

MANIPUR'S LOKTAK LAKE CHOKES FROM A CATASTROPHIC PROJECT FLAGGED OFF 50 YEARS AGO

Relevant for: Geography | Topic: Lakes, changes therein and in Flora & Fauna and the Effects of such changes

Fishermen return with the day's catch from Loktak Lake | Photo Credit: [Ritu Raj Konwar](#)

At 2.00 a.m., I wake up to the makings of a disaster; the lake is rising beneath me as rain charges down like a mob spiralling out of control. I am separated from the lake only by a tent resting on a mat of bamboo poles over a *phumdi* (an organic mass floating in the lake), relying on the physics of buoyancy that generations of Meitei fisherfolk have mastered.

Dawn reveals the damage. The part of the *phumdi* on which my tent is pitched has nearly separated from the rest of the mass. Had the rain continued any longer, I would have been drifting on the lake on my own little island.

As the fishermen fix the *phumdi*, I hike up a hill and look at the vast expanse of Loktak Lake. The overcast sky has rendered it a deep blue. Green rings — *athaphum* (circular fish culture ponds) — speckle its surface until the horizon where a long chain of mountains stand guard. Small huts sit on their peripheries, mere specks. Fishermen navigate their *he* (canoes) though the lake, splitting water and drawing tangents over the vegetation everywhere.

Malem, however, is unmoved by the sight in front of him. For the octogenarian, it brings back old memories. "My father and I were out fishing that day in March 1944. We had caught heaps of pengba, ngaton and khabak, and we were ready to head to the market. Suddenly, the earth rumbled and the water started trembling." They instinctively dropped to the ground. "Three Japanese warplanes roared over us. That's when we knew World War II had reached here, right in our backyard."

As the Battle of Imphal and Kohima raged, his father told him, "This is our greatest test. If we survive this, we will survive it all." He was wrong, says Malem. "We have never had a greater adversary than the Ithai Barrage — not even the war."

Legend has it that Loktak was formed when gods wooed the valley's people. The lake has witnessed the very idea of Manipur take shape. It was on its shores that the beloved Meitei folklore of princess Thoibi and Khamba and their timeless romance came to life. Poubi Lai, a mythical creature integral to the Meitei belief system, is believed to reside in the heart of the lake.

The town of Moirang, on its bank, was the headquarters of the Indian National Army where they established a provisional independent government after defeating the British.

Loktak is not just a lake. For Manipuris she is Loktak Lairembi (Goddess Loktak), and for the several thousands of fishermen who depend on her for their livelihood, she is *ema* (mother). And although she is the fountainhead of Manipuri culture, her own identity has been in a state of flux for decades.

Before the 80s, Loktak Lake as we know it today did not exist. Back then, it was one of 20-odd wetlands in the region that merged into one water body during monsoon and in drier seasons fell apart. Together, helmed by the *phumdi*, they nurtured a unique ecosystem that fostered all

forms of life.

A floating assortment of soil, vegetation and organic matter in various stages of decay, the *phumdi* clump together to form islands that move around freely on the lake, their shape and size morphing through the year. For Meitei fishermen who have inhabited the region for centuries, it is the fundamental unit of life.

They build their houses (*phumsang*) on top of it and carve out the *athaphum* by cutting *phumdi* into rectangular strips, tying them together and arranging them in a circle. After divers anchor it down with heavy rocks, a huge net is cast within the *athaphum* and left for anywhere from 15 days to two months. Fish in the *athaphum* are fed rice and the husk of grains. The entire community comes together on the day of the catch, which can be a day-long affair.

Edible plants, roots and fruits growing on the *phumdi* are a major part of the diet of not just the lake people but across Manipur. Like any living organism, the *phumdi's* life cycle is regulated by the seasonal fluctuation in water level. In the dry season, they sink to the lake bed where their roots absorb nutrients from the soil. During monsoons they float back to the surface.

Meitei fishermen play a key role in this cycle by getting rid of the dying biomass. When the water level is low, they burn the *phumdi* in heaps, and when the lake is brimming, they cut up *phumdi* strips and carry it in their *he* to water channels from where the currents take it out to sea. This ensured that the lake stayed in good health and was conducive for fish to spawn.

Loktak once thrived in this symbiotic relationship. Once considered extinct, the population of brow-antlered deer found only on Loktak's largest *phumdi*, the Keibul Lamjao National Park, rose. Huge shoals of fish came in from the Chindwin-Irrawaddy river system in Myanmar through the Manipur river. Fishermen often faced a delightful problem — the problem of plenty. The fishing community prospered, and with Loktak as its lifeline, so did Manipur.

Sea change

Then things changed dramatically for Loktak, and for Manipur. A single decision set off a chain reaction of catastrophic events no one could have anticipated.

In the 70s, the National Hydroelectric Power Corporation Limited (NHPC) pitched an ambitious project to the Manipur government — a power station to harness the hydropower potential of Loktak Lake. The 105 MW capacity power station would provide cheap electricity to Manipur and its neighbouring States. It would also provide lift irrigation for 23,000 hectares of land in the valley. The State government approved the project without making any effort to study its impact on the lake's ecosystem and on livelihoods.

In 1983, NHPC constructed a barrage at the confluence of the Manipur and Khuga rivers — two of the five major rivers that drain into Loktak Lake — near Ithai village. The Ithai Barrage was to act as a barrier and create an artificial reservoir with the water level maintained at 768.5 metres throughout the year, much higher than Loktak's water level.

The barrage became operational that year. First, Loktak's perimeter broke. Then thousands of hectares of agricultural land around the lake was flooded and thousands of people lost their lands and homes overnight. Farmers became fishermen. And the fishermen now became too many.

Loktak and the 20 other wetlands became one water body for good; seasonal changes in the water level stopped and the ecosystem started crumbling.

As we hike down the hill, the sky begins to clear. We step into a *he*, water trapped inside it, wetting my shoes. Malem is rowing with a strength that defies his age. I see a thick, impenetrable mop of plant matter that often brushes the bottom of our boat. Malem has to push it away with his oar to make way. This does not look natural — and I am told it isn't.

With the water level now permanently high, *phumdi* can no longer reach the lake bed in the dry season. Unable to feed on nutrients, Loktak's islets of vegetation are thinning out and decomposed chunks sink in. With the Ithai Barrage blocking the outlet that once connected the lake to the sea, fishermen cannot dispose of the dying biomass any more. So, for decades now, rotting vegetation has been piling up on the lake bed. Run-off from surrounding agricultural fields has added pesticides and insecticides to the mix. Finally, the Nambul river that flows from Imphal into the lake, dumps in it the untreated sewage of an entire city. This has resulted in an intemperate growth of semi-aquatic weeds that deplete oxygen in the water, choking Loktak.

Half an hour later we have made our way through the vegetation and to the middle of the lake. Fishermen are hard at work. In a *he* parked next to a dense *phumdi* is a man bent over a steel bowl, combing a long nylon net with his fingers.

"He is Ibomcha," says Malem, "my son."

Ibomcha is removing more weeds from the net than fish. He has been at it for over an hour and a half, he tells me, and his effort has yielded a grand total of a dozen fish, all of them the size of my little finger. The catch is worth 10. For Ibomcha, this is usual. At 39, he has never seen the lake in its prime.

The barrage has blocked the route of migratory fish coming into the lake from Myanmar and so Loktak can no longer meet the demand of an entire State. In a bid to salvage the situation, the fisheries department introduced one lakh fingerlings brought in from Andhra Pradesh and Odisha. This has become an annual ritual now, one that has gradually wiped out several species of *fabou nga* (native fish) found in the lake.

Meitei fishermen are now forced to rethink their age-old methods. For one, they have swapped their traditional cotton nets for nylon ones made in Myanmar so that the weeds don't tear them. The nets have also become longer to catch more fish. Traditional shallow-water fishing methods have all but disappeared.

Some fishermen have made an unusual addition to their fishing arsenal — batteries to stun the fish with a jolt of current, which often ends up paralyzing or sterilizing the fish that get away. Law enforcement was invoked, many fishermen were jailed, and now the practice has finally stopped.

With fish populations dwindling, the unspoken laws of the community suffered. Now, the only law is the one of survival.

My only home

Malem and I are about to make our second pit stop. Before us is an islet with just enough space to accommodate two ramshackle *phumsang*, their roofs fitted with solar panels. On some parts of the islet, the vegetation is taller than me. A dog barks at us as we reach the shore. Cats, geese and four ducks look on. They do the important job of keeping water snakes and other dangers at bay. A haphazard, bobbing walkway made of bamboo poles leads to the entrance of the *phumsang*.

The single-room shack is bare. Utensils, a mattress, a solar-powered battery, and a clay stove is

all the middle-aged couple have. There is no electricity, the NHPC never delivered on its promise. On the stove, the woman smokes two varieties of fish. Since an entire day's work often yields only a meagre catch, most fisherfolk smoke the catch of several days together before heading to town to sell it.

The couple's two children stay in Moirang with relatives, they tell me. There was a time when they all lived together. In November 2011, *phumsang* all over the lake were burnt down by the Loktak Development Authority (LDA) and the couple, unsure of the future, sent their children away. The LDA was constituted by the Manipur government in the 80s to check the lake's deterioration; it enforced the Manipur Loktak Lake (Protection) Act in 2006 to clear the lake. Fishermen were asked to leave the *phumdi* in exchange for compensation. Most refused. This was their only home, their only land.

Aided by armed policemen, in an illegal and violent operation, the LDA burnt down 777 huts; Malem's was one of them. The lake was partially cleared of *phumdi* and *athaphum* and the latter were declared illegal.

Yet, their numbers have increased in the last few years. The centuries-old form of aquaculture is monumentally labour intensive and the returns poor, but for many, it is the only way to survive. The benefits outweigh the risk of getting caught. And who knows risk better than people who have built entire lives on a floating piece of land.

Malem and I are now heading back. The sun, minutes away from setting, casts an ethereal golden-orange hue over the lake. I am listening to Malem talk about that night when his house was burnt down by the LDA. At 18, he had built it himself with the help of a few friends. In a single night, 60 years of belongings and memories went up in smoke. At 78, he had to start life over again.

"Why didn't you just leave?" I ask.

After all, tens of thousands of fishermen have migrated to Imphal in the last couple of decades, to pull rickshaws or do whatever odd job they can find. Malem looks at the lake as the sun sinks into its waters. "*Ema* is dying... I may not be able to save her but I can be with her in her final moments. It's the least that I can do."

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