

# Impact of COVID-19 Pandemic Lockdown on Fishery Potential of Uran Tehsil, M. S., India

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**Abstract:** *This investigation was intended to find out the impact of covid-19 pandemic lockdown on fishery potential of Karanja and Mora village of Uran Tehsil from Maharashtra State. Data was collected by questionnaire and on field survey method. Data revealed the presence of 55 commercially important fishery species, including 44 fishes, 08 crustaceans and 03 molluscs. It was found that species diversity was positively correlated with substantial impact of Lockdown.*

**Keywords:** Uran Landing Centers, Fishery Potential, Covid-19 Lockdown, etc.

## I. INTRODUCTION

Today whole world suffers from an ongoing Coronavirus/ COVID-19 pandemic. Humans are mostly affected directly through coronavirus infection and indirectly through their occupation/jobs. This impact is also being seen on the fisheries potential of India. The Coronavirus popularly known as COVID-19 was started in China, mainly from Wuhan city [1, 2]. The spread of the virus was almost in all the countries which leads to millions of corona positive cases and thousands of human deaths per day [2]. On 30 January 2020 World Health Organization [2] had declared a global emergency [1]. In India First lockdown was placed on 24 March 2020 [3].

As the GDP of the world during the Covid-19 lockdown has been affected, the economic status of India also has been lowered down and hence it shows multi-sectoral spillover effects. One of those is the fishery sector, which had also been impacted due to lockdown. In many countries, Fishing and distribution of Fishery products i.e., Transportation of seafood are considered as an important activity and because of implementing several rules to prevent the spread of infection, this sector has been facing great loss [3, 4]. During this period the small-scale fishery was facing problems in pricing, marketing, and organization. Due to complete strict lockdown, there was no landing of fishes on landing centers which affects the economy of the coastal region [5].

Maharashtra state comprises 526 villages which are marked as marine fishing villages. Raigad district with a number of 195 it comprises the maximum number of villages Raigad with 31.2% of them comes under active fishing, more than six months in a year and the rest of the time they do part-time seasonal fishing [6].

Uran is blessed with good nature and marine environment, people living here are mostly 80% fishermen. Fishing is the main occupation and source of economy for the local people in Karanja and Mora. People in these regions are facing fishing crises due to corona pandemic lockdown as compared to past years. In the present work, we try to highlight impact of Covid-19 lockdown impact on fish species occurrence and its potential in the coastal landing centers of Uran tehsil.

## II. METHODOLOGY

### A. The Study Area

For this study we have selected two landing centers and local fish market each situated in Karanja and Mora village from Uran Tehsil. Uran (18° 52'38"N 72° 55'42"E) is a coastal town which is located in Navi Mumbai, Maharashtra State comes under the Raigad district in the Konkan division. A creek called 'Uran creek / Sheva creek' (Lat. 18° 50' 20" N and Long. 72° 57' 5" E) encircles Uran city towards the north side and is continuous with the Panvel creek and Thane creek. Creek namely Dharamtar creek (Lat. 18° 50' 5" N and Long. 72° 57' 10" E) encircles Uran city towards the south side and is continuous with the Karanja creek and Pen-Khopoli creek. On the west side, Uran is encircled by the Arabian Sea. Karanja (18°51'13" N 72° 56'51"E) is a village which is present southward side of Uran. This village is mostly consisting

of fishermen families engaged in active fishing in coastal waters, while utilizing landing center located along Karanja creek also known as Karanja jetty (Figure 1). Mora (18°54'47" N 72° 55'30" E) is a village which is present northwards from the in Uran which is complete opposite to Karanja village (Figure 2).



**Figure 1: Site Map of Karanja Village**



**Figure 2: Site Map of Mora Village**

#### **B. Data Collection:**

Weekly survey was conducted for the period of 3 months from February 2021 to April 2021, to assess fish species occurrence at the selected landing center and local fish market weekly. Fish species were identified by using, Pictorial guide books [7, 8] and through online database of fish base website [9].

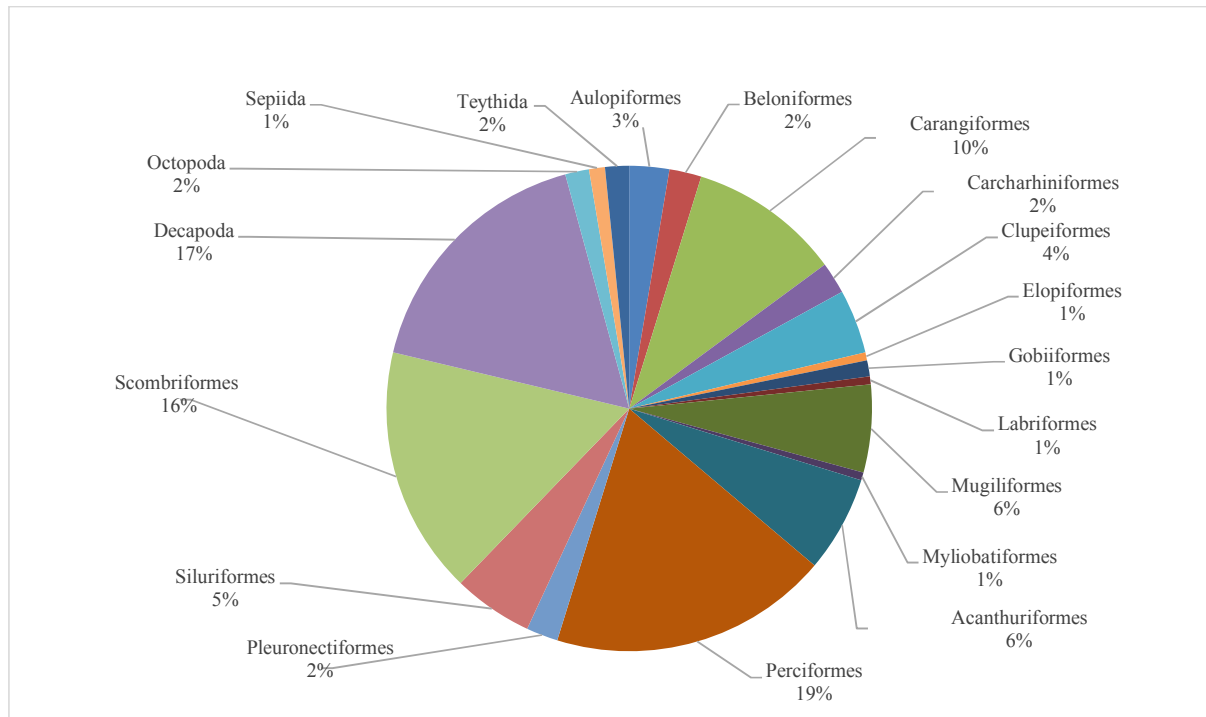
### **III. RESULT AND DISCUSSION**

During Covid-19 pandemic period, aquaculture producing Asiatic countries were experienced difficulties in accessing inputs and disrupted export in aquaculture [10, 11]. Decrease in fishing pressure, mainly by legal industrial fleets, may allow fish stocks with more resilient life histories to recover, with important indirect effects for the small-scale sector. For example, the combination of decreased demand, lower prices, and lockdowns on fisheries in many places indicates that boats are harboring in port and fishing is reduced by as much as 80% [12]. Total 55 commercially important species, including 44 fishes, 08 crustaceans and 03 molluscs were recorded.

Reported 44 fish species were belonging to 33 families and 15 order, while 08 crustacean species were belonging to 04 families of order decapoda. Though number of crustacean species were found to be less as compared to data given by Maheshwaradu [13] for economically important crustaceans including penaeid prawns, non-penaeid prawns, crabs and lobsters reported along Maharashtra coast. In molluscs, only 03 species reported, each belonging to one order and family

respectively. Pawar, [14] has recorded 31 species of fishes from the Uran coast, whereas we have recorded 39 species of fishes from the Karanja and Mora coast.

With site dependent assessment, all 55 reported species were observed at Karanja landing center and local fish market, while only 31 species were reported from Mora landing center and local fish market. Pawar, [14] fishes of Order Perciformes were predominantly recorded from both the landing centers. Similarly, we have also recorded fishes with the species belonging to order Perciformes (25%) in large number followed by Scombriformes, 18% and Carangiformes, 13%. (Table I and Fig. 3).



**Figure 3:** Order wise species occurrence at Uran Tehsil.

At Karanja, species like, *Pampus argenteus*, *Mugil cephalus*, *Lutjanus argentimaculatus*, *Parastromateus niger* and *Penaeus indicus* were recorded maximum times, while species like *Coryphaena hippurus*, *Megalops cyprinoides*, *Boleophthalmus boddarti*, *Acentrogobius nebulosus*, *Aetobatus narinari*, *Pateobatis uarnacoides*, *Scatophagus argus*, *Epinephelus coioides*, *Acanthopagrus berda*, *Psettodes erumei*, *Arius maculatus*, *Leptura canthus*, *Parapenaeopsis stylifera*, *Macrobrachium rosenbergi* and *Portunus sanguinolentus* were least observed. From above listed species, ICAR-CMFRI have already successfully developed brood stock induced spawning and seed production for cage culture for *Lutjanus argentimaculatus* and *Epinephelus coioides* [15].

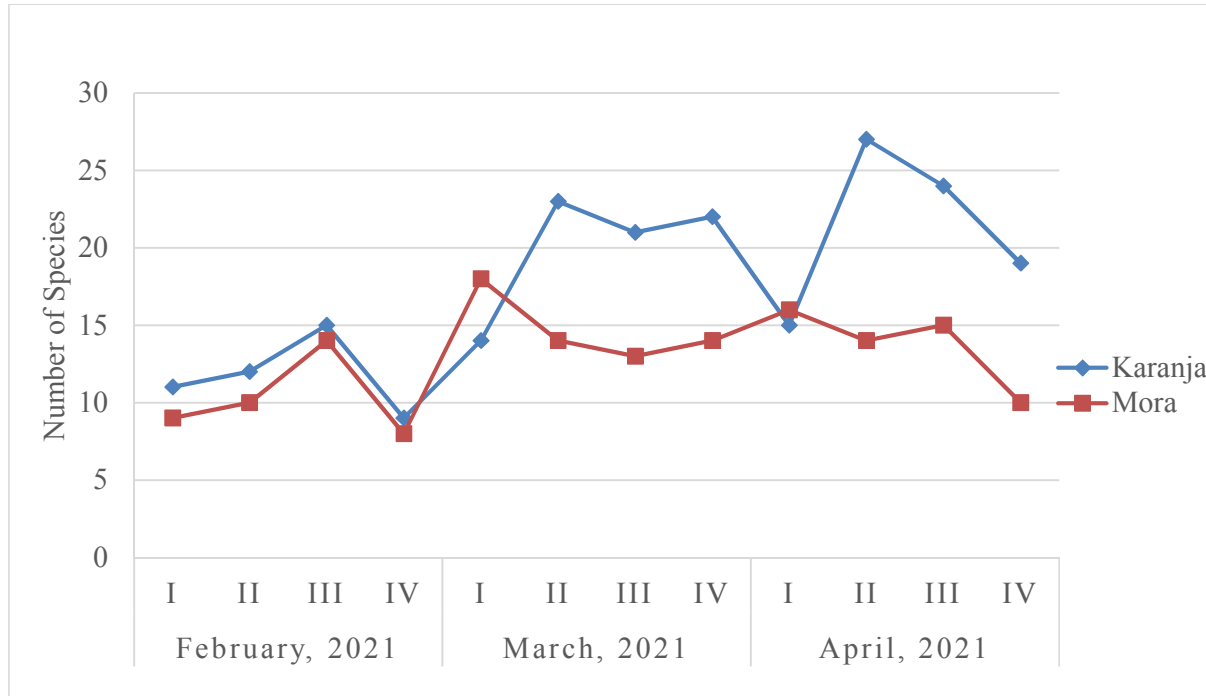
At Mora, fishes like *Portunus sanguinolentus*, *Mugil cephalus*, *Rita rita*, *Penaeus indicus*, were recorded predominantly, whereas species like, *Lutjanus sanguineus*, *Pampus chinensis* and *Uroteuthis duvaucelil* were rarely observed (Table I). In Handbook on Fisheries statistics [16], it was stated that, in Maharashtra, species wise maximum landings were shown by *Penaeid* and *non-paenaeid* prawns, Bombay duck, Ribbon fish, Indian Mackerel, Oil Saradine, Silver pomfret. While fishes like, Snappers, Rays, Tunas, Molluscs showed negligible landing.

**Table I:** Commercially important fish species at Karanja and Mora village of Uran Tehsil





species observed along Karanja, whereas a smaller number of fishermen practicing along Mora village, hence low number with ranges of 10-15 species observed during month of March (Table I, II & Fig. 4).



**Figure 4:** Weekly occurrence of commercially important fish species from Karanja and Mora village.

#### IV. CONCLUSION

Covid-19 Lockdown enforcement adversely affects commercial capture fishing practice as well as reduces vessel traffic along coastal water. These conditions probably avail optimum environment to thrive fish species, which is resulted in to increased species diversity along coast line of study area. Other hand current socioeconomic status of coastal fishermen needs to asses as under these circumstances, their only source of bread is badly influenced.

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