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# Status of commercial fish species production in India

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## INTRODUCTION

Fisheries and aquaculture are vital components of India's food production system, rural employment, and export economy. India's fisheries sector has shifted from its traditional role as a subsistence activity to an important commercial activity today and considered as one of the thriving industries of the country (Rajeev *et al.* 2022) resulting in production of 184.02 lakh tons during 2023-24 which is a global share of 8 %. India is the third-largest fish-producing country globally and the second-largest producer through aquaculture (MINFAHD, 2025). The sector supports the livelihoods of more than 30 million people and plays a crucial role in nutritional security, especially for vulnerable populations in coastal and inland areas (Phand and das, 2025). India's fisheries sector encompasses three major domains: marine capture fisheries, inland capture fisheries, and aquaculture. Inland aquaculture has shown remarkable growth, primarily driven by the cultivation of Indian major carps. At the same time, shrimp aquaculture, particularly of exotic species like *Litopenaeus vannamei* has witnessed rapid expansion since the early 2000s and has emerged as a dominant force in India's seafood export strategy. Shrimp accounted for nearly 66 % of India's total marine export value in 2023-24, with Andhra Pradesh, Gujarat, Odisha, and Tamil Nadu as key production hubs (MPEDA, 2025). On the other hand, the increase in per capita fish consumption from 4.9 kg in 2005 to 8.89 kg and among fish-eating population from 7.43 kg to 12.33 kg in 2021 (Padiyar *et al.* 2024), coupled with the growing production from culture fisheries, offers an opportunity to tap into the unutilized marine fisheries resources in the Indian EEZ and adjacent high seas, thereby meeting the rising demand for fish while also boosting fishermen's incomes.

The sector has generated employment opportunities for thousands, including women and smallholders. However, it also poses significant environmental and social challenges, such as salinization of land, disease outbreaks, antibiotic misuse, and displacement of traditional fishers (Gnaneshwar *et al.* 2023; Gaur and Tewari 2023; Singh *et al.* 2024). To promote sustainable growth, the Government of India has launched schemes such as the Pradhan Mantri Matsya Sampada Yojana (PMMSY), focusing on infrastructure, biosecurity, and responsible farming practices. Moving forward, achieving a balance between intensification, ecological sustainability, and livelihood equity is essential for the long-term resilience of India's fisheries and aquaculture sectors.

**Analysis commercial species production in India**

**L. vannamei:** Production of *L. vannamei* has increased significantly over the last five years, rising from 711,674 metric tons in 2019–20 to a peak of 1,097,481 metric tons in 2022–2023—a total increase of around 51%. The year 2021–2022 saw the biggest yearly growth (+19.69%), which was probably driven by improvements in farming practices and higher demand during the post-COVID recovery period. However, production fell significantly (-1.87%) to 1,076,970 metric tons in 2023–2024, either as a result of economic problems, market saturation, or competition from other nations. The long-term trend is still favourable despite this slight decline, indicating that the industry is still growing while adjusting to the market (MPEDA, 2025).

**P. monodon:** *P. monodon* output has fluctuated significantly over the last five years, first dropping by 22.04% in 2020–21, most likely as a result of disturbances brought on by the pandemic. However, output experienced a robust recovery from 2021–22, growing at consecutive rates of 46.72%, 55.68%, and 36.06% to reach 85,752 metric tons in 2023–24. With a 142% increase overall from 2019–20, this indicates enhanced farming methods, more market demand, and a growing preference for Black Tiger shrimp possibly as a result of increased market value and customer interest in premium shrimp species (MPEDA, 2025).

**Scampi:** In 2020–21, scampi production first fell by 12.96%, most likely as a result of disruptions brought on by the epidemic. But in 2021–2022, it had a stunning 156.74% increase, indicating both increased demand and better farming practices. Growth steadied at 7.24% in 2022–2023 and 8.35% in 2023–2024 after this notable recovery, suggesting a consistent and long-term expansion. Overall, production rose by around 160% between 2019–20 and 2023–24, indicating a robust rebound and steady demand for Scampi in the market (MPEDA, 2025).

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**Other export-oriented fishes:** Both Pangasius and Mud Crab have grown significantly over the last five years; Pangasius production increased sharply before leveling off at 152,599 MT in 2023–2024, while Mud Crab production tripled from 2001 MT in 2019-20 to 6197 MT in 2023-24. Due to market modifications, Seabass had a significant increase in 2022–2023(19,030 MT) and a minor fall in 2023–2024 (17,505 MT). Production of tilapia peaked in 2022–2023 (12,682 MT) and then sharply declined in 2023–2024 (7,099 MT), indicating potential issues with cultivation or demand. As a result of their niche status, Cobia and Pompano produced little and irregularly. Overall, certain species like pangasius, seabass, and mud crab show great promise, but others are unstable and have unpredictable growth patterns (MPEDA, 2025).

**Table 1: State wise utilised and production of *vannamei*, *monodon* and *scampi in 2023-24***

| SN | States | *L.vannamei* | | | *P.monodon* | | | *M.rosenbergii* | | Total (vannamei & monodon) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AUC (ha.) | EP (MT) | Tons/ ha | AUC (ha.) | EP (MT) | Tons/ ha | AUC* (ha.) | EP (MT) | AUC (ha.) | EP (MT) |
| 1 | Gujarat | 2768 | 18015 | 6.5 | 6406 | 27430 | 4.3 | NA | 1470 | 9174 | 45445 |
| 2 | Maharashtra | 850 | 1968 | 2.3 | 55 | 68 | 1.2 | 1610 | 139 | 905 | 2036 |
| 3 | GOA | 112 | 272 | 2.4 | 21 | 20 | 1.0 | -- | -- | 133 | 292 |
| 4 | Karnataka | 706 | 2015 | 2.9 | 2252 | 405 | 0.2 | -- | -- | 2958 | 2420 |
| 5 | Kerala | 284 | 804 | 2.8 | 3034 | 1048 | 0.3 | -- | -- | 3318 | 1852 |
| 6 | Tamil Nadu & Pondicherry | 9188 | 41200 | 4.5 | 68 | 199 | 2.9 | 13 | 6 | 9256 | 41399 |
| 7 | Andhra Pradesh | 97137 | 932484 | 9.6 | 4517 | 31365 | 6.9 | 124 | 100 | 101654 | 963849 |
| 8 | Telangana | 56 | 209 | 3.7 | -- | -- | 0.0 | NA | 16123 | 56 | 209 |
| 9 | Orissa | 8409 | 42637 | 5.1 | 252 | 402 | 1.6 | 1802 | 1339 | 8661 | 43039 |
| 10 | West Bengal | 6470 | 37365 | 5.8 | 51650 | 24815 | 0.5 | 8720 | 5593 | 58120 | 62180 |
| | Total | 125980 | 1076969 | 8.5 | 68255 | 85752 | 1.3 | -- | 24770 | 194235 | 1162721 |

AUC – Area under culture, EP(MT) – Estimated Production (Metric tons), NA – Not available

* Area under village farms and reservoirs

(Source: MPEDA,2025)

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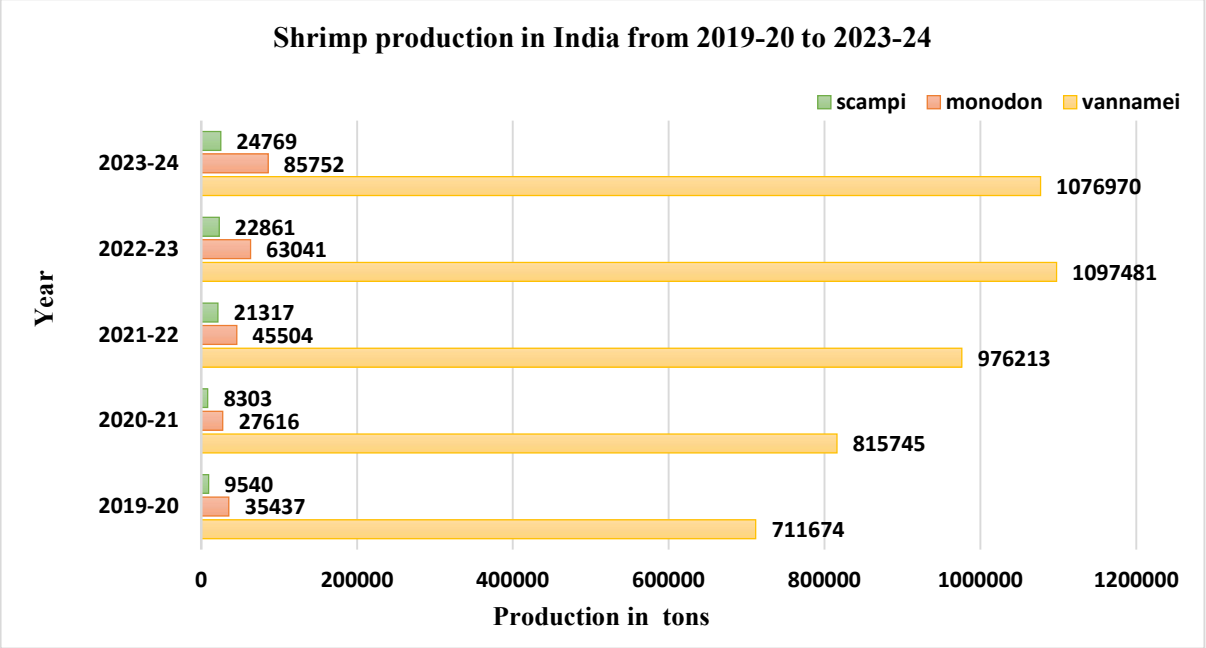
Result of Table 1 indicates, India produces 11.87 lakh tons of cultured shrimp such as vannamei monodon and scampi in nearly 2 lakh hactare area during 2023-24. Where vannamei domainate the field with 10.8 lakh tons (91 %), followed by monodon with 8.6 lakh tons (7 %) and Scampi with 0.25 lakh tons (2 %). Among the shrimp producing states, Andhra Pradesh alone holds 86 % of total vannamei prodution in India. Followed by Tamil Nadu & Pondicherry (3.8 %), Orissa (4 %), West bengal (3.5 %), and Gujarat (1.7 %). An average productivity of vannamei in india is 8.5 tons/ha. Andhra Pradesh registered highest productivity in vannamei with 9.6 tons/ha followed by Gujarat produces 6.5 tons/ha. Orissa and West Bengal produees an average of 5 tons/ha. Whereas least productivity noted in Goa, Telungana, Kerala and Maharastra with less than one ton/ha.

Regarding monodon farming, Andra pradesh, Gurarat and West Bengal dominates with 3 lakh tons, 2.7 lakh tons and 2.4 lakh tons respectively. These three states alone contributes the major share (97.5 %) of monodon production. An average productivity of monodon in India is 1.3 tons/ha. As expected Andhra Pradesh yields high productivity with 7 tons/ ha. Followed by Gurajat with 4 tons/ha. Surprisingly, West Benagal produces only 0.5 tons/ha although it holds nearly 30 % of Indian monodon production. Whereas, Tamil Nadu & Pondicherry, Orissa, Maharastra and Goa produces better with 3, 1.6, 1.2, and 1 tons/ha respectively despite their individual share in total monodoon production is only less than 0.5 percentage.



## Conclusion

India has taken a leading position in the production and export of fish products, making a significant contribution to economic growth while also serving as an important source of livelihood for millions of people. However, income from the fisheries sector largely depends on shrimp exports. Other commercially important fish species are produced and exported only in limited quantities, mainly due to constraints in the production of quality fish seeds. With rising demand, competition among developing countries in shrimp exports has intensified, which in turn has led to a decline in shrimp prices in international markets, as evidenced by several data sources. Therefore, in the coming years, long-term profitability from the fisheries sector can be ensured not only through shrimp but also by expanding the production and export of other fish species such as pompano, seabass, grouper, cobia, ornamental fish, seaweeds, as well as value-added fish products. At present, shrimp farming is concentrated mainly in coastal states such as Andhra Pradesh, Gujarat, West Bengal, Odisha, and Tamil Nadu. Hence, it is necessary to identify the constraints in other coastal states and implement appropriate measures to increase their production potential.

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