

## Prospects of Developing Fish Processing Industry near Bhima River

Ankush Kamble<sup>1</sup>, Bhalerao A. K.<sup>2</sup>, Shivaji Argade<sup>1</sup> and Neha Qureshi<sup>1</sup>

<sup>1</sup>Scientist, ICAR-Central Institute of Fisheries Education, Mumbai, (M.S.)

<sup>2</sup>Scientist, Training and Education Centre, ICAR - Indian Veterinary Research Institute, Pune, (M.S.)

### SUMMARY

Fish processing is a traditional business for lakhs of families who stay in close vicinity to oceans. The fish harvests are processed to fulfill off-season demand and it also increases the shelf life of perishable commodities. The transport of processed product becomes relatively easier and more market price is fetched by value added products. Now considering the present situation of Covid-19 pandemic, transportation sector got affected severely. It negatively hampered transportation of perishable commodities such as fishes, vegetables, fruits etc. Therefore, through this article we discuss the possibility and prospects of fish processing in Bhima river basin.

### INTRODUCTION

Fishes are significant constituent of non-vegetarian diet and abundantly provide proteins and essential nutrients. Our ancestors used elementary fish processing techniques such as sun-drying, salting, and smoking to stabilize the fish supply (Singh and Pigott, 2021). The term fish processing refers to the various courses involved from harvesting of fish to the delivering to the last consumers. Therefore, fish processing can be divided into fish handling (the initial processing of raw fish) and fish products manufacturing. The fish processing occurs at fish processing yards / plants for fish products. Fishes and fish waste are being used in pearls, medicines, pigments, manure, wine, beer, fertilizers industries. The Bhima is a one of the most important rivers in the southwest India and it flows through Maharashtra and Karnataka states. It is a major tributary of the Krishna River in western India. It originates in the Bhimashankar heights of the Western Ghats and flows southeastward for seven hundred and twenty-five kilometer in Maharashtra to join the Krishna in Karnataka. The various studies reported Bhima and its tributaries are highly polluted. The urban sewage from Pune and Pimpri Chinchwad municipal corporations, industrial waste flows into this river along with ritual anthropogenic activities are reported major cause of pollution in river. In Bhima river belt (Figure 1), entire harvested fish is either consumed locally (peripheral urban & rural markets) or transported in other areas for fresh consumption. The consumers of area prefer processed products of marine fish (dried fish). The area is preferably less suitable for establishment of fish processing industries because of some reason as mentioned below.

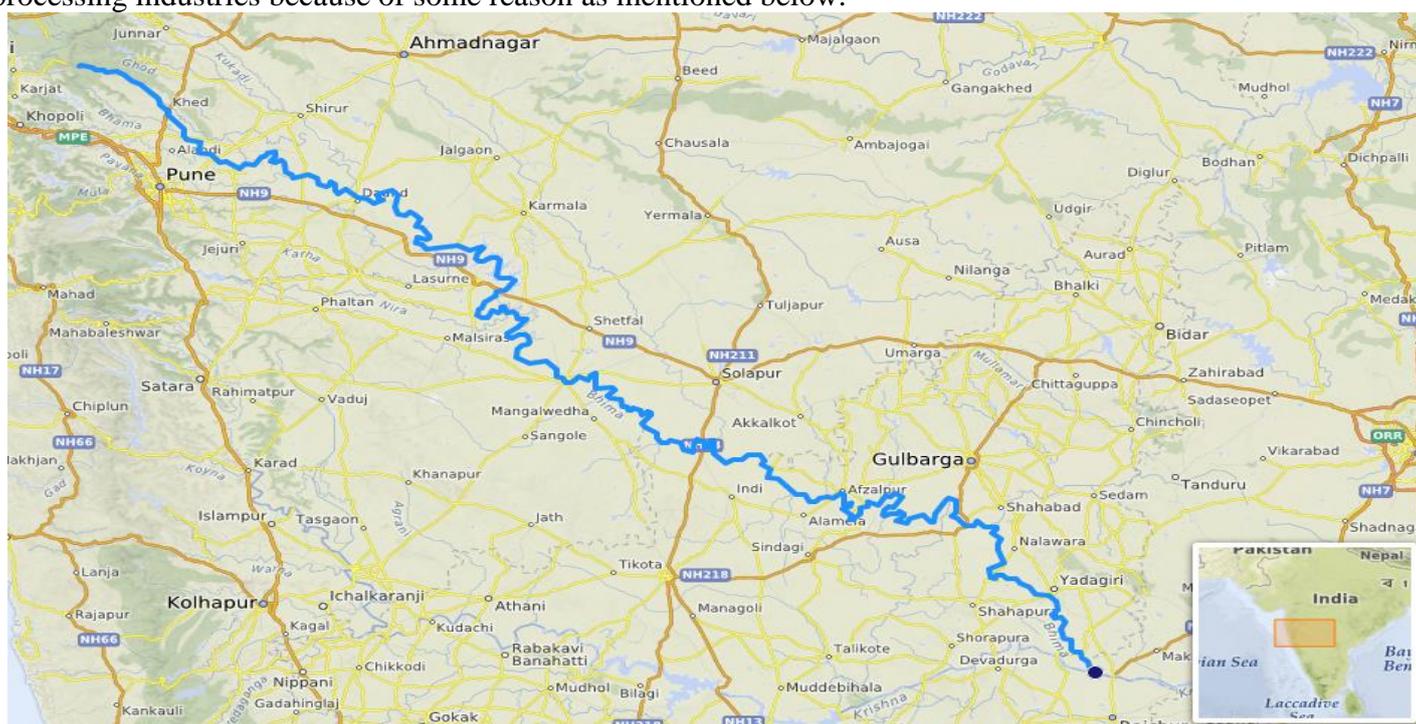


Figure 1. Bhima river course indicated by blue color

**Reasons for the slow growth of fish processing industry****Consumer preference:**

The consumers of area prefer fresh fish of river, village ponds and canals. They consume processed products of marine fish like Bombay duck, Anchovy fish, Baby Prawns, Bluefish, Butter Fish, Mackerel and Prawns. The processed products of fresh water fish are not preferred by consumers of the area.

**More demand of fresh fish:**

The demand for consumption of fresh fish immediately after harvest is high. Also, the remaining fish are sold in other nearby and distant markets. So, fish availability for processing is very less.

**Fluctuation in fish harvests:**

The success of any food processing industry depends on the regular and consistent supply of raw material. Due to various reasons, including pollution in Bhima river, deletion of water quality and quantity, irregularity of monsoon, loss of aquatic biodiversity, illegal fishing, over fishing, illegal exploitation of riverine resources, etc. the fish harvests are fluctuating. Hence, to set up a fish processing industry near Bhima river, efforts are needed for the conservation of river as well as for sustainable fishing.

**Long distance from sea:**

The area is located about 300 km away from sea. So, transporting raw fish from the sea and processing in Bhima river area is not economical. In other words, it would be highly uneconomical to bring raw fish from the ocean if there is no raw input from Bhima river.

**Fish Processing in high value commodities:**

The fish processing industries are mainly involved in processing and export of high value fishes like tuna, salmon, herring, sardines, and shrimp. The processed products of these fishes are highly demanded in export market.

**Poor technological knowledge:**

The folks of the area believes that only marine fish are being processed and fresh water fish has no scope in processing. The functionaries involved in fish supply chain have poor knowledge of fish processed products.

However, various processing activities like filleting, salting and freezing of fresh fish have a great scope in transporting and distribution to fresh fish retail, catering outlets. It increases the shelf life of the fish by inhibiting the mechanisms that promote spoilage and degradation. It prevents enzymatic, bacterial and chemical deterioration and maintain the fish flesh in a condition as near as possible to that of fresh fish. In addition, Boil-Dried Fish, Roast-Dried Fish and Smoked Fish have some scope in retail hoteling services (Sen, 2005).

**Way Forward to Promote Fish Processing Industries**

The first logical step for this endeavor would be to propagate joint efforts for the conservation of Bhima river. Presently, lot of pollution is taking place in the Bhima river basin which is a threat to the livelihood of fishermen families as well as for future businesses depending of fish farming. Timely interventions are needed from state Government Departments, NGOs, Civil Societies, Local communities and all other stakeholders to clean the river and also to stop the current as well as future pollution. Secondly, the efforts are needed to transform fishermen into the guardians of river ecosystem. They need to be educated on the importance of maintaining river ecosystem at optimal stage. The State Fishery department, ICAR institutes related to fish farming and KVKs in the region can take initiative to organize such training program and sensitization workshops. Moreover, a small-scale fish processing clusters with minimal investment can be set up at various locations, on the banks of Bhima river. For example, 4 to 8 pilot project with involvement of The State Fishery department, ICAR institutes related to fish farming and KVKs in the region can be implemented to see the probability of fish processing success. In

fact, a good approach would be to form FPOs to organize the fishermen and other stakeholders. It would bring organizational outlook to this unorganized sector and corporate style of business would be possible for fishermen. Finally, after studying all the dimensions of pilot projects of fish processing, big industries can be set up on the banks of Bhima river. If this idea is not feasible then rather than investing massive money in big industries, several other mini-processing units can be established to promote and utilize the entrepreneurship among fishermen communities.

## CONCLUSION

The prevailing food consumption of rural inhabitants is difficult to change. However, the Bhima basin offers close proximity with blooming metro cities such as Pune, Bengaluru etc. wherein demand can be created for processed fish foods. Now a days, several online meat seller apps and portals are being popularized. This brings huge opportunity to form FPOs on fish production as well as fish processing in Bhima river basin, and the final product would be sold to e-commerce agency. It will provide employment to thousands of families and their socio-economic status can be uplifted (Singh & Surasani, 2020). In future, fish processing can play significant role in increasing exports and bringing foreign exchange to India (Chengappa, 2004).

## REFERENCES

- Singh, A., & Surasani, V. K. R. (2020). Fish processing: An entrepreneurial opportunity for livelihood and income generation. *SCIENTISTS JOINED AS LIFE MEMBER OF SOCIETY OF KRISHI VIGYAN*, 144.
- Singh, R. Paul and Pigott, George M.. "Fish processing". *Encyclopedia Britannica*, 13 Apr. 2021, <https://www.britannica.com/topic/fish-processing>. Accessed 24 June 2021.
- Sen, D. P. (2005). *Advances in fish processing technology* (Vol. 1). Allied Publishers.
- Chengappa, P. G. (2004). Emerging trends in agro-processing in India. *Indian Journal of Agricultural Economics*, 59(902-2016-68029).