

## Chapter 7

### Crisis for Fishers and Fish workers further deepens

**F**isheries provide direct livelihoods to more than 20 million fishers and fish farmers. The fishing industry contributes INR 1.75 lakh crore to the gross value added of India's economy every year. The Indian fishery sector leads the way in terms of export earnings, and ranks among the top agricultural commodities exported.

Rivers in India flow over 17,000 miles. Other water channels cover over 70,000 miles. Marine resources include the Indian Ocean, Arabian Sea, as well as many Gulfs and Bays. India is now the third largest producer of fish and the second largest producer of inland fish in the world. In addition to being a major foreign exchange earner, it is also a source of cheap and nutritious food.

### Inland Fisheries

Fishing in India is known for its diverse range of indigenous fisheries, with a wide range of inland fisheries. Rural communities relied on fisheries for their food security and livelihood. The fisheries sector in India now contributes 60 percent of the country's fish production and provides jobs to about 145 million people. It's more productive and sustainable to provide food security and create jobs for small, landless, and marginal farmers. The fish producing states of India are- West Bengal, Andhra Pradesh, Gujarat, Kerala, Tamil Nadu, Maharashtra, Bihar, Karnataka, Orissa, Uttar Pradesh, Chhattisgarh etc. In West Bengal, inland aquaculture emerged as a first growing enterprise and a stable alternative to the declining capture fisheries.<sup>1</sup> West Bengal is the only state in India, where fishes have been cultivated in every types of water bodies' be it brackish water, sweet water, sewage water and marine water as well.

However, inland fisheries include riverine fisheries, reservoir fisheries, wetland and local water body fisheries. Several attempts have been made since 1955 to develop suitable sampling techniques for estimation of catch in inland fisheries, but none have been conclusive.

Recently, the Central Inland Fisheries Research Institute (CIFRI), Barrackpore came up with a method for collecting data about some of the important still water areas around the world. Fish production is assessed using different sampling methods in each group. Data gaps remain not only geographically but also in terms of several sources of inland fisheries such as rivers, canals, etc. Statistics on fish production in the inland sector are

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<sup>1</sup>[https://www.ripublication.com/irph/ijfas16/ijfasv6n1\\_06.pdf](https://www.ripublication.com/irph/ijfas16/ijfasv6n1_06.pdf)

collected by the State Governments. Data collection requires a significant amount of materials and resources and the cost is not proportional to the volume of fish produced. As a result of the vast and diverse nature of water sources, inland fisheries present several challenges and it is imperative to develop a cost-effective approach.

Data on fish production in the inland sector are collected by state governments. Regular data collection involves a considerable amount of resources, and the cost incurred is not proportional to the amount of fish produced. As a result of the diversity and abundance of inland water resources, inland fisheries pose several challenges that require cost-effective methodologies today.

In the 1990s, the inland fisheries sector registered a growth rate of 6.55%. Aquaculture accounts for about 75-80% of all fish produced in inland waters. Fisheries have been given low priority as a result of the multipurpose use pattern of inland waters and their prominence relative to other production systems has not been recognized in most riparian states. Thus, most of the inland open water resources have suffered habitat degradation along with low fish yields. This has also resulted in fewer employment opportunities in rural areas.

Fisheries play a crucial role in sustaining wealth and economic growth of small scale inland fisheries. In terms of poverty alleviation and women's empowerment, the fishery sector plays an important role. Likewise, fishing is also a sector where females engage in a wide range of activities. Fish capture is dominated by men, but post-harvest activities like fish processing, retailing, and trading are usually handled by women. Poor and illiterate women of fishing communities are involved in post-harvest activities since high skill and large amounts of capital are not necessary. Women make up a large percentage of small-scale fishers. Fisheries were often the main source of income for families, although men control most of the household's cash-generating activities. Fishing activities play an important role for the disadvantaged women in the fishing villages, where a significant number of women are engaged in fish related activities as part of the day-to-day struggle for economic and social development.

Coastal West Bengal has vast marshy areas, brackish water in Orissa and Andhra Pradesh, and a multitude of lakes and ponds in Uttar Pradesh, Rajasthan, Madhya Pradesh, Andhra Pradesh, Bihar and West Bengal.

Approximately 40 percent of the total catch comes from inland waters. Nearly 6.5 times more fish have been produced in inland waters over the past forty

years. In recent years, inland fisheries have undergone rapid changes in both raising methods and preservation. In contrast to the northern states of India, whose production has remained flat over the past few years, the southern and eastern states have made rapid progress toward reaching self-sufficiency in fish production.

## Marine Fisheries

India is a tropical country with multi-species fishery in the marine sector<sup>2</sup>. For fishing from the sea, there are many types of gear and fishing crafts available. Prior to 1965-66, landings were mainly accomplished with non-mechanized indigenous crafts and gears and landings remained below one million tonnes during this phase. In the second phase, which covers the period up to 1985-86, the major developments were increased mechanization, improved gear materials, motorization of country crafts, expansion of export trade, etc. The last phase was after 1986. The mechanization process, motorization of crafts, and fishing on multi-day voyages all began during this phase. The vast coastlines in south-eastern and south-western India offer tremendous opportunities for marine fishing.

India's vast coastline - more than 8,000 kilometres long - is an ideal fishing ground. It supports a thriving marine fisheries industry, which contributes to the country's food security while supporting about four million fishers and their families. Over the past few decades, however, India's marine fishing industry has changed dramatically. Fishing was once dominated by small-scale and artisanal fisher folk who fished mostly for subsistence, has now become commercial and industrialized, with larger vessels such as trawlers and purse seines catching larger volumes of fish at one time. Traditional fishing has evolved into commercial fishing, and there has often been disgruntlement among local fishing communities as a result. In India, too, the rapidly expanding industrialized fishing operations along its coast seem to be seeking out migrant workers to meet their large manpower needs.

On the basis of ecosystem structure and functions, the Indian coastline can be divided into 22 zones. Indian boats range from traditional catamarans, *masula* boats, plank-built boats, dugout canoes, *machwas* and *dhonis* to fibreglass motorboats and trawlers with mechanical motors.

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<sup>2</sup><https://core.ac.uk/download/pdf/33019161.pdf>

## **COVID -19 and fishers and fish workers**

The first, then second wave of COVID-19 and subsequent lockdown has left the Indian fisheries in the lurch. Fisheries have reported severe economic losses around the globe, and in all cases, export-driven fisheries with complex supply chains have suffered the most. While the pandemic may have triggered the crisis, India's barrel was already stuffed full of decades of well-intentioned but ill-fated policies, unregulated growth, and markets that had been unstable.

Fisher folk communities hit by cyclones last year lost almost nine to ten months of fishing time in the first and second waves of pandemic. After COVID-19 hit them hard, months after the cyclones, the people were still walking to the fisheries to claim compensation. In addition to the COVID-19 pandemic and the cyclones, fishers face a 45-60-day fishing ban, resulting in more days without fishing.

Deep-sea fishers typically stay on the ocean for two to four weeks, but sometimes they stay for as long as 40 days, just in a few places. As early as the lockdown began, many of them were still at sea, returning to shore periodically. As they arrived at harbours with their huge catch, they were shocked to see empty fish landing centres. When they walked into their coastal villages, the fish markets were closed. There were no women vendors.

Women are usually seen on the streets selling fish, but all of them have disappeared. “Even though some fishing happens, the women are not able to sell because they cannot ride a cycle like some male vendors do, and there’s no public transport,” said Pradip Chatterjee, President of the National Platform for Small Scale Fish Workers (NPSSF<sup>3</sup>).

## **Sundarban Mangrove Forest and Fishers**

Sundarban, is pronounced, ‘*shundorbon*’ in Bengali, simply meant the dense forests of deltaic-coastal Bengal, characterized by the tiger, the crocodile, and the kamot (any of the few species of Sundarbans river sharks). Sundarban stand for the forest in India and Bangladesh, though physically undivided, politically and administratively they are separate entities and hence referred to as the Indian Sundarban and Bangladesh Sundarban, respectively. In the non-forest administrative circles of West Bengal, ‘Sundarban or Sundarbans affairs’ would usually mean the economic, social, or administrative issues connected with the non-forest areas of the 19 community development blocks (sub-districts) in the districts of North 24 Parganas and South 24 Parganas in southern West Bengal. The terms also stand for the region in general, either

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<sup>3</sup><https://thewire.in/rights/coronavirus-lockdown-climate-hit-fishers-livelihood>

forested or settled, south of the Dampier- Hodges Line, which once marked the northern borders of the Sundarbans Forests<sup>4</sup>. This Sundarbans, i.e. the 19 Community Development (CD) blocks plus the forest area, appears in United Nations Educational, Scientific and Cultural Organization (UNESCO) and Government of India documents as the Sundarban Biosphere<sup>5</sup> Reserve (SBR) and a world heritage site. This SBR is also occasionally referred to as the Indian Sundarban Delta (ISD). The biosphere reserve is part of the Sundarban, the world's largest mangrove forest straddling India and Bangladesh. It is home to an estimated 425 species of wildlife, including 300 species of birds and 42 species of mammals, including the royal Bengal tiger<sup>6</sup>. However, Sundarban consists of roughly 4,200 square km of reserve forest and 5,400 square km of non- forested area.”

Agriculture and fishing predominate in the Indian Sundarban, in the Bay of Bengal, which is home to 4.5 million people. As many as 54 of the 104 islands support human settlements and one in five households now has at least one family member who has migrated out of the region for better employment opportunities.

The forest lies outside village boundaries and hence no gram Sabha can lay claim to CFR in the classic way outlined in the Act. Currently on 20% of the Community access the forest for fish and honey, being their traditional occupation since long. Through many a struggle and signature campaign as well, fishers have asserted their rights while protesting atrocities heaped on them by Forest officials who more often than not are mistaking the wood for the trees.

### **Sundarban and cyclones**

Over just the past three years, the Sundarban, which is home to close to five million people, has been battered by four tropical cyclones — Fani (May 2019), Bulbul (November<sup>7</sup> 2019), Amphan (May 2020) and Yaas (May 2021). On each occasion, the region has suffered damage because of gale winds and

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<sup>4</sup><https://www.scribd.com/document/260874788/The-Sundarbans-Fishers>

<sup>5</sup>[https://sportdocbox.com/67411771-Game\\_and\\_Fish/The-sundarbans-fishers-coping-in-an-overly-stressed-mangrove-estuary.html](https://sportdocbox.com/67411771-Game_and_Fish/The-sundarbans-fishers-coping-in-an-overly-stressed-mangrove-estuary.html)

<sup>6</sup><https://india.mongabay.com/2019/05/demand-for-fra-implementation-in-the-sundarbans-echoes-in-2019-general-elections/>

<sup>7</sup><https://www.thehindu.com/news/national/other-states/ripples-from-cyclone-yaas-and-surgings-tides-devastate-the-sunderbans/article34678971.ece>

breached embankments, leading to ingress of sea water<sup>8</sup>.The storm did not breach the river embankment nor make the residents homeless, as it did elsewhere<sup>9</sup>.

When cyclone Yaas hit on May 26, 2021 it inundated several coastal villages in the Sundarban. However, Jharkhali, a low-lying village in the South 24 Parganas district of West Bengal, did not face a strong impact. The storm neither breached the river embankment nor rendered the residents here homeless, as it did elsewhere. Surrounded by three rivers, Matla, Bidyadhari, and Herobhanga, the region is cyclone prone and the villagers have previously been hit by cyclones, including Aila (May 2009), Fani (May 2019), Bulbul (November 2019), Amphan (May 2020), before Yaas in May 2021.

The protection from Yaas can, in part, be credited to the mangrove saplings that the villagers of Jharkhali have grown at the embankment, meant as a coping mechanism against cyclones and tidal waves. Around 300,000 mangrove saplings have been planted here since 2017<sup>10</sup>.

Women of the Jharkhali Sabuj Bahini, not for profit organisation formed in June 2005, and Akul Biswas, a visually impaired person, led these villagers, mostly housewives and widows, to form the organization and take up the plantation effort.

The mangroves help hold back the strong blows of the high tidal waves<sup>11</sup>. The river embankments are protected as the root of these mangroves grips the earth tight and that resists landslides.

Mangrove forests, nature's buffer against disasters, are imperilled by unregulated coastal development, shrinking of deltas and climate change linked extreme events<sup>12</sup>. The degrading health of mangroves affects their resilience and recovery potential against climate change consequences like sea-level rise<sup>13</sup>.

## **Bhitarkanika Mangrove Forest**

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<sup>8</sup><https://www.thehindu.com/news/national/other-states/ripples-from-cyclone-yaas-and-surg-ing-tides-devastate-the-sunderbans/article34678971.ece>

<sup>9</sup><https://www.pixstory.com/story/jharkhali-sabuj-bahini-and-their-mangrove-plantations-protects-village-against-cyclones/40038>

<sup>10</sup><https://mangroveactionproject.blogspot.com/2021/06/map-news-issue-523-june-19-2021.html>

<sup>11</sup><https://www.getbengal.com/details/west-bengal-government-executes-massive-mangrove-plantation-in-sundarbans>

<sup>12</sup><https://india.mongabay.com/2021/06/mangrove-plantation-drives-to-protect-jharkhali-from-cyclones/>

<sup>13</sup><https://www.getbengal.com/details/west-bengal-government-executes-massive-mangrove-plantation-in-sundarbans>

Odisha's Bitarkanika mangrove system is one of the largest in the subcontinent, and it is home to salt water crocodiles and huge range of other creatures. It is also the world's largest mass nesting site for Olive-Ridley turtles. The Bhitarkanika sanctuary is located in the north-eastern region of Kendrapara district of Odisha and the sanctuary covers an area of 672 square kilometres of mangrove forests and wetland<sup>14</sup>. The muddy creeks and mangroves at Bhitarkanika are part of a tidal maze formed by three rivers. The park is home to more than 215 species of birds.

The population of the saltwater or estuarine crocodile has increased in the water bodies of Odisha's Bhitarkanika National Park and its nearby areas in Kendrapara district

Bhitarkanika is also the largest mass nesting site for the Olive-Ridley turtles, followed by the coasts of Mexico and Costa Rica. Every year, between the months of November and April, the offshore waters of the Bay of Bengal and the Indian Ocean witness a flurry of action as the turtles<sup>15</sup> make their way to beaches along India's south-eastern coast to nest.

Using Earth's magnetic field for orientation, this species of ocean wanderers' journeyed several thousand kilometres to reach the beaches of Odisha, one of the largest mass-nesting sites in the world<sup>16</sup>.

Bhitarkanika is world's largest rookery of sea turtles. After between 45-65 days, the eggs begin to hatch, and the beaches are swamped with crawling turtle babies, making their first trek towards the vast ocean.

In 2020 due to restricted movement of people because of the ongoing COVID-19 lockdown, over 800,000 Olive Ridley turtles safely returned to the coasts of Odisha, at the Gahirmatha beach and the rookeries in Rushikulya, for mass nesting in late March. With no human interference, the hatchlings began emerging from the sand and started their journey to the sea at the start of May 2020.

Olive Ridley turtles mate in the ocean and females can store sperm throughout the breeding season, enabling them to produce one to three clutches of eggs at intervals. Like all sea turtles, the Olive Ridley females nest on the beach where

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14 <https://mangroveactionproject.blogspot.com/2021/03/map-news-issue-517-march-27-2021.html>

15 <https://www.rfi.fr/en/podcasts/international-report/20210318-head>

16 <https://mytvbuffalo.com/news/offbeat/video-over-14-million-olive-ridley-turtle-babies-scramble-towards-the-sea>

they were born and they lay 50 to 200 eggs in each nest and return to<sup>17</sup> the ocean shortly after.

### **Bhitarkanika and Cyclone Yaas**

Bhitarkanika national park, was ravaged by Cyclone Yaas that made landfall May 26, 2021 north of Dhamra port near the park. There were hundreds of trees uprooted by the violent winds, mostly casuarina, palm, coconut, and other trees. The crowns of many other trees were severely damaged. Many mangrove trees were also battered. Mud houses were washed away, saline embankments destroyed, and agricultural land inundated by salt water in Satabhaya, Kanhupur, Barahapur and other seaside villages within the park.

It wasn't the first time Bhitarkanika was hit by a cyclone. Amphan in 2020 and Fani in 2019 also damaged large areas of the national park<sup>18</sup>. But the area was not greatly impacted by the super cyclone in 1999 because of the presence of dense mangrove forest.

Though Bhitarkanika National Park and Similipal National Park experienced negligible damage due to their dense tree cover as tropical Cyclone Yaas barrelled through coastal and Northern Odisha. Mangroves with their intricate root system that stabilizes the coastline emerged as a protective barrier in Bhitarkanika, and at Similipal National Park in Mayurbhanj district minimized the damage<sup>19</sup>.

### **Tawa Matsya Sangh**

The Tawa dam, in Hoshangabad district of Madhya Pradesh, tells a story of success where the people displaced charted their own rehabilitation by fighting for their water and land rights.

The Tawa Matsya Sangh (TMS), a cooperative of fisher folk in Tawa formed on October 3, 1996, has helped 1000 people relocated around the Tawa reservoir live a contented life today. In Tawa, displaced people played a key role in managing natural resources, setting a precedent. Villagers did not have fishing rights, they had to poach in the reservoir. Getting rightful ownership entitles them to fish and prevent poaching. Anger and discontent began after a dam was built on the 172 km Tawa River, one of the longest tributaries of Narmada.

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<sup>17</sup><https://thelogicalindian.com/environment/odisha-baby-olive-ridley-turtles-21002>

<sup>18</sup><https://www.downtoearth.org.in/news/natural-disasters/cyclone-yaas-fells-hundreds-of-trees-in-bhitarkanika-hit-on-fauna-being-assessed-77129>

<sup>19</sup><https://www.newsbytesapp.com/news/india/luxuriant-tree-cover-withstood-cyclone-yaas/story>



The Tawa Matsya Sangh (TMS) was formed after a struggle led by the Kisan Adivasi Sangathan, in response to which the State government granted exclusive fishing rights to displaced fishermen. It is more than just democratizing the polity that the TMS has accomplished. It has made a significant contribution to the economic and ecological development of the region. Since the federation began operating at the reservoir, fish production has increased, and that too in a sustainable way. Comparisons of the various fishing phases in the reservoir provide insight into who manages the fisheries best.

The TMS recognizes that the economic security of the displaced tribal persons is closely connected to the ecological stability of the region. Thus, it not only provides marketing facilities to adivasi members, but also regularly stocks fish seeds in the reservoir.

However, in 2006 the Federation lost its license to fish in the reservoir as the State's nodal fishery body, the Madhya Pradesh Fisheries Development Corporation (MPFDC), wanted to benefit from the rights. The Federation continued to operate after that also.<sup>20</sup>In an incident, the Forest Department seized their boats which led to huge protests by the adivasis.

First the federation lost its fishing rights. Then in April 2014, they lost their leader, Sunil Gupta, popularly known as Sunil Bhai, rose to prominence in 1995 when he led the struggle of the adivasis displaced by the reservoir.

### **Wular Lake threatens livelihoods of Fishers**

Kashmir's largest flood basin, Wular Lake, has long been a source of fishing and other livelihoods for rural communities, but shrinkage, siltation, and ecological degradation have taken their toll.

Elderly fishermen who fished in Wular Lake in their youth, when the expansive lake, tucked into the lush green mountains of Bandipora district in north Kashmir, was abundant with fish. The fish have almost vanished now. For generations, thousands of Kashmiris living on the fringes of water bodies have relied on fishing and collecting water chestnuts and fodder for their livelihoods

But with the water bodies shrinking in size due to encroachment and in depth due to siltation, their livelihoods are at stake<sup>21</sup>. Their livelihoods are at stake as

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<sup>20</sup><https://www.indiawaterportal.org/articles/tawa-matsya-sangh-loses-its-leader>

<sup>21</sup><https://science.thewire.in/environment/kashmir-wular-lakes-livelihood/>

the water bodies shrink in size due to encroachment and in depth due to siltation.

Wular's shores support 32,000 households, including 2,300 fisher households, according to a study by Wetland International. Fish diversity and fish production in Kashmir, however, have declined sharply in recent decades. Some of the local fish species have even become endangered or threatened. Water bodies are being encroached upon, silt is being deposited, and pollution is a major contributor to the decline.

### **Loktak Lake: Fishing community struggle for survival**

Loktak Lake, the largest freshwater lake of Manipur, is the lifeline for the people of Manipur. It holds much more significance for the fisher folk community. This lake is their primary source of livelihood<sup>22</sup>. But now it has become a fight for survival for the fisher folk community. Government policies announced to conserve the lake is posing a huge threat to the fishers as most of them lack any alternative livelihood skills.

Situated at a distance of 53 km from Imphal, the state capital of Manipur, Loktak Lake is best known for its floating islands<sup>23</sup> and floating huts or Khangpok built by fishermen on the phumdis, a series of floating islands. About 50% of Manipur's fish production area is in Loktak, which covers about 26,000 hectares. About 12% of Manipur's population depend on its resources.

The removal of a large number of fish culture ponds from the core area of the lake has caused massive economic displacement. In 2006, the Manipur government enacted the Manipur Loktak Lake (Protection) Act aimed at conserving the lake.

But the government was oblivious about its impact on the fishing community.<sup>24</sup> Making things worse for the fishing community, in November 2011, an eviction drive to vacate the fishers from the lake was launched. During the same time the Loktak Development Authority also cleared the fish culture ponds from the core area of the lake.

Despite having access to rich resources, most families currently living in Loktak Lake area cannot afford to buy fishing equipment. This has forced the

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<sup>22</sup><https://www.krctimes.com/guest-column/manipur-phum-namba-is-practiced-in-the-region-since-time-immemorial/>

<sup>23</sup><https://www.eastmojo.com/news/2019/12/31/manipurs-loktak-lake-fate-of-the-floating-wonder/>

<sup>24</sup><https://www.eastmojo.com/news/2019/12/31/manipurs-loktak-lake-fate-of-the-floating-wonder/>

women folk to sell their ornaments in exchange to buy a large fishing net, locally known as 'Innjao' and other fishing gadgets.<sup>25</sup>

As the pulsating lake shrinks down half during winter due to various factors, the degradation of the lake is alarming. During the rainy season, the lake is about 500 square kilometres. Loktak Lake might soon lose its shine if proper measures are not taken to safeguard the lake. During mid-May through late November, the lake has surplus water, while the level depletes throughout the rest of the year.

The fishing community in Loktak Lake are gradually losing control of their fishing line, as it became thinner during the lockdown situation in the two waves of the pandemic outburst.

Despite hardships being experienced by every section of society due to the pandemic and lockdown enforced to contain the spread of the disease, the fishing community at Loktak Lake, whose only means of livelihood is fishing and selling fish, have been hit particularly hard.

The Loktak Lake fishers have observed that even though prices of other goods have risen, they have to lower the prices they charged since most markets remain closed during the lockdown, and fish they caught are not available on the market. Even if they managed to sell the fish, they could hardly make any profit as the transportation charges are high and they have to buy daily essential items in the market which are priced much higher than the usual rate.

### **Bharuch's Bhadbhut project upsets fishing community**

Gujarat government awarded a barrage project to a joint venture between Dilip Buildcon Ltd and Hindustan Construction Company Ltd in 2017. It was proposed to build a 1.7-km causeway-cum-weir barrage, with 90 gates, along the Narmada River, 5 kilometres east of Bhadbhut village, and 25 kilometres from where it flows into the Gulf of Khambhat. Specifically, the barrage was proposed to prevent most of the excess water flowing out of the Sardar Sarovar Dam from reaching the sea, creating a "sweet water lake" of 600 mcm (million cubic metres) on the river. Furthermore, a six-lane road was proposed as part of the barrage, allowing a shorter drive between Bharuch and Surat.

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<sup>25</sup><https://www.eastmojo.com/news/2019/12/31/manipurs-loktak-lake-fate-of-the-floating-wonder/>

The Bhadbhut barrage project in Gujarat's Bharuch district resulted in outrage among thousands of fisher folk community living in areas downstream of Narmada, as they feared their sole source of income was in danger. However, the barrage would disrupt the migration and breeding cycles of Hilsa fish, which is a luxury for Bengali fish eaters. A marine fish, hilsa migrate upstream and arrives in the brackish water of the Narmada estuary near Bharuch for spawning usually during the monsoon months of July and August, and continue doing so till November. Once the barrage is built, it is expected to block their natural entry.<sup>26</sup>

In Bhadbhut village, between July and September every year, the hilsa catch has dropped from 50-100 fish a day to 10-15 fish a day. An annual fish production study conducted by the Central Inland Fisheries Research Institute (CIFRI) in Kolkata found that fish production in the Narmada estuary declined from 15,889 tonnes in 2006-07 to just 1,618 tons in 2014-15. The hilsa catch during the same period has fallen to 419 tonnes from 5,180 tonnes<sup>27</sup>. Water outflow from the dam has decreased, industrial effluents have entered the river and salinity has encroached.

### **Tuticorin Struggle against Sterlite**

On May 22, 2018, tens of thousands of protesters took to the streets of Thoothukudi (Tuticorin) against a proposed expansion of Sterlite's 400,000-tonne annual capacity smelter, but the police opened<sup>28</sup> fire, killing at least 13 protesters. It was the deadliest environmental protest of the year in the country. The police justified their action saying the protesters pelted stones and burned their vehicles.

Sterlite Copper, the Indian subsidiary of Vedanta Resources, a global mining and metals conglomerate, was forced to shut its plant in 2018<sup>29</sup>. Within a week of the police firing, Tamil Nadu state Government shut down India's largest copper plant – which met a third of the country's demands – following a public outcry.

The United Nations condemned the “excessive and disproportionate” use of force by police against protesters and sought an inquiry.

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<sup>26</sup><https://www.legacyias.com/bhadbhut-project-explained/>

<sup>27</sup><https://indianexpress.com/article/explained/barrage-across-narmada-promise-of-sweet-water-worries-about-hilsa-6558972/>

<sup>28</sup><https://www.aljazeera.com/features/2021/1/7/india-how-a-retired-professor-took-on-a-mining-giant-and-won>

<sup>29</sup><https://www.kractivist.org/how-a-retired-indian-professor-took-on-mining-giant-vedanta-and-won/>

Sterite copper plant was accused of widespread environmental degradation, destruction of farmland, flouting laws, and inflicting adverse health effects on thousands. The factory, which has been closed at least five times since it began production in 1997 for flouting environmental provisions, denies the allegations. It has also rejected the accusations linking the plant to cancer cases<sup>30</sup>.

Thoothukudi, with its large port, has attracted several big industries, including Vedanta. Rows of plants dotting the coastline facing the Bay of Bengal, spewing out toxic gases like sulphur dioxide and discharging industrial effluents.

Rows of plants dot the city's coast facing the Bay of Bengal spewing toxic gases, such as sulphur dioxide, and discharging industrial effluents<sup>31</sup>. Experts and environmentalists say sulphur dioxide emitted from smelters and power plants harm the human respiratory system and kill vegetation in their vicinity.

The study conducted by Tirunelveli Medical College found that about 14 percent of those surveyed around Sterlite's factory had "respiratory diseases", which according to the study was significantly higher than the state average and in the two "controlled" areas. It singled out "asthmatic bronchitis" as being more than twice the state's average "attributable to air pollution due to the presence of gases or a mixture of gases and particulate matter".<sup>32</sup>

Vedanta's plant was initially opposed by Thoothukudi's large fishing and farming communities who constitute two-thirds of the city's population<sup>33</sup>. The fishing community opposed a proposed 8km-long wastewater pipeline from the plant to the sea. They feared effluents from the plant would further decrease the fish population and threaten their livelihoods. While farmers opposed the diversion of 10 percent of the city's water supply from the Thamiraparani river to the copper smelter<sup>34</sup>.

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30<https://www.aljazeera.com/features/2021/1/7/india-how-a-retired-professor-took-on-a-mining-giant-and-won>

31<https://www.aljazeera.com/features/2021/1/7/india-how-a-retired-professor-took-on-a-mining-giant-and-won>

32<https://www.aljazeera.com/features/2021/1/7/india-how-a-retired-professor-took-on-a-mining-giant-and-won>

33<https://www.aljazeera.com/features/2021/1/7/india-how-a-retired-professor-took-on-a-mining-giant-and-won>

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A forgotten chapter in more than 20 years' struggle against Sterlite plant is how the fishing community successfully blocked the proposed wastewater pipeline back in March 1996, when fishers blocked the first consignment of copper ore from Australia from entering the harbour.

The boat owners and fishers put up a blockade for the ship bringing the ore. Fishers stocked up on food and rations for a few days in their movement against Sterlite. The campaign gained momentum following the fishing community success in 1996 quickly faded until the gas leaks in 1997 as the issue failed to galvanise the larger population of Tuticorin.

### **National Fisheries Policy**

National Fisheries Policy (NFP) introduced by Central Government in 2020 would increase private control over open access water bodies. Members of fisher rights unions have criticised the draft NFP 2020 for being export-oriented, production-driven, and based on capital investments, which they fear would strip small scale fishers off their rights of access to commons, and also damage the environment in the long run. In addition, they say that the policy does not talk about women<sup>35</sup>.

NFP neglects fishing communities and environment Fishermen bodies, marine experts and other experts working with the fisheries sector feel that the National Fisheries Policy (NFP) is export-oriented, production-driven and based on capital investments. National Fish workers Forum (NFF), feels that it is neither protecting the interest of the fishing communities nor the environment.

**TARUN KANTI BOSE**

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<sup>35</sup><https://science.thewire.in/environment/draft-national-fisheries-policy-seeks-big-growth-but-ignores-fishers/>