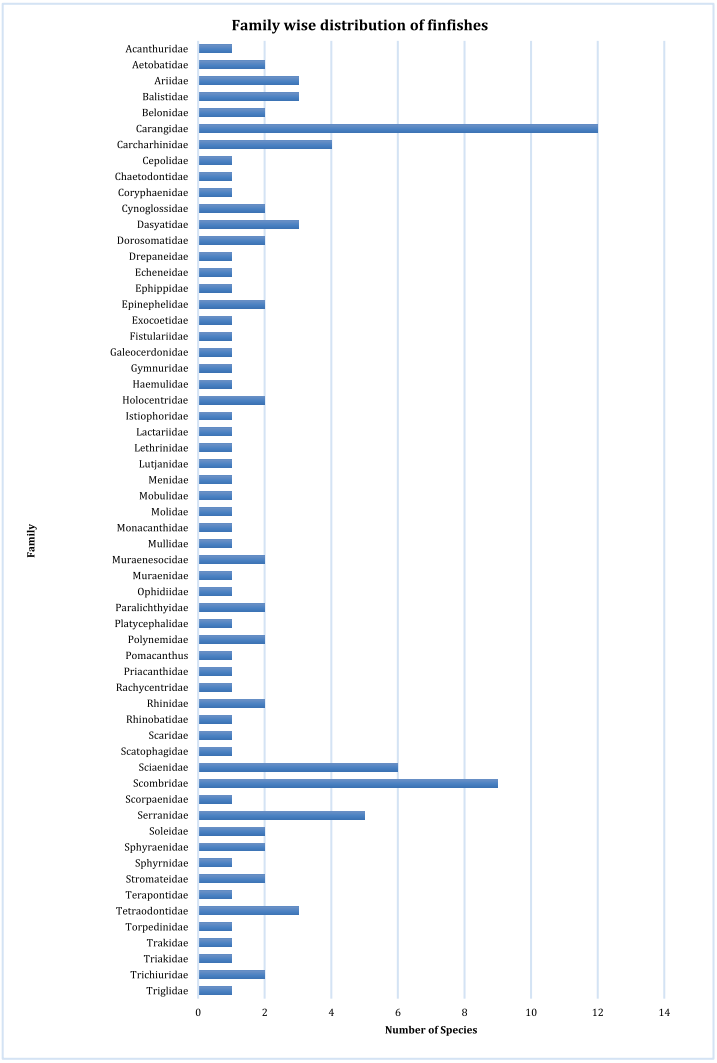

Figure 3: Graphical representation of Family wise species composition of Fish

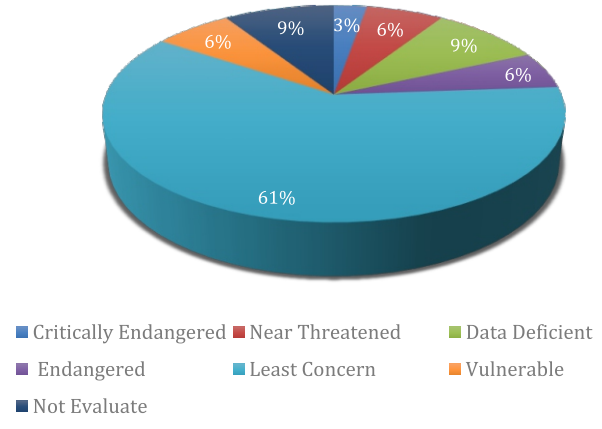

Figure 4: Fish Catch of Mangrol related to IUCN Category

As per IUCN red list status 2021, 3 species were Critically endangered, 7 species as Near threaten, 10 species as Data deficient, 6 species as endangered, 66 species as Least concern, 7 species as Vulnerable, and 10 species as Not evaluated. [Figure 4]

During the study, only a few individuals of Critically Endangered species were observed. For instance, only 2 individuals of *Rhina ancylostomus*, 4 individuals of *Aetobatus narinari*, and 2 individuals of *Mobula mobula* were observed, all of which are classified as Endangered. Similarly, only 2 individuals of Leopard whip ray and 5-6 individuals of Ocean sunfish, both classified as Vulnerable, were observed. This suggests that either these species were captured in very small numbers or they are rare in the field.

In a study on economically important marine fin fish and shellfish near the Okha [Dwarka district] fish landing centre in Gujarat, Solanki and colleagues [2020] [29] identified 86 fin fish species from 74 genera. The most abundant species included flounders, sharks, lizard fishes, croakers, seer fishes, pomfrets, rays, ribbon fish, thread fins, mackerels, skates, eels, grunters and sweet lips, reef cods, catfishes, barracuda, sole fishes, flying fishes, full beak, and other fishes.

Joshi and colleagues [2018] [15] conducted a study at the Kharakuva Fish market in Veraval Taluka of Gir-Somnath district and identified 94 finfish and 26 shellfish species belonging to 62 families and 18 orders. The study found that Carangidae had the highest number of species [9 spp.], followed by Scombridae [7 spp.], Sciaenidae [6 spp.], Synodontidae [5 spp.], Clupeidae [4 spp.], and

various other families. The most abundant order of finfish was Perciformes with 54.26%, followed by Clupeiformes [8.51%], Carcharhiniformes [5.32%], and other orders with lower percentages. The study also provided market prices for various fish, ranging from 20 to 1500 rupees. High-priced fish included Jew fish [Ghol], Silver pomfret, Chinese pomfret, Indian scad, Chinese herring, silver conger eel, Sharks, and Ribbon fishes. These fish were primarily consumed fresh, while the remaining catch was processed and exported to other countries after value addition and freezing.

In 2017, Katira and Kardani [17] conducted an investigation on the diversity of ichthyofauna present along the Sikka coast. According to their research, there were 112 fish species spread throughout 12 orders, 50 families, and 84 genera. Perciformes possessed the greatest number of families, totaling 29, followed by Clupeiformes with five families and Pleuronectiformes with three families. The remaining orders, including Elopiformes, Siluriformes, Tetraodontiformes, and Beloniformes, contained two families each, while Carcharhiniformes, Myliobatiformes, Anguilliformes, Gonorhynchiformes, and Scopaeniformes had only one family each. Family Carangidae contributed the highest percentage, with 11.6% and 13 species, followed by Serranidae and Clupeidae with a 6.25% contribution each, containing seven species each. Haemulidae, Mugilidae, Sparidae, and Tetraodontidae each contributed 4% to 5%, while Dasyatidae, Garreidae, Leiognathidae, Sciaenidae, and Ariidae contributed 3% each. Other families contributed 2% and 1%. Family Carangidae had the most fish species, with 13, followed by Serranidae and Clupeidae with seven species each, Haemulidae with six species, Sparidae and Mugilidae with five species each, and Tetraodontidae with four species. Ariidae, Sciaenidae, Dasyatidae, Garreidae, and Leiognathidae all had three species each, while other families had one to two species. Overall, the Sikka coast had 112 recorded fish species distributed across 50 distinct families.

Conclusion

The study conducted on the coast of Mangrol identified a total of 113 finfish species belonging to 60 families in 25 orders. The orders that are most prevalent in terms of species were Carangiformes, Scombriformes, and Perciformes. The market price study indicated that the price of fish varied between 10-1500/- with Jewfish, Silver pomfret, Tunas, Sharks, Ribbon fish, Herrings, and Dara fetching the highest prices. Among the families, Carangidae contributed the most significant number of finfish species. A few critically endangered species were observed during the study, including *Rhina ancylostomus, Aetobatus narinari*, and *Mobula mobula*. However, the low number of individuals observed for these species suggests that they are either rare or captured in very small numbers, the study offers important details about the variety and state of conservation of finfish species along the Mangrol coast.

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