A report by Jaljeevika and Change Engine

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India's Aquatic Economy

The untapped potential of inland water bodies



Jaljeevika

Change Engine

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Who we are

About Jaljeevika

Jaljeevika works on the vision of Water for Livelihood, Water for All. We help small-scale and marginalised fish farmers build resilience and earn better livelihoods from existing water bodies, using appropriate technology and strong community institutions. Our ecosystem development model builds skills, strengthens institutions such as Self Help Groups and Farmer Producer Organisations (FPOs), develops a community cadre of business service providers (including our Matsya Sakhis), and links smallholders to markets through IT-based advisory services. Our work spans freshwater fish farming, women-led fishery livelihoods, fish seed rearing micro-enterprises, low-cost fish cages, recirculating aquaculture systems and seaweed cultivation. We work across 5+ states including Bihar, Odisha, Telangana, Madhya Pradesh and Uttar Pradesh, impacting 40K+ farmers.

Jaljeevika is founded by Neelkanth Mishra and supported by philanthropic foundations such as Tata Trusts, Godrej Foundation and Azim Premji Foundation, among others.

About Change Engine

Change Engine is an ecosystem builder with the goal of catalysing India's next **100 non-profit unicorns:** organisations that can impact 1M+ people meaningfully.

We do this through a highly selective, funded accelerator program, where we partner with high-potential founders and work closely with them to get to product-market fit and set them up for scale. In the last few years, we have worked with 15+ impactful organisations which have raised over $2M in follow-on funding.

We have also published the first evidence-based *Playbook for building non-profit unicorns* which distils insights from 30+ organisations on what it takes to scale impact. Our recent *Ease of doing good* series is looking at systemic barriers such as lack of access to unrestricted funding.

Change Engine is founded by Varun Aggarwal, Shubham Bansal and Shailendra Nath Jha, and supported by philanthropists, senior VCs and non-profit leaders.

About the report

India's Aquatic Economy: The Untapped Potential of Inland Water Bodies and Jobs looks at the current status of inland fisheries in India, their current productivity, the potential of these inland resources such as ponds, tanks, wetlands and reservoirs, and what it will take to turn that potential into jobs and incomes for rural families. It draws on data by the Department of Fisheries, reports by the Food and Agriculture Organisation, Parliamentary records, and academic papers based on field studies in Bihar, Jharkhand and Odisha, and the organisations' own estimates based on the earlier mentioned sources.

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The untapped potential..

India is the second-largest producer of fish in the world. It produced about 20 million metric tonnes (MMT) in 2024–25, and the sector accounts for 1% of GDP. Fisheries have grown at almost 8% a year over the last decade, the fastest of any sub-sector within agriculture and allied activities. Most of this growth has come from inland fisheries (lakes, ponds, tanks and wetlands) rather than marine fisheries. But production levels of inland water bodies remain far below their potential.

When very few initiatives have raised farmer incomes, rural wages have been stagnant, and high unemployment is driving migration from villages to cities, we believe that inland water bodies offer a solution.

It is usually the poorest and most vulnerable groups that depend on these water bodies for their livelihood. By developing them, we can do two things at once: **drive economic growth, and meet social development and equity goals**.



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Key findings

01

India can double its inland production from 15 MMT to 30 MMT, adding $40B to the economy.

Inland production has grown from 6.1 to 15.2 million tonnes in a decade. It is now worth $22B, about 0.5% of India's GDP. At a similar pace, it can reach 30 million tonnes by 2035 and add another $40B, if we can enable farmers improve productivity per hectare and get better prices for their catch.

Most water bodies in country are underused. Average productivity is 1.86 tonnes per hectare, against a national target of 5. The states with the most water, such as Bihar (0.90) and Odisha (0.97) have the lowest yields.

Raising productivity while making sure that the poorest households are able to participate in the growth, will need a mission mode approach with investments in infrastructure, capacity building and access to finance.

02

It will lead to about 1.8 crore new jobs and higher incomes for fishing communities.

Inland fisheries provide livelihoods to 23 million people. People in the sector come disproportionately from socially and economically disadvantaged groups. Their household incomes range from ₹60,000 to ₹1,20,000 a year. Most rely on fishing as a second source of income, alongside farming, livestock, small businesses and wage labour.

Where farmers get training and access to water, programmes have raised household incomes by 45% to over 200%. In Bihar, small farmers' income rose from ₹30,000 to ₹1 lakh a year after training.

Doubling inland fish production could add 1.8 crore jobs. A 10% rise in inland fish production is linked to an 8.2% rise in employment, twice the rate in agriculture.

03

Governments and markets are coming together to build the sector.

The Union Budget 2026–27 gave fisheries its highest-ever allocation of ₹2,762 crore. The flagship PMMSY scheme has approved projects worth over ₹21,000 crore since 2020. State governments are investing in infrastructure and in support for farmers.

Startup activity has picked up too. About $400 million of venture capital has gone into better technology for feed, seed and monitoring over the last 10 years.

04

India has a vibrant network of grassroots organisations to make this happen.

India has 2.5 lakh gram panchayats, 90.9 lakh women's self-help groups with over 10 crore members, and about 28,000 fisheries cooperatives with 39.5 lakh members.

These institutions can lease and manage village ponds, tanks and wetlands together. This lets small farmers and fishers take part in the inland economy.

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Key Recommendations

India should double its inland production to 30 MMT by 2035, through a targeted approach that includes small farmers and fishers.

01

Launch state Aquatic Livelihoods Missions.

Fisheries, rural livelihoods, water resources and panchayats are managed by different departments. A state level mission should bring them together around high-potential clusters, with the water body as the unit of planning. A key role of the mission would be to converge central and state schemes, and give farmers a single window for all of them.

It should track shared outcomes such as productivity, household income and employment. It should also codify models that can be replicated across the state.

02

Build the infrastructure around high-potential clusters.

To raise the productivity of water bodies from 1.86 to 5 tonnes per hectare, farmers need good-quality fish seed. That needs large investments in nurseries and hatcheries around high-potential clusters.

We estimate this would need ₹7,000 crore over the next 10 years. With capital subsidies and interest subvention, it would cost the government about ₹3,600 crore, or ₹360 crore a year. Existing PMMSY and FIDF schemes can meet all of this with deliberate planning.

03

Give local communities secure, long-term rights to use water bodies.

States should create model leasing frameworks that give water bodies directly to local SHGs, fisher groups and FFPOs. Leases should run for at least 5 years, with a capped rent.

This will ensure that gains in inland productivity benefit the poorest households.

04

Build a cadre of local fisheries extension agents.

Most farmers lack hands-on support with stocking, feeding, water quality and disease. A trained cadre of local agents can give them regular support using standard technical playbooks.

The agents would work with the Fisheries Department, the Aquatic Livelihoods Mission and community organisations. AI chatbots and video content can support them, as has been done in agriculture.

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Chapter one

State of inland fisheries

Inland water now produces three-quarters of India's fish and supports 23 million livelihoods.



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1.1

India's inland fisheries are valued at about $22B[1] and have grown at about 8%[2] over the last decade

India's total fisheries production (marine and inland) was 19.78 million tonnes,[3] making it the world's second-largest producer of fish. Fisheries contribute about 1% to India's GDP. They are the fastest-growing sub-sector within agriculture, at about 8%. Agriculture itself has grown at a slower 4.45%.[4]

Fisheries also add to India's exports, earning about ₹73,000 crore.[5] This is about 1% of India's total exports[6] and about 16% of agricultural exports.[7]

The sector divides broadly into inland and marine fisheries. Its recent growth has come from inland fisheries. India's inland fisheries now produce 15.17 million tonnes. That is 75% of India's fish production, up from 63% in 2014.[8] Inland fisheries are valued at $22B,[9] about half of the total fisheries value of $45B.

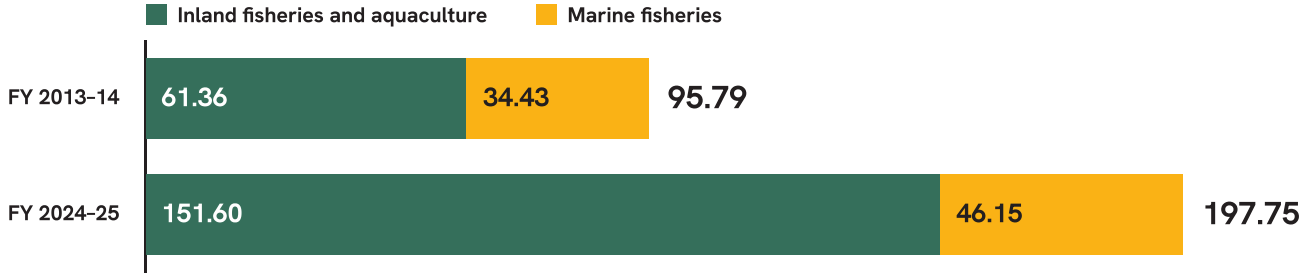
Marine fisheries need heavy investment in fishing equipment, and large corporations often run them. Inland fishing is different. Local communities can practise it in rivers, canals, tanks and ponds, reservoirs, raceways, brackishwater, saline and alkaline water, beels, oxbow lakes, derelict waters and other inland water bodies in landlocked areas.[8]

These water bodies use different fishing practices. Capture fisheries catch fish from their natural habitat. In culture-based fisheries, fish are raised from seed (or spawn) to full-grown fish. Freshwater aquaculture is the umbrella term that combines capture and culture-based fisheries. Table 1.1 lists these practices and where they are used.

Figure 1.1

Fish production has nearly doubled in a decade, driven by inland fisheries

Fish production by source, FY 2013–14 and FY 2024–25 (lakh tonnes)



Source: Government of India, Press Information Bureau, 10 February 2026.

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Table 1.1

Inland fisheries by mode of fishing and the physical boundaries of the waterbodies where they operate

Physical boundaries of waterbodies	Capture (including culture-based fisheries where capture is the main mode)	Culture-based fisheries	Freshwater aquaculture, including capture-based aquaculture
Enclosed	Natural warm- and cold-water lakes, ponds, disused waterbodies	Human-made tanks, ponds, lakes, reservoirs	Fish farms, pond carp culture systems, hatcheries, livestock–fish integrated systems, human-made tanks
Semi-enclosed	Floodplain wetlands (beels, haors, mounds, oxbows), lagoons, brackishwater lakes, irrigation canals	Floodplain wetlands, natural freshwater and brackish water lakes, rice–fish systems, irrigation canals	Cage culture, prawn culture within or next to other waterbodies, hydrologically connected during the flood season
Open	Rivers and floodplain channels, streams, estuaries	Rivers or floodplain wetlands with established populations of exotic fish	–

Source: Kelkar and Arthur (2022), FAO Fisheries and Aquaculture Circular No. 1230.[10]

1.2

Inland fisheries offer livelihoods to 23 million fish farmers, the largest such workforce in the world[11]

India has more people working in fisheries and fish farming than any other country. According to FAO's *The State of Fisheries and Aquaculture 2026*, India has the highest number of people employed in the primary sector of fisheries and aquaculture. The sector employs 30 million fishers and fish farmers. Twice that number work in its value chain:[12] supplying fingerlings and feed, harvesting, transport, processing and selling.

Women are a big part of this workforce. 44% of Indian fishers are women.[11] They help manage ponds, catch fish and sell them.[10]

Inland fishers make up 82% of the total workforce, and 44% of inland fishers are women.[11]

A typical inland fishing household earns about ₹60,000 to ₹1,20,000 a year. A study of fisherfolk on the River Ganga found that those in Uttar Pradesh earned ₹60,000 a year, while those in West Bengal earned up to ₹1,20,000.[13] A study of fisherfolk in Tamil Nadu found they earned ₹50,000 to ₹70,000 a year.[14]

Employment in the sector is not uniform. It varies by how much time people give to fishing:[15]

Occasional: under 30% of work time on fishing.
Full-time but seasonal: fishing hard for part of the year, with other work such as farming for the rest.
Part-time, all year.
Full-time: over 90% of livelihood from fishing.

In India, only 21% of inland fishers fish full-time. The rest are part-time, occasional or unspecified.[11] For most people, inland fishing is a second source of income.

Most fish farmers rely on fish for both food and income. Fish is an important source of nutrients. For instance, 50g of mola can provide up to 70% of an adult's daily calcium needs, 35% of iron and 16% of zinc.[16] The Government of India has set a fish consumption benchmark of 12 kg per person.[17]

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1.3

Governments at both central and state levels are running dedicated schemes to develop fisheries

The Government of India has been making a big push to develop the country's fisheries. It gives support mainly through two flagship schemes: PMMSY with its sub-scheme PM-MKSSY, and FIDF. Table 1.2 sets out what each one funds.

Since 2015, the Government of India has spent ₹39,272 crore on developing fisheries and aquaculture.[20] In FY 2026–27, the Centre allocated ₹2,500 crore to PMMSY and ₹30.3 crore to FIDF.

But inland fisheries are a state subject. State governments are responsible for funding and developing the sector. States also hold the rights over their water bodies, and decide who can get access to them.

Table 1.2

Policy mandate for the development of fisheries

Scheme	What does it fund?	Budget outlay
Pradhan Mantri Matsya Sampada Yojana (PMMSY)	Broad support for fisheries and aquaculture: production, beneficiary equipment and facilities, post-harvest infrastructure, value chains, technology and fisher welfare.	₹2,500 crore for FY27
PM Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)	Formalises the fisheries sector. It supports FFPOs, gives performance grants to fisheries micro-enterprises (including for value-chain improvements and quality standards), and brings all fisheries and aquaculture entities onto the National Fisheries Digital Platform (NFDP).	₹6,000 crore (Central Government, World Bank and beneficiary share).[19] ₹1,500 crore from PMMSY over FY24 to FY27.
Fisheries Infrastructure Development Fund (FIDF)	Concessional finance for infrastructure such as fishing harbours, landing centres, cold storage, hatcheries, fish markets and processing units.	₹30.30 crore in FY27. Total fund is ₹7,522.48 crore.

Source: Ministry of Finance, Notes on Demands for Grants 2026–27, Demand No. 43.[18]

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1.4

Startup investments are on the rise, with about $400 million invested over the last 10 years[21]

About 250 startups have emerged in fisheries and aquaculture, with $386 million of investment in the last 10 years.[22] This shows that fisheries is an emerging sector, and that both the government and the market are responding to its needs.

Table 1.3 maps the value chain. The government funds the sector's inputs, disease surveillance, and training for farmers and farmer groups. Startups are making aquaculture ponds more efficient, with IoT systems and feed that cut waste and help farmers earn profits. Others are improving traceability across the value chain to help fishery exports.

Table 1.3

Value chain matrix of fisheries

Stage	Government	Startups
Pre-harvest Broodstock, hatcheries, seed, feed, pond preparation	Nucleus breeding centres, new freshwater and finfish hatcheries, grow-out ponds, fingerling stock, input support for the first crop, fish feed mills, brood banks, integrated development of reservoirs, certification of hatcheries, brood banks and feed mills	UltraNutri, Loopworm, Sea6, Growel, Bonphul Foods, UCliq, Jaljeevika, Bariflow Labs, AquaExchange, Captain Fresh, FreshR
Harvesting and grow-out Feeding, water quality, monitoring	RAS, cages	Eruwaka Technologies, Snrassystems, Aquapulse, AquaExchange, Bariflow Cybernetics
Post-harvest handling Scaling, grading, icing, primary processing	Cold storage, ice plants, disease diagnostic and quality testing labs	Captain Fresh, Growel
Transport and distribution Insulated, refrigerated movement	Refrigerated and insulated vehicles, motorbikes, cycles	Aquaconnect
Marketing and consumption Wholesale, retail, exports	Fish vending centres, construction of fish retail markets	Damn Good Fish, Bonphul Foods, AquaAgri, Aquaconnect
Others Credit support, training and capacity building	Integrated aquaparks; support to set up more FFPOs and strengthen micro-enterprises; fish markets, brood banks, hatcheries, fisheries training centres and processing units; Matsya Seva Kendras and cluster coordinators as extension agents; aquaculture insurance	Seagrass Tech (marine algae), Fermensis Bio (micro-algae food products), AquaAgri (seaweed)

Note: the matrix covers the top 20 funded startups (by valuation) in fisheries and aquaculture, from Tracxn.[22]

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1.5

Andhra Pradesh and Telangana accounted for almost 40% of the growth in India's inland fish production[23]

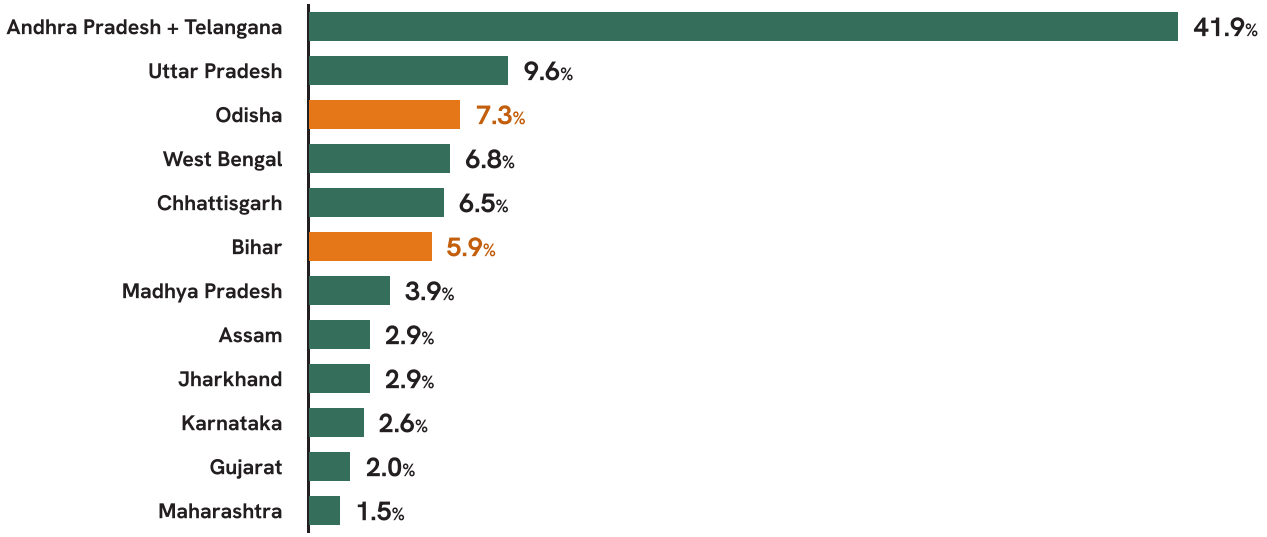
Andhra Pradesh's inland fish production was 1.58 MMT in FY14[23] and grew to 4.88 MMT in FY25.[24] Investment in intensive aquaculture, with a focus on shrimp, drove this growth. Five shifts reinforced each other: a clear policy anchor, sustained infrastructure investment, capacity building, crowding in of private capital and regulatory easing.

A similar mission-mode approach could help unlock inland fisheries in water-rich states like Bihar, Odisha, Madhya Pradesh and Uttar Pradesh.

Figure 1.2

Andhra Pradesh and Telangana have led the growth of inland fisheries in India

Share of the 90.24 lakh tonne rise in inland fish output, 2013–14 to 2024–25. Odisha and Bihar, two of the most water-rich states, are highlighted.



Sources: Handbook on Fisheries Statistics 2018 (2013–14); Press Information Bureau, February 2026 (2024–25). Andhra Pradesh and Telangana are combined so the geography matches across years.

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Chapter two

The opportunity

The water is already there. Using it well would create jobs in the villages that need them most.



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2.1

India could increase its inland fisheries market from $22B to $60B in the next 10 years

India has 7,57,040 wetlands covering 1,52,60,572 hectares. Of these, marine or coastal wetlands cover 41,40,116 hectares and inland wetlands cover about 1,05,64,899 hectares.[25] Table 2.1 shows the types of inland water bodies that make up these wetlands.

But most of these wetlands are not used to their potential. Table 2.2 compares reported yields with the benchmark yields reported across the literature for each type of wetland in India. For comparison, China averages 743 kg/ha from its reservoirs, against the 98–190 kg/ha usually reported in India.

Table 2.1

Types of inland water bodies in India

Inland wetland class	Unit	Area
River / stream	km	341,906
Raceways	ha	1,928
Small reservoirs	ha	754,833
Medium and large reservoirs	ha	2,082,797
Tanks and ponds	ha	2,747,505
Brackish water	ha	606,977
Saline / alkaline water	ha	12,579
Beels / oxbow lakes / derelict water	ha	1,449,821
Other than rivers and canals	ha	2,012,577
Total	ha	**9,669,017**

Source: Department of Fisheries, Handbook of Fisheries Statistics 2025.[8]

Table 2.2

Inland water body potential

Inland wetland type	Reported yield (kg/ha)	Potential yield (kg/ha)	Multiplier
Small reservoirs	190	500	2.6X
Medium and large reservoirs	98	150–250	1.5X–2.5X
Man-made tank / pond	3,000	5,000	1.7X
Oxbow lake	450	2,000	4.4X

Sources: PMMSY Operational Guidelines (2020);[26] FAO (2024), A review of the inland fisheries of India.[27]

Our estimate

The total production potential of these water bodies ranges from 26.41 million tonnes to 52.82 million tonnes. That is worth between $40B and $100B in gross value added.

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2.2

The average productivity is 1.86 tonnes per hectare, well below the national target of 5 tonnes per hectare

The Government of India set a target of 5 tonnes per hectare for fisheries productivity. But a closer look at inland fisheries shows that no state other than Andhra Pradesh has reached this benchmark. That includes the other top producer states: West Bengal (3.68), Uttar Pradesh (3.08), Bihar (0.90) and Odisha (0.97).

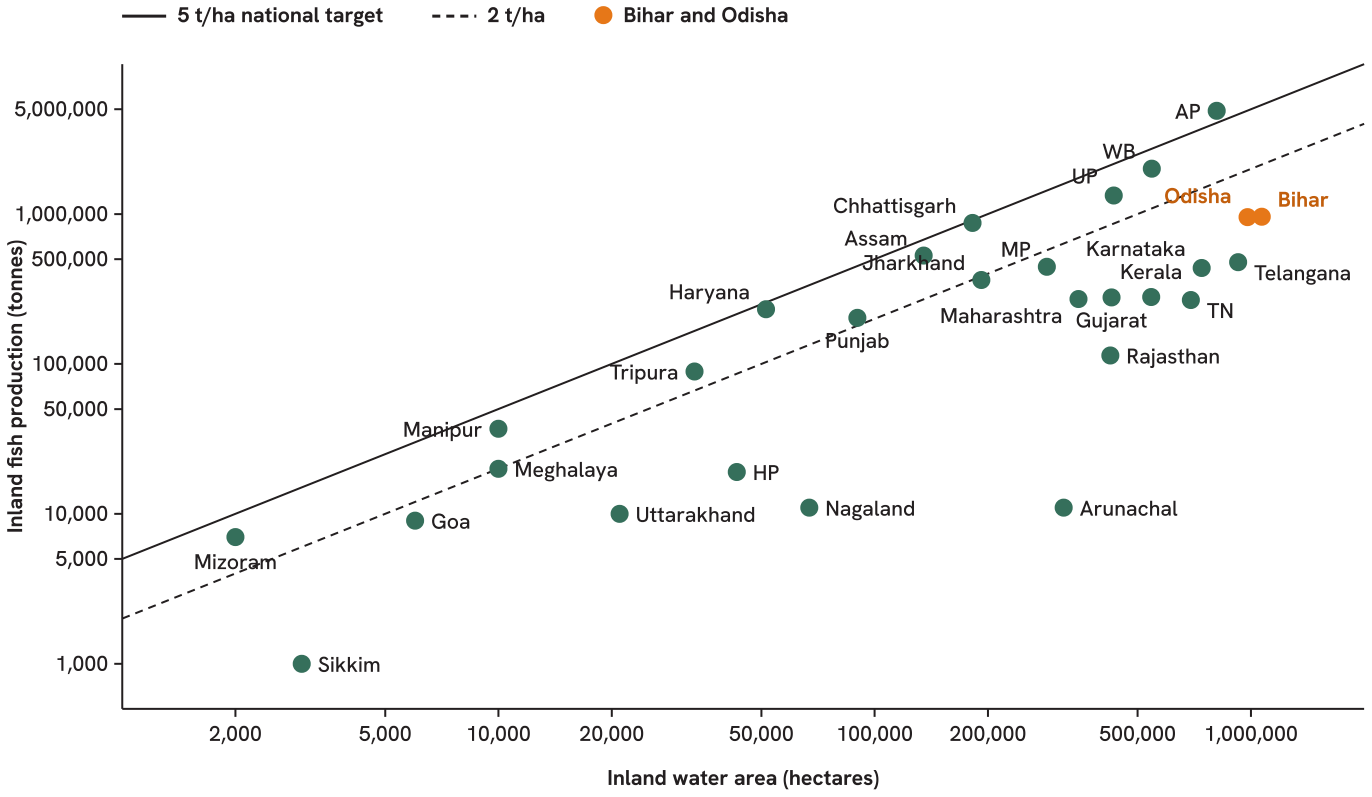
Current inland productivity is 1.86 tonnes per hectare. Most states remain below 2 tonnes per hectare, as Figure 2.1 shows. Annexure 1 sets out the method.

Notably, the states with larger inland water resources, such as Bihar, Odisha, Karnataka, Tamil Nadu and Madhya Pradesh, show lower productivity.

Figure 2.1

Inland-based productivity of fisheries

Inland water area and inland fish production by state, both on log scales. Bihar and Odisha, the two states with the most water, are highlighted.



Source: Jaljeevika and Change Engine analysis of Department of Fisheries data (Handbook on Fisheries Statistics 2025). Bihar: state Handbook of Fisheries Statistics 2021–22. Sikkim and Haryana: academic papers. Method in Annexure 1.

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2.3

The growth in inland fisheries can disproportionately benefit smallholder farmers and low-income communities

Our estimates show that a 10% increase in inland fisheries production is associated with an 8.2% increase in employment. In agriculture, a similar rise in production brings a 4% increase in jobs.

This means that if production doubles to 30 million tonnes, it will create 18 million additional jobs.

Several programmes have also shown that targeted interventions raise the incomes of fishers.

A Government of Odisha programme, with technical support from WorldFish, trained and supported about 4,000 women's self-help groups to start fishing in unused gram panchayat tanks. The average tank per self-help group was 1 hectare. Each yielded an annual profit of about ₹1,50,000 at a 50% margin, with productivity of 1.7 tonnes per hectare. This brought an additional ₹10,600 per woman a year, from 2 hours a day spent on fish farming. Women sold the fish and shared them with family and friends, which improved household nutrition in the state.[28]

Small farmers in Bihar (with landholdings under 2 acres) who were trained in fish farming saw their fish income rise from ₹30,000 to ₹1 lakh a year. For most of them, fish farming was a part-time activity.[29]

From 2023 to 2025, Jaljeevika piloted a fisheries and aquaculture livelihood programme in Kumuram Bheem Asifabad district. It raised the income of about 500 households by 24.7%.

The programme combined farm ponds, community ponds and reservoirs, and built community institutions around them. This created a resilient, cluster-based aquaculture model. Two things made it work: real-time technical advice for each pond, and local fish seed nursery enterprises.

Global evidence also points to communities as the route to sustainable livelihoods. An FAO study found that communities near the African Great Lakes that engage in small-scale fisheries were less likely to be income-poor (by 9–15%). They also ate fish about twice as often each week, and up to three times as much, and had higher food security (up by 12.6%).[15]

Table 2.3

Impact of targeted interventions on the incomes of fish farmers

Organisation	Water body	State	Base income per farmer	Additional income per farmer a year	Farmers	% increase
ICAR-CIFRI	Village ponds	Bihar	₹30,000 a year (fish income)	₹70,000	2,622 trained (318 surveyed)	233%
ICAR-CIFRI	Reservoirs	Jharkhand	₹1,45,000 a year (total household)	₹65,500	70 cage fishers surveyed (vs 30 non-cage)	45%[30]
Odisha FARD + Mission Shakti, with WorldFish	Village tanks	Odisha	Tanks were unused	₹10,600	4,000 women's SHGs (40,000 women fishers)	Up to 48% vs comparison group
Jaljeevika	Village tanks and farm ponds	Telangana	₹58,546	₹14,456	434 households	24.7%

Sources: Roy et al. (2021);[29] Kachhap et al. (2026);[30] Dubey et al. (2024);[28] Jaljeevika programme data.

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2.4

India has a rich network of grassroots community organisations to manage water bodies sustainably and enable equitable growth

Improving the productivity of water bodies is crucial, but it alone won't lead to equitable growth. In several cases, efforts to raise production have led private contractors to capture water bodies, with little or no benefit to small farmers.

For inland fisheries to benefit the poorest households, those households need legal rights to fish in and manage these water bodies. They also need the know-how, and the capital or credit to make the first investments. Individual fish farmers are usually too poor to run the whole enterprise alone. But India's vast network of self-help groups, cooperatives, producer organisations and gram panchayats lets people come together and co-manage these water bodies.

But cooperatives in India remain largely defunct, and funds from central schemes for their development are slow to reach them. Recognising the value of community-based approaches and technical training, the government set a target under PMMSY of 550 fish farmer producer organisations (FFPOs). The PM-MKSSY scheme aims to set up and strengthen 5,500 FFPOs. As of 2026, 195 new FFPOs have been set up and 1,909 existing fishery cooperatives have been converted into FFPOs.

However, most conversions are concentrated in Maharashtra, Telangana, Andhra Pradesh, Assam, Manipur and Kerala, which together account for 60% of them. High-potential states such as Odisha and Bihar (see Figure 2.1) account for just 1% each. This risks deepening regional gaps in fisheries, as Andhra Pradesh already drives 40% of the growth in India's production.

Table 2.4

Role of grassroots institutions in the development of inland fisheries

Community networks	Scale	Role for inland fisheries
Gram panchayats	2.5 lakh[31]	Panchayats are the custodians of village commons, including tanks and ponds. States are giving them rights to lease these out to community organisations.
Women's self-help groups (DAY-NRLM)	90.9 lakh SHGs with 10.05 crore women[32]	Lease village ponds as a group. Train members through community resource persons. Access credit for seed and feed.
Fisheries cooperatives and producer organisations	About 28,000 societies with 39.5 lakh members,[33] and about 2,000 producer organisations[34]	Hold leases on wetlands and reservoirs. Most states give them first claim to a lease, and they can bargain with traders as a group for better prices.

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Chapter three

What can catalyse the ecosystem?

Doubling inland output by 2035 needs growth of about 8% a year. Five changes can get India there.



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The inland fisheries sector would need to keep growing at roughly 8% a year to go from 15.17 MMT in 2025–26 to 30 MMT by 2034–35. This needs a concentrated effort to raise production in high-potential states, while keeping growth equitable and climate-resilient. To get there, we make the following recommendations.

3.1

Make public investments in infrastructure around high-potential clusters

A thriving fisheries industry needs significant investment in infrastructure across the value chain. First, producers need access to high-quality and diverse fingerlings (baby fish). This requires investment in hatcheries and nurseries.

We estimate this would need capital investment of about ₹7,000 crore. Capital subsidies and credit support through the existing flagship schemes, PMMSY and FIDF, can crowd in private investment. The total budget outlay would be ₹3,600 crore over the next 10 years, or ₹360 crore a year (Table 3.1).

Second, the government needs to invest in cold chains and post-harvest infrastructure, including cold storage, collection and aggregation centres, and processing facilities.

Table 3.1

Public investments needed to develop fisheries infrastructure

Item	Amount (₹ crore)	Financed by
Total investment	**7,000**	
Capital subsidy	2,800	PMMSY (Central share: ₹1,680; State share: ₹1,120)
Owner's contribution (10%)	700	Entrepreneurs, cooperatives, FFPOs, SHGs
Bank loans	3,500	Banks, NABARD, NCDC under FIDF (12-year loans, 2 years before repayment starts)
Interest subsidy (cost to government, on top of the investment)	788	FIDF interest subvention: 3% a year on the outstanding loan
Total public cost	**3,588**	Capital subsidy + interest subsidy

Source: Jaljeevika and Change Engine estimates.

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3.2

Launch an Aquatic Livelihoods Mission and adopt a state aquatic policy

For each priority water body, the Mission should develop a common action plan covering rehabilitation, production, producer organisation, infrastructure, finance and markets. It should bring together Fisheries, rural development and livelihood missions, Panchayati Raj, Revenue and Land Reforms, and Water Resources, with other departments as needed. It should track shared outcomes such as water-body productivity, household income, employment and private investment. The Mission should use an initial set of clusters to develop and codify models that can be replicated across the state.

Fisheries and water bodies are a state subject, but most states don't have a comprehensive fisheries policy. NITI Aayog, with the Department of Fisheries, can publish a model state fisheries policy to guide state departments. The state policy should set production targets, map all water bodies and their potential, and identify high-potential clusters. It should bring central and state schemes together around these clusters, and set up an Aquatic Livelihoods Mission to deliver the policy.

Fisheries, water resources, rural livelihoods and panchayats are all managed by different departments. The Aquatic Livelihoods Mission should coordinate them around high-potential clusters, with the water body as the basic unit of planning.

3.3

Open up inland water bodies and give local communities secure usage rights

A key challenge in developing water bodies for fisheries is that local communities rarely get the right to lease them. Most ponds, tanks, wetlands and reservoirs are owned by the state and leased on short contracts, often by auction. Auctions favour people with capital, and traditional and small-scale fishers end up as hired labour.

State governments can amend their Panchayati Raj Acts to give gram panchayats the power to lease out local ponds and tanks. They can also create model leasing frameworks for ponds, tanks, chaurs, mauns, oxbow lakes and reservoirs, so communities can manage them together. Such a framework must define, for each water body:

Eligibility and priority: local women's SHGs, fisher groups, cooperatives and FFPOs, with priority to those living nearest and those already fishing the water body.

Duration of the lease: shorter leases (under 5 years) don't give farmers enough incentive. Longer leases should be considered.

Process: most states hold auctions, but these tend to crowd out smaller groups and fishers. Leases should go directly to eligible local groups, with open auction as a last resort.

Rent: a capped share of production value, with a rent-free first year.

Safeguards for sustainable use: annual production audits to prevent under- or overuse, and protected zones in large water bodies for subsistence fishing.

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3.4

Build an extension agent cadre

The government should develop a dedicated cadre of local fisheries extension agents. They would give producers regular, hands-on support on pond preparation, species selection and stocking, feed and water management, disease prevention, harvesting and farm economics.

The cadre could be deployed through high-potential clusters, with each agent serving a group of farmers. Agents would work alongside Fisheries Department officials, rural livelihood missions and producer organisations. A standard set of technical playbooks and protocols can form the basis of their training and field support.

3.5

Funders should fund inland fisheries as a livelihood portfolio

Funders should treat inland fisheries as a way to fight rural poverty, and include it in their livelihood portfolio. This should include supporting research into sustainable and efficient fish production, and commissioning studies on what works for fishers' incomes, jobs and nutrition.

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References

1 Ken Research. (2026, July). India fish market size, share & forecast, by fish type, product form & distribution channel, 2026–2031. https://www.kenresearch.com/industry-reports/indian-fish-market

2 Press Information Bureau. (2026, February 10). Boom in aquaculture. Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2225760&reg=48&lang=2

3 Press Information Bureau. (2026, January 12). Fish production has increased to 197.75 lakh tonnes in FY 2024–25 from 95.79 lakh tonnes fish production in FY 2013–14 increasing a significant 106%. Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2213532&reg=48&lang=2

4 Ministry of Finance. (2026, January 29). *Agriculture will be central to achieving Viksit Bharat, driving inclusive growth and improving the livelihoods of millions: Economic Survey*. Press Information Bureau. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2219960&reg=6&lang=1

5 https://www.pib.gov.in/PressReleasePage.aspx?PRID=2267484&reg=48&lang=2

6 Press Information Bureau. (2026, April 15). The cumulative exports (merchandise & services) during FY 2025–26 (April–March) is estimated at US$ 860.09 billion, as compared to US$ 825.26 billion in FY 2024–25 (April–March), an estimated growth of 4.22%. Ministry of Commerce & Industry, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2252272&reg=48&lang=2

7 Press Information Bureau. (2026, March 26). India's resilient production systems in agriculture: From fields to market.Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2245639&reg=3&lang=1

8 Department of Fisheries. (2026). Handbook of fisheries statistics 2025. Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. https://www.dof.gov.in/static/uploads/2026/05/ed7bc7e6cab04413cde70999596c9fe2.pdf

9 National Statistics Office, Ministry of Statistics and Programme Implementation. (2025, June 27). Release of publication "Statistical report on value of output from agriculture and allied sectors (2011–12 to 2023–24)" [Press release]. Government of India. https://mospi.gov.in/sites/default/files/press_release/Press%20release%20for%20Brochure%202025_0.pdf

10 Kelkar, N., & Arthur, R. I. (2022). A review of governance and tenure in inland capture fisheries and aquaculture systems of India (FAO Fisheries and Aquaculture Circular No. 1230). Food and Agriculture Organization of the United Nations & International Collective in Support of Fishworkers.

11 Department of Fisheries. (2026). Handbook of fisheries statistics 2025. Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.

12 International Collective in Support of Fishworkers. (n.d.). India: Fisheries and aquaculture sector—Strong pillar of India's food production and economic growth. https://icsf.net/newss/india-fisheries-and-aquaculture-sector-strong-pillar-of-indias-food-production-and-economic-growth/

13 Pohit, S., Chowdhury, S. R., & Maurya, N. (2025). Livelihood challenges, community perception and payment for ecosystem services: The curious case of fisherfolk of the River Ganga. Margin: The Journal of Applied Economic Research, 19(1). https://journals.sagepub.com/doi/10.1177/00252921251365305

14 Angela, S. A. D., Immanuel, S., & Ananthan, P. S. (2012). Fishers of Stanley Reservoir: An insight into their livelihood. Indian Research Journal of Extension Education, 12(3), 128–131. https://api.seea.org.in/uploads/pdf/v12325.pdf

15 FAO, Duke University, & WorldFish. (2023). Illuminating hidden harvests: The contributions of small-scale fisheries to sustainable development. Food and Agriculture Organization of the United Nations.

16 Mohanty, B. P., Sankar, T. V., Ganguly, S., Mahanty, A., Anandan, R., Chakraborty, K., Paul, B. N., Sarma, D., Dayal, J. S., Mathew, S., Asha, K. K., Mitra, T., Karunakaran, D., Chanda, S., Shahi, N., Das, P., Das, P., Akhtar, M. S., Vijayagopal, P., & Sridhar, N. (2016). Micronutrient composition of 35 food fishes from India and their significance in human nutrition. Biological Trace Element Research, 174(2), 448–458 . https://www.researchgate.net/publication/301732151_Micronutrient_Composition_of_35_Food_Fishes_from_India_and_Their_Significance_in_Human_Nutrition

17 Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. (2020, June). Pradhan Mantri Matsya Sampada Yojana (PMMSY): Operational guidelines. Government of India.

18 Government of India, Ministry of Finance. (2026). Notes on demands for grants, 2026–2027: Demand No. 43—Department of Fisheries. https://www.indiabudget.gov.in/doc/eb/sbe43.pdf

19 Tata Trusts. (n.d.). Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY) [Presentation]. Department of Fisheries, Government of Mizoram.

© Jaljeevika and Change Engine 2026

20 Government of India, Ministry of Fisheries, Animal Husbandry and Dairying, Department of Fisheries. (2026, August 4). Seafood export: Unstarred question No. 2723 [Lok Sabha question and answer]. https://sansad.in/getFile/lsapps/loksabhaquestions/annex/188/AU2723_ClomwD.pdf?source=lsapps

21 Tracxn. (2026). Aquaculture tech startups in India. https://tracxn.com/d/explore/aquaculture-tech-startups-in-india/__1LugINP8gHxKBPOGYS65bNefGH0aH-N-U3d8Okx_Uzg

22 This matrix incorporates the top 20 funded startups (via valuation) in fisheries and aquaculture via Traxcn

23 Department of Fisheries, Government of India. (n.d.). Fisheries profile of the state: Andhra Pradesh. https://www.dof.gov.in/static/uploads/2025/08/e5f553138445ad5722796ea3c38577fc.pdf

24 Ministry of Fisheries, Animal Husbandry and Dairying. (2026, February 10). Boom in aquaculture. Press Information Bureau, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2225760&reg=3&lang=1

25 Wetlands of India Portal. (Retrieved September 14, 2026). *Interactive wetland map of India*. https://indianwetlands.in/wetlands-overview/interactive-wetland-map-of-india/

26 Department of Fisheries, Government of India. 2020. Pradhan Mantri Matsya Sampada Yojana: Operational Guidelines. (Target to raise aquaculture productivity from 3 to 5 tonnes/ha.)

27 FAO. 2024. A review of the inland fisheries of India. FAO Fisheries and Aquaculture Circular No. 1265. Rome: FAO. https://doi.org/10.4060/cd0674en

28 Dubey SK, Padiyar A, Chadag VM, Shenoy N, Gaikwad AB, Ratha BC and Belton B (2024) Scaling community-based aquaculture for enhanced nutrition and women's empowerment: lessons from Odisha, India. Front. Sustain. Food Syst. 8:1412686.

29 Roy, A., Som, S., Bhattacharyya, S., Das, B. K., Pandit, A., & Yadav, A. K. (2021). Impact of trainings in increasing farmers income: Evidence from Bihar, India. Journal of Environmental Biology, 42, 499–504.

30 Kachhap, S., Umamaheswari, T., Rajakumar, M., Athithan, S., Singh, A. K., Siddique, A. P., & Seenivasan, P. (2026). Assessment of socio-economic impacts of fisheries development programs on the livelihood of fish farmers in Jharkhand. Aquaculture International, 34, Article 181. https://doi.org/10.1007/s10499-026-02582-3

31 Ministry of Panchayati Raj. (2024, July 31). Infrastructure for Gram Panchayats. Press Information Bureau, Government of India. https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2039629&reg=3&lang=1

32 Ministry of Rural Development. (2025, February 11). Self-help groups. Press Information Bureau, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2101864&reg=48&lang=2

33 The National Federation of Fishers Cooperatives Ltd. (n.d.). Data bank. https://fishcopfed.in/data-bank.html

34 Ministry of Fisheries, Animal Husbandry and Dairying. (2026, July 21). FFPOs under PMMSY. Press Information Bureau, Government of India. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2286995&reg=48&lang=2

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Annexure 1

Calculation of current productivity of inland water bodies in India

To calculate the current productivity of inland water bodies across Indian states (excluding Union Territories), data on inland water body area was obtained from the Department of Fisheries. This was compared with the annual fish production from inland water bodies in each state, as reported in the *Handbook on Fisheries Statistics 2025*, published by the Department of Fisheries.

The average productivity across states was then calculated to estimate the average productivity of inland water bodies in India. For Bihar, data was taken from the state's *Handbook of Fisheries Statistics (2021–2022)*, while data for Sikkim and Haryana was obtained from academic papers.

Table A1.1

Productivity of inland water bodies by state

State	Area (hectares)	Production (tonnes)	Productivity (tonnes per hectare)
Andhra Pradesh	811,000	4,888,000	6.03
Chhattisgarh	182,000	873,000	4.80
Haryana	51,436	232,000	4.51
Assam	135,000	529,000	3.92
Manipur	10,000	37,000	3.70
West Bengal	545,000	2,007,000	3.68
Mizoram	2,000	7,000	3.50
Uttar Pradesh	432,000	1,331,000	3.08
Tripura	33,217	89,000	2.68
Punjab	90,000	203,000	2.26
Meghalaya	10,000	20,000	2.00
Jharkhand	192,035	363,000	1.89
Madhya Pradesh	287,000	445,000	1.55
Goa	6,000	9,000	1.50
Odisha	980,000	953,000	0.97
Bihar	1,069,521	960,000	0.90
Maharashtra	348,000	271,000	0.78
Gujarat	426,000	278,000	0.65
Karnataka	740,000	437,000	0.59
Telangana	925,000	477,000	0.52
Kerala	543,000	280,000	0.52
Uttarakhand	21,000	10,000	0.48
Himachal Pradesh	43,000	19,000	0.44
Tamil Nadu	693,000	267,000	0.39
Sikkim	3,000	1,000	0.33
Rajasthan	423,000	114,000	0.27
Nagaland	67,000	11,000	0.16
Arunachal Pradesh	318,000	11,000	0.03

Source: Department of Fisheries, *Handbook on Fisheries Statistics 2025*; Bihar: *Handbook of Fisheries Statistics 2021–22*; Sikkim and Haryana: academic papers.

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