

Manipur News Articles
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Manipur: UCM calls for judicious implementation of fishers' schemes

<http://e-pao.net/GP.asp?src=42..051122.nov22>

"United Committee Manipur (UCM) has stressed the need for a monitoring mechanism to check implementation of schemes for fish farmers. UCM in association with fisheries department organised a one-day fisheries training programme cum distribution of nursery fishes at New Keithelmanbi community hall on Friday. The training programme organised under the theme 'self-sufficiency in food' was attended by Yarou Bamdiar ZP member Samom Manglembi, UCM president Joy-chandra Konthoujam and Moidangpok GP pradhan Laishram Keinaton as chief guest, president and guest of honour respectively.

Speaking on the occasion, Joychandra pointed out that all the indigenous communities of the state consume fish as a favourite food. However, the state has not been able to produce enough fish to meet the demand and as a result, fishes are being imported from other states and countries.

UCM is organising the training programme keeping in view the need for enhancing fish production capacity in the state, he said. The state government is also taking up different initiatives to enhance fish production capacity of the state.

Re-introduction of Sareng (Wallago catfish) is one such example of the government's initiative to boost fish production. Besides, individual farmers are taking up their own initiatives to promote local indigenous fish species like Pengba and Ngaton among others. Though these initiatives are important steps, the government also need to focus on other types of fishes to meet the local demand and it will help in reducing income outflow from the state, he said.

On the other hand, the government also needs to strictly monitor the implementation of various schemes for fish farmers to check if the benefits are reaching the targeted beneficiaries or being swindled away by fake farmers. There is also the strong need to study and find out the reason behind the state's inability to utilise around half of the fund sanctioned by the Centre and work on remedial measures for full utilisation of funds, he said.

UCM secretary general Ng Deba also spoke on the impact of fish import to the economy of the state and stressed the need for concerted efforts to boost fish production in the state. He also called for reviving the tradition of rearing fish in homestead land for consumption purpose, which was widely practiced by almost every family in the valley area some decades ago.

Fingerlings and seeds of winter crops were also distributed to the participating farmers on the occasion."

Manipur: RPF to ban import of 'fish' from 2024

<http://e-pao.net/GP.asp?src=29..151022.oct22>

"The proscribed Revolutionary People's Front (RPF) announced ban on import of certain varieties of fish to Manipur with effect from October 15, 2024 . Fish varieties to be banned include catla, mrigal, grass carp, common carp, rohu, silver carp and tilapia (Tung-hanbi) . Sea fishes which are not available easily and could not be reared in Manipur, however, will not be covered under the ban, a statement of RPF said.

The main objective of imposing the ban is to restore self-sufficiency in fish production that was in existence when Manipur was an independent nation and also to prevent people from consuming unhygienic and chemically treated fishes brought or imported from outside, the RPF statement issued by its deputy secretary of publicity Roben Khuman said and appealed to local fish traders to deal with fishes procured from local fish farmers only when the ban becomes effective.

According to the RPF statement, Manipur is the land of agriculture and it had not only self-sufficiency in food but also exported surplus food to outside at one point of time. After the forcible merger to India, Manipur has been converted into a food dependent land as indigenous food production had become extinct. As businessmen from outside invested huge money and grasped all economic opportunities of indigenous people, Manipur's traditional economy system has degenerated.

Just as big fish engulfed small fishes, colonial rulers destroyed native economy of occupied land and the main objective of imperialist India is to convert Manipur as their captive market after abolishing all local products. While asserting that Loktak project is a big ploy to erase Manipur from the globe, the RPF statement said that construction of Ithai barrage for the project not only inundated 80,000 hectares of paddy fields under Loktak water but also prevented natural flow of fishes from Chindwin-Irrawaddy rivers of Myanmar to rivers of Manipur.

This is the main reason for extinction of 12 fish species native to Manipur, the outfit said. While maintaining that abundant availability of different varieties of fish in Manipur from the early period till the construction of Loktak project was due to natural flow of water of rivers of Manipur and existence of numerous lakes, the RPF statement, while citing report of a survey,

said that Manipur had around 500 lakes till early 20th century.

However, these lakes got vanished at very fast pace and there were only around 55 lakes in 1950s while Manipur at present has 17 lakes and two oxbow lakes only. The main reason for rapid extinction of lakes in Manipur is implementation of special policy by Delhi 'bandits' to completely uproot indigenous people and constructions in the name of development after drying up lakes. However, people of Manipur can revive the extinct lakes and escape from India's trap, the RPF statement said.

While giving other reasons for imposing ban on import of fish from outside, the RPF said that the ban will retain around Rs 300 crore expended annually oil purchasing fish from outside and this will be the first step towards self-sufficiency in fish production. Manipur consumes approximately 52,000 metric tonnes of fish annually and local fish production is only around 32,000 metric tonnes while the remaining 20,000 metric tonnes of fish are imported from outside.

Import of 20,000 metric tonnes of fish from outside costs Manipur Rs 300 crore per year and this has been continuing since the past many years, the RPF statement said and maintained that the ban will be the first step towards preventing flow of huge money outside.

The RPF statement further said that increasing fish rearing activities in 80,000 hectares of land submerged under Loktak water and adoption of modern method of fish farming like biofloc would not only fill up the fish deficit when the ban becomes effective but also enable sale of surplus fish outside with profit.

The outfit also said that creating awareness among people about stopping fishing at breeding time is imperative. While stating that another reason behind imposing ban on fish import is to prevent people from consuming chemically treated fishes, the RPF statement said that there had been report of harmful formalin (formaldehyde) found on imported fishes but how sincerely investigation in this regard was conducted remains questionable still. It said that prolonged consumption of chemically treated imported Ashes could cause numerous diseases like cough, arthritis, skin problem, lung cancer and liver ailment."

Manipur: Involve locals in action plan for iconic lake

The Tribune "The Loktak lake of Manipur is the biggest freshwater lake in Northeast India. Before the Loktak Multipurpose Project (LMP) came up, its size pulsed between 250 sq km and 500 sq km, depending on the season. The lake is fed by numerous streams and is

connected to the Manipur river by the Khordak channel. The uniqueness of the lake is that it is mostly covered by phumdis (heterogeneous mass of vegetation, soil and organic matter), the biggest being the 40-sq-km Keibul Lamjao National Park (KLNP), the only floating national park, that is the natural home to brow-antlered deer or sangai.

The lake suffers from severe eutrophication due to the flow of highly polluted nutrient-rich water through the Nambul stream, which passes through Imphal city. This has led to deterioration of water quality. Besides, large-scale deforestation in the catchment areas of the lake has led to soil erosion. The state government's focus is on developing the lake as a tourist spot and various initiatives were considered, but unfortunately these were never taken up in consultation with people dependent on the lake.

Loktak was designated a Ramsar site on March 23, 1990, and on June 16, 1993, was listed under the Montreux Record — a record of Ramsar sites where changes in the ecological character have occurred or are occurring or are likely to occur. Most of the changes occurred after the LMP became operational in 1983; in an effort to mitigate the problems, the Loktak Development Authority (LDA) was established. It was tasked with taking measures to improve the lake's condition. For the LMP to impound water in the lake, the Ithai Barrage was constructed over the Manipur river. The project had led to regular flooding of the Manipur valley as there was no storage space for storm water during the monsoon.

As a high water level has to be maintained for the LMP, the vegetation, which during the lean season sucks nutrients from the bed below, perpetually floats. As a result, the phumdis, including in the KLNP, are slowly becoming thinner and a time may come when it may not be able to support the weight of the sangai.

The number of species of plants that grows on the phumdis has come down from above 100 to around 60. Indigenous fish that moved from the Chindwin river stopped migrating due to the barrage. Traditionally, the fisher folks constructed athaphums (artificially cultured floating islands) using phumdis, in which fish are reared.

In 2006, the Manipur Loktak Lake (Protection) Act-2006 was enacted and the LDA became a statutory body. Under the Act, the lake was divided into two zones — a core no-development zone and a buffer zone. Some provisions of the Act were strenuously contested by the local population. The lake suffers from severe eutrophication due to the flow of highly polluted nutrient-rich water through the Nambul stream, which passes through Imphal city. This has led to the deterioration of the water quality.

Further, large-scale deforestation in the catchment areas of the lake has led to severe soil erosion. The LDA started dredging the lake bed during the 1980s, without much benefit. It started harvesting the phumdis, but without much success.

Then the phumdis, which proliferate generously, were cut and made to float down the Manipur river. Most of the control measures were engineering solutions and only when international agencies like Wetland International Asia came into the picture, was a more comprehensive mitigation plan developed.

Traditionally, small huts were erected over the phumdis, called phumshangs, which served as resting places for the fisher folk, but from the 1960s, residential huts were erected. Champu Khngpok, a conglomerate of huts over the phumdis with 300 people, was designated as a census village from the 1991 Census. There seems to be a belief in the LDA and government circles that the deterioration of the lake was due to such huts, detrimental fishing practices and the proliferation of phumdis. Efforts were made to evict the huts and the eviction carried out in 2011 led to Paban Kumar's award-winning documentary *Phumshang* (2015), which includes footage of the eviction drive. It won the Golden Conch at the 14th Mumbai International Film Festival.

The state government's focus is on developing the lake as a tourist spot and various initiatives were considered, but unfortunately these were never taken up in consultation with people dependent on the lake.

Earlier, the mitigation efforts included the construction of check dams in the catchment areas, removal of phumdis, eviction of fisher folk residing on the lake and dredging the bed. Only during the past two decades was an environmental approach adopted, including plantation of trees in the catchment areas. Efforts were made to clean the polluting Nambul river, but the project did not include cleaning of its tributary, the Naga stream, which is more polluted than the Nambul river. It is only recently that a project to clean up this stream was prepared.

In July, the LDA issued a notice mentioning that the state government is striving hard to rejuvenate the ecological condition of the lake and delist it from the Montreux Record and it has observed that the exponential rise in the number of athaphums, houses and huts constructed on the phums have put the lake at risk. It has also been observed that such homestays have become a social issue as these are operated without proper regulation and, therefore, exercising the powers conferred by Sections 4, 19 and 20 of the Manipur Loktak Lake (Protection) Act, read with Section 5 of the said Act, it was notified that all athaphums, huts or houses on phumdis within

the premises of the lake, excluding Champu Khangpok, shall be dismantled by the individuals concerned within 15 days of the date of publication of the notice.

This order created fear psychosis among the fisher folk as well as those who operate the homestays. Many are concerned that the next step may be a ban on fishing in large swathes of the lake. The irony is that in tourism advertisements, athaphums and homestays in the lake are projected as the USP.

There is a general belief that tourism in the lake will be transferred to moneyed people and the locals will be left high and dry. The state tourism department had developed a mega eco-tourism project, whose details are still not available in the public domain, though people were invited to see the detailed project report in the office of the Director, Tourism. What the Loktak lake needs is a comprehensive and holistic approach, involving locals, that takes into all its aspects to arrest further deterioration. Following a debate among experts, the components of the final project may be prioritised. No development project can sustain itself if the local population is dead against it."

Manipur: Flash floods ruin paddy, fishery ponds in Ukhrul

<https://www.eastmojo.com/manipur/2022/09/24/manipur-flash-floods-ruin-paddy-fishery-ponds-in-ukhrul/>

"Around 100 paddy fields have been reportedly submerged in rain-triggered flash floods in Chingjaroi Khunou village in Manipur's Ukhrul district. The floods have destroyed paddy fields belonging to over 100 families in different locations of the village including Kashapala, Alinroh, Khazankhrala, Taropula, Angzadan, Ralinhor, Rarkhola, and Khanghapala.

According to one of the affected farmers Raskan Thotmathing, Rangazak Kong river, which flows between Chingjaroi Khunou and Senapati district, and other small streams in the areas of Kazankhra, Taropukhra, and Angkhrokhra swelled up due to the heavy rains on the nights of September 23 and 24. The resulting floods destroyed about 50 acres of paddy fields.

Also, fish worth Rs 5 lakh reared in around 10 fishery ponds and other terrace paddy fields have been swept away due to torrential rainfall. Apart from rearing fish in the fishery ponds, many locals in the area practice the integrated rice and fish farming system since it is a mutually beneficial process. "Affected farmers have gone to their respective paddy fields today to assess the damage since it rained heavily again last night," said Thotmathing. Meanwhile, the lifeline between Chingjaroi and Razai village, a road constructed under the Pradhan Mantri Gram Sadak

Yojana (PMGSY), was cut-off on Saturday morning, following a rockslide due to the heavy downpour overnight.

Many local vehicles ferrying passengers to Ukhrul from the village had to return due to the road blockade, causing huge inconveniences, said Thotmathing. He said that the flash floods had partially damaged the reservoir tank which is under construction for water augmentation. The bank is being constructed under the funding of the New Development Bank (NDB)."

Manipur: For those dependent on Loktak Lake, sustainable development is an elusive goal

<https://www.newsclick.in/For-those-dependent-Loktak-Lake-sustainable-development-elusive-goal>

"Loktak Lake is at the base of the identity of the fisherfolk community that has resided for years in the lake and preserved its existence. Attempts of the government to commercialise the fragile ecosystem under the purported goal of development threatens the loss of livelihood and identities.

Loktak Lake in Manipur is the largest freshwater lake in all of North-East India, known for its distinctive floating islands, popularly known as “phumdis” by the local people. The lake spans an area of 286 square kilometres. It is also home to the world’s only floating national park housing the endangered Sangai deer. About 12 lakh people in the state are estimated to be indirectly or directly dependent for their livelihoods on the lake.

The Loktak Development Authority (‘LDA’) is a statutory body which has been entrusted with the responsibility of administering the lake. On August 3, 2016, the LDA forcibly evicted fishermen families by claiming that their houses were government property. Acquisition of their land was a consequence of the state government’s plan to open a parking lot for tourists.

This wasn’t a singular incident of contestation between the fisherfolk community and the government. Conflict has long marred the history of the lake. The construction of the Loktak Multipurpose Hydroelectric Project in 1971 led to the submergence of agricultural land and large-scale socio-economic displacement, which threatened the survival of the valley. The government has failed to rehabilitate the indigenous population ever since the completion of the project in 1984. Huge profits earned have not generated any accountability towards the safeguarding of traditional ownership, enjoyment and possession of property.

Following directions from the Supreme Court in 2017, the Manipur High Court started proceedings to conserve the Loktak ecosystem and sought suggestions from LDA. The LDA responded, seeking approval to solicit tenders for eco-tourism projects in the lake. The state's Director of Tourism stated that once approved, Manipur will witness the greatest development of the Loktak Lake with world class amenities to attract tourism.

The survival of Loktak today rests on political grandeur and the fragile power play of political parties within the state. At the centre of the ruling Bharatiya Janata Party's political campaign in the recent elections was the proposal for a plan named 'Loktak Manipur: An integrated Plan use (2020-2025) by Westland International South Asia and the LDA'. Activists and fisherfolk of the Loktak community have staged protests against the proposal, which could prove to be ecologically and socially disruptive for the lake. The eco-tourism project seeks to generate revenue at the cost of the sustainable livelihood of the lake and its people.

In 2020, the High Court of Manipur granted permission to the Manipur government to proceed with the implementation of the plan. Pursuant to this, the Chief Minister N. Biren Singh sought an intervention from the central government to secure funding for the project from the World Bank. On February 25 this year, the high court directed the authorities of LDA to ensure that no construction or developmental activity could take place without prior permission of the court.

The current predicament stems from the government's position of viewing the rights of the fisherfolk of Manipur and their presence within the lake's eco-system as a "growing menace" for the state's plan to commercialise the historic status of Loktak to benefit its exchequer.

In July, the government has ordered the removal of all allegedly unauthorised activities within 15 days for the purported ecological conservation of the lake. Traditional fisheries, huts, houses and homestays have all received notices demanding eviction. The current predicament stems from the government's position of viewing the rights of the fisherfolk of Manipur and their presence within the lake's eco-system as a "growing menace" for the state's plan to commercialise the historic status of Loktak to benefit its exchequer.

The status quo at the moment concerns the challenge indigenous fishermen community of Loktak have levelled to the government's developmental projects, which directly threatens the livelihood of 140 families living in the Champu Khangpok floating village. Oinam Rajen, the secretary of All Loktak Lake Area Fishermen Union Manipur, has asked an important question: "[H]ow long will the state continue to violate our fundamental right to access the territory of our life?"

What are the implications of the conflation of public purpose with commercialisation?

The Manipur Loktak Lake (Protection) Act, 2006 governs the administration of the lake and reposit such powers with the state government. The LDA constituted under the Act has been granted powers under Section 17 to grant approval for “commercial utilization” of any lake resources and permitting any activity which may be conducive to efficient administration of the lake. The wide-ranging power granted to the state government to acquire land to facilitate commercialization of the lake is similar to the powers granted to the Union Government under the LARR Act, which mandates compulsory sale of land to the government when justified under the “public purpose” enumerated under its Section 2(1)(b). The central legislation has also additionally defined “public purpose” to include land acquired for PPPs and industrial corridors, among others.

The Supreme Court, in *Sooraram Pratap Reddy & Ors. versus District Collector, Ranga Reddy District & Ors.* (2008), noted that “any purpose wherein even a fraction of the community may be interested or by which it is benefitted” could justify the land acquisition powers of the State. The excessively wide nature of judicial understanding of public purpose has led to unchecked commercialisation of natural resources. Section 17 of the 2006 Act is a reflection of the same trend.

Commodification of nature is clearly visible in the presence of extractive tourism industries. The acquisition of land by the Andhra Pradesh government to make Hyderabad a “Business-cum-Tourism Centre for the state” has been held to be a public purpose in *Sooraram Pratap Reddy. In Fomento Resorts & Hotels & Anr. versus Miguel Martins & Ors.* (2009), the Supreme Court held that since tourism is an important industrial activity, it generates ancillary benefits to the state and hence, qualifies as public purpose.

But the development of the tourism sector today has seen a marked shift towards greater adoption of PPPs and benefits of the SEZ policy. Tourism is seen as a coherent whole where there is no classification made between different kinds of tourism projects; ones which are open to access of public and ones which are cloistered by the privileged. While there is a case to be made that access to roads and sanitation facilities are covered under the ambit of tourism, there is no reason for land to be acquired for luxury resorts in the name of “public purpose”.

The judiciary’s token response to most of the challenges to such commercialisation has been simply not to engage with determining whether the State’s claim to further ‘public interest’

is bona fide or not. The Supreme Court's observation in *Bajirao T. Kote (Dead) By LRs. & Anr. versus State of Maharashtra & Ors. (1994)* is noteworthy here: "it is primarily for the State Government to decide whether there exists public purpose or not, and it is not for this court or the high courts to evaluate the evidence and come to its own conclusion whether or not there is public purpose." Similar kind of reasoning has resonated in a number of other court judgements.

The judiciary's token response to most of the challenges to such commercialisation has been simply not to engage with determining whether the State's claim to further 'public interest' is bona fide or not.

The lack of judicial scrutiny due to the "hands-off" approach by courts has culminated in judicial sanction to any act of land acquisition of the government which could be justified in the name of 'public welfare', even though it lacks genuine 'public utility'. In *Indrajit C. Parekh of Ahmedabad versus State of Gujarat & Ors. (1975)*, compulsory land acquisition by the State, which had only resulted in the addition of a single rupee towards the state exchequer, was held to be sufficient to grant it the status of "public purpose".

In light of such judicial trends, it is imperative for courts to:

Firstly, adopt a conscious attempt to limit the sphere of what constitutes 'public purpose' by according due importance to the cost which is to be incurred by local communities and persons in lieu of the purported 'public purpose' to be fulfilled. The Supreme Court recognized the importance of such an analysis in *Dev Sharan versus State of Uttar Pradesh (2011)* by pointing out that the State's desire to acquire land for promoting a public purpose benefitting a particular section of the society at the cost of the interest of the larger part of the society, especially indigenous populations, defeats the very purpose of public purpose.

Secondly, 'public purpose' should be recognized to be limited to only State-sponsored projects. The provisions for acquisition of land for private companies and PPPs must be deleted instead of being diluted as the government has sought to do in the LARR Amendment Act, 2015. As the Supreme Court has observed in *Sulochana Chandrakant Galande versus Pune Municipal Transport & Ors. (2010)*, once the land is acquired, a person becomes non-persona grata to the extent that they are restrained from claiming restoration of land and only have a vested right to compensation. Thereby, the government must be restrained to claim only the bare minimum required for any State-sponsored project to prevent its potential misuse.

How to ensure the safeguarding of the voice of the marginalised in this process?

Under the LAAR Act, once a property or land has been decided to be acquired; an invitation is sent out to record objections. The assessment of objections is facilitated by the conduct of the Social Impact Assessment ('SIA'), which decides whether or not a particular area of land can be permitted to be acquired. The assessment is carried out "in consultation" with the gram sabha or any other equivalent body in the area. The nature and significance of public interest, along with the socio-economic impact on local communities, is studied as well as the possibility of better alternatives. An "expert group" further constituted by the Union Government examines the findings of the SIA and decides whether there is a bona fide public purpose which could potentially justify the acquisition of the land.

The houses, home stays and land owned by people of Loktak are not just private property, but markers of ethnicity and identity. Camouflaging its destruction under the veneer of development and protection of ecology does not hide the violence displayed by the State in its land acquisition plans.

Similarly, Section 34 of the 2006 Act provides absolute power to the state-constituted LDA to undertake schemes for the development of the lake. The composition of the LDA fails to provide for the participation of the indigenous community in this crucial decision-making process, which is vital to the future of the lake and its ecosystem. (See Section 7). This is a clear disregard of the principles in the Ramsar Convention on the Conservation of Wetlands, which mandate participation, consultation and consent of local communities. Even the procedure under the LARR Act is not democratised as there is no statutory requirement for the expert committee constituted by the state to include representation from indigenous population being displaced. (Again, see Section 7) The government is additionally not legally bound by the decision of the committee, as it can reject the same by recording its reasons in writing...."

Manipur: Aims to increase fish production in Patsoi

<https://www.thesangaiexpress.com/Encyc/2022/8/28/By-Our-Staff-ReporterIMPHAL-Aug-28-With-the-goal-of-increasing-production-of-fish-in-Patsoi-with.html>

"With the goal of increasing production of fish in Patsoi within 2 years and consequently becoming self-reliant in fish production, Sapam Kunjakeswor Singh released full grown fishes at Khamnam Leirak Pukhri Achouba today. It may be noted that this marks the 6th phase of release of fishes in this connection.

Speaking on the occasion, the MLA stated that the people of Manipuri are big fish-lovers and sa

such, efforts must be made to make the State self-reliant in production. He added that if fishes are farmed in all big ponds across Patsoi AC, it will greatly contribute towards the overall fish production of the State. With this goal in mind, the MLA stated that the day's effort had been carried out. Adding that the State spends around Rs 400 crores in importing fish, he expressed hope that this step will help in bringing down that amount.

Manipur: Loktak Indigenous fishers face threats to their livelihoods

<https://www.iucn.org/story/202208/loktak-indigenous-fishers-face-threats-their-livelihoods>

"Manipur's Loktak Lake is one of India's Ramsar sites. A significant natural inland freshwater wetland, Loktak supports a diversity of life including Indigenous Meitei fishing population. The fishers have thrived upon the lake resources for many centuries. Due to the State's intervention, Loktak fishers' now face threats to their livelihoods.

For centuries, Meitei Indigenous fishers have thrived upon the fish resources of Loktak Lake for their living. Fishing is their only known activity, occasionally supported by sourcing edible aquatic plants for food supplements. Fishers live within and in the peripheral shores of the lake, and the entire spread of the lake is their traditional commons from where they source their food. The sale of fish provides for their families and education for their children.

The intervention by the State with developmental projects in the lake area has tremendously impacted their lives. In 1983, the National Hydroelectric Power Corporation commissioned the Loktak Hydroelectric Power Project, and this single project completely changed the ecological and hydrological character of the lake. Loktak became a stagnant, vast spread of water captured as an artificial reservoir for the hydro project.

A man-made structure – Ithai Barrage – was constructed for the hydro project across the Manipur River, and this barrage cut off the traditional passage of migratory fish coming upstream from the Chindwin-Irrawaddy river system in western Myanmar. With this, there was an abrupt decline in the original fish population in Loktak, and subsequently the livelihoods of the fishers were considerably impacted.

In 2006, the Manipur Government introduced a new law, The Manipur Loktak Lake (Protection) Act of 2006. As per the new law, the entire water body of the lake was designated as Core Zone and almost all activities were restricted. After public outcry, the Act was slightly amended to allow the fishers to continue with their traditional capture fishery.

In November 2011, the State, represented by the Loktak Development Authority (LDA), started to evict Loktak fishers from the lake area under the provision of the new law, citing the fishers as

illegally occupying shelter huts built on floating biomass for their fishing activity. Around 777 shelter huts – locally called Phumshang – were pulled down and burnt by the Government. Personal belongings - fishing nets, tools, fish traps, clothes, mattresses, utensils, and children's books - were destroyed in the arson.

Recently on 18 July (2022) the LDA issued a new notification stating that all Athaphum, which is a practice of fishery in the form of circular open water fish culture ponds formed with floating biomass, must be removed within a period of 15 days from the date of notification. The fishers have resented this move of the State, calling it a renewed activity of the Government to completely restrict them from the lake.

In the meantime, a small section of the fishers living on Thanga Island in the midst of the lake have started inventorising floating homestays to support their livelihoods in consideration of their hardship following the decline in fish population due to the hydro project.

There are presently 40 floating homestays off the Thanga Island, and these generate some amount of revenue for the marginalized fishing community. The LDA notification of 18 July has ordered the homestay owners to dismantle and remove the structures within the stipulated deadline. The homestay owners have formed an association to resist the Government's move.

Meanwhile, the Manipur Government has come up with two 'developmental' projects in the lake area. These are the Loktak Inland Waterways Improvement Project and the Loktak Mega Tourism Project. The fishers, under the lead of the All Loktak Lake Area Fishers Union, Manipur, have since filed a review petition with the Manipur High Court challenging these two projects, stating that the projects will not only impact their lives but will also impact the ecology of the lake.

The status quo at the moment is that except for the odd 140 fisher families living in Champu Khangpok floating village, a State-recognized revenue village which is located within the core zone area of the lake, the Government expects that all Athaphum and shelter huts built on the floating biomass be completely removed by the first week of August. The protest by the fishers against this move has set the ball rolling for a renewed, vigorous conflict of interest between the State and the Indigenous fishing population.

As Oinam Rajen – the secretary of the fishers union – says, how long will the State continue to violate their fundamental rights to life and access to resource use within the Loktak commons, their Territory of Life.

Manipur: Fish based integrated farming system for higher income

[http://epao.net/epSubPageExtractor.asp?src=education.Jobs_Career.Fish based integrated farming system for higher income Part 1 By Ch Basudha](http://epao.net/epSubPageExtractor.asp?src=education.Jobs_Career.Fish_based_integrated_farming_system_for_higher_income_Part_1_By_Ch_Basudha)

"Asia has been the cradle of integrated crop-livestock-fish farming systems, which have evolved since the inception of human civilization particularly when human settlements started moving inland leaving the river banks. Though there are several successful practices of integrated fish farming in Asian countries, including Indian, the system of farming using synergizing scientific integration of agriculture, aquaculture and livestock farming are not yet widespread in the region.

Further, large-scale integration of carp culture with irrigation and sewage utilization are to be viewed-seriously, both for economic and ecological reasons (Sinha, 1979). Integrated fish farming is a system of producing fish in combination with other agricultural/livestock farming fish pond.

The farming subcomponents e. g. fish, crop and livestock are linked to each other in such a way that the by-products/wastes from one sub component become the valuable inputs to another sub-component and thus ensuring total utilization of land and water resources of the farm resulting in maximum and diversified farm output with minimum financial and labour costs.

In a proper fish, crop and livestock integrated farming system, the possible inter sub-system interactions are - excreta and waste feed from livestock sub-system acting as manure and feed for fish as well as for crop land. Byproduct/wastes of crop can be used as feed and manure for the fish pond and as feed for livestock.

Nutrient rich bottom silt and water of of fertilizers for the crop land. It thus appears that the different sub-systems in an integrated system are beneficially inter-linked to each other in a limited area, minimizing the production costs but resulting in a diversified output viz. fish, meat, eggs, vegetables, fruits, fuel wood and fodder which are the basic need of a farm family Most integrated fish based integrated farming systems use low levels of inputs and fall within the type of aquaculture called semi-intensive.

This means less reliance on heavy feed and fertilized inputs, lower densities of farmed organisms and. therefore, less chances of causing serious pollution and disease risks than more intensive, feedlot-type systems. This is important as it is the high output of the foodstuffs nec-systems that create environmental pollution. Semi-intensive systems in synergy with agriculture (crop-livestock-fish integrated farming) capitalize on in situ, vitamin and protein natural aquatic feeds, which obviate the need for expensive feed components.

Semi-intensive freshwater ponds usually have few environmental effects other than their occupation of former natural habitats. In the tropics, where there is fast turnover of organic waste loading, their effluents and excavated soils usually enhance the productivity of adjacent waters and lands and avoid over enrichment.

Most of the farmers in India have limited spaces for taking up additional and diversified farming activities. Integrated fish farming on the other hand offers opportunity for taking ties with optimum utilization of available land space for food production, thus increasing household income of small farmers.

Fish-livestock production in combination with planted crops on pond dykes could be a workable pattern of an integrated system. The inter-linkmg is easy: the farm animal produces organic manure for fertilization of agricultural land and fish pond - the crops and plants provide food for animals, fish and man - the nutrient rich pond humus can provide fertilizer to the crop land.

Integrated fish farming can be broadly classified into two:

1. Agriculture-fish and
2. Livestock-fish systems.

Agriculture-fish integration systems include rice-fish integration, horticulture-fish Livestock-fish system includes cattle-fish system, pig-fish system, poultry-fish system, duck-fish system, goat-fish system, rabbit-fish system. In the present effort enhancing fish production under various fish based integrated farming models for higher income generation is being discussed.

Rice and fish culture has been a tradition in southeast Asia including Manipur for over 2000 years. Rice is presently grown in 113 countries. Rice farming also offers a suitable environment for the culture of fish and other aquatic organisms. This rice-based farming system contributes towards food security and poverty alleviation of the country

Notable changes have taken place in pest management in rice fanning, and in fish seed production and availability, making this a particularly relevant moment for emphasizing the importance of rice-fish farming. In, India, though six million hectares are under rice cultivation, only 0.03 per cent of this is now used for rice-fish culture.

This type of fish culture has several advantages such as

- (a) economical utilisation of land,
- (b) little extra labour
- (c) savings on labour cost towards weeding and supplemental feeding,
- (d) enhanced rice yield, and
- (e) additional income and diversified harvest such as fish and rice from water, and onion, bean, and sweet potato through cultivation on bunds.

Considering these, it is imperative to expand fish culture in the rice fields of our country. The rice fields retain water for 3-8 months in a year. The culture of fish in paddy fields, which remain flooded even after paddy harvest, serves an off-season occupation and additional income to the farmer. This system needs modification of rice fields, digging peripheral trenches, construction of dykes, pond refuge, sowing improved varieties of rice, manuring, stocking of fish @ 5,000 - 10,000 fingerling ha⁻¹.

All or most parts of the crops planted in the fodder crop field and corner plots on the pond dykes and slopes are used as green fodder for the fish and as fertilizers for the ponds. This is the most popular pattern in fish cum crop integration.

Crop variety: Crop that are palatable to the fish, rich in nutrition, resistant to disease, easy to manage and have well-developed roots to protect the slope should be used. If the crop serves as manure, it should decompose easily. High value crops like chillies, carrot, broccoli, onion, garlic brinjal, beans etc, can be grown in the pond dykes.

In upland and colder area, fruits like kiwi, passion fruit etc can be grown. Banana, papaya, cassava plants, leguminous plants like parkia etc are suitable to be planted at the outermost dyke of fish farm.

Aquaculture can provide large amounts of silt and fertile water for agriculture and land on fish farms have much agricultural potential. The average pond dyke is 3 m wide with a slope gradient of 1:1.5 to 1:3. The mean area of a fish pond is 0.25-0.5 ha. The average ratio of arable land area (pond dyke and slope) to water surface area is 1:5.

There is more arable land before May, when the water level in the pond is low. With an extra forage field attached to fish pond in addition, all the areas already available, the ratio of arable land area to water surface area could reach 1:2 or even higher. Aquatic plants can also be planted on scattered, unused surface.

It is necessary and feasible to integrate fish farming with crop production to fully utilize pond silt, arable land, and water surface. As a result, the demand for fish feeds can be wholly or partially satisfied.

The only objective of integrated livestock fish farming is to produce an optimum level of phytoplankton, zooplankton and bacteria, which are protein-rich natural feed for fish from livestock excreta. The suitable fish species for integrated fish farming system are those that are able to filter feed plankton and bacteria from water.

The common filter feeders are carps and mixed feeders on algae-detritus are some species of tilapia. Tilapia can survive on low levels of dissolved oxygen than the carps.

Indigenous species like catla (*Catlacatla*), rohu (*Labeorohita*), mrigal (*Cirrhinus mrigala*) and kalbasu (*Labeocalbasu*) and the exotic varieties like grass carp (*Ctenopharyngodon idella*), silver carp (*Hypophthalmichthys molitrix*) and common carp (*Cyprinus carpio*) are commonly used for composite fish culture.

Animal wastes and waste feed particles which enter the food web of a pond ecosystem are utilized in several ways: [As a source of nutrients required for primary production;

As nutrients and organic substrates for heterotrophic micro-organisms which in turn may be consumed directly by fish or by invertebrate fish food organisms;

Directly consumed by the fish. A large number of farmers in rural areas are reluctant to handle and apply animal excreta in fish ponds. Some of them also hesitate to eat fish produced in integrated fish farms where fish consume fresh poultry manure directly. Generally, most of the ponds are built for serving various social functions such as raising foundations for houses, bathing, washing, cooking and even for drinking. Adoption of integrated fish-livestock farming is not possible in many ponds, particularly in homestead ponds, because of the use of water for domestic purposes."

Manipur: Govt orders floating homestays off Loktak; Locals demand rollback

<https://www.downtoearth.org.in/news/environment/manipur-govt-orders-floating-homestays-off-loktak-locals-demand-rollback-84047>

A recent notice by the Manipur government to remove all floating houses and fishing structures on Loktak lake has evoked a sharp reaction from the fishing community and homestay operators. Loktak Development Authority (LDA), a lake development authority in Manipur, July 18 issued a notice to remove/dismantle all ‘athaphums’ (circular fish culture ponds) and huts on ‘phumdis’ (floating organic mass) from the lake.

The notice said: All athaphums, hut or houses on phumdi (homestay) within the premises of Loktak lake shall be removed/dismantled by individuals, people or society concerned within 15 days from the date of publication of the notice. Champu Khangpok, a floating village on the lake, has been excluded from the order.

LDA issued the orders despite holding several rounds of meeting with homestay operators, said Oinam Maipakchao Singh. It has been conserved that the exponential rise in the number of athaphums, houses (homestays) and huts constructed on phumdis have put the lake at risk, impacting the natural environment adversely,” the LDA notice said.

At present, there are 30 floating homestays under the LFHA on the Loktak lake. The authority has claimed there are 41 floating homestays, said Singh. The homestays are also a social issue as they are not appropriately regulated, the notice had said. ""true"" “The state government is trying to rejuvenate the ecological condition of the Loktak lake and delist it from the Montreux record,” it said. Montreux Record is a register of wetland sites on the Ramsar list.

The lake covers 61 per cent of the total identified wetlands of the state, official reports said. It plays a significant part in the socio-economic and cultural life of Manipuris. Loktak, located about 40 kilometres south of Imphal, is presently under threat due to various factors, including human pressure. The Ithai barrage, commissioned in 1983, has brought about drastic changes in the characteristics of the wetland.

The LDA notice was issued as per “powers conferred by sections 4, 19 and 20 of the Manipur Loktak Lake (Protection) Act, 2006”, it said. The Act looks into the seriousness of the deteriorating ecological condition of the lake to improve and restore its ecosystem “In case any of the concerned failed to comply with the notices, LDA shall take necessary action for removal of unauthorised activities without further notice to save the lake from further deterioration,” the notice, issued by the project director of LDA Manipur, said. Fishing is a traditional way of life for the local community on the lake. However, a hydro-power project came into being in 1983 that brought a major change in its hydrology. There has been a sharp reduction in fish production

and the traditional fisheries. The loss of large areas of agricultural fields due to inundation and increased levels of sediments and pollutants by untreated rivers have added more misery to the lake's fate. Locals had to take up alternative means of livelihood as a result. Operating locally made tourist boats and floating homestays in the lake over the fishing in the traditional athaphums are some of the new work taken up. "Most of the floating homestay operators are educated unemployed youths," said Singh. "We have requested LDA not to dismantle the homestays and instead suggest redesigns. We've also already taken up necessary steps to run homestays by introducing dos and don'ts, etc

"Homestay operators are ready to incorporate whatever suggestion and designs are framed by the authority," N Ranjan Singh of Loktak Floating Homestay Association said in a press conference July 27. LDA notice came out of the blue," said Ranjan, who started running his homestay in 2018. "We want the betterment of the locals, but we do not want to pollute the lake."

Loktak can not be saved without its people, Ranjan added, urging authorities to take back the notice in the public interest by July 30. The LDA order is an attempt to violate the traditional rights of the people living around the lake, said Ningthoujam Raghu of Apunba Loktak Ngami Sinmi Cooperative Society, a fishing group.

"The order alienates and deprives us of our rights. We have been dependent on Loktak since time immemorial," Raghu said, demanding revocation of the notice. "Otherwise, we'll take to various forms of agitations," he added. LDA project director L Bhagaton Singh did not respond to messages and calls.

The authority's Chairman, M Asnikumar, had attended an event prior to the notice, where he had appealed to all stakeholders for support. Asnikumar had asked local elected representatives for assistance in the conservation and sustainable measures for preserving Loktak lake and its associated wetlands. The chairman had pointed out that the lake played a crucial role in the socio-economic life of Manipur and said it was the collective responsibility of every stakeholder to contribute to its conservation and maintenance."

Manipur: Imported fish to be tested at transit points for safe consumption

<https://www.ifp.co.in/manipur/imported-fish-to-be-tested-at-transit-points-for-safe-consumption-minister-h-dingo>

"The state government will conduct tests on imported fishes at transit points by using testing kits to determine whether they pose any health hazards to the fish consumers in the state, said Manipur Fisheries Minister Heikham Dingo on Thursday. He made the statement at the ongoing monsoon session on Thursday as a response to the observation moved by MLA K Leishiyo.

H Dingo said that with the increase of fish farming in the state, its production amount has increased up to 36,000 MT. However, the amount is still less than the actual consumption amount of 56,000 MT, he said. To meet the requirement, the remaining amount is imported from outside the state, he added. Keeping in concern of the increasing cancer cases in the state, the state government has taken up an initiative to monitor the imported fishes in the state. Testing kits will be kept in every transit point as it is not possible to test all fish once they reach Imphal, he added.

As fish is highly consumed in the state, fish markets will be set up in every district, he further said, adding, hill areas can also practice fish farming apart from the valley areas. In order to increase fish production in the state, the government is applying many innovative ideas and technology, he added.

Responding to the cut motion moved by MLA O Surjakumar Singh, Information and Public Relation minister Dr Sapam Ranjan said that the government will clear all pending advertisement bills soon. Surjakuamr said that with the advent of digital technology, the media fraternity is facing a lot of hardship. Amid this situation, the state government not clearing the advertisement bill is highly unfortunate, he said.

Concerning the mushrooming of "unauthorised media houses" in the state, he urged for implementation of digital news media policy and strengthening of the Directorate of Information and Public Relation (DIPR). S Ranjan said that the media is playing a crucial role in delivering the facts and performing their duties by facing all odds. Therefore, the state government had taken up various welfare programmes for them like Journalist Pension Scheme, issuance of CMHT, COVID-19 vaccination programme etc., he said.

To sort out the problems of understaffing issues in DIPR, the result for its recruitment examination conducted last year will be declared soon, he added. He also assured to look into the

formulation of Digital News Media Policy and streamlining of unauthorised digital media platforms."

Manipur: Trading ecology for tourism: Why Biren Singh's dream project might be a nightmare

<https://www.newslaundry.com/2022/07/21/trading-ecology-for-tourism-why-biren-singhs-dream-project-might-be-a-nightmare>

"The Manipur government's proposed mega ecotourism project at the Loktak lake – a site of global significance under the Ramsar convention and home to the critically endangered sangai deer – has again waded in troubled waters. Tenders to appoint consultants for the Rs 1,700 crore project in Bishnupur district were floated in 2020, but the Asian Development Bank, which was likely to pump in 80 percent of the money, is learnt to have sought a review considering the possible adverse ecological impact.

While state government officials said conservation measures have been part of chief minister N Biren Singh's dream project, sources privy to the ADB's concerns said the bank is "not happy" with the proposal – which is yet to be approved by the union environment ministry but has been cleared by all state departments.

Loktak comprises five freshwater lakes known for their phumdis, or floating vegetative mats. The state tourism department, the implementing agency, wants to redevelop Loktak with water sports infrastructure and tourist facilities such as an artificial beach over an area of 200 hectares. Besides, a "world class" resort and a golf course will also come up in the eco-sensitive zone of the Keibul Lamjao National Park, the only floating protected natural habitat in the world.

Notably, the Manipur High Court had halted development activities in separate orders in a suo motu case in September 2019 and February this year. The court has been monitoring such activities at Ramsar wetlands on the basis of a 2017 Supreme Court direction and has sought a brief document and wise-use plan before it permits any further action. A wise-use plan is a reference document to guide development of wetlands under the Wetlands Rules. It requires the central government's approval for its implementation.

A review petition was, however, filed against Solicitor General Tushar Mehta by the All Loktak Lake Area Fishermen's Union Manipur for allegedly misleading the court. The union said Mehta had claimed that ADB had already released funds for the ecotourism project in order to clear legal hurdles to the proposal. Meanwhile, the state government is trying to work out a solution,

with the chief minister holding a meeting on the issue last month.

“In the meeting, the ADB was very appreciative of the ecotourism project...At the same time, they also want to add another project: lake restoration,” said Waikhom Ibohal Singh, state tourism director. “It is very good for us that they are concerned about pollution, biomass and causes for ecological degradation. So there could be two projects: ecotourism and lake restoration. They could run concurrently or one after the other.”

However, two sources privy to the matter told Newslandry that the bank “was not happy” with the proposal. “They were not happy with the wise-use plan and the ecotourism proposal in their current form,” said one source. “Their objections were related to the ecology of the Loktak lake...ADB may not pull out of the project but it certainly wants changes in it.”

The second source said the environmental safeguards for international funding are “strong”. “According to its internal discussions, ADB conservationists told me that the ecotourism project does not make sense until the wetlands are protected. They want that the wise-use plan be implemented first before undertaking the project.”

The wise-use plan for the project was prepared in 2020 by the lake’s custodian, Loktak Development Authority, in partnership with Wetlands International South Asia. But experts have raised objections. An environment ministry official said the plan is yet to be approved by the ministry.

While the government insists that all project components are on the periphery, experts assert the plan tampers with the core area of the lake that supports three lakh livelihoods and is home to several species of migratory birds from central Asia. On June 9, Biren Singh tweeted that the world-class ecotourism facilities will be built on the “periphery of the Loktak lake”.

With ADB still examining the proposal, it is yet to release Rs 1,350 crore for it. Ibohal Singh said the project is at the planning stage and “we are yet to get sanction [of funds] from ADB”. However, Tushar Mehta – representing the state government in a suo motu case for the protection of wetlands since 2017 – stated the contrary before the high court in October 2020. Mehta has not replied to a Newslandry email seeking his comment.

Four months after his submission, the ADB, in an email response to Ram Wangkheirakpam of NGO Environment Support Group, said that the bank “will examine the project proposal as per standard procedure. No details are available with ADB at this moment.”

On July 15, Newslandry sent a questionnaire to ADB, asking if funds have been released and if it raised any ecological or environmental concerns related to the project. Four days later, ADB said the official concerned was on leave and a response will be sent “in a few days after necessary approval”.

Ibohal Singh said most tourists visit the lake “only for a day, so we want to provide holiday packages under which they can stay for a week or month...Whatever infrastructure is required to facilitate tourist arrival, we will build that.” But the state tourism department has also set aside a little over Rs 200 crore for lake and waste management to tackle increasing degradation of the water body. It proposes to spend Rs 450 crore for resorts; Rs 280 crore for lake view facilities; Rs 226 crore for a ropeway and Rs 90 crore for adventure sports, among others.

Besides the requirement of a union environment ministry nod for the entire plan, two components of the project – the resort and golf course – need the National Board for Wildlife’s clearance as they fall within the eco-sensitive zone of the Keibul Lamjao National Park, which is protected under the Wildlife Protection Act.

Approaching the NBWL for this approval, the government listed 13 goals, including to “mitigate negative impacts of ecotourism”, “enhance travel activities”, increase revenue generation, provide and diversify employment opportunities for local communities, and find “critical balance between possibly damaging consequences of ecotourism and the potential benefits to the local communities and ecosystems”. Bolstering its case, it pointed to cleaning and conservation of the water body to tackle the “number of pollutants” that has been increasing “without any check”. In its latest meeting on June 17, the NBWL deferred the discussion on the proposal pending experts’ review.

According to the minutes of a meeting held in April, NBWL expert member and ecologist Raman Sukumar “pointed out that the golf course would require a lot of water for its maintenance and the likely impact of the proposed project on the Keibul Lamjao National Park needs to be assessed in order to ensure that the hydrology of the area is not disturbed”.

The genesis of the disagreement between experts and the governments is born out of the LDA’s delay in clearly demarcating the boundaries of the Loktak lake. “The physical mapping of the boundary will be completed by the end of this financial year. So far, we have covered part of the lake...” said LDA project director L Bhagaton Singh. Submitted to NBWL, geo-referenced maps of the land parcels earmarked for the resort and the golf course showed they border the lake shoreline. These land parcels have been traditionally used by local communities for grazing their

cattle.

Ibohal Singh also asserted that all project components are either on the western or southern periphery and “not in the core zone”. However, Rajesh Salam, a member of the International Union for Conservation of Nature and an expert member of the state wetlands authority, told Newslandry that his objection about the project activities being “within the Loktak lake area” was overruled during a technical advisory committee meeting in September 2020 and the proposal cleared.

Bhagaton Singh said all activity is 50 metres away from the core zone and called it beyond the “zone of influence”. But environmental lawyer Ritwick Dutta told Newslandry that the zone of influence is drawn depending on the ecology of an area and nearby settlements and has not been specified by the rules.

The wise-use plan listed several reasons behind ecological distress to the lake, the first being the construction of the Ithai Barrage in 1983 to regulate water outflow for power generation. According to ecologists, the area is inundated throughout the year, affecting its natural flow. This means that migratory fish population from the Bay of Bengal has reduced, phumdis have mushroomed due to almost stagnant water, and agricultural avenues reduced. “Now, phumdis have become thinner, making it difficult for sangai to stand on them and graze,” said a wildlife expert, who has been working in the national park for more than a decade.

After coming to power in the state in 2017, the BJP government asked the central government to decommission the barrage due to recurring floods as part of its poll promise. Among other reasons are untreated sewage discharged into the major rivers, including the Manipur river, that pass through the Loktak wetlands area, and an increase in use of chemicals for agriculture and fish farms.

“Until 20 years ago, the water was blue and people could drink straight from the lake. Now, there are all kinds of colours: black, grey and brown,” said Rajesh Salam. A paper authored by RS Khoiyangbam, assistant professor (environment pollution) at Manipur University, called for immediate remedial measures while arguing that the lake is showing signs of near total collapse.

Rajen Singh, general secretary of the Loktak fishers’ union, said the ecological changes have worsened socio-economic troubles. Between 1990 and 2017, the LDA spent Rs 491 crore on restoration but with little ecological success, given that the Ramsar site is yet to be taken off the Montreux Record – a register of sites with altered ecological character. The mistrust, meanwhile, between the authority and local communities is widening with an alleged absence of public

consultation over the project.

The Loktak Protection Act describes people living in floating huts in the core zone as occupiers even as fishing is allowed. According to the LDA, there are 170 such units in the water body. On July 18, it gave a 15-day notice to people to vacate these huts or face eviction.

“We are just following the HC order that prohibits any kind of construction in the core zone,” said Bhagaton Singh. “Moreover, people have built toilets in these units and discharge waste in the water body.” In a similar move in 2011, the LDA had burnt down illegal floating huts. Ibohal Singh said the government will soon hold consultations with people. “We have recently appointed a consultant under Environment Impact Assessment for the ropeway. For the rest, we will begin soon.”

Public hearings are a must under the EIA which is a prerequisite for any development project larger than 20,000 square metres, according to Ritwick Dutta. “On the notice, we are holding small meetings now to consider our next course of action. Maybe we will protest the move,” said a homestay owner at one of the islands in the lake. Koinam Maipakchao Singh, president of the Loktak Floating Homestay Association in Thanga, said the project has evoked a mixed response. On the recent LDA notice, he said people will meet Thanga MLA Tongbram Robindro Singh for a solution. “We have met LDA officials three-four times in the last two months and even submitted dos and don’ts on waste management. These are self-imposed norms.” A questionnaire sent to chief minister N Biren Singh has remained unanswered.”

Manipur: Minister stresses assistance to committed fish farmers

<http://e-pao.net/GP.asp?src=29..110722.jul22>

"While acknowledging the efforts and contributions of the fish farmers in augmenting the state's economy, Consumer Affairs, Food & Public Distribution (CAF & PD) minister L Susindro Meitei advised officials concerned to ensure that the genuine fish farmers are not deprived of benefits of government schemes. Minister Susindro, who inaugurated the 22nd National Fish Farmers' Day 2022 on Sunday organised by Department of Fishery at its Lamphelpat office auditorium on Sunday, said the state would not require import of fishes and can be a self-sufficient if we work according to the population and consumption rate. Stating that the government has been taking up steps for self-sufficiency in fish production, the minister urged the fishermen to fish for livelihood purposes only instead of looking for surplus catch.

The fishes meant for annual consumption has been used in a month due to such overindulgence

by some fishermen, he opined. Susindro also informed that government has been taking up initiative for different forms of captive breeding of fish through State Livelihood Mission in the marshy lands around the Loktak lake.

In the coming years, the state will be able to produce fish sufficiently for local consumption and for that, he said, cooperation is needed from every sector especially the fish farmers to bring about development in the area. The minister added that fish farmers should also be encouraged as they provide subsistence to the state and help improve the economy.

He urged the officials of Fishery department to verify the authenticity of farmers and provide assistance to committed fish farmers only. He informed that the department under his charge will extend all possible support to make the state self-sufficient in fish production which has also become a staple diet of the state.

Speaking on the occasion, fisheries minister H Dingo Singh observed that though it is a minor department, the Fishery Department has been playing a significant role to provide the staple diet sufficiently in the state.

The department has, at least, achieved the target of producing 32,000 MT of fish for consumption in the state, he added. Stressing on the need for application of advanced technology in pisciculture, he maintained that coordination among the staff, experts and fish farmers is necessary for high fish production.

He also acknowledged the grievances of the department and the fish farmers, and stated that the production process should not be hindered with problems. Government will look into the matter, Dingo said while seeking cooperation of the officials concerned and fish farmers in making a self-sufficient state and also to export the produce which have unique taste and quality.

Veterinary & Animal Husbandry minister Khasim Vashum, who also took part in the programme, appreciated the work taken up by Fishery department in recognising the district employees, and stated that imported fishes should be replaced by local produce. He said: ""we should work together to make our state self-reliant"" and urged the farmers to put in effort in producing high quantity of fishes. Eligible farmers should be provided assistance regardless of hill or valley as fish is the common staple food for the people of the state, he assured.

Director of Fisheries H Balkrisna Singh said that National Fishery Day is celebrated in remembrance of Professor Dr Hiralal Chaudhury and his colleague Dr Alikunhi for their

contribution in achieving the successful induced breeding of major carps on this day in 1957 at Angul in present day Odisha for the first time in the country.

This pioneering work of induced breeding over the years has transformed the growth of aquaculture sector from traditional to intensive aquaculture practices and led to success of modern aquaculture industry, he pointed out.

The director also maintained that fishery plays a big role in economic sector and the day has been observed to mark the contribution of the fish farmers of the state. He said that the annual requirement of fish for consumption is about 52,000 metric tonnes but only about 32,000 metric tonnes are being produced by the fish farmers in the state annually.

The remaining fish for consumption are imported from other states and an amount of Rs 300 crores spent annually. To reduce import of fishes, the fishery department has been trying to meet the demand and supply of fishes in the state but due to lack of spawns, production has not increase as expected, he added.

Balkrishna further maintained that the Meitei Sareng project taken up under the guidance of the present government has been successful and will definitely meet the demand of the people.

The dignitaries also released the July edition of Manipur Today, a monthly journal published by Directorate of Information and Public Relations. The edition mainly focuses on the activities and achievements of the Fisheries Department. Awards were also distributed to winners of Annual Fish Fair cum Fish Crop Competition, 2021 organised by the Department of Fisheries on November 5, 2021 at Mapal Kangjeibung, Imphal.

Cash prizes and citations were handed over to three Highest Producer in Individual Category, one Highest Indigenous Fish Producer, 20 consolation prizes and to two District Officers with Highest Fish Production (Hill/Valley).

ICAR-NEH Region senior scientist Dr Basuda Chanamthabam talked on the importance of National Fish Farmers' Day. Selected fish farmers also shared their needs and experiences on fish farming during the programme. The event was also attended by Fishery secretary H Robita, additional secretary Neeta Arambam, DAYA Group of Industries AGM Saibal Chatterjee, district officials and staff of Fishery department, fish farmers and invitees."

Manipur: Protest against move to shift heritage park site

<https://www.thehindu.com/news/national/other-states/protest-against-move-to-shift-heritage-park-site-in-manipur/article65551842.ece>

Members of seven youth clubs, people from all walks of life and women activists in the villages surrounding the 40-sq. km Keibul Lamjao National Park (KLNP) in Manipur have now taken up the cudgels to ensure that the does not shift the proposed heritage park from the government-approved site. The villagers on Tuesday took out a demonstration near the KLNP, 53 km away from Imphal in the Bishnupur district, opposing the plan to shift the site elsewhere. They contend that the people of the proposed site are not associated with steps for the protection of the endangered brow-antlered deer (Sangai) in the KNLN. Manipur Chief Minister N. Biren recently said, “The government has set aside ₹46 crore for the construction of the heritage park. There will be traditional thatched houses of the different communities in this heritage park”. It was expected that the museum of the Indian National Army where the first Indian flag of Independence was hoisted near the Loktak lake and the heritage park will attract tourists from the country and abroad.

Spokesperson of the joint seven youths’ clubs N. Ranbir said, “It is deplorable that politics has spoilt the atmosphere. Without giving any credible and acceptable explanation, the government had taken up steps to shift the site to a place six km away from the KLNP. The proposed site has no connection with efforts to save the endangered deer. On the other hand, the people in surrounding villages have been doing everything possible to protect the deer. Will there be any meaning now for celebrating ‘Sangai festival’ every year to create awareness among the people and attract tourists?” So far, the Chief Minister and others have not commented on the issue. Mr. Ranbir said, “The government must take a positive step in this regard by Thursday (June 23).

If the government fails despite the demand of all villagers around the KLNP, all government offices there shall be closed down by the villagers. Besides no tourist shall be allowed to enter the KLNP and nearby tourist spots.” The KLNFP is the natural habitat of the brow-antlered deer, whose population is less than 300 and is listed in the red book. Wildlife enthusiasts fear the actual number of deer in the KLNFP must be alarmingly low since some poachers allegedly get ‘complete freedom’ to kill this ‘dancing deer’. Some months ago, one person was caught with a sack of venison. The government cannot ban the entry of fishermen into the Loktak lake, including the KLNP, as the villagers have been fishing there since time immemorial and have no alternative source of income. Some poachers enter the Loktak lake, the largest freshwater lake in the northeast, masquerading as fishermen to kill the deer.

Manipur: All Loktak Lake Areas Fishermen's Union extends gratitude to state government

<http://e-pao.net/GP.asp?src=14..110522.may22>

"All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) has expressed heartfelt gratitude to Chief Minister N Biren Singh and the State Government for taking up special measures to protect and preserve the Loktak Lake which is of paramount importance to the State. ALLAFUM in a press release lauded the step of BJP for specially mentioning the Loktak Lake and measures to be taken up for its protection in its election manifesto published in regards with the recently concluded 12th Manipur Legislative Assembly election.

It may be noted that it was inducted in the election manifesto to undertake Loktak Mega Eco-tourism Project with an aim to generate large scale employment. Further it mentioned to take up a holistic approach by considering the key ecological parameters of the lake to make it an iconic wetland of the Southeast Asia, to restructure Loktak Development Authority (LDA), to initiate a wise use policy integrated plan and to develop Champu Khangpok Floating Village into a heritage floating village.

The union also lauded the Government for appointing Moirangthem Asnikumar who is born and brought up in the area and has a close connection with the lake as the chairman of LDA, which is the lone authority for the development of Loktak Lake and expressed belief that the chairman will take up all possible means to safeguard and develop the lake.

The fishermen body also pledged to support the Government and LDA in all the endeavours to be taken up in the interest of Loktak and the people and the people residing in and around the surrounding areas. Lastly the union appealed to the authorities concerned to review the Loktak Protection Act 2006 and to formulate a fishermen welfare policy especially for those who are into fishing activities in Loktak Lake and to utilize the resources of the lake in any of its developmental activities. ALLAFUM also expressed belief that the Government will fulfill the promises made for the development of Loktak Lake."

Manipur: CM pitches for saving Loktak, warns encroachers

<http://e-pao.net/GP.asp?src=29..120522.may22>

"Chief Minister N Biren released one lakh fingerlings of Pengba in Loktak Lake with an aim to rejuvenate population of Pengba (*Osteobrama Belangeri*), the state fish of Manipur, and also distributed inputs (cage nets and fish feeds) to fish farmers at Sendra in Bishnupur district on Wednesday.

Speaking at the event, CM Biren appreciated the concerted efforts and schemes of ICAR-CIFRI, Barrackpore taken up in collaboration with local fishermen and the fishery department with the aim of reviving the indigenous fish variety of the state.

He lamented that out of 54 indigenous fish species, the state now has only 35 in existence.

While expressing concern over the environmental hazard caused by human negligence, he also made strong remark against the public habit of dumping garbage into rivers, which in turn fall into Loktak Lake and making it hard for the fish and other organisms to survive.

""Now is not the time for speeches, it is the time to act"", the CM said while stressing on the importance of acting on the government's promises and assurances.

""Sometimes, we seem to forget that there is a democratically elected government formed with the mandate of the people,"" he said, highlighting obstructions given to developmental projects from some quarters.

He said that the present government was formed with the full mandate of the people, and further appealed to the people against obstructing developmental schemes.

Explaining the story behind implementation of Loktak Livelihood Mission in 2018, the CM said that during his air travels, he noticed a vast tract of swampy area around Loktak Lake lying idle.

This gave him an idea to utilise the area for rearing fish by means of pen culture after clearing the phumdis, which could be turned further into organic fertiliser, he said.

The CM also said that altogether Rs 15 crore has already been sanctioned for developmental works to be taken up in the peripheral area of Loktak Lake out of which only about Rs 2.5 crore has been utilised so far.

Maintaining that shortage of fish production in the state is due to lack of releasing fish in the lake, the CM said that the government is releasing one lakh fingerlings, and aim to release around one crore during the month of May.

He also made an earnest appeal to the fish farmers to create awareness among the public as well as to stop catching fingerlings.

The CM further appealed to the fish farmers against using electric current to catch fish.

Biren also spoke strongly against encroachment on forest land and Loktak Lake. Pointing out that out of 12,344 pattadars around the lake, 379 illegal encroachers were found, he said that after the Loktak Protection Act was implemented in 2006, no new patta could be issued. Stringent actions will be taken up against all encroachers and government officials involved in issuing illegal pattas, he added. The CM also warned against illegal drug business and illegal poppy plantations. Calling upon all to preserve and save Loktak Lake, the CM said that Manipur's own existence rests on the existence of Loktak Lake and Koubru range. So it is very important to safeguard Loktak Lake and Koubru Range. He further stressed on the importance of safeguarding forest cover and added that the present generation has to meet all challenges for the future generation with conviction and commitment. Earlier, around Rs 400 crore were utilised for importing fish into the state annually, however, in the past 4-5 years, the government has managed to bring this down to around Rs 300 crore.

The CM further said that the government needs the support of the people. "We need support and sincerity from the public, government as well as officials to bring development," he added. Biren also assured that any developmental project to be implemented in and around Loktak Lake will be taken up by properly maintaining the ecological balance as well as with proper consideration of the local population. At the same time the public should ensure that the ecological balance of the Lake is properly maintained and that there is no illegal encroachment in the area, he said. He further stressed the need to construct a ring road around the lake to ensure that there is no encroachment around the lake and to improve tourism in the area. Reiterating that the government will not work against the law, the CM appealed to all to support in the surveys operations taken up by the revenue department and LDA.

Meanwhile, Fisheries director H Balkrisna stated that due to overfishing in the Loktak lake, the population of fishes are depleting and to supplement the depleting population, and as Pengba is declared as the state fish of Manipur, one lakh fingerlings are being released into the lake. Asserting that the fingerlings will need at least six months before it is fully grown, the director appealed to local fishermen to allow them to grow fully in an undisturbed habitat. Once these fingerlings grow and start breeding, it will help in improving the local economy as well as in preserving the state fish.

According to ICAR-CIFRI Barrackpore director Dr BK Das, the population of Pengba is gradually declining in Loktak Lake and as such ICAR-CIFRI is trying to regenerate its

population in the lake. He said that they will mark this day so that this fish can establish its population within 2-3 years in the lake, and at the same time increase the livelihood of the local fish farmers. Fisheries minister H Dingo, Thanga MLA T Robindro, Mayang Imphal MLA K Robindro, Keirao MLA L Rameshwor, Moirang MLA Th Shanti, and Loktak Development Authority chairman M Asnikumar also attended the function among others.

The programme was organised by ICAR-Central Inland Fisheries Research Institute, Barrackpore in collaboration with the department of fisheries and Loktak Development Authority."

Manipur: The state government should respect the rights of the fishing community living in Loktak and Pumlén Pat wetlands

<http://e-pao.net/GP.asp?src=29..080522.may22>

"Ngamee Lup organised a meeting on Saturday to discuss the issues related to wetlands management in the state particularly with regard to Loktak and Pumlén Pat.

According to a press release, the meeting was attended by representatives of All Loktak Lake Area Fishermen's Union, Manipur; Pumlén Pat Koidum Lamjao Kanba Apunba Lup, Upokpi Khunou Fishermen's Society, village unions of Pumlén and Loktak, and Lousal, along with representatives from Pumlén wetland regions covering Bishnupur, Champu Khangpok, Ishok and Pumlén Pat of Loktak and Sarik, Nongmaikhong and Arong village. During the meeting, resolutions were adopted for repeal of The Manipur Loktak Lake (Protection) Act, 2006 and its replacement by the National Wetlands (Management and Conservation) Rules, 2017; preparation of separate plans for each wetland; scrapping of the controversial LDA; and constitution of a new body or bodies having scientific temperament and focussing on sustainable livelihoods of the local communities.

The meeting also iterated that the state government should respect the rights of the fishing community living in Loktak and Pumlén Pat wetlands; government should desist from violating the rights of the local communities while taking up developmental projects; presence of only one chairperson for all wetlands so as to cohesion in the functioning and implementation; and lastly holding a series of open, inclusive and public consultations before notifying any wetlands, as is mandatory under the Wetlands Rules, 2017 ."

Manipur: Tryst with the PPP model of development: At what cost?

<https://www.eastmojo.com/manipur/2022/05/06/manipurs-tryst-with-the-ppp-model-of-development-at-what-cost/>

"Manipur's tourism department currently has a slew of active tenders for a Public-Private Partnership (PPP) model of development. A few of them are: But why is the state government pushing for the PPP model of tourism? Who does it benefit, and at whose cost?"

There is recognition that tourism needs to be developed in Manipur, but the state government "lacks the financial power," said Robert Oinam, PhD scholar, Department of Economics, Manipur University. So the state government seeks entrepreneurs who are willing to share the risk of tourism ventures along with the government.

The other reason the Manipur government looks to the PPP model of development: state incapacity to administer the implementation of developmental projects. "Given failures of existing models and projects, PPPs are a way to hand over state responsibilities and liabilities to the 'private'," said Donald Takhell, a student of Development Studies, Ambedkar University, Delhi. In a 2018 research paper, an associate professor at Manipur University too made similar arguments to support the PPP model. The professor highlighted that "statutory requirements" as well as "safety" and "security" can be ensured with the PPP model because it would curtail "corrupt practices" of public authorities. Other researchers too point to the PPP model as a potential solution for "infrastructure bottlenecks" in the state's hill districts.

The Manipur tourism policy too highlights the advantages of PPP models in light of both risk-sharing and service delivery. More specifically, it says the model is an opportunity "to improve service delivery, improve cost-effectiveness, increase investment in public infrastructure, reduce public sector risk..." It highlights the risk transfer from the public to the private sector as "a critical element" of all partnerships.

The larger question, though, is who forms the 'private' entity. "Do they breathe the common aspirations as that of the 'public'?" Takhell asked. Oinam too, said the PPP model remains a murky area in Manipur because there is little understanding of who the government is partnering with.

Ibohal Singh, Director (Tourism), Manipur Government, did not respond to multiple requests for interview, including a detailed questionnaire on the PPP model of tourism development in the state.

Other departments of the Manipur government have also encouraged the PPP model of development. For instance, consider the proposal by the fisheries ministry to lease out government-maintained fish farms across the state via a PPP model or PM Modi's announcement entailing Rs 160-crore worth of projects in the healthcare sector on a PPP basis.

The PPP model of development has to also be examined in light of the Rs 2,600-crore 'eco-tourism' project that has drawn widespread criticism, including a court case. According to the tender floated by the tourism department, the plan to 'develop' the lake with golf courses, adventure sports and an artificial beach, among other things, includes projects to be executed on a PPP basis. But how will the rights of those living on the phumdis and fishing in the lake for livelihood purposes be protected in light of such developmental plans? It remains unclear. Communities had previously suggested a community-owned model of eco-tourism as opposed to a model that entails a transfer of ownership and usage rights to private entities or the government.

Similar concerns arose in the town of Andro too, with the plan to develop Santhei Natural Park for Rs. 4.78 crore. Soon after the tourism department floated the tender on September 7, 2020, the plan was met with protests citing loss of access to the park for livelihood and water needs and the fact that local stakeholders were not consulted. And this was when the locals had managed the park until now.

The biggest fear with the PPP model of tourism development is "the privatisation of commons," Takhell said. Avli Verma, a researcher at Manthan Adhyayan Kendra agreed. A fundamental issue with PPP projects is the scope for "exploitability" because control and access go to private players and the government in a manner that "takes away natural resources" from other users and "subtracts or disturbs" the natural ecosystem processes with interventions, she explained.

Elaborating on such concerns related to the Santhei Natural Park, Bele Asheibam, a resident of Andro, said that even though the land belongs to the people of Kharam leikai, the government announced a tender without their knowledge. Members of the leikai use the land for grazing while the wetland supports the community's water needs. "There is a fear that people will not be allowed to use the land and the water if the project goes to someone outside the community," Asheibam said. It is likely that the project will be developed by those not belonging to the local community because "people there don't have a lot of money," Asheibam added. This is true of other areas too. Local stakeholders rarely have the kind of money it would take to bid for capital-intensive PPP tenders. So PPP projects and ensuing rights over land and resources could very likely go to outsiders at the risk of marginalisation of local lives and livelihood. And all this in a

state where communities collectively hold land rights.

The other issue with the project in Andro was that the government did not conduct impact assessment studies for the project. This raises questions of accountability concerning the PPP model. If costs and risks of projects are privatised, and if the state looks at this aspect as a core element of the model, to what extent will the state scrutinise for compliances like those related to the environment? Incidentally, the 2014 Manipur tourism policy states one of the roles of the government in PPP models as directly related to environmental safeguards.

Homestay owners, too, expressed concerns about the government partnering with private entrepreneurs for developing tourism in the state. Maipakchao Oinam, who set up the first homestay in Manipur in 2013, said that such models are primarily “for the benefit of contractors and bring nothing to the people.” Ashok Sapamcha, another homestay owner, said that the phrase “eco-tourism” in plans like the development of Loktak lake is “deceptive” because they rarely take communities and the local environment into account.

The path ahead lies in testing the PPP model and empowering local communities to make decisions, Oinam suggested. One way to enable this is to hold public hearings to mutually discuss the costs of benefits of the PPP model with the local communities. The Manipur tourism policy also underscores the role of local communities and even civil society, alongside the government and the private sector in PPP models. It charts their role as “advise partners” to communicate local needs.

The other worry is that ill-conceived PPP models could become the standard to be replicated elsewhere if they’re not set right at the present stage. “Eco-tourism projects with PPP models are the third most important set of infrastructural projects after roads and ports,” Verma said. Similar tourism projects also exist in other eco-sensitive regions like the Andaman and Nicobar islands. “We don’t know if the PPP model could bring us some benefits. The government should tell us what this model is... all the advantages and disadvantages,” Asheibam said.”

Manipur: Thunderstorm causes extensive damages

<http://e-pao.net/GP.asp?src=22..280422.apr22>

"Heavy rain accompanied by thunderstorm that lashed the state in the early hours of Wednesday caused extensive damages all over. However, no casualties were reported.

The strong wind also knocked down electric poles, thereby interrupting power supply, apart

from damaging the crops in different parts of the state. The thunderstorm also affected many parts of Bishnupur district, with Ningthoukhong, Upokpi, Toupok-pi, Kha Potshangbam, Nachou, Kwashiphai, Khoijuman, Toubul, and Ngaikhong areas witnessing uprooting of trees, roofs of houses being blown away and several private vegetable gardens suffering damages.

Meanwhile, the strong wind uprooted a tree located on the southern gate of Kangla, which then fell upon the huge ""KANGLA"" signboard, damaging it. An excavator was engaged early Wednesday morning to remove the fallen tree.

The storm also blew away the metal roofing sheets of the rehearsal hall of Imphal Theatre located at the residence of renowned theatre director Loitongbam Dorendro. The blown away sheets landed on the roof of a neighbouring house. The hall is presently being used by Imphal Theatre to rehearse for the upcoming National Theatre Festival.

The theatre troupe has been left frustrated as many rare theatre books, written documents, stage props and manuscripts of various plays were left damaged after the thunder storm. Meanwhile, Loktak Lake Fishermen's Welfare Association has urged authorities concerned extend assistance to fishing community of Loktak and residents of 14 localities in Thanga area whose houses and other properties were destroyed by the heavy storm that swept the area on Wednesday.

In a release, Association secretary Megha Haobijam said that fishing materials were completely damaged and many were lost in the storm. The local fishermen who are depending on Loktak lake are facing huge problems because of the damages caused by the storm.

Poor fishermen who could not buy the fishing materials again are in dire straits, he maintained. Megha further informed that the 14 localities of Thanga that are affected by the storm are Karang, Chingkha, Heishnam, Salam, Oinam, Samukol, Khunsem, Ngaram, Moirangthem, Khoiromm, Tongbram, Khola, Ething and Sendra."

Manipur: Loktak Development Authority chairman appeals for conservation of Loktak Lake

<https://easternmirrornagaland.com/manipur-loktak-development-authority-chairman-appeals-for-conservation-of-loktak-lake/>

"The Loktak Development Authority (LDA)'s new Chairman M Ashinikumar Singh appealed to all the stakeholders, particularly the local elected representatives for their valuable support while carrying out the conservation and sustainable measures for preserving the Loktak

Lake and its associated wetlands.

According to a press release, a number of illegal encroachment and constructions have been taking place within the protected area of the Loktak Lake like floating huts for local fishing purposes, home stay, cage culture, plantation of athaphums, and construction of ring bands, which have become alarming issues as well as harmful deterrents to the environmental and ecological cycle of the Loktak Lake. “Therefore, the LDA earnestly appeals to those responsible to put an end and remove such illegal activities/structures,” the release said.

“If not, necessary legal actions will be taken up as per rule of law against those defaulters within 3 weeks from this day.” According to media reports, the number of floating resorts has increased to around 20 in the Loktak Lake. There were only about five to six floating resorts before lockdown was imposed to control spread of Covid-19 in the state.

Stating that on the advice of the Manipur Chief Minister, the LDA Chairman had convened a joint meeting with the Additional Chief Secretary (Forest & Env't. & Climate Change), Secretary (Revenue), Joint Secretary (Revenue), Deputy Commissioners – Imphal West, Bishenpur, Thoubal, Kakching & Director Fisheries, LDA senior officials.

During the said meeting, a thorough discussion and deliberation on the issues regarding encroachment and land allotment inside protected areas of Loktak Lake and its associate wetlands, had taken place. Also, the officials present in the meeting were instructed to submit a concrete report within three weeks pertaining to the encroachment of the Lake and its associate wetlands, it said adding that swift, appropriate actions would be taken up as per the report.

He also initiated a review of the Loktak Lake Protection Act, 2006 and restructured the LDA with a new dimension for holistic approach in order to reconstruct its policy programme in consultation with all the concerned stakeholders and international experts. He also emphasised the integrated development of the Loktak Lake — ecotourism, preservation of Champu Khangpok floating village to identify culturally and historically important sites inside the lake and preservation of such sites, enhancement of fisheries and support of community livelihood, promotion of water sports, regulation of local fishing practices and motor boats with consultation with the concerned departments and stakeholders.

Manipur: Dams threatens local ecology and communities

<https://www.eastmojo.com/environment/2022/04/12/manipurs-push-for-dams-threatens-local-ecology-and-communities/>

“Ngamu, pengba, ngaton or khabak, ngakra ...” Tongbram Ahongjao names fish varieties that have gone missing from his environment over the past 40 years. A sexagenarian resident of Thanga, an island village inside Loktak, the largest freshwater lake of northeastern India located in Manipur state, he has seen the lake area change. “Moirang phou, kakching phou, chimlei, tao thabi...,” he continues, speaking of rice varieties that disappeared from the lowlands around the lake. To be fair, the lowlands disappeared in the first place.

At some mythological time, Poubi Lai, the giant, dragon-headed python, which lived under the waters of the Loktak lake, ate one man every night, until King Kabui Salang Maiba killed it with a trick, goes the legend. For centuries, Poubi Lai symbolised disaster at the community level for the Loktak people.

Then, four decades ago, in 1983, disaster came in the shape of a hydropower project, say the local people – the Ithai barrage on Manipur (or Imphal) river that uses Loktak as the reservoir. As of March 2022, the Loktak multipurpose project is Manipur’s only functional hydropower project, with an installed capacity of 105 megawatts (MW) of electricity, and is Manipur’s main source of power.

Declared a Ramsar site, or wetland of global importance in 1990, it was listed in the Montreux Record as early as 1993, signifying “Ramsar sites where changes in ecological character have occurred, are occurring or are likely to occur”. Three decades since then, there is no dearth of stories that reflect the dirty side of clean energy.

“Tao thabi (a rice variety), in particular, was a great source of energy... it’d been a favourite with local sportspersons ... And don’t forget the heikak (water chestnut), a cheap source of nutrition and also income, once found in abundance, growing increasingly rarer,” Ahongjao told Mongabay-India. Among the fishes he named, ngamu is channa/snakehead, pengba is *Osteobrama belangeri*, ngaton or khabak is *Labeo bata* and ngakra is catfish, going by their other names.

At a young age, Ahongjao fished in the lake during monsoon and farmed on the lowlands during winter, just like most other people living in and around the Loktak wetlands. But the dam has impacted all local sources of nutrition and income – fish, rice and edible plants.

“Fish varieties dwindled because the Ithai barrage blocked the path of the migratory fishes that used to swim upstream from Bay of Bay Bengal through Chindwin river (in Myanmar) to spawn in Manipur river and Loktak lake,” environmentalist Salam Rajesh, a member of the technical committee of Manipur State Wetlands Authority, told Mongabay-India.

Sprawling over 230 square kilometres, Loktak is large; it has a direct catchment area of 1,064 sq. km. and serves as a source of livelihood for about 100,00 people living in and around the wetlands.

But size is not its claim to fame: it’s the phumdis, the floating islands of biomass that make Loktak a unique landscape. Described as ‘thick, floating mats of weeds covered with soil’ in the Ramsar listing, the phumdis usually have about 2 metres floating above water level and 3 metres below. They used to sink during winter to extract nutrients from the base of the lake. But that cycle has stopped. The water level never goes down.

The phumdis are also the only natural habitat of the endangered Sangai, the brow-antlered or dancing deer which dwell on a 22 sq. km. stretch of phumdis inside the 40 sq. km. Keibul Lamjao National Park, the world’s only floating protected area, is part of the Loktak landscape. Before the barrage came up, the water level at the lake used to go down in winter, receding from hectares of lowlands, making them available for growing rice. But the barrage requires maintenance of a particular water level throughout the year. The lowlands never come out of water.

“Heikaks (water chestnuts) used to grow mostly in winter when the lake was less deep. Sunlight reached the bottom of the lake and helped the heikak germinate. Now, as the water level is always high, heikaks do not grow that much,” Budha Khwairakpam, a resident of Ithing village on the edge of the lake, explained to Mongabay-India.

The National Hydroelectric Power Corporation (NHPC), which built and operates the project, claimed that apart from generating 105 MW of hydropower, the surrounding area “has also been benefited by development of infrastructure, education, medical facilities and employment avenues” and that the power station also provides lift irrigation for over 23,000 hectares of land in the valley.

Notwithstanding their claims, the demand for decommissioning the Ithai barrage has continued to grow. In 2017, the then Manipur governor Najma Heptullah had said at a programme that she was “working very hard for the removal of Ithai barrage” due to its adverse economic and

ecological impact. In fact, flood has become a regular phenomenon both in the villages upstream and downstream of the Ithai barrage.

Chairen, a village about 11 km downstream of the barrage, bore the burnt. “Chairen has been famous for its pottery. But sediments deposited by successive floods due to the barrage have covered the village’s original soil under layers. The new soil is unfit for their craft,” Jiten Yumnum, secretary of the Imphal-based non-profit Center for Research and Advocacy, Manipur (CRAM), told Mongabay-India.

In March 2019, the government of India decided to declare large hydropower projects as renewable energy sources. Until then, only hydropower projects of lower than 25 MW of installed capacity were categorised as renewable energy, apart from solar, wind and biomass projects. The decision opened the door for a prospective boom in building large dams across the country – with the Himalayan region in northern India and the hilly terrain of the northeast being the prime target zones.

According to a Central Electricity Authority report, a total hydropower capacity of 148,701 MW has been identified across the country, of which 58,971 MW (39.65 percent) were in northeastern India. This excluded Sikkim (4,286 MW), which was clubbed under the eastern region. The report said, of the total identified capacity in the northeast, only 1,427 MW of installed capacity had been developed, leaving 93 percent yet to be exploited. The lion’s share of identified capacity in the northeast goes to Arunachal Pradesh, 50,328mw or 85 percent of the northeast’s total potential, followed by Meghalaya (2,394 MW), Mizoram (2,196 MW) and Manipur (1,784 MW). Manipur had 94.04 percent of its identified capacity yet to be tapped, the report says...”

Manipur: Dams threatens local ecology and communities

<https://india.mongabay.com/2022/04/manipurs-push-for-dams-threatens-local-ecology-and-communities/>

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Chairen, a village about 11 km downstream of the barrage, bore the burnt. “Chairen has been famous for its pottery. But sediments deposited by successive floods due to the barrage have covered the village’s original soil under layers. The new soil is unfit for their craft,” Jiten Yumnum, secretary of the Imphal-based non-profit Center for Research and Advocacy, Manipur (CRAM), told Mongabay-India...”

Manipur: Fishers' Union gets stay on construction in Loktak Lake area

"On 25th February, the Court responded to the review applications by two members of All Loktak Lake Area Fishers Union of Manipur (ALLAFUM) - Smt Oinom Akashini Devi and Smt Khoirom Kiranbala reaffirmed the stay on constructions in or around the Loktak Lake Area and directed the Government to ensure that no development/construction works are initiated in or around the Loktak Lake without the leave of the Court (High Court's order attached).

All Loktak Lake Area Fishers Union of Manipur (ALLAFUM), affiliated to the National Platform for Small Scale Fish Workers (NPSSFW), has been fighting to protect the Loktak Lake, recognised as a wetland of international importance under the Ramsar Convention. The Hydel Project and Icthai Dam had sounded the death knell of the Lake. As if that was not enough, the Government of Manipur has started schemes for water sports and cage culture fisheries in the lake in spite of vehement protest by the fisher people - the largest primary stakeholders of the lake.

Failing to restrain the government from selling off Loktak to investors and business interests, the union moved the High Court of Manipur and sought justice pointing out the blatant violations of the High Courts order of 17th July 2019 that prohibited all development / construction works in and around Loktak Lake without permission of the Court.

The All Loktak Lake Areas Fishers Union - Manipur (ALLAFUM), Indigenous Perspectives (Imphal), and Environment Support Group (Bangalore) has issued a Press Statement (copy enclosed) welcoming the 25th February 2022 order of the Special Bench of the Hon'ble High Court of Manipur.

The National Platform for Small Scale Fish Workers (NPSSFW) hails the success of ALLAFUM in reaffirming the High Court's stay order and vows to fight shoulder to shoulder to protect Loktak.

Manipur: Documentary on Losing Loktak, largest freshwater lake

<https://www.youtube.com/watch?v=KqXCCfH1gLo>

"The mighty Loktak, the largest freshwater lake in northeast India, is a unique ecosystem and a source of livelihood for thousands of fishermen and farmers.

The lake is home to about 200 aquatic plant species and 400 faunal species, including the endemic and endangered brow-antlered Sangai deer and over 60 species of birds, most of which

are migratory.

The Rs 2,600 crore Loktak Eco-Tourism Project and the Loktal Inland Waterways Improvement Project will span over 82 hectares of the lake, coming in direct contact with the sensitive flora and fauna.

The project plans the construction of a 'sea beach', golf course, resorts, boardwalks and walkways, motor boating, etc., on the vibrant freshwater wetland ecosystem.

The project came as a rude shock to thousands who depend on Loktak for their livelihood. Activist Salam Rajesh, who has been fighting for the rights of fishermen and conservation of the lake for over 20 years, says the project will be detrimental to the fragile ecosystem.

It is no more a secret that Loktak Lake is losing its beauty, its fish species, and waterfowl birds. Much of the damage took place after the Ithai barrage was constructed in 1983 over the Manipur river to the south of Loktak lake. It was a message that chief minister of Manipur N Biren Singh delivered personally. It was a promise that was not kept."

Manipur: Wetlands action for people and nature

<https://www.thesangaiexpress.com/Encyc/2022/2/4/N-Munal-MeiteiContd-from-previous-issueBut-due-to-indiscriminate-felling-in-the-catchments-4-5.html>

"But due to indiscriminate felling in the catchments, 4.5 million cu.m. of soil are eroded each year and 0.65 m cm are deposited in Loktak Lake reducing 4 mcm of water holding capacity in the last 10 years. About 18 rare indigenous fish species have also disappeared from the Lake. If it's the trend, then we may not see Loktak Lake in 2050. Other important existing but degraded lakes are Kharungphat, Khoidumpat, Pumlenpat, Loukoipat, Sanapat, Yaralpat, Poiroupat, Ikopat, Waithoupat, Ngakrapat and Loushipat. These lakes remain threatened due to artificial eutrophication and large scale encroachment for cultivation and fish farming. Since the healthiness of our wetlands is so much challenged, this year the number of migratory birds coming to the State has been reduced drastically. It is really a challenge for our ecosystem. Soil erosion due to large scale deforestation in the catchments followed by the change in the land use pattern and fish farming inside the wetlands are the root causes for the loss of wetlands.

Development activities such as roads and canals inside the wetlands are also another reason. And this is again made worse with the excessive deposition of plastic and other harmful wastes and water being diverted to make dams, ponds, channels and canals. Enabling people for a decent living and at the same time ensuring the conservation and safety of wetlands is our primary

objectives of this day. We need also to educate the younger generation about the importance of wetlands and wetland conservation. The dreams of Manipur for being a world tourism hotspot will come true, only when we conserve our hills, forests, wildlife and the wetlands altogether. Therefore, let's join hands today to save and secure our wetlands for a better tomorrow.

Assam, Manipur and Tripura: Ramsar designated wetlands of Northeast India are under imminent threat

<https://assamtribune.com/north-east/ramsar-designated-wetlands-of-northeast-india-are-under-imminent-threat-1352326?infinitescroll=1>

"Guwahati, Feb 2: Wetlands contribute to the environment in a number of ways including regulating water quantity, groundwater recharge, protecting the ecosystem against floods and drought, acts as erosion control and sediment transport. It also provides as an important habitat for migratory birds and other species. However, threats like draining of wetland, construction works, climate change and dumping zones are contributing to the degradation of these natural habitats. India is blessed with a total of 899 natural and man-made wetlands. Amongst these 49 sites have been recognized to be of "international importance" under the Ramsar Convention. In Northeast India, the three Ramsar sites are- Deepor Beel in Assam, Loktak Lake in Manipur and Rudrasagar in Tripura. Deepor Beel The fresh water lake of Deepor Beel is located on the outskirts of Guwahati city. The wetland derives its name from the 'lake of elephants' which used to be a channel of the Brahmaputra River. Considered as one of the largest beels in the Brahmaputra valley, the lake was declared a Ramsar site in August 2002.

Apart from providing livelihood opportunities to the locals in the form of fishing and farming, the lake is a natural habitat for many varieties of birds, 219 species of birds including more than 70 migratory species are reported in the beel area. Considering the richness of the bird varieties found in the beel, BirdLife International has declared Deepor Beel as an Important Bird Area (IBA) with high priority for conservation. Natural and anthropogenic causes are some of the major threats that the lake is facing. This includes the proliferation of human settlements, expansion of roads and industries, threat from construction of broad-gauge railway line on the periphery of the beel that often possess a threat to elephant corridor thereby affecting the movement of the pachyderms. Another major threat is posed by the dumping ground in the nearby area close to the water body.

The situation worsens during the monsoon as garbage gets carried away into the water body, affecting residents and migratory birds and fish. Waste water from different parts of the city and the adjoining areas is also contributing to liquid waste, which is affecting the health of the water body. Loktak Lake Located at Moirang in Manipur, the Loktak Lake is the largest freshwater

lake in Northeast India and is famous for the phumdis (heterogeneous mass of vegetation) floating over it. Situated on this phumdi, Keibul Lamjao National Park is the only floating national park in the world. It is a Ramsar-designated wetland of international importance and home to the last wild population of the highly endangered brow-antlered, or Sangai deer which is the State animal along with a plethora of migratory birds and plant-life. Development activities such as hydropower generation, irrigation and drinking water supply for economic expansion are the major stress factors and cause rapid conversion to other uses and their function in a wider economic sense. Locals and environmentalists have often voiced their concern over the hydropower project which is gradually destroying the lake's ecosystem, greatly harming local livelihoods and threatening the habitat of animal species.

Degradation of catchment areas has occurred due to the construction of Ithai barrage. Deforestation and shifting cultivation in the catchment areas have accelerated the process of soil erosion resulting in the lake's shrinkage due to siltation. The annual silt flow into the lake is estimated to be 336,350 tonnes. The nutrients carried through the catchment areas are discharged into the lake affecting its water quality, thus encouraging the growth of water hyacinth and phumdis. All these activities have a direct bearing on ecological stability of the lake. The thickness of the phumdis has also decreased in the National Park, thereby threatening the survival of the Sangai deer. Rudrasagar Lake Also known as Twijilikma, the lake is located in Melaghar, in Sipajjala district of Tripura, about 52 kms south of Agartala. It was declared as a Ramsar site in 2007. The lake is situated near the Majestic Neermahal which is in the north-east bank of the lake.

The Rudrasagar Lake is a natural sedimentation reservoir, which receives flow from three perennial streams Noacherra, Durlavnaraya cherra and Kemtali cherra. After settling the sediment from the received flow, clear water discharges into the river Gumati through a connectivity channel Kachigang. Rudrasagar is a potential Important bird area and attracts a large number of waterfowl in winter. Among the rarer species recorded are the endangered Baer's pochard and near-threatened ferruginous duck. The main threats are increasing silt loads due to urbanisation, deforestation, expansion of agricultural land and intensive farming, and land conversion for population pressure. Apart from these the other major threats include dumping of garbage, deposition of solid waste and storage of construction materials along the shoreline. Destroying or degrading wetlands which are considered to be a rich repository of bio-diversity can lead to serious consequences, such as increased flooding, extinction of species, and decline in water quality. These consequences can be avoided by maintaining the valuable wetlands we still have and restoring lost or impaired wetlands where possible.

Manipur: Iconic Loktak lake will now be protected

<https://www.femina.in/travel/domestic/iconic-loktak-lake-in-manipur-will-now-be-protected-217719.html>

"It is a unique ecosystem in itself, and one that has been in peril for a while now, but Loktak Lake in Manipur is now set to receive a new lease of life. Union Minister of Environment, Forest and Climate Change Minister Bhupender Yadav, in a recent meeting with Awangbow Newmai, Manipur Forest, Environment and Climate Change Minister, has stated his commitment to provide Rs 97 crore to undertake the protection of the lake through various measures. In Manipur's Bishnupur district, Loktak Lake is sited 48 kilometres from Imphal, and is the largest freshwater lake in North-East India. Resembling a miniature inland sea, the lake is a must-visit attraction for visitors to Manipur. Loktak Lake is known especially for its floating islands - called phumdis - that support phumsangs (floating huts) in which the local fishermen live. Local legend has it that the lake was formed when the gods wooed the people of the valley, and, for Manipuris, it is a goddess, Loktak Lairembi. In the local Meitei belief system, the timeless romance of princess Thoibi and Khamba came to life on the lake's shores, and the mythical creature Poubi Lai resides at its heart. The lake itself is ema (mother) for the thousands of fishermen who earn their livelihood through her.

The phumdis (floating islands) are composed of soil, vegetation and organic matter, and nurture a unique ecosystem. These man-made islands float freely on the lake and form new shapes and sizes at different points in the year. The fishermen use them to build their houses on, to anchor huge nets to catch and grow fish, and also consume the edible plants, roots and fruits that grow on them. The best place to catch a bird's eye view of the lake is from Sendra, where there is a tourist home and attached cafeteria. Visitors can also try boating and water sports at the Takmu Water Sports Complex. Alongwith Loktak Lake, Deepor Beel in Guwahati and Rudrasagar Lake in western Tripura are categorised as wetlands of international importance in the North East under the Ramsar Convention, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Loktak Development Authority Chairman LS Meitei added that the detailed conservation effort will include a plan to provide sustainable livelihood for fishermen in the periphery area.

Manipur: Chief Minister inaugurates 18 Cage Culture units and 11 Pen Culture units

<http://e-pao.net/GP.asp?src=14..080122.jan22>

"Chief Minister N Biren Singh today inaugurated 18 Cage Culture units and 11 Pen culture units under the Loktak Livelihood Mission through video conferencing. Speaking at the

event, N Biren Singh said that the Loktak Livelihood Mission, which was launched in 2018, is an initiative of the State Government for bringing improvement in the livelihood of people living on the periphery of Loktak Lake. He stated that it aims to increase the income of farmers by utilizing marshy land in and around the lake. The mission also aimed at providing employment opportunities to fish farmers and youths of the State, he added. The Chief Minister further maintained that a total of Rs 15 crore have been earmarked in the budget for the Loktak Livelihood Mission. He appreciated the Minister for Fisheries, Commissioner, Director and other officials of the department for making the mission successful. N Biren Singh mentioned that 18 Cage Culture units and 11 Pen culture units have been constructed and being installed today at various places of Loktak Lake, Takmu Lake and Thanga for ensuring sustainable economy of the people and increasing fish production in the State.

He also stated that more and more units of Cage Culture and Pen Culture would be installed in the near future in and around Loktak Lake in order to provide more economic benefits to the local fisherman communities for their sustainable livelihood. He further appealed to the people to extend their valuable support and cooperation towards achieving Atmanirbhar Manipur and Atmanirbhar Bharat. Minister for Fisheries S Rajen Singh; Deputy Speaker K Robindro Singh; MP (Rajya Sabha) Leishemba Sanajaoba; Commissioner (Fisheries) M Harekrishna; Director (Fisheries) H Balkrisna Singh and others were present during the function. Prior to this program, the Chief Minister inaugurated Astro Turf at Kazipphung village, Hungpung and VIP seating gallery at Ukhrul headquarters ground, Ukhrul via video conferencing. The Chief Minister also unveiled the statues of Thangal General and Chirai Thangal at Mayangkhang, Kangpokpi district through video conferencing.

Manipur: Centre to release Rs.97 cr to protect iconic Loktak Lake

<https://pragnews.com/centre-to-release-rs-97-cr-to-protect-manipurs-ionic-loktak-lake/>

"In a conclusive step undertaken by the government after a meeting between Manipur Forest, Environment and Climate Change Minister Awangbow and Union Environment, Forest and Climate Change Minister Bhupender Yadav on Sunday, the Centre has assured to provide Rs 97 crore to protect the iconic Loktak Lake of Manipur. Three lakes in Northeast India namely, the Loktak Lake of Manipur's Bishnupur district, Rudrasagar Lake in West Tripura, and Guwahati's Deepor Beel are categorized as wetlands of international importance under the Ramsar Convention. The Ramsar Convention oversees the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The meeting held on Sunday marks the objective to save Loktak Lake which is globally known for its floating landmasses and scenic 'phumdis' (series of floating lakes), which is not available

anywhere in the world. Protection of this natural resource and utilization of resources in a more holistic manner is of utmost importance.

The Union Government commits to provide Rs 97 crore for undertaking various protection measures of the Loktak Lake. During the review meeting, governments of both sides decided on a detailed conservation plan which also includes providing sustainable livelihood for fishermen in the periphery area. Highlighting the importance of Loktak Lake, the Central Environment Minister enumerated the historical significance of the lake as it was the historic landmark of India's independence struggle, a sacred place from where Subhash Chandra Bose showed the dream of an independent India to his countrymen. Earlier, Manipur Chief Minister N. Biren Singh opined on the state government's failure to timely and wisely utilize nature's gift. The area is rich in flora and fauna and tapping of its resources in a sustainable manner needs to be undertaken by the state.

Manipur: PM urged to trash Loktak power project, upgrade INA

<http://e-pao.net/GP.asp?src=28..060122.jan22>

"In separate memorandums submitted to Prime Minister Narendra Modi through the Governor of Manipur, Manipuri Tourism Foundation and Historical Heritage Development Organisation respectively demanded decommissioning of Loktak Hydro Electric Project and upgrade of the INA war museum into a national war museum. In its memorandum, Manipur Tourism Foundation secretary K Mohonchandra pointed out that commissioning of the Loktak Hydro Electric Project has led to shallowness of the largest fresh water lake in the northeast due to stagnation of loose soils and decaying floating biomass (Phumdis) on the lake bed. Consequent to commissioning of the project innumerable flora and fauna have been disappearing four nearly four decades while over 37,000 hectares of paddy fields and thousands of fish farms have submerged. Citing continuous degeneration of the lake's ecology, the memorandum appealed for timely action by decommissioning the Loktak Hydro Electric Project to save the endangered Loktak Lake. In another memorandum, Historical Heritage Development Organisation appealed for upgrade of INA war museum, Moirang to a national war museum along with initiating development of Moirang Kangla Museum.

Manipur: PMMSY benefits handed to fish farmers

<http://e-pao.net/GP.asp?src=13..231221.dec21>

"Fishery Minister S Rajen Singh has distributed Pradhan Mantri Matsyas Sampada Yojana, PMMSY, benefits to 1503 fish farmers of Manipur through PFMS, today. Speaking to reporters during the distribution function held at the conference hall of his office at Old

Secretariat, he said that PMMSY beneficiaries have been selected through proper screening at the district and State level and this is the first time that the beneficiaries have received their benefits directly through Direct Benefit Transfer Scheme.

The Minister maintained that the Fishery Department has been focusing on bringing the blue revolution successfully and to achieve it, production of self reliant fish products in the State has been given priority. He also assured that local and indigenous fishes will also be produced sufficiently in the coming years. Loktak Livelihood Mission has been launched in order to encourage the fish farmers residing around Loktak lake. Areas under the Fishery Department have been leased out to fish farmers to provide income to the farmers and revenue to the Government in return, he added. The Minister also maintained that Sareng (Wallago attu) which has local importance will be produced in plenty from next year. Biofloc Fish Farming has been introduced in the State and training for the same has been provided to farmers, he added. M Harekrishna (IAS), Commissioner Fishery; H Balkrishna Singh (MCS), Director, Fishery Department and other officers of the department also attended the occasion.

Manipur: Loktak fishers call for respect of fundamental human rights

<http://e-pao.net/GP.asp?src=30..121221.dec21>

"Human rights is a fundamental right for every person on this planet, irrespective of gender, class or situation, and government of Manipur must respect the rights of the Loktak fishers, All Loktak Lake Areas Fishermen's Union, Manipur secretary Oinam Rajen re-emphasised on the occasion of Human Rights Day 2021 on Friday. Loktak Lake dwellers observed the day, with a simple function at Langolsabi locality of Champu Khangpok, one of the only floating villages of its kind in the entire world, uniquely placed amongst floating biomass across the lake - a Ramsar site of international importance. The recent move by the Loktak Development Authority to deny the existence of Champu Khangpok floating village in Loktak Lake is a classic example of absolute violation of the fundamental human rights of the marginalised fishing community, Rajen said, while referring to the LDA's recent complaint filed with the Elections Commission to de-recognise the polling station assigned to the village citing invalid reasoning that the village is 'non-existent'. Champu Khangpok is a government recognised village and the census reading of villages under the Moirang Sub-Division cited the village on different occasions, Rajen pointed out, adding that the village was in existence much before the establishment of Loktak Development Authority in 1987. Terming the LDA's reference to the non-existence status of the village as uncalled for, Rajen cited the Moirang Sub-Divisional Officer's official census report of 2001 stating the village with 342 households and a total population of 1368.

The LDA's preposterous claim must be withdrawn immediately, he demanded. Respecting human rights is fundamental for all, Manipur University Professor Elangbam Bijoykumar Singh said as chief guest of the observance. There is need for the academics and research scholars to understand the dynamics of the lake and the people who depend on it to do justice to the indigenous Aching community, he continued. Referring to the UN Special Rapporteur on Human Rights and the Environment, David R Boyd's 2021 report to the UN General Assembly, environmentalist Salam Rajesh said that the report is self-explanatory, which states that, "Exclusionary conservation commonly involves eviction and displacement of Indigenous Peoples and other rural rights holders from their lands, typically without due process or respect for the right of free, prior, and informed consent". The report titled as 'Human rights-based approaches to conserving biodiversity: equitable, effective and imperative', stated that, "Many governments continue to embrace restrictive or exclusionary conservation approaches aiming to purge high-biodiversity areas of human inhabitants".

The report's author David Boyd has specifically focused on the principle of respect of fundamental human rights, stating that, "Rights-based approaches are obligatory in all actions to conserve, restore, and share the benefits of biodiversity, including conservation financing," Rajesh pointed out. Loktak Lake has been subjected to a process of ecological disaster primarily due to the Loktak Hydroelectric Power Project and the fishing community have suffered extensively by the provisions of the Manipur Loktak Lake (Protection) Act of 2006, Rajesh contended adding that the current status of the lake as a Ramsar site need to be reviewed at the earliest. Observed annually on the 10th day of December across the globe, the day reminds the world of the universality of humankind and the need to have respect for human lives in all of its aspects, whether socially, culturally, economically or politically. The event was attended by research scholars from the Centre for the Study of Social Exclusion & Inclusive Policy, Manipur University and Indigenous Perspective, Imphal.

Manipur: Loktak Lake: The Human and environmental costs of hydropower

<https://thediplomat.com/2021/12/loktak-lake-the-human-and-environmental-costs-of-hydropower/>

"Nestled in the valley of Manipur, Loktak Lake is the largest freshwater lake in northeast India. It is a Ramsar-designated wetland of international importance and home to the last wild population of the highly endangered brow-antlered, or sangai, deer. However, according to locals and environmentalists, a recent hydropower project is gradually destroying the lake's ecosystem, greatly harming local livelihoods and threatening the habitat of Manipur's beloved sangai. In post-independence India, dams have long been lauded as signs of modernity and progress; hydropower is also crucial to India's commitment to producing 40 percent of its energy from

renewable sources by 2030. Currently around 170 dams are being planning for the northeast of the country. However, activists and locals point with caution to the environmental and social damage this barrage has caused Loktak and its animal and human populations: the water quality is depleting, the vegetation thinning out, and fish species and edible plants disappearing. The World's only floating national park under threat Wedged between Myanmar and India's Assam, Loktak is one of the last remaining pats, or lakes, of an ancient wetland system once covering much of Manipur, a remote, conflict-ridden state.

A proudly independent kingdom, the state was forcibly subsumed into India following Indian independence in 1947, setting off decades of conflict between ethnic groups and the Indian state. Today, Manipur is slowly emerging from over half a century of political unrest and violence. Of this ancient wetland, only a few pats remain; most have been replaced with concrete. Loktak is 250 square kilometers in size and is by far the largest. Nicknamed the belly of the state, it is renowned for its phumdis, tangled clumps of biomass, vegetation, and soil, half-submerged, half-floating in the water. Famously, local fishermen have sculpted these phumdis into natural fish farms, creating a covering of perfectly symmetrical circles across the lake. Loktak is also home to the world's only floating national park, Keibul Lamjao, a 40 sq km area of phumdis, home to the sangai deer, along with a plethora of migratory birds and plant-life. The sangai were actually thought to be extinct until the 1950s when a small group was found living on the phumdis of southern Loktak; their rounded hooves mean they can survive only on Loktak's spongy biomass. The 2016 census counted 260 sangai remaining in the park. According to Oinam Maipakchao, a local social worker, the residents of the Loktak area are now facing unprecedented environmental and social challenges, that can be linked mainly to the construction of a hydroelectric dam, the Ithai barrage, across the lake's main draining outlet in 1983.

“This destroyed the natural flushing cycle of the lake which kept the waters clean and the phumdis strong,” he explains. He describes how before the dam, during the dry season the phumdis would fall with the water level, feeding on nutrients and soil from the base of the lake. Then, in the monsoon, they would rise, along with their cargo of soil and silt, and be flushed through Myanmar to the Bay of Bengal. This, he says, was a natural draining cycle that acted as flood control for the valley as well as purging the lake of the debris and dirt. According to Maipakchao, the consequences of the dam for the wetland are severe. Now, with constant water levels and no natural outlet, the phumdis are building up, along with the silt and dirty water. He explains that the inability to feed in the dry season means the phumdis are thinning out and breaking up. Water pollution and the weakening of the phumdis are reducing fish migration; numerous fish species are already disappearing, as are the migratory birds seeking food. On a visit to Keibul Lamjao, Maipakchao points to the parts of the phumdis in the national park are now submerged in water. This, he says, is a sign of poor health.

A study carried out in 2020 found that the areas of the national park that are suited to the sangai are indeed decreasing in size. The study identifies the impact of the Ithai barrage and the thinning of the phumdis as major drivers of these changes. The Human impact of the dam The permanent flooding of the lake also submerged large areas of agricultural land once used for crops and buffalo grazing. The displaced farmers were left with little choice but to move to the city to seek jobs or join the ranks of the fishing community. The lake was also a major source of plant food sources, such as water chestnuts, which are no longer able to germinate as they need shallow waters. While scrapping muddy gunk from his old fishing net, looking out over the lake, Ahnonjao Singh, a local fisherman in the lakeside village of Thanga, explained, “before the dam, there were so many fish; our fishing techniques were quite different.” Singh is 60 and has lived on the banks of Loktak his whole life.

He describes how the wetland is entwined with the economic, social, and spiritual lives of the local people who over generations developed a range of fishing techniques for all seasons. Local religious rituals are not complete without certain types of fish and flowers from the lake, some of which they are now struggling to find. “She gives us life,” Singh said. “But we don’t know how much longer she will live.” Today, according to Maipakchao, 95 percent of the local population are fishers, relying on the lake’s declining fish stock for a living. With scant government help available, out of necessity, many fishermen build shacks, or phum-shangs, on the phumdis, and live out on the lake for months at a time with their families. However, between 2011 and 2013, citing environmental concerns, the state government controversially cleared over 700 of these phum-shang, offering minimal recompense to the fishermen. In an interview in the state capital of Imphal in February 2020, Ram Wangkheirakpam, from the NGO Indigenous Perspectives, explained that the effects of the dam run deep for the local community. “This is not a one-time experience. For the local people the impacts are long. Even after 30 years people are still suffering. It has been three decades and people are still trying to make sense of their lives. They have lost their habitat and are still trying to locate themselves legally or otherwise.” He continued, “Loktak brings an example of how dams can affect people. For people not affected by a dam they will never understand this. Many people in Loktak have not been compensated. Even when people have been compensated and rehabilitated, the impact goes on. It passes down generations.”

Manipur: MoU signed to create sustainable rural livelihood opportunities

<http://e-pao.net/GP.asp?src=21..051221.dec21>

"The ICICI Foundation for inclusive growth, the CSR arm of ICICI Bank and its group of companies has signed an MoU with Manipur State Rural Livelihood Mission (MSRLM), Department of Rural Development and Panchayati Raj, Government of Manipur on November

30 to work for creating sustainable livelihood opportunities for rural population in Manipur. The MoU was signed during an online event by Anuj Agarwal, Chief Operating Officer, ICICI Foundation for Inclusive Growth and Robita Yumnam, IAS, State Mission Director, MSRLM, Department of RD & PR, Government of Manipur. The MoU is expected to further strengthen the ongoing livelihood activities of both the organizations and benefit the rural population in project locations of Manipur. Under this MoU, both the organizations will work together to train local youths as Pashu Sakhi, Fish Mitra and Krishi Mitra which will provide ground technical support to the farmers for taking up fishery, piggery and agriculture operations.

Manipur: Centre will give full support to develop Loktak lake as top tourist destination: Union Minister Sarbananda Sonowal

<https://indianexpress.com/article/north-east-india/manipur/centre-will-give-full-support-to-develop-loktak-lake-as-top-tourist-destination-union-minister-sarbananda-sonowal-7656516/>

"Union Minister of Ports, Shipping and Waterways Sarbananda Sonowal assured that the Centre will extend full support for the promotion and development of Manipur's Loktak Lake to make it one of the most beautiful lakes in the world. Sonowal stated this during his visit to Loktak Lake in Bishnupur district on Saturday. "We all have an important role to play in the development and promotion of Loktak Lake as one of the most important tourist destinations in the world. The lake is one of the largest lakes in Asia with its greenery and marine lives surrounded by beautiful mountain," the minister said. He added that Prime Minister Narendra Modi has always given emphasis to the speedy growth of NE states. He (PM) is the first PM in the last 75 years of Independence who has given his 'heart and soul' for the promotion and development of Northeast, Sonowal claimed. He further stated that his visit to the state is under the directive of PM, to extend full support to the government of Manipur in the sectors of Inland Waterways development and Ayush.

The minister also lauded the Chairman of Loktak Development Authority (LDA) for his hard work to develop the water body as a national and international tourist destination. Loktak lake is situated at Moirang, about 48 km from Imphal. It is the largest freshwater Lake in the Northeast. In November 2019, the Union Shipping Ministry approved Rs 25.58-crore for Loktak Inland Waterways Improvement Project (LIWIP) — a long-pending demand of the Manipur government. The project aims to boost tourism and connectivity in the lake. However, the fishing communities residing in and around the Loktak have been opposing the project asserting that it will be harmful to biodiversity. As per Loktak Lake Area Fishermen's Union Manipur, at least 4000 fisher persons reside in and around the lake.

Manipur: Chronic shortage in fish production

http://epao.net/epSubPageExtractor.asp?src=news_section.editorial.editorial_2021.Chronic_shortage_in_fish_production_PC_20211108

"Locally produced fish yield for this year's Fish Fair, which is held every year in connection with the Ningol Chakkouba festival, officially put at 1.24 lakh against the target of 90,000 is something to cherish about for it signifies that the government's effort to promote aquaculture is paying off to some extent. However, the state still facing annual production deficit of 23,000 metric tonne and spending Rs 4 crore in importing fish to meet the demand underscores that more fish farming projects backed by the subject experts and proper land use policy will have to be implemented for overcoming the chronic dependence on other states for one of the choicest food items of Manipuris. While increase in the production this year reflects that the local farmers are keen to contribute their mite in augmenting the annual yield with the right support of the government institutions, there is no way that the objective to be self-reliant in fish production could be realised if the area under aquaculture remains static. As of date, participants of the fish fair are limited to established big farms while those newly venturing into fish farming on commercial scale mainly comprise few wealthier individuals and top bureaucrats who purchased land beyond the city limits as a retirement plan.

Through their connections in the higher echelon of the administration, these groups of individuals could avail government-sponsored schemes and financial assistance with ease while ordinary citizens have to run from pillar to post to seek the support of the administration or banking institutions. Similar to the frenzied race for gifting items during the Ningol Chakkouba festival, the number of consumers too has been increasing in commensurate with the growing population. With the festival no more confined to the Meetei community it is but natural that the demand for fish would only surge in the coming years, thereby, necessitating expansion of the fish production areas. Some decades back, there used to be substantial number of families, both in the rural, suburban and urban areas; which feasted on fish reared from own ponds. With such ponds filled to make way for houses and other commercial purposes, purchasing from the markets or directly from the fish farms has been the norm today.

As such, the huge gap between the annual production and demand needs to be bridged with effective policy at the ground level. Even if there no remote possibility of achieving self-sufficiency in production of food grains and vegetables on account of the pathetic irrigation network coupled with unpredictable rainfall pattern, Manipur seems to be naturally endowed for aquaculture for there are still many water bodies and sufficient ground water stock across the valley districts. Thus, there is no valid reason why the state should perennially import when there is vast potential for fish farming. It is equally important for the government to ensure

materialisation of the much-publicised projects and schemes aimed at bridging the supply-demand gap instead of the people compelled to consume imported fish and fish products, which are generally laced or treated with chemicals or other forms of preservatives to increase their shelf life.

Manipur: Fishery Minister releases over 4 lakh fish fingerlings into Loktak Lake

<https://www.northeasttoday.in/2021/10/21/manipur-fishery-minister-releases-over-4-lakh-fish-fingerlings-into-loktak-lake/>

"The Manipur Fishery and Education Minister S Rajen Singh on Wednesday released more than four lakh fish fingerlings into the Loktak Lake, as part of the 32nd Loktak Day celebration. Singh stated that Department of Fishery of the state government has released 4,10,000 fish fingerlings into the Loktak Lake as a part of the celebration. Besides, out of these 4,10,000 fingerings, two fish farmers from the state, namely – Heisnam Meghachandra Mangangcha from Thanga; and Ibosana from Laphupat Tera contributed 1,10,000 fish fingerlings. The Fisheries minister considered the mass fish hunting as one of the major reasons for the constant decrease in aquatic creatures. He added that a major population of Manipur is highly dependent on fishing as a major source of income. That is why the fishery department is releasing fish fingerlings with the objective to multiply varieties of fishes in the lake, informed Singh. Recently, the state Chief Minister N. Biren Singh asserted that Manipur had saved over Rs. 100 crore in fish import during the last four-and-a-half years. According to the CM, this feat could be achieved after the state reduced its fish imports from 20 metric tonnes to 14 metric tonnes, under a government initiative to achieve self-sufficiency in fish production.

Manipur: Aggressive push for ADB's Manipur ring road project leads to 'forced' eviction threats

<https://www.counterview.net/2021/10/aggressive-push-for-adbs-manipur-ring.html>

"The health and social crisis unfolding amid the Covid-19 pandemic situation during 2020 and 2021 in Manipur is also accompanied with aggressive push for large infrastructure and energy projects in Manipur, such as the Imphal Town Ring Road project financed by the Asian Development Bank (ADB) and the 66 MW Loktak Downstream Hydroelectric Project, envisaged for financing by the Japan International Cooperation Agency. Forced eviction during Covid-19 pandemic is an obvious reality in Manipur, which heightened the risks of community infections. Indeed, at least 66 Kuki households were evicted by the Deputy Commissioner of Tengnoupal District, Manipur from November 3 to 13, 2020 in villages along M Chahnou village till the Integrated Check Point, Moreh to construct the Moreh Integrated Check Point (ICP)

ByPass Road as a component of ADB-financed Imphal to Moreh road. The Imphal Town Ring Road project caused wide controversy in Manipur with threats of forced eviction, again amid the Covid 19 pandemic.

Villagers of Tharon village were forced to organise a protest amid the Covid-19 on June 26, 2021, when the daily Covid-19 cases stand close to around 700 cases, a high number given Manipur's low population density. The Sub Divisional Order, Lamphel, Imphal West District, Manipur issued an eviction order on August 27, 2021 under the Manipur Public Premises (Eviction of Unauthorized Occupants) Act, 1976 to establish the project corridor for the Imphal Ring Road Project. Background The Imphal Ring Road Project is a part of ADB's South Asia Sub Economic Cooperation (SASEC) Road Connectivity Investment Programme. Manipur is one of the states targeted for US\$ 300-million loan agreement signed between the Government of India and the ADB on March 26, 2015, aiming to improve road connectivity and increasing domestic and regional trade along the North Bengal-North Eastern region international trade corridor. Two roads in Manipur envisaged for construction under the Project are Imphal-Kangchup-Tamenglong Road and the Imphal Town Ring road.

The project proponents reasoned that India's Act East Policy and trade expansion with South East Asian countries would enormously increase traffic volume, thus requiring the Imphal Town Ring Road. The project was first pursued in the year 2014. In September 2014, the Public Works Department (PWD), Manipur issued a tender inviting consultants to take up a feasibility study and prepare a detailed project report with support from ADB. A team of experts from the Erieye Ground Interface Segment (EGIS International), France subsequently inspected roads and crossings in Imphal city. However, affected communities from Langthabal, Patsoi, Tarung, Kongba etc objected to the survey due to lack of consultation, limited impact assessment, and faulty assessment of their assets. The affected villages submitted complaints to the Office of the Compliance Review Panel of ADB on December 15, 2014. The Project was thus delayed for years, till the Government resumed the project in 2020 after meeting with ADB on January 17, 2020. The Survey works for the Imphal Ring Road again resumed in September 2020. Series of notifications for survey and land acquisition followed.

The Deputy Commissioner, Imphal East District, Manipur and the PWD issued notifications on September 7-8, 2020 to commence demarcation of road in the villages to be affected by the road. The Deputy Commissioner, Imphal West also issued notice on July 16, 2021 for direct purchase of land along Langjing to Ghari via Lamjaotongba and FCI Godown in Imphal West District, followed by eviction order for Tharon village. Implications An initial assessment indicates that the Imphal Ring Road project will affect over 1,000 acres of agricultural land in Kongba, Langol,

and Lamphel in Imphal West and Imphal East districts. Over 500 families will also be affected in the villages of Tharon, Thangmeiband, Tarung villages, etc.

The project will destroy part of sacred hills, Langol, Langthabal, etc and adjoining forests areas. The eviction order of August 27 was based on a prior notification of the Deputy Commissioner, Imphal West district, July 28, 2021, that leveled villagers of Tharon villagers as illegally encroaching on the Langol Reserve Forest Areas. The Tharon villagers decried the eviction notice levelling them as encroachers, maintaining that records of Royal chronicle (Cheitharol Kumbaba) in Manipur confirming their village as established nearly 500 years ago during the reign of King Lamgramba (1512–1523). The villagers confirmed settling in the Langol Hills and Forest areas for generations before enactment of Forest Conservation Act, 1980 of the Government of India and before declaration of Langol Reserve Forest by the Forest Department, Manipur. The proposed eviction plan will affect around 20 households of Tharon Village belonging to the Kabui Tribe. The villagers expressed concern that the pursuance of the proposed ADB financed Imphal Town Ring Road with a width of 100 feet, will uproot the Tharon village. The construction of the ring road will create an artificial gorge which will cause disconnection of 40 households residing above the road.

The excavation of earth and forest for the ring road will render most of the households close to the road unfit for settlement. The eviction and road building will directly affect over 300 villagers in the village. The eviction notice for selected Tharon villagers is despite the fact that the detailed project document, the rehabilitation and resettlement plan, Indigenous Peoples Action Plan, Social and Environment Impact Assessment were not finalized and concealed from the communities. Definition of alternative measures in consultation with affected communities is still lacking too. The proposed Ring Road will involve destruction and removal of many graves and tombs of ancestors, which is a taboo to the Kabui customs and traditions in Tharon village. The road building will lead to destruction of temple of Tingkao Ragwangh Chapriak Phwam, which is an ancestral worship of the Kabui people, besides destruction of church close to the road. The proposed road will lead to filling up of the only village pond and removal of a hand pump in the middle of the village that serves as the main water source of the village. This will affect water sources and cause water shortage in the village.

The project proponents failed to apply the Forest Rights Act, 2006, which makes it mandatory to seek the consent of the traditional village institutions of the Tharon Villagers for any diversion of their village land. The eviction order caused mental and psychological problems on fear of losing their land and livelihood, which violates the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989. Additionally, residents of Khurai Konsam Leikai in Imphal East District, who opposed the project stated that Ipum Pat (wetland) which is being utilized by the locals for

access to water, fishing, seasonal food collection and other purposes will be affected if the ring road is constructed. The Meitei and Meitei Pangal communities who settled near Ipum Pat filtered the water from the lake and consumed it since there is no regular supply of tap water in the locality.

Besides, a community hall which is being used by the locals in different occasions and hundreds of homestead land will also be affected if the ring road is constructed. The forced eviction plan without the consultation and consent of villagers and absence of rehabilitation plan will impoverish the affected villagers. The affected villagers are worried that any amount cannot compensate the loss of their land, property and heritages. The eviction will also affect their livelihood and threaten affected peoples indigenous culture and identity. The construction of the Imphal Town Ring Road will also pose additional problems of air, noise pollution due to the increased vehicular movement in their village, causing safety and health problems among the affected communities. The construction process will also involve land and mudslides in the area, besides dumping of excavated earth and rocks in the area. Further, a serious concern is the feasibility of Imphal Ring Road plan with its route concentration in congested areas of Imphal city, such as in Thangmeiband and Chingmeirong areas. The ongoing plan for Imphal Town Ring Road to pass through one of the most congested part of the town in Chingmeirong and Tharon areas with important landmarks such as Manipur High Court, Manipur Capital complex, Legislative Assembly, etc. lacks rationality and defeats the objectives of the Imphal Town Ring Road to decongest the traffic in the Imphal Town.

Human rights implications Several communities who eke out their livelihood through farming, fishing and small-scale economic activity will lose their livelihood and constitute a clear violation of right to life, as guaranteed both by Article 21 of Constitution of India, Article 6 of the International Covenant on Civil and Political Rights. Any forced displacement is violation of Article 11 of the International Covenant on Economic, Social and Cultural Rights. The impact of displacement will be consequently followed by the loss of economic activities with no ways and means of settlement and basic services. It will create social turmoil to those evicted families as there is mechanism for rehabilitation and resettlement. The proposed project clearly failed to take the free, prior and informed consent of affected indigenous communities of Tharon, Khurai, Kongba, etc. as required under the provisions of the UN Declaration on the Rights of Indigenous Peoples, 2007 and even under ADB's own safeguard policies. There is no room to suggest alternatives by affected communities. The issuance of eviction order violates the ADB safeguard policy that requires the consultation of the affected indigenous communities and to advance their rights, besides violating Forest Rights Act, 2006.

The eviction order at Tharon Village caused mental harassment of Tribal Kabui Villagers of Tharon, which violates the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989. Community responses The proposed Imphal Town Ring Road plan already provoked wide concerns and objections from affected communities in Imphal West and Imphal East districts. The residents of Khurai Sajor Leikai, Kongba, Wangkhei in Imphal East District, Manipur already expressed objection to the proposed Imphal Town Ring Road project based on concerns of significant impacts on their land and livelihood means. The lack of information on the project, lack of consultation with affected communities and the lack of clarity on the rehabilitation and resettlement of affected communities are other concerns. Locals of Khurai Konsam Leikai and adjoining villages in Imphal East District, Manipur staged protest and blocked roads on December 17, 2020 in protest against the construction of Imphal Ring road that will pass through surrounding areas of Ipum Pat. The JAC against the construction of the ring road was formed to protest the ring road and resolved to protest if the state government failed to respect their demands.

Due to concerns of impacts, Tharon villagers also resolved to stand against the Imphal Town Ring road project in their village. The residents of Tharon village staged a sit-in protest at a community hall of the village against the proposed Imphal Ring Road project on June 26, 2021. Affected locals staged protest, raising demands, 'Government Should Respect Human Rights', 'No Road Through Our Home' etc. The villagers also organized a democratic call to stop forced displacement of Tharon villagers on 17 June 2021. The villagers filed a petition with the Manipur High Court in August 2021, which passed an interim order on 10 September 2021 to suspend the eviction order till the next hearing.

Manipur: Fishery Minister launches 'Nga Keithel App'

<http://e-pao.net/GP.asp?src=10..210921.sep21>

"Fisheries and Education Minister, S Rajen Singh on Monday launched the 'Nga Keithel App' at INA Memorial Hall in Moirang. The programme was attended by Moirang AC MLA, P Sharatchandra Singh; Director Fisheries Manipur, H Balkrishna; District Fisheries Officer Bishnupur, K Dineshore; Fishery Officer, Hemchandra Ningthoukhongjam; Advisor & mentor Keithel App, N Nabakanta and INA Advisory Committee member M Ashok as presidium members. Speaking on the occasion, S Rajen said that the newly launched App will help fish farmers of the State to grow while adding that many schemes had also been launched by the Central Government for the welfare of the fish farmers. "Loktak Livelihood Mission has been introduced to help the fish farmers particularly in Bishnupur District. The expenditure to purchase fish from outside has been reduced. Different schemes such as biofloc, PPP model of Government fish farms, DBT to the farmers, loan to the cooperative societies, subsidy scheme

etc have been introduced. Entrepreneurs have also been encouraged by presenting awards and incentives", he added. P Sharatchandra Singh stated that people of Moirang and surrounding areas have an inseparable relationship and the launching of Nga Keithel will play an important role in bringing fish farmers of the State together.

Manipur: Income generation and nutritional security through livestock based integrated farming system

<http://epao.net/epSubPageExtractor.asp?src=education.Jobs Career.Income generation through livestock based integrated farming By Neeta Shah Mahesh>

"Livestock based integrated farming system is one of the rising agriculture systems for the northeastern region. The practice of this type of farming system has been continued in this region in a traditional way from time immemorial. The basic principles of the farming system are productive recycling of farm wastes. Different subsystems work together in integrated farming system resulting in a greater total productivity than the sum of their individual production. Fish-Livestock along Livestock-Crop farming is the major concept in Livestock based integrated farming system. Fish-livestock farming systems are recognized as highly assured technology where predetermined quantum of livestock waste obtained by rearing the live stock in the pond area is applied in pond to raise the fish crop without any other additional supply of nutrients. The main potential linkages between livestock and fish production concern use of nutrients, particularly reuse of livestock manures for fish production. The term nutrients mainly refer to elements such as nitrogen (N) and phosphorus (P) which function as ferti-lizers to stimulate natural food webs rather than conventional livestock nutrition usage such as feed ingredients, Both production and processing of livestock generate by-products that can be used for aquaculture.

Direct use of livestock production wastes is the most widespread and conventionally recognized type of integrated farming. Production wastes include manure, urine and spilled feed; and they may be used as fresh inputs or be processed in some way before use. Based on the type of livestock used for integration there are many combinations in livestock-fish systems. Some of the combination are listed and discussed below. a. Cattle-Fish Culture Manuring of fish pond by using cow dung is one of the common practices all-over the world. A healthy cow excretes over 4,000-5,000 kg dung, 3,500-4,000 lt urine on an annual basis. Manuring with cow dung, which is rich in nutrients results in increase of natural food organism and bacteria in fishpond. A unit of 5-6 cows can provide adequate manure for 1 ha of pond. In addition to 9,000 kg of milk, about 3,000-4,000 kg fish/ha/year can also be harvested with such integration. Cowshed should be built close to fishpond to simplify handling of cow manure. A cow requires about 7,000-8,000 kg of

green grass annually. Grass carp utilizes the leftover grasses, which are about 2,500 kg. Fish also utilize the fine feed which consists of grains wasted by cows.

In place of raw cow dung, biogas slurry could be used with equally good production. Twenty to thirty thousand kg of biogas slurry are recycled in 1 ha water area to get over 4000 kg of fish without feed or any fertilizer application. b. Pig-Fish system China, Taiwan, Vietnam, Thailand, Malaysia and Hungary are the countries where pig-fish farming system is popular. The waste produced by 30-40 pigs is equivalent to 1 tonne of ammonium sulphate. Exotic breeds like White Yorkshire, Landrace and Hampshire are reared in pig-sty near the fish pond. Depending on the size of the fishponds and their manure requirements, such a system can either be built on the bund dividing two fishponds or on the dry-side of the bund. Pig-sties, however, may also be constructed in a nearby place where the urine and dung of pigs are first allowed to the oxidation tanks (digestion chambers) of biogas plants for the production of methane for household use. The liquid manure (slurry) is then discharged into the fishponds through small ditches running through pond bunds. Alternately, the pig manure may be heaped in localized places of fishponds or may be applied in fishponds by dissolving in water. Pig dung contains more than 70 per cent digestible feed for fish. The undigested solids present in the pig dung also serve as direct food source to tilapia and common carp.

A density of 40 pigs has been found to be enough to fertilize a fish pond of one hectare area. The optimum dose of pig manure per hectare has been estimated as five tonnes for a culture period of one year. Fish like grass carp, silver carp and common carp (1:2:1) are suitable for integration with pigs. Pigs attain slaughter maturity size (60-70 kg) within 6 months and give 6-12 piglets in every litter. Their age at first maturity ranges from 6-8 months. Fish attain marketable size in a year. Final harvesting is done after 12 months of rearing. It is seen that a fish production of 3,000 kg/ha could be achieved under a stocking density of 6,000 fish fingerlings/ ha in a culture period of six months. c. Poultry-Fish Culture Poultry raising for meat (broilers) or eggs (layers) can be integrated with fish culture to reduce costs on fertilizers and feeds in fish culture and maximize benefits. Poultry can be raised over or adjacent to the ponds and the poultry excreta recycled to fertilize the fishponds. Poultry housing, when constructed above the water level using bamboo poles would fertilize fishponds directly. In fish poultry integration, birds housed under intensive system are considered best. Birds are kept in confinement with no access to outside. Deep litter is well suited for this type of farming.

About 6-8 cm thick layer prepared from chopped straw, dry leaves, saw dust or groundnut shell is sufficient. Poultry dung in the form of fully built up dip litter contains: 3% nitrogen, 2% phosphate and 2% potash, therefore it acts as a good fertilizer which helps in producing fish feed i.e. phytoplankton and zooplankton in fish pond. So application of extra fertilizer to fish pond for

raising fish is not needed. This cuts the cost of fish production by 60%. In one year 25-30 birds can produce 1 tonne dip litter and based on that it is found that 500- 600 birds are enough to fertilize 1 ha water spread area for good fish production. Daily at the rate of 50 kg/ ha water spread area poultry dung is applied to the fish pond. When phytoplanktonic bloom is seen over the surface water of fish pond then application of poultry dung to the pond should immediately be suspended. Poultry-fish integration also maximizes the use of space; saves labour in transporting manure to the ponds and the poultry house is more hygienic and water needed for poultry husbandry practice can get from fish pond. d. Duck-Fish Culture Duck-fish integration is the most common integration in China, Hungary, Germany, Poland, Russia and some parts of India.

A fish-pond being a semi-closed biological system with several aquatic animals and plants, provides excellent diseasefree environment for ducks. In return ducks consume juvenile frogs, tadpoles and dragonfly, thus making a safe environment for fish. Duck dropping goes directly in pond, which in turn provides essential nutrients to stimulate growth of natural food. This has two advantages, there is no loss of energy and fertilization is homogeneous. This integrated farming has been followed in West Bengal, Assam, Kerala, Tamil Nadu, Andhra Pradesh, Bihar, Orissa, Tripura and Karnataka. Most commonly used breed for this system in India is the 'Indian runners'. It is highly profitable as it greatly enhances the animal protein production in terms of fish and duck per unit area. Ducks are known as living manuring machines. The duck dropping contain 25 per cent organic and 20 per cent inorganic substances with a number of elements such as carbon, phosphorus, potassium, nitrogen, calcium, etc. Hence, it forms a very good source of fertilizer in fish ponds for the production of fish food organisms.

Besides manuring, ducks eradicate the unwanted insects, snails and their larvae which may be the vectors of fish pathogenic organisms and water-borne diseasecausing organisms infecting human beings. Further, ducks also help in releasing nutrients from the soil of ponds, particularly when they agitate the shore areas of the pond. For duck-fish culture, ducks may be periodically allowed to range freely, or may be put in screened resting places above the water. Floating pens or sheds made of bamboo splits may also be suspended in the pond to allow uniform manuring. The ducks may be stocked in these sheds at the rate of 15 to 20/m². It is better if the ducks are left in ponds only until they reach marketable size. Depending on the growth rate of ducks, they may be replaced once in two to three months. About 15-20 days old ducklings are generally selected. The number of ducks may be between 100 and 3,000/ha depending on the duration of fish culture and the manure requirements.

For culturing fish with ducks, it is advisable to release fish fingerlings of more than 10 cm size, otherwise the ducks may feed on the fingerlings. The stocking density of fingerlings also

depends on the size of pond and number of ducks released in it. As the nitrogen-rich duck manure enhances both phyto- and zooplankton production, phytoplankton-feeding silver carp and zooplankton-feeding catla and common carp are ideal for duck-fish culture. The fish rearing period is generally kept as one year and under a stocking density of 20,000/ha, a fish production of 3,000-4,000 kg/ha/year has been obtained in duck-fish culture. In addition to this, eggs and duck-meat are also obtained in good quantity on an annual basis.

Livestock-crop production system An “integrated crop-livestock system” is a form of mixed production that utilizes crops and livestock in a way that they can complement one another through space and time. The backbone of an integrated system is the herd of ruminants (animals like sheep, goats or cattle), which graze a pasture to build up the soil. Eventually, sufficient soil organic matter builds up to the point where crops can be supported. Animal can also be used for farm operations and transport. While crop residues provide fodder for livestock and grain provides supplementary feed for productive animals. Animals play key and multiple roles in the functioning of the farm, and not only because they provide livestock products (meat, milk, eggs, wool, and hides) or can be converted into prompt cash in times of need. Animals transform plant energy into useful work: animal power is used for ploughing, transport and in activities such as milling, logging, road construction, marketing, and water lifting for irrigation. Animals also provide manure and other types of animal waste.

Animal excreta have two crucial roles in the overall sustainability of the system: (a) Improving nutrient cycling: Excreta contain several nutrients (including nitrogen, phosphorus and potassium) and organic matter, which are important for maintaining soil structure and fertility. Through its use, production is increased while the risk of soil degradation is reduced. (b) Providing energy: Excreta are the basis for the production of biogas and energy for household use (e.g. cooking, lighting) or for rural industries (e.g. powering mills and waterpumps). Fuel in the form of biogas or dung cakes can replace charcoal and wood. One key advantage of crop-livestock production systems is that livestock can be fed on crop residues and other products that would otherwise pose a major waste disposal problem.

For example, livestock can be fed on straw, damaged fruits, grains and household wastes. Integration of livestock and crop allows nutrients to be recycled more effectively on the farm. Manure itself is a valuable fertilizer containing 8 kg of nitrogen, 4 kg of phosphorus and 16 kg of potassium per tonne. Adding manure to the soil not only fertilizes it but also improves its structures and water retention capacity. It is also opined that where livestock are used to graze, the vegetation under plantations of coconut, oil palm and rubber, as in Malaysia, the cost of weed control can be dramatically reduced, sometimes by as much as 40 per cent. In Colombia sheep

are sometimes used to control weeds in sugarcane. Draught animal power is widely used for cultivation, transportation, water lifting and powering food processing equipment.

Over all Advantages of Integrated Farming System

- 1) Productivity: IFS provides an opportunity to increase economic yield per unit area per unit time by virtue of intensification of crop and allied enterprises especially for small and marginal farmers.
- 2) Profitability: Cost of feed for livestock is about 65-75% of total cost of production; however use of waste material and their byproduct reduces the cost of production, conversely it is same for the crop production as fertilizer requirement for crop is made available from animal excreta no extra fertilizer is required to purchase from outside farm as a result the benefit cost ratio increases and purchasing power of farmers improves thereby.
- 3) Sustainability: In IFS, subsystem of one waste material or byproduct works as an input for the other subsystem and their byproduct or inputs are organic in nature thus providing an opportunity to sustain the potentiality of production base for much longer periods as compare to monoculture farming system.
- 4) Balanced Food: All the nutrient requirements of human are not exclusively found in single food, to meet such requirement different food stuffs have to be consumed by farmers. Such requirement can be fulfilled by adopting IFS at farmer level, enabling different sources of nutrition.
- 5) Environmental Safety: In IFS waste materials are effectively recycled by linking appropriate components, thus minimize environment pollution.
- 6) Recycling: Effective recycling of product, byproducts and waste material in IFS is the corner stone behind the sustainability of farming system under resource poor condition in rural area.
- 7) Income Rounds the year: Due to interaction of enterprises with crops, eggs, meat and milk, provides flow of money round the year amongst farming community.
- 8) Saving Energy: Cattle are used as a medium of transportation in rural area more over cow dung is used as such a burning material for cooking purpose or utilized to generate biogas thereby reducing the dependency on petrol/diesel and fossil fuel respectively, tapping the available source within the farming system, to conserve energy.
- 9) Meeting Fodder crisis: Byproduct and waste material of crop are effectively utilized as a fodder for livestock (Ruminants) and products like grain, maize are used as feed for monogastric animal (pig and poultry).
- 10) Employment Generation: Combining crop with livestock enterprises would increase the labour requirement significantly and would help in reducing the problems of under employment to a great extent IFS provide enough scope to employ family labour round the year.

Conclusion.

In recent years, food security, livelihood security, water security as well as natural resources conservation and environment protection have emerged as major issues worldwide, Developing countries struggling to deal with these issues and also have to contend with the dual burden of climate change and globalization. It has been accepted by everyone across the globe that sustainable development is the only way to promote rational utilization of resources and

environmental protection without hampering economic growth. Developing countries around the world are promoting sustainable development through sustainable agricultural practices which will help them in addressing socioeconomic as well as environmental issues simultaneously. Within the broad concept of sustainable agriculture “Integrated Farming Systems” hold special position as in this system nothing is wasted, the byproduct of one system becomes the input for other. Integrated farming is an integrated approach to farming as compared to existing monoculture approaches. It refers to agricultural systems that integrate livestock and crop production. Moreover, the system help poor small farmers, who have very small land holding for crop production and a few heads of livestock to diversify farm production, increase cash income, improve quality and quantity of food produced and exploitation of unutilized resources.

Manipur: Saved over Rs 100 crore in fish imports in the past four years: CM N Biren Singh

<https://indianexpress.com/article/north-east-india/manipur/manipur-fish-impomts-cm-n-biren-singh-7461849/>

"Manipur Chief Minister N Biren Singh Thursday said the state had saved over Rs 100 crore in fish import in the last four-and-a-half years. According to the CM, this was achieved after the state reduced its fish imports from 20 metric tonnes to 14 metric tonnes as part of a government initiative to achieve self-sufficiency in fish production. Annually, Manipur’s requirement of fish for consumption is about 52,000 metric tonnes, while only about 32,000 metric tonnes are produced by farmers in the state. Therefore, around Rs 400 crore is spent in importing fish. However, Biren Singh said the production capacity of fish in the state had now increased to 36,000 MT per year with the joint efforts of the government and the fish farmers. Singh further stated that the state has also started an initiative to revive Sareng (Freshwater Catfish) production. Sareng is one of the delicacies of Manipur. He said the state procured around 2,000 Sareng fingerlings from different parts of the country and started rearing them in ponds identified by the fisheries department. The initiative will reduce the demand for imported iced Sareng, he added. Earlier, as part of the revival plan, the state had announced that it would provide loans with 50 per cent grant to fish farmers who produce local Sareng.

Manipur: Fish farming: Intensive farming key to being self reliant

<http://epao.net/epSubPageExtractor.asp?src=education.Jobs Career.Fish farming in Manipur By Konsam Samita>

"Subject Matter Specialist (Fishery) of KVK Andro, Imphal East, Md Abdul Salam has stated that promoting an intensive farming system and addressing the problem being faced by the

fishing community are the keys to make Manipur self-reliant in fish production. He also stated that the fish production of the State is not able to meet the local demand. Continuing that the majority of fishermen in Manipur practice an extensive farming system, which requires small inputs of labour, capital, etc, he said that in extensive farmings, fishers usually rear about 5,000 fingerlings on a piece of land (1 pari) and market whatever they get in 7-10 months. To ensure maximum productivity, fishermen should upgrade the farming method to at least a semi-intensive system, Md Abdul said and apprised that fishers can easily rear 10,000 to 15,000 fishes on land measuring 1 pari through good management.

He continued that one can also use fertilizer and supplementary feeds in a semi-intensive farming system to enhance production. Saying that the rate of fish consumption is relatively high in Manipur, Md Abdul added that fishes are regularly bought from outside to meet the demand here. As per Government data, an average Manipuri consumes over 11 kilograms of fish in a year, he said and asserted that taking all possible measures to enhance fish production in the State is crucial to meet the local demand. Continuing that production of 32.5 million metric ton of fish annually is quite low even for the domestic market, Md Abdul confirmed that the quantity required to meet the demand for fish, actually, is around 62.7 million metric ton. "We can enhance our fish production by increasing the land under pisciculture or use all available resources with utmost efficiency," Dr Abdul said and added that fishers should give more emphasis on the latter option such as intensive farming as 'our areas are limited'. Informing that intensive farming system is popular these days, he added that widespread implementation of this method is a necessity to boost fish output of the State. Dr Abdul maintained that the State can produce sufficient fishes for meeting the domestic demand through intensive farming.

However, in intensive farming, one has to invest 60 to 70 percent of the farmer budget on feed cost, he continued. Saying that one can rear 1 to 5 lakh fishes in this method (intensive farming), Md Abdul added that intensive systems require management skills such as preparation of pond, feeding the fingerlings timely, using the aerator properly etc. Highlighting that marketing is one of the major problems of the farmers/fishers here, he maintained that the Government must formulate a marketing policy and set up a cold storage facility for fishes to encourage the fishers. He further stated that giving loan facility to fishermen engaged in intensive farming method is also imperative as this method of pisciculture is expensive. According to Dr Abdul, rearing climbing perch (ukabi) in a pari of land might cost the farmer around Rs 7.5 to 8 lakh while rearing Tilapia Fish (Tunghanbi Nga) on the same size of land might cost as high as Rs 13-14 lakh and Rs 17 to 18 lakh for rearing Ngahei (Hamilton).

He also urged the fishers to take benefits of Pradhan Mantri Matsya Sampada Yojana (PMMSY) to boost the fishery sector. The districts that produce the maximum quantity of fishes in Manipur

are Bishnupur, Imphal West and Thoubal, he said and contended that reducing the infrastructural gaps in the fishery sector among the 16 districts is also important to increase the State fish output. Continuing that certain farmers have started rearing improved fish varieties such as Amur Carp, Vietnam Koi, Monoflex Tilapia in Imphal East, Thoubal, Kakching, Bishnupur, Imphal West, Md Abdul added that farmers can produce 8 to 10 thousand kilograms of these improved fish varieties from a pari of land. Maintaining that Central Agriculture University Imphal has also been giving awareness and training on the different types of farming systems to the fishers community, he appealed to all to contact Krishi Vigyan Kendra (KVK) or CAU, Imphal to learn the latest skills/technology of pisciculture.

About the indigenous fish varieties, Dr Abdul stated that an initiative of the Fisheries Department is essential to conserve the local breeds. To culture the indigenous fish breeds, seeds production through private-public mode by collaborating with the registered farmers under the initiative of the Fisheries Department is required, he added. He then appealed to fishermen to take the benefits of Government schemes, utilize the latest technology/skills to increase the fish production of Manipur. According to certain fishermen, the problems being faced in the commercial rearing of fishes are marketing, transportation and poor road conditions. One Waikhom Tikendrajit from Wabagai Mayai Leikai contended that lack of marketing and transportation facilities are the challenges he faces as a fisherman. Saying that the Covid pandemic is amplifying the woes of farmers as well as fishermen of the State, he stated that repaying the existing loan taken for the business at these times of uncertainties is difficult. He then appealed to the State Government to look into the matter. It is said that Tikendrajit pursued graduation at Chandigarh, but didn't complete it due to the conditions at home and started rearing fishes commercially.

He also said that farmers and fishermen should not only think of the profit but also of the health of the population while doing business. Saying that he rears Rohu, Mrigal, Common Carp, Silver Carp, Grass Carp on three pari of land, he added that he is able to produce 7 to 8 thousand kilograms of fishes from a pari of land by using artificial feeds. He also said that he received training for rearing fishes from KVK Thoubal and CAU Imphal. Saying that Wabagai is famous for fish production in the State, Tikendrajit said that fishermen of Wabagai can play a crucial role in boosting fish output of the State if the problem of marketing and transportation is solved. He on the other hand expressed disappointment that no measure has been initiated to encourage the farmers during these difficult times, despite claims from different stakeholders.

Manipur: Minister appeals to stop encroachment on fishery area

<https://www.uniindia.com/minister-appeals-to-stop-encroachment-on-fishery-area/east/news/2420723.html>

"Fishery Minister S. Rajen Singh today said any form of illegal encroaching activities by individuals in the Waithou fishery area should be stopped immediately. Rajen was speaking to the media during a visit to Waithou Lake (Pat) today. He said that the government has started demarcation of fishery areas and the government maintained fish farms in the state. Encroaching of any form in the area of the fishery department will be evicted. Concerned district authorities and departments have also been informed to take up necessary actions in this regard, he added. Rajen said that not only at Waithou lake there have been instances of encroaching in other sites belonging to the fishery department. Individuals involved in such practices should understand that illegal encroachment is liable to be punished under the law. He said that the government has started to work to achieve the objective of producing adequate fish products for the state. It will help to save the financial expenditure on fish products from outside. As a measure to encourage fish farmers in the state, the government has also decided to introduce Public-Private Partnership (PPP) model. Revenue can also be generated by successfully implementing the PPP model in such an area of around 400 acres of Waithou lake. This initiative will help those fish farmers who are enthusiastic to take up this activity. Rajen appealed to all the interested fish farmers to cooperate with the government initiatives to bring a change in the state by making Manipur one of the biggest fish producing states in the country.

Manipur: Government fish farms to be given on lease: Fishery Minister

<http://www.uniindia.com/government-fish-farms-to-be-given-on-lease-manipur-fishery-minister/east/news/2382219.html>

"Fishery Minister S. Rajen Singh today said government fish farms will be leased out in Public Private Partnership (PPP) model to fish farmers. State Cabinet will take a decision very soon in the regard, he added. Speaking to media at his office at Old Secretariat, he said that such steps were taken up by the government with the objective to increase fish production and also to encourage unemployed youths of the state to help to generate income, he maintained. He said that there are reports of unauthorised encroachment upon the government-maintained fish farms by some individuals of the areas during the recent days. Notice was served to one individual for encroaching upon the Regional Pengba Farm, Haotak, Kumbi in Bishnupur District. He appealed all the concerned individuals to stop such illegal acts rather to cooperate with the government initiative. Explaining about the consumption of fish in the state, Rajen explained that more than Rupees four crore is spent every year to buy fish from other states. This money can be saved if

we focus towards the improvement of unused fish farms in the state. All the concerned officials of the department have also been instructed to chalk out suitable plans in the regard, he added. He also highlighted the Loktak Livelihood Mission through which farming of fish through Cage Culture will be widely practiced in Loktak lake. This will also help to generate income for the farmers

Manipur: Project will destroy wetland and our natural ancestral rights to the wetland system

<https://enewsroom.in/loktak-inland-waterways-project-manipur-wetlands/>

"“Our land was destroyed by the Ithai Barrage in the 1980s,” when Salam Joy, Secretary of Pumlun Pat Ngamee Sinmee Lup highlighted this line in his speech, an absolute silence gripped at Pumlun Pat – an integral part of Loktak Wetland Complex (LWC), a Ramasar site in Imphal, the state capital of Manipur. Breaking away the calm distinctive sound settled on the wetland bed for the moment, Roy continued, for 40 long years the community has been eking out a living by nurturing small fishing zones, and that too without any support from the government. He concluded by saying that the result of commissioning the Ithai Barrage across the Manipur River has been equivalent to pushing them into conditions of forced poverty. Words of Roy were silently heard by a large number of anxious, angry and upset indigenous farming communities of Manipur, fisher unions who have assembled to commemorate the 2021 World Wetlands Day function. Now, the land on which we farm and fish is also on the verge of being taken over for various infrastructure and mass tourism projects, he added. Recalling how life was before the Ithai barrage, Nimai Keisham, President of Khoidum Lamjao Ngamee Sinmee Lup, said it is high time the fishers and the farmers get together before the government takes over their land and livelihood.

Both Roy and Nimai were referring to the proposed plan of the Manipur Government and Union Government that aims at a robust IWT [Inland Waterways Transport] system in Loktak Lake. The planned paper titled “Ecotourism project at Loktak Lake – 2020” and the “Loktak Wetland Waterways Investment project -2019” involve massive investments in the February 2 function. The project is expected to deliver growth in trade and increase commercial activity, boost ecotourism and livelihoods and is expected to create job opportunities, says the revised project proposal paper titled- Loktak Waterways Improvement Project, September 2019, prepared by the Loktak Development Authority, a Manipur Government undertaking. The paper points: the development of inland waterways in Loktak Lake with modern facilities became the natural strategy for the socio-economic development of the State of Manipur.

Though the state government is taking up plans to reduce loading of pollutant particularly all the sewage flowing in from the upstream towns and cities, to control overgrowth of weeds and formation of Phumdi on a long term basis, technical feasibility studies revealed that removal of the existing weeds and Phumdi along the waterways is the only way to make IWT system in Loktak a grand success, the paper suggests. This can be easily achieved with the help of advanced machinery and equipment, available at a reasonable cost, to address the specific issues depending on the types of vegetation across the section of the designated water routes, it suggests. The plan aims at deepening waterways as many shallow parts of the waterways near the shores often get exposed during the lean seasons. For it, Water Master, a multitasking machine suited for various offshore activities, will be engaged in deepening and widening of all the shallow parts of the waterways near the shore, the paper says. In areas where it is difficult for Water Master to find it difficult to move in owing to adverse site conditions and lack of space, Long Boom Amphibious Excavator will perform the task, the paper reads.

The proposed plan aims to promote eco-tourism in Loktak, one of the most important touristic destinations in Manipur. “Except for short boat rides in the marginal areas, most of the activities are confined to sightseeing as the visitors can never avail themselves the opportunities of taking a ferry ride across the lake and visit the islands such as Karang. The project will boost the prospect of eco-tourism providing greater access to various parts of the lake under a safe and organised IWT system,” the paper says. The paper also claims that the IWT system will surely open up a wide range of opportunities as markets get integrated and bigger while ecotourism, as it grows, will surely contribute significantly to generating employment for the educated youths who are in a dilemma now. The proposed plan justifies by saying that: Found in three varieties, these plants make their presence heavy and dense as the water level recedes with the departure of monsoon. While the traditional boats seem to have little problem gliding over the submerged vegetation, it had been troublesome or sometimes impossible even for the mechanised boats to move across the lake swamped with these submerged and various types of floating plants like water hyacinth. The problem is often worsened when large quantities of water hyacinth get amassed at various points and sometimes by large chunks of a tree floating Phumdi with the action of wind that blows over the lake as the day advances.

Unless removed regularly, the IWT route; will remain dysfunctional as more of these plants will get accumulated over a large area choking the routes and quite a large part of the lake. The paper reads that “the success of inland water transport in Loktak Lake now hinges on the management of these plants to keep the routes opened and well maintained at all times”. In November 2019, the Union Government approved the development of the Loktak Inland Waterways Project in Manipur at an estimated cost of Rs 25.58 crore. The Ministry of Shipping has approved the development of the waterways project under the central sector scheme, the ministry said in a

statement [Govt approves development of Loktak Inland Waterways Project in Manipur | Business Standard News (business-standard.com). “Northeast is a beautiful region with stunning landscapes and holds a lot of opportunity for tourism purposes. The project will develop the inland water transport connectivity in northeast states and give a boost to tourism sector also,” it quoted Minister of State for Shipping Mansukh Mandaviya as saying. However, the cohabitants of the Loktak, Pumlen, Ikop, Kharung, Khoidum Lamjao, Waithou, Ngakrapat, Biraharipat, Ungamelpat which are distinct yet interrelated wetlands formed by meandering flows of the Manipur river system and spread over 500 sq km, a region popularly referred to as the Loktak Wetland Complex (LWC) are upset with the proposed plan. The fisherfolk inhabitants of the floating villages feel that due to the proposed plan, their socio-economic, cultural importance in Manipur and ecological and economic security will be affected.

They think Meitei fishing communities have worked here over centuries to evolve a lifestyle that helps harvest fish and wetland-based crops and vegetables which forms the backbone of food security of the wider Manipur area. In addition, their carbon neutral living, involving dugout canoes and Phum Shang – huts of bamboo and thatch built on floating biomass – phumdi, constitute a distinctive feature of Manipur’s living heritage, and the world as well. “The need of the hour is to fight back against all such projects that will destroy the wetland along with the natural ancestral rights to the wetland system,” Oinam Rajen, who is a union worker and resident of Champu Khangpok Floating village said. Nimai Keisham said it is high time the fishers and the farmers get together before the government takes over their land and livelihood. Ratan Yumnam, the Secretary of Manipur Loumee Marup (Manipur Farmers Union), drew attention to the strong linkage between the ongoing farmers’ protest across the country and the struggle of the Loktak people. He said it is time the farmers and the fisherfolks of Loktak and the surrounding wetlands come together with those who are leading the movement against the repressive pro-capitalist system.

He emphasised the importance of collectively fighting against undemocratic and oppressive projects that would certainly destroy wetlands and displacement of fishing and farming communities in Manipur. Babloo Loitongbam, Director of Human Rights Alert, said the government policy and programs are antithetical to the conservation and livelihood of the people of the Loktak and the other wetlands. He told the audience that the right to life and livelihood are enshrined in the Constitution of India and the Government of Manipur cannot bypass any of the laws that seek to protect them. The fisherfolk, farmer unions have launched a global petition [Global Campaign To Protect For Posterity The Unique Loktak Wetland Region In Manipur, India] that asserts rights of local indigenous communities to continue to live in the Loktak region without being disturbed by destructive projects and draconian laws and State action. The petition calls on the international community to support the struggle of the fishing community of

the Loktak Wetlands region and includes Wetlands International to withdraw its so-called 'wise use' plan.

Manipur: Increase production of state fish Pengba: Minister

<http://www.uniindia.com/increase-production-of-state-fish-pengba-minister/east/news/2375752.html>

"Fisheries Minister S. Rajen Singh today inspected Regional Pengba Fish Farm, Haotak, Kumbi and asked to rejuvenate and strengthen fish fingerling production of Pengba, State Fish of Manipur. During the inspection tour of 50 hectares of Regional Pengba Fish Farm at Haotak, Kumbi, the Minister stated that renovation and deepening works of 18 stocking ponds will commence from the first week of May. He further stated that eviction of unauthorized encroachers from the State Government Fish Farm will be initiated in the right earnest to conserve the Pengba stocking farm at Haotak. He appealed to the encroachers to vacate their belongings from the Government fish farm in order to avoid any untoward incident. The Minister also inspected Ungamlen Fish Farm at Ithai village under Kumbi Assembly Constituency and interacted with local fish farmers. He assured that the State Fisheries Department will look into the infrastructural gaps of 400 hectares of Ungamlen farm by construction of an approach road, demarcation of its boundary and eviction of unauthorized encroachers if any within the shortest possible time. He appealed to the local fishermen to work hard and avail various schemes introduced under Loktak Livelihood Mission and other schemes to boost up the fish production in the State.

Manipur: The 'lake' sharks of Manipur all set to swallow Loktak, the largest freshwater lake in the NE

<https://www.nationalheraldindia.com/india/the-lake-sharks-of-manipur-all-set-to-swallow-loktak-the-largest-freshwater-lake-in-the-ne>

"Loktak Development Authority, a state-run agency, burnt down over 700 huts built over floating biomass on the 350 square kilometre Loktak lake a decade ago. The over 3,000 fishermen families who were displaced have been resisting their eviction by the state which wants to convert this fragile ecosystem into a commercial and tourist hub. The BJP government of Manipur has already handed over an island to a private hotel chain, where a water sports complex has been set up. In the process, the government and the private operator have cleared the biomass from the lake which contained rich medicinal herbs and plants, the roots of which were the breeding ground of 15 species of fish. In the area where over 1000 fisherfolks are still residing, resisting eviction, floating islands of biomass still exist, defying the onslaught of

commercial vested interests represented by tour operators and hoteliers. Loktak is surrounded by five districts of Manipur and is the recipient of water from Iravady and other rivers that originate from the hills that stretch from Nagaland to Myanmar.

I spent a night in one of the floating huts of Rajen Singh Oinam, a former BSF jawan, who is the secretary of the All Loktak Fishermen's Union. It took us a one-hour ride in a narrow canoe dug out of a log to reach his hut from the mainland. The hut rests on bamboo pillars planted in the lake and has floors made of wooden planks and corrugated tin sheet roof. The hut is lit by solar lamps. It was well after sunset that we reached Rajen's hut. There were already over 30 fishermen and women seated in the hut in a circle. They had come by canoes from different floating islands. In 2011, over a thousand indigenous fishing folk – Meiteis, were evicted when more than 700 floating huts or Khangpokshang, built over Phumdis (floating plant mass on Loktak Lake) were burnt down by the Loktak Development Authority (LDA). The floating huts were burnt down under the provisions of the ill-conceived Loktak Lake (Protection) Act, 2006, that prohibited dwellings on the phumdis and the dwellers were termed as illegal occupiers. However, the Meitei fisherfolks fought all odds to continue living on the floating huts of Loktak, upholding their age-old way of living and fishing in the face of tremendous hardship. Apart from torching their dwellings, fishing gears and nets of the communities, their only means to catch fish from the Loktak wetlands had also been burnt.

The displaced fishing families were given shelter under the aegis of ALLAFUM. A case against the then state government was filed before the Asian Human Rights Commission for violating “right to life”, and “right to adequate housing” as guaranteed by the Constitution of India. Dwellers of Champu Khangpok village, who stayed in the middle of Loktak Lake, were also deprived of voting rights since the time Manipur became full-fledged state. According to the Census of 2001, the phumdi village has a population of 700-800 and is located under Moirang subdivision of Bishnupur district. “We now have our names included in the voters' list and also have ration cards. But the addresses against our names show us as residents of peripheral villages,” said Oinam Rajen Singh. The All Loktak Fishermen's Union of Manipur in collaboration with People Resources Development Association, an active NGO in the province, has set up the country's first floating elementary school at Langolsabi Leikai of Champu Khangpok in northern part of the lake.

Most of the villagers of Champu Khangpok are uneducated and mostly depend on fishing as meagre source of income. At present the school has 25 students (mostly dropouts) and two teachers. “My son, after passing his matriculation from a high school, lives with me with his wife and does fishing for living because I could not pay Rs 5 lakh which was sought as bribe to

get him a job as a police constable,” recalls Rajen. Rajen, his wife, son and daughter in-law all live on fishing, earning anything between Rs 12,000 to Rs 15,000 a month.

The fisher folk of Loktak, living there since time immemorial, are now in dire straits because of dwindling fish catch. The construction of a dam for a hydel power plant of National Thermal Power Corporation has obstructed the flow of water from the rivers that originate from the surrounding hills. After Loktak was declared “a wetland of international importance”, the government began to take steps to clear the lake of human settlements on floating islands, instead of including the fishermen in the conservation process, the local government evicted them from their age-old dwelling. Why couldn't tourism development plans be framed in consultation with the fishermen? Since not more than a few hundred seasonal tourists will arrive on any given day, fishermen wonder why they all need to be evicted in the first place.

Manipur: Training programme on Modern Methods for Sustainable Aquaculture begins

<https://www.thesangaiexpress.com/Encyc/2021/3/16/Our-CorrespondentSenapati-Mar-16-3-days-Training-programme-on-Modern-Methods-for-Sustainable-Aquaculture-for-fish-farmers-of-Senapati-and-Kangpokpi-districts-began-today-at-Multi-Purpose-Hall-Sen.html>

"3 days Training programme on Modern Methods for Sustainable Aquaculture for fish farmers of Senapati and Kangpokpi districts began today at Multi-Purpose Hall, Senapati organised by the District Fishery Officer, Senapati under the sponsorship of ICAR, Central Institute of Fishery Education. The inaugural programme was attended by Additional Deputy Commissioner, Senapati Adahrii Maheo, MCS and Dr Sukham Munilkumar, Principal Scientist, ICAR, Central Institute of Fishery Education, Kolkata as the presidium members. L Sanatombi Devi, District Fishery Officer, Senapati and staff of the department also attended the programme. In her welcome note, L Sanatombi stated that the programme is being organised for the welfare of the fish farmers considering the emergent need for the fish farmers of the district to be well equipped with more knowledge to produce more fish products. The trainees would reportedly be taken to visit some successful fish farmers and biofloc fish culture unit in Imphal on March 18, she added.

Further she appealed to all fish farmers to feel free in asking queries relating to aquaculture and its improvement and for production of fish in large quantity. Speaking as the chief guest, Adahrii Maheo urged the fish farmers of both the districts to avail the opportunity to learn more about aquaculture, how to rear fish in more productive way thereby generating more income. Dr Sukham Munilkumar stated that one of the fastest growing sectors in agriculture is fishery and aquaculture and enumerated the benefits of consuming fish. He continued that the Central

Institute of Fishery Education under ICAR is to provide education and training thereby enhancing knowledge and skill so that interested farmers and entrepreneurs can take up fish farming activities for long term sustainability. 65 farmers from Senapati and Kangpokpi districts are participating in the 3 days training programme.

Manipur: The Khengjang- Yangoulen Fish Conservation Zone : An ecological initiative

<https://www.thesangaiexpress.com/Encyc/2021/3/18/Fr-Paul-Lelen-HaokipIntroductionAgainst-the-backdrop-of-deteriorating-environmental-conditions-creation-care-is-a-relevant-option-for-sustainable-behaviour-Creation-care-can-manifest-in-different.html>

"Introduction Against the backdrop of deteriorating environmental conditions, creation care is a relevant option for sustainable behaviour. Creation care can manifest in different ways. One such care is "The Khengjang-Yangoulen Fish Conservation Zone" project under Chandel district of Manipur, India. This unique project is positioned in the Eastern Himalayas, which is one of 36 global biodiversity hotspots. The unique topography of these mountains, combined with the southwestern monsoon winds from the Bay of Bengal promotes a multitude of diverse flora and fauna. It has been learnt that due to severe exploitation of freshwater ecosystems in this biodiversity hotspot, nearly 14% of the fish species are considered threatened, while 9% are near threatened. While the Wildlife Protection Act of India (1972) offers a legal shield to terrestrial and some of the aquatic animals and marine mammals, unfortunately, less emphasis has been accorded to freshwater fish biodiversity (Sarkar et al., 2008).

This project is an initiative to incorporate traditional ecological knowledge (TEK) and western scientific ecological knowledge (WSEK) looking forward to co-creation, integration and co-management arrangements (Bussey et al., 2016). The Christian perspective that human beings are the pinnacle of creation and lord of all creatures stands against environmental safeguard measures. It is time that biblical values and scientific expertise work together hand in hand for environmental care. The secular and sacred divide is fading. Today, all disciplines of research deal with ecological issues. Aim of the project This project has been initiated to conserve fish resources through a community-based fishery management model called Fish Conservation Zones. This is aimed to educate the local population regarding the depletion of fish and involve them in fish conservation community responsibility. Empowerment of the locals to be aware of their surroundings for a proactive stance is the priority.

Ecological conservation Ramachandra Guha, in his book "Environmentalism: A Global History", highlights natural resource conflicts of the 1970s and 1980s emphasizing the rights of plants, animals, habitats where human activity should be curtailed (Guha, 2014). The fish may

like to speak or make a sound but as soon as it opens its mouth, it is filled with water. Perhaps those elements outside the river ecosystem could mitigate the extinction of fish, and improve their habitat. Care for creation is evident in the Biblical narratives which began with creation and end in a new creation (Moo & Moo, 2018). Saving the voiceless inmates of this earth is a scientific work as much as a Biblical calling.

A recent freshwater biodiversity assessment in the eastern Himalayas potentially list two endangered species namely *Schisturakangjupkhulensis* and *Schistura reticulata*. In the above project areas, nearly 20 species of fish were consumed earlier, but now only four or five are available in small quantities. Other studies also have pointed out the critically endangered and endangered freshwater finfish species such as *Horabagrus brachysoma*, *Tor mussullah*, *T. putitora*, *T. tor*, *Pangasius pangasius*, *Osteobramabelangeri*, *Om-pokpabda*, *Chitalachitala* and *Chacachaca* (Sarkar et al., 2008). Protection and conservation are imperative. Protected area “The Kheingjang-Yangoulen Fish Conservation Zone” project falls under the larger project titled “Saving the fish from the Mekong to Meghalaya” funded by The Critical Ecosystem Partnership Fund (CEPF), Bangalore, India wherein Bashida Massar (a Zoology Professor at St Anthony’s College, Shillong) and James Haokip (a Professor of Anthropology at Sikkim University) are principal researchers.

From the conventional rearing of fish in ponds and tanks, these two researchers are trying to conserve fish in their habitat. This project research has pointed out that while Fish Conservation Zones are a novel project for the Indian context, the same has been successfully implemented in Laos and Myanmar where communities directly manage their local resources. They do this by identifying an area where the conservation of fish species is needed, and they typically close this area to all fishing activities. Rules for the same are imposed by official authorities and the area is monitored by members of the community, providing a haven for fish. Realizing the imminent need to conserve for the survival of almost extinct species of fish and enhancing local availability of the species for consumption, this project has been initiated to conserve fish in their habitat through a community-based fishery management model called Fish Conservation Zones. Conservation activities

Through this Fish Conservation Zones, the researchers have carried out the following activities: (1) Transfer and sharing of knowledge about fish (2) Conservation zones and capacity building of communities across multiple hotspots (3) Identifying areas that are critical for long term survival of fish (4) Recording diversity of species and characteristics of the river (5) Creating a plan for long-term regulation and monitoring of fishing activities (6) Implementation of the plan and periodical reviews. Outcomes of the project The initial project has found these useful pieces of data (1) Generation of information on the diversity of fish in the Tuivang river, as well

as their breeding seasons and locations, (2) Establishment of the first-ever community based and managed fish conservation zones in India which can become one of the pillars of river conservation strategies for State Governments in North-East India, (3) Civil society organizations, local community members and local researchers, will be trained in establishing community-based fish conservation zones, fish taxonomy, biology and stream hydrology, (4) Promote public appreciation for fish conservation and the requirement of ecological flows in rivers.

Conclusion Each human being is a co-creator, not a destroyer. As much as humans try to preserve their lives, so also must we preserve and conserve the lives of other beings around us. This project is an initiative towards sustainable local conservation and consumption of fish. Depletion of fish is one area of the ecological crisis that threatens the survival of those living nearby. It is also fitting to analyze the causes of such an ecological crisis. While analyzing the causes, the pro-active task of conservation is profoundly fitting. Community support is imperative for the safeguard of ecological resources. While sustenance-based harvest of resources is unavoidable, destructive exploitation of terrestrial and aquatic habitats greatly harm the ecosystem. Hence the need for conservation and sustainable use of non-renewable resources.

Manipur: Weeklong celebration on International Day of Action for Rivers concludes

<http://e-pao.net/GP.asp?src=21..150321.mar21>

"A weeklong celebration of the International Day of Action for Rivers 2021 organized by the Centre for Research and Advocacy Manipur and the JAC against Pabram Dam from March 10 concluded today. During the celebration community meeting along the Barak River in Nheng (Langpram) Village and community awareness visits in several villages in the catchment areas of Barak River and Irang River in Tamei areas of Tamenglong District were held to mark the international River day celebration. The International River Day celebration has been organized considering the increased threats to the free flow and health of the Rivers in Manipur, due to large dam construction, removal of boulders and sand using heavy machineries, destruction of forest in catchment areas of Rivers, increased pollution of Rivers, and other unsustainable practices like using explosives, chemicals, inverter batteries for fishing etc. During the Community meeting held along the Barak River at Nheng Village on 11th March, Enoch Newmai of the JAC against Pabram Dam shared that the Barak River has been targeted for construction of large dams. He shared that the proposed 190 MW Pabram Hydroelectric Project and 67 MW Khongnem Chakha dam over the Barak River will entail widespread submergence of forest and agriculture land in villages like Luangdi Pabram, Nheng, Khunphung, Piulong, Dikiuram etc in Tamei areas.

This will entail livelihood loss, destroy the fish species of Barak River and caused climate change in Tamenglong areas. Jiten Yumnam of CRA, Manipur also shared that Rivers of Manipur are targeted for large dam construction, such as the Khongnem Chakha Dam, Pabram Dam, Irang Dam, Tipaimukh dam etc. Commissioned dams like Khuga dam, Mapithel dam, Loktak hydroelectric project already entailed much hardship to indigenous communities. Removal of boulders and sands using machines and destruction of forest in catchment areas of major rivers already affected the free flow and health of Rivers of Manipur. The community Sr meeting at Nheng called for the free flow of the Barak River and to stop the building of 190 MW Pabram Dam, 67 MW Khongnem Chakha dam, 1500 Tipaimukh dam etc over the River. The community awareness visits in several villages noted with concern the widespread logging of forest areas in the catchment areas of Irang River and Barak River in Tamenglong areas. The River day Celebration is marked by call for free flow of all Rivers, to abandon dam building and stop unsustainable practices affecting the health and life of Rivers and further to protect the forest in catchment areas of Rivers and to uphold indigenous peoples' intrinsic relationship with Rivers, land and forest in Manipur.

Manipur: Vanishing wetlands ring ecological disaster warning

<http://e-pao.net/GP.asp?src=5..210221.feb21>

"Once closely intertwined with the lives of the locals and home to many flora and fauna, wet-lands are now shedding their original glory rapidly. Water bodies and marshes which once had abundant fishes and vegetables are now shrinking turning the wetlands into deserts thereby warming the atmosphere. Utra Pat, Khoidum Pat, Loushi Pat, Kharung Pat and Ikop Pat - all these wetlands like others are facing the brunt of uncontrolled human exploitation. The symbiotic relation which once existed between these wetlands and the locals appears to have lost now as humans march toward development without paying due attention to the degrading environment. A team of journalists including this reporter came across the sorry state of these wetlands during the ""Know Your Sanctuaries and Wetlands"" media campaign on February 12, organised by the All Manipur Working Journalists' Union (AMWJU) under the sponsorship of the Directorate of Environment and Climate Change.

The team first visited Utra Pat in Nambol. It is now dry though it was once famous for foxnut. As Utra Pat has become much shallower, cultivation of foxnut is no longer productive. Except for many ponds where farmers rear fishes, the wetland appeared to have lost almost all the aesthetics of being a wetland. A local who has a piece of land in the wetland, said some 50-60 years ago Utra Pat ""glittered in the sun"". There was water all over irrespective of season, he said. The man continued that ""the wetland once had fishes that taste the best"". Locals used to fish and collect edible vegetation from the wetland. Now, there is no water and all the fishes and

vegetation are gone, he added. He further stated that a society by the name Utra Pat Fishing Cum Pisciculture Co-Operative Society, formed by about 120 people from Nambol Naorem and adjoining villages are overseeing the wetland and farming activities in the wetland. The wetland which is bounded by Nambol River in the east and the southeast has shrunk in size over the years. There are many houses and other structures built inside the wetland, he said adding that strict laws regarding wetland and Government's active intervention are needed to save Utra Pat. Utra Pat Fishing Cum Pisciculture Co-Operative Society chairman Chongtham Temba said the society is a registered body (1951) and it has been looking after the wetland and undertaking fish farming on lease from the Department of Fisheries. The team then visited Khoidum Pat, Loushi Pat, Kharung Pat and Ikop Pat. As in other wetlands, agriculture and pisciculture activities were found dominant at Khoidum Pat in Kakching district. Although the wetland has some water in the canals during the rainy season, the wetland is normally dry, said locals.

The wetland is surrounded by Hiyanglam Hiranmei, Sarik Konjil, Tokpaching, Laphupat Tera and Arong Nongmaikhong. Agriculture and allied activities were taken up inside the wetland after the green revolution was brought to India in the late 1960s. However, due to excess water from the Ithai Barrage, agriculture activities have decreased. "The wetland is no longer a wetland nor is it viable for agricultural activities now," said a local. At Loushipat north of Kakching, the team found vast agricultural activities dominating the landscape. To aid agriculture activities, locals had cut a hill at what is known as Kakching Chingkakpam to drain water and facilitate irrigation. Even though the wetland has some water during the rainy season, it is dry in other seasons, said locals. They also claimed that pattas have also been issued to some. Kharung Pat and Ikop Pat were also found sharing similar fate as other wetlands. Agricultural and allied activities were found dominant. The wetlands once had water which provided locals with fishes and vegetation. The wetlands also had migratory birds as visitors, said locals who expressed hope that the wetlands can be conserved with collective efforts of the Government and the people.

Manipur: Free boats boost fish farming prospective

<https://in.news.yahoo.com/free-boats-boost-fish-farming-133752502.html>

"In a bid to meet the rising demand for fish and to encourage fish farmers in the state, 21 free coracles were distributed to selected fishermen in a program held at Western Gate of Kangla Gate in Imphal west on Feb 07. The distribution program was organised by the Valley District Fisherman's Co-Operative Federation Ltd in collaboration with Karnataka State Co-Operative Fisheries Federation Ltd, Mysore. "This coracle is somewhat advanced technology and one more new technology is coming up. We will show the farmers the most advanced coracles also. This is

more advanced than the traditional ones” says K Nabachandra Singh, Chairman of the Valley Districts Fisherman's Co-operative Federation Ltd.

Manipur: Govt working to increase fish production: Minister

<https://www.uniindia.com/govt-working-to-increase-fish-production-in-manipur-minister/east/news/2306457.html>

"Fishery Minister S Rajen Singh on Sunday said that the state government is working to increase the net production of fish in the state. He was speaking to the media during a visit to a fish farm here. Rajen said that the government, especially the fishery department is trying to produce more fish to make it a viable industry. Fish is consumed by the people as it is one of the main dishes, he said. Action plans have been chalked out in this regard. He said there is a need for up-gradation of the government maintained fish farms in the state.

Manipur: Importance of protecting Loktak Lake emphasized on World Wetlands Day

<http://e-pao.net/GP.asp?src=5..040221.feb21>

"Fisher unions and farming communities of Manipur observed World Wetlands Day yesterday at Tonoma Chingjin, Mamang Ching, Pumlun Pat-a wetland devastated by the Ithai Barrage of the Loktak Hydroelectric Project. The event was organised by Ngamee Lup, a federation of fisher unions and other associations of Loktak and surrounding wetland areas including Pumlun and Khoidum Lamjao in coordination with Indigenous Perspectives (Imphal) and Environment Support Group (Bangalore) and was hosted by Pumlunpat Ngamee Sinmee Lup. The focus of the event was to demand Wetlands International South Asia and Loktak Development Authority must unconditionally withdraw Loktak-An Integrated Plan For Wise Use (2020-2025) and the Government to repeal the draconian Manipur Loktak Lake (Protection) Act, 2006. The federation also demanded cancellation of Loktak Inland Waterways Project and the Loktak Eco tourism project. The occasion was also an event asserting the indigenous and natural right of present and future generations' to access these wetland commons without repressive action of the Government of Manipur and Loktak Development Authority (LDA), as has been the case periodically.

The event witnessed active participation of people living in and around Loktak, Pumlun and Khoidum Lamjao and also representatives of fish workers living on Champu Khangpok, the floating village of Loktak. Members from Human Rights Alert (HRA) and Extrajudicial Execution Family Association Manipur (EEVFAM)', Imphal-based organisations working for the protection of civil and political rights of the people of Manipur, the Lawyers from Imphal and Manipur Loumee Marup (affiliates of All India Kisan Sabha) participated to extend

solidarity with the struggle of the locals. Representatives from Girl Up Manipur and Fridays For Future (Manipur Chapter) were also present. Delivering the keynote address Salam Joy, Secretary of Pumlun Pat Ngamee Sinmee Lup highlighted how their land was destroyed by the Ithai Barrage in the 1980s. For his community the result of commissioning the Ithai Barrage across the Manipur River has been equivalent to pushing them into conditions of forced poverty, he added. He maintained that for 40 long years the community has been eking out a living by nurturing small fishing zones, and that too without any support from the government. Now the land on which they farm and fish is also on the verge of being taken over for various infrastructure and mass tourism projects.

He asserted that the wetland is their ancestral territory, and the entire community is resolved to resist the takeover of these biodiversity by corporations backed by the government. Ratan Yumnam, the Secretary of Manipur Loumee Marup (Manipur Farmers Union), drew attention to the strong linkage between the ongoing farmers' protest across the country and the struggle of the Loktak people. He said it is time the farmers and the fisherfolks of Loktak and the surrounding wetlands come together with those who are leading the movement against the repressive pro-capitalist system. He emphasised on the importance of collectively fighting against undemocratic and oppressive projects that would certainly result in destruction of wetlands and displacement of fishing and farming communities in Manipur. Babloo Loitongbam, Director of Human Rights Alert, said the Government policy and programs are antithetical to conservation and livelihood of the people of the Loktak and the other wetlands.

He said that the right to life and livelihood are enshrined in the Constitution of India and the Government of Manipur cannot bypass any of the laws that seek to protect them. He also said that human rights groups in Manipur and also those across the world should help the people of the wetlands thereby protecting their livelihood. Ram Wangkheirakpam, Convener of Ngamee Lup, read out a Global Petition that asserts rights of local indigenous communities to continue to live in the Loktak region without being disturbed by destructive projects and draconian laws and State's action. The petition calls on the international community to support the struggle of the fishing community of Loktak Wetlands region. The event came to an end with release of campaign posters by Lanchenbi, Panchayat member of Khoikum Lamjao, a symbolic gesture to mark observance of the World Wetlands Day at Pumlun Pat and of resisting projects that attack human rights and destroy nature.

Manipur: global campaign to protect for posterity the unique Loktak wetland region in Manipur, India

<https://esgindia.org/new/campaigns/lakes/global-campaign-to-protect-for-posterity-the-unique-loktak-wetland-region-in-manipur-india/>

"Loktak, Pumlen, Ikop, Kharung, Khoidum Lamjao, Waithou, Ngakrapat, Biraharipat, Ungamelpat are distinct yet interrelated wetlands formed by meandering flows of the Manipur river system and spread over 500 sq kms, a region popularly referred to as the Loktak Wetland Complex (LWC) south of Imphal, Manipur. These wetlands are nourished by abundant water and nutrient flows captured by the surrounding blue mountains, thus creating this astonishing and awe-inspiring wetland complex. Meitei fishing communities have worked here over centuries to evolve a lifestyle that helps harvest fish and wetland based crops and vegetables which forms the backbone of food security of the wider Manipur area. In addition, their carbon neutral living, involving dugout canoes and phumshangs – huts of bamboo and thatch built on floating biomass – phumdi, constitute a distinctive feature of Manipur's living heritage, and of the world as well. There is no other place in the world where fisherfolk live in floating villages as in the Loktak region. UN Habitat has recognised this way of living as a model of sustainability for the world and Loktak Lake is a Ramsar site.

The Meitei communities have protected this wetland over centuries as a biodiversity rich area. The critically endangered brow antlered deer (Sangai) is endemic to this region. Besides, the massive wetland is a critical habitat to migratory waterfowl from Europe and Central Asia who come here via the Central Asian Flyway and the Eurasian-Australian Flyway during mid-winter. Hundreds of thousands of families live in this highly productive wetland complex respectful of nature's ways and the limits she imposes. Instead of validating such ecologically wise ways of living – interwoven as it is with deep respect for environmental and biodiversity conservation, Governments of Manipur and India are now set on promoting projects that will irreversibly destroy this biodiversity rich wetland complex and unique cultures and livelihoods associated with it. They involve involving massive investments in the form of "Ecotourism project at Loktak Lake – 2020" and the "Loktak Inland Waterways Improvement Project – 2019".

Wetlands International through its South Asia division has supported such ecologically and socially destructive mass tourism and infrastructure projects. Statement Wetlands International South Asia (WISA) and Loktak Development Authority (LDA) have developed "Loktak Manipur: An Integrated Plan for Wise Use (2020-2025)" in July 2020 at the invitation of the Manipur Government. This is ecologically disastrous and socially disruptive and a patently unjust proposal. The 231 page plan includes proposals for governance of the region led by parastatals, not democratic institutions and an action plan that promotes massive expansion of

infrastructure for transport and tourism, extractive fishing based on industrial models of production, and a range of consumerist mass tourism. WISA's plan includes proposals to set up factories in this eco-sensitive region to back extractive fishing, a move that would displace and destroy traditional and artisanal fisherfolk and farmers.

WISA in its 'wise use' plan has not in the least questioned the highly problematic Manipur Tourism Department's 2020 "Ecotourism project at Loktak Lake" involving proposals to build golf courses 'alongside the lake front', building of roads, jetties and boardwalks in and around the wetlands, the development of "a bridge on the way to Sendra like a Hump Bridge below which boat rides can be enjoyed", an 'artificial beach at the bank of lake', 'development of Loktak lake front to attract tourists and to provide provision for resting and viewing of Loktak Lake and bird watching', etc. WISA has also not discussed the draconian nature of Manipur Loktak Lake (Protection) Act, 2006 which criminalises indigenous communities, their livelihoods, cultures and traditions. The organisation In fact supports LDA's position that fishing families who have lived on the lake for centuries are encroachers and occupiers. WISA and LDA reports also make no mention of the floating village of Champu Khangpok inside Loktak which has been in existence for centuries and is registered as an electoral village by the Election Commission of India.

Shockingly, WISA's plan is approving of the brazen November 2011 attacks by LDA and Manipur police on this unique floating village, which included burning their houses, destroying their boats and fishing gear, a horrific act of state led violence on indigenous people that has left them traumatised. This human rights violation of indigenous people has been globally condemned, including by Ms. Renata Lok-Dessalien, the UN Resident Coordinator of India. WISA's so-called 'wise use' plan tacitly embraces LDA's ecologically and socially destructive model of developing the Loktak region into a major hub of mass tourism. Such proposals will not only destroy the wetland, but will also annihilate hundreds of thousands of livelihoods intricately linked for their survival with this wetland complex and destroy one of the best bird habitats of the world. Governments of Manipur and India, who are constitutionally bound to protect Right to Life and Livelihood, have instead defended WISA and LDA's highly problematic proposals in the High Court of Manipur (in PIL No. 24 of 2017). Thus disregarding grave human rights situations that will result due to consequential massive displacement of indigenous fisher, farming and artisanal communities and wreck this amazingly biodiverse wetland complex.

The Governments were duty bound to have held deep and extensive conversations with local communities, fishworkers and their unions, and by this process evolved plans to conserve Loktak region for posterity. Such plans should have also been the outcome of due democratic and

transparent consultations with Panchayat Raj institutions, District Planning Committees (as per Article 243 ZD of India's Constitution) and various connected government departments whose consent is mandatory. Governments of Manipur and India are comprehensively sidestepping these constitutional and statutory mandates in proposing reckless development of Loktak region into a mass tourism hub. The Indian Ministry of Environment, Forests and Climate Change which is the ultimate custodian for the protection of this wetland complex, has remained silent despite widespread outcry from local communities and the wide public. Public documents reveal that Manipur State Wetlands Authority was kept in the dark during the development of plans by WISA and LDA.

The Authority appears to have been coerced to approve these proposals disregarding staunch opposition from its Technical Committee members. The members had demanded time to carefully examine the voluminous proposals – which they were denied. WISA and LDA proposals are abjectly opposed to the Wetlands (Conservation & Management) Rules 2017, Ramsar Convention-1971, Rio Declaration-1992, Convention on Biological Diversity-1992, Universal Declaration of Human Rights – 1948, International Covenant on Economic, Social and Cultural Rights -1966, etc. Besides, they are opposed to Supreme Court of India judgments that uphold the Right to Life, Livelihood and a Clean Environment, Public Trust Doctrine, Precautionary Principle, Principle of Ecocentrism, etc. All this does not at all reflect well on WISA's competence to represent and promote 'wise use' of wetlands globally which it claims as its core mandate. In fact, WISA appears to be allowing its position as a global institution promoting wetland conservation to be misused by the Manipur Government in promoting mega and ecologically destructive projects in the Loktak region.

Keeping the above in view, we demand: - Wetlands International, Switzerland must withdraw the "Loktak, Manipur: An Integrated Plan for Wise Use (2020-2025)" unconditionally and immediately. - The Government of Manipur must withdraw "Loktak Inland Waterways" and the "Loktak Eco-Tourism Project" projects. - The draconian Manipur Loktak Lake (Protection) Act of 2006 must be repealed. In its place a law must be enacted after deep and widespread consultation with the Loktak region people to ensure their traditional rights and livelihoods are protected and they continue as custodians to protect and conserve this biodiversity rich wetland complex for posterity. - The Loktak region must be declared a World Heritage Site by UNESCO in acknowledgment of the living heritage that fisher and farming communities here have shaped over centuries. - The Loktak region must be declared a 'Community Conservation Area' as per the Forest Rights Act, 2006 and as a 'Biodiversity Heritage Site' in accordance with the Biological Diversity Act, 2002. As a first step towards this goal, statutory mandates to constitute Forest Rights Committees and Biodiversity Management Committees must follow. - All fundamental and traditional rights of indigenous communities living in the Loktak region,

particularly their right of domicile, right to housing and right to livelihoods, must be recognised and with due dispatch.

Manipur: Indigenous fish to be promoted in Manipur : Minister

<http://www.uniindia.com/indigenous-fish-to-be-promoted-in-manipur-minister/east/news/2276952.html>

"Fishery Minister S. Rajen Singh today said that indigenous fishes of the state need to be promoted. The government specially the fishery department is focusing for the production of sustainable fish products for the state. Action plans have been chalked out in this regard, he said. Rajen Singh speaking to the media at his office chamber at Old Secretariat, said that there is a need for upgradation of the government maintained fish farms in the state at present. He informed that as announced recently by the Chief Minister of Manipur, N. Biren Singh a total number of 705 beneficiaries from the hill districts have been benefited under Rashtriya Krishi Vikas Yojana, RKVY. Rs. 15000/- each has been successfully transferred to their respective bank accounts. Total number of beneficiaries selected by the department is 900. Transfer of benefits for 195 beneficiaries are still pending due to account defaults.

Concerned officers have been instructed to complete the formalities, he added. He said that unemployed and interested persons can approach the department for pisciculture activities for which the fishery department is always ready to help. Biofloc method of fish farming will be provided for interested farmers specially in hill districts where there is limited scope for digging of ponds. This will not only generate their income but also reduce the unemployment problem in the state. Five batches of biofloc training has been successfully conducted by the department, he added. Minister Rajen also appealed to the beneficiaries to furnish correct information and correct bank documents when they apply for the scheme. He also said that regular inspection visit will be conducted at the respective sites with the officials.

Manipur and Arunachal Pradesh: Takes to fish-cum-paddy farming in hills districts like the Apatanis of Arunachal Pradesh

<https://www.deccanherald.com/national/east-and-northeast/manipur-takes-to-fish-cum-paddy-farming-in-hills-districts-like-the-apatanis-of-arunachal-pradesh-930459.html>

"Farmers of the Apatani community in Arunachal Pradesh have been traditionally doing this for a long time. Now, farmers in Manipur seem to be following their footsteps by taking to fish-cumpaddy cultivation together. Manipur has started a project to develop at least 450 hectares of paddy fields in five hilly districts to make them ready for fish farming and paddy cultivation together with a target to make the state self-sufficient in fish production. Manipur Fisheries

Minister S Rajen said on Tuesday that the objective behind the paddy-cumpisciculture project was to double the farmers' income from the same field through fish rearing. "Efforts are on for the development of the paddy fields by raising peripheral rings and constructing feeding channel across the paddy field with small marketing ponds for paddy-cumpisciculture.

It is also to encourage and inculcate the interest of farmers to fish culture," said a statement quoting the minister. The paddy-cum-pisciculture scheme has been taken up under the Rashtriya Krishi Vikas Yojana Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR) for the year 2019-2020. Manipur requires 52,000 MT of fish every year. However, the state could produce only 27,000 MT. So the state imports fish worth Rs 400 crore from other states every year. "The present scheme is to develop 450 hectares of paddy field in five hills districts with the total government subsidy at the rate of 25% to the total unit cost of Rs 1.60 lakh per hectare. The government has released a sum of Rs 1.80 crore with a sharing pattern at 90:10 between Centre and the state. And each beneficiary having an area of 0.5 hectares will get a subsidy amount of Rs. 20,000 which will be given in two installments. Rs 15,000 will be transferred through PFMS and the rest Rs 5,000 will be given in the form of fish seed," said the statement.

Manipur: CM Biren appeals to increase fish production

<http://www.uniindia.com/cm-biren-appeals-to-increase-fish-production/east/news/2271192.html>

"Chief Minister today transferred Rs 15,000 each to the bank accounts of 900 fish farmers of 10 hill districts totaling Rs 1.80 crore. The assistance was provided under Paddy cum Pisciculture scheme under Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied Sectors Rejuvenation (RKVY-RAFTAAR) for the year 2019-2020. A function to mark the occasion was organised by the Directorate of Fisheries at the Chief Minister's Secretariat. Speaking at the occasion, the Chief Minister said that Manipur requires 52,000 MT of fish every year. However, Manipur could produce only 27,000 MT till the coming of the new Government thereby requiring around Rs. 400 crore to import the remaining quantity of fish from other States every year, the Chief Minister informed.

As such, the Government started focusing on enhancement of fish production, he said and added that apart from commissioning of a fish-feed production unit, the State Government has arranged loans ranging from Rs. 2 lakh to Rs. 7 lakh for hundreds of fish farmers. As a result, State's current fish production per year has increased to 32,600 MT per year, the Chief Minister said. The Chief Minister said that the State Government sent a proposal of Rs. 14 crore to implement Pradhan Mantri Matsya Sampada Yojana to the Centre out of which Rs. 7.04 crore has already

been sanctioned Moreover, the State Government is planning to submit an ambitious project worth Rs. 400 crore in consultation with the Central Agricultural University, N. Biren Singh informed.

In the meantime, cage culture under Loktak Livelihood Mission and fish production through Biofloc system are also going on in full swing. The Government is ready to assist with bank loans, Manipur StartUp and StandUp schemes to accomplish the objective of making self-sufficient in fish production, the Chief Minister said. Fisheries Minister, S. Rajen said that the State Government has been trying its best to maintain accountability and provide good governance to the people. It was a part of this effort that monetary assistance was disbursed through DBT, the Minister said. He also exhorted the people to extend cooperation to the Government in making Manipur a self-reliant State. The main objective of implementing Paddy cum Pisciculture is to double the farmers' income from the same field through fish rearing, development of these paddy fields by raising peripheral rings and constructing feeding channel across the paddy field with small marketing ponds for paddy cum pisciculture.

It is also to encourage and inculcate the interest of farmers to fish culture. The present scheme is to develop 450 hectares of paddy field in 5 hills districts of Manipur with the total Government subsidy at the rate of 25 pc to the total unit cost of Rs 1.60 lakh per hectare. The Government has released a sum of Rs 1.80 crore with a sharing pattern at 90:10 between Centre and State. And each beneficiary having an area of 0.5 hectares will get a subsidy amount of Rs 20,000 which will be given in two parts. Rs 15000 will be transferred through PFMS and the rest Rs 5000 will be given in the form of fish seed.

Manipur: From Loktak to rented place in Imphal : Survival story of displaced fisherfolks told

<http://e-pao.net/GP.asp?src=9..301120.nov20>

"When a plant is uprooted from its natural habitat and planted in an alien environment, it will surely struggle to survive or wither, if not strong enough to stand the change. Such is the case to a couple who once had abundant resources given by the Loktak lake to feed their family and children but are now facing harsh conditions of city life just to survive. Chandrakumar and Pramila, the couple from Thanga Heisnam Liekai now have a very different life today at a rented place at Keishampat with their two children. Few years ago, Chandrakumar would sail the Loktak lake and catch fishes and Pramila would sell them (fishes) at Ningthoukhong bazar. The couple would thank 'Loktak Lairembi' (Goddess of Loktak) and they would feed their family, send their children to schools. Fishing was all Chandrakumar was very good at and for many years it was enough for the family to meet ends. But all changed when the Loktak Multipurpose

Hydroelectric Project came and deprived him of his only means of earning income and feeding his family.

His floating farm hut in the middle of the lake along with several hundreds were razed to ground and phumdis (floating biomass), which held the fishes were removed. All these changed their course of life and forced the couple to move to the city in pursuit of a new life. The magnificent Loktak lake in Moirang, Bishnupur district is about 52 kilometres from the capital city Imphal. After construction of the Ithai Barrage, the Loktak Multipurpose Hydroelectric Project was commissioned in the year 1983 and subsequently, the Manipur Loktak Protection Act 2006 was enforced. The Loktak lake was divided into two zones - 'Core Zone' and 'Buffer Zone'. The core zone was further subdivided into 'No Development Zone' and 'Totally Protected Zone'. The Loktak Development Authority, starting from November 15, 2011 burnt down as many as 777 floating farm huts which fall under the Core Zone. More than 80 Phumdis (floating biomass) which were used by the farmers to farm fishes were removed.

Above this, the Loktak Lake Protection Act, 2006 also restricted use of fishing equipment when farming inside the Core Zone. All these had affected Chandrakumar and Pramila and hundreds of other local farmers who were dependent on the lake for their survival. Hundreds of people who were skilled fishermen were turned into unskilled labourers and forced to move out to other areas and cities in search of jobs. Expressing how the family is surviving in the city, Pramila, 55, told *The Sangai Express* that they have been staying at rent in Imphal since the past 8 years. "As fishing was no longer possible, we searched for other jobs. Before moving here, for a short period of time, my husband used to work at a dam construction site. He had no skills other than fishing. Life was hard and we moved to Imphal with hope to find jobs.

Through one of his friends, my husband is now working as a construction worker. But due to coronavirus, he is not working at present," Pramila said. Pramila added she sells fish at Khwairamband bazar to earn extra money and help feed the family and send their children to school. Her daughter is pursuing BSc Nursing (final year) and her son has finished three years engineering in Electronics after clearing Class XII. Recounting the past, she asserted that they never received any compensation for their farm hut, which was burnt down. "We are poor. We couldn't afford to sit idle waiting for the compensation money. We have to work daily else we would starve," she said. "Even though we were struggling, life on the lake was somewhat easy for us as we were raised there. We knew how to fish. We would catch all kinds of fish and I would sell them in the market," she said, adding that the city life is hard to cope with everything 'moving fast'. Selling fishes at Ningthoukhong bazar is different from selling fishes at Khwairamband bazar, she said recalling that her mother used to sell fishes at Khwairamband bazar and she would accompany her.

Loktak Fishery Welfare Association, secretary, Heisnam Chaoba said even though the Loktak Lake Protection Act 2006 aims at protecting the water body, it is an 'aggressive' Act against the farmers. The burning down of the farm huts and restrictions in place have robbed the livelihood of hundreds of locals. Many were displaced and moved out of the villages and they are now staying in rents at Imphal and other places in search of jobs. As they are unskilled, they could not find good jobs. Many are now driving auto-rickshaws, pulling carts and engaged in construction works, he said adding that the Government has not yet compensated the farmers (owners) for the Phumdis (floating biomass) it removed. Centre for Organisation Research and Education, president, L Debrata Roy said displacement of people due to development projects is increasing in Manipur. The Loktak Multipurpose Hydroelectric Project and the Loktak Lake Protection Act, 2006 had forced many to move to urban areas in search of livelihood as unskilled labourers. Such development projects not only displace the people but affect their lifestyle, means and way of earning income and drag them down below poverty line, he said.

Manipur: Womenfolk pledge to protect Loktak's ecology

<http://e-pao.net/epSubPageExtractor.asp?src=features.Spotlight>

On_Women.Champu_Khangpok_Womenfolk_pledge_to_protect_Loktak_ecology_By_Mamta_Lukram "Folklores and legend narrate stories about how the Meitei evolutionary myth is laden with values of wetlands and water bodies. Stories signifying fishing as a life routine depicts how a self-sustained economy was supported by ecology. Disturbances in equilibrium of ecology are a threat to food sovereignty. Loktak is the food bowl of many thousand fishers and villagers around the periphery of the lake. This lake forms the domain of the food supply chain in the State. Since times immemorial, floating huts and traditional fishing have engrained the lake's description. However the fishing community has frequently been understood as a defying community responsible for polluting the lake's ecology. They are considered as people who degenerate environment. Nevertheless, these floating hut dwellers in water across many generations are people equipped with traditional knowledge of maintenance. The survival skills grounded them with practical knowledge of preserving their territorial water. Due recognition of indigenous knowledge system's significance in environment conservation is the current advocacy by the working groups on environment.

The original settlers have been the protectors of the eco-system. However, in the history of resistance in Loktak Lake, floating hut dwellers have always been depicted as a community responsible for degeneration of ecology. In the name of so called 'development projects' and 'conservation initiatives,' several forceful attempts were made to wipe out the dwellers from the surface of the lake water. Addressing the issue, the womenfolk of Champu Khangpok Floating village are of the view that they have been inhabiting the middle of the lake in their small

floating huts cutting across generations. Every corner of the lake they are acquainted with, every bit changes they can acknowledge through their life experiences. They honour Loktak Lake as their Revered Mother Goddess, whose blessings made possible to sustain and propagate generations floating in its heart.

And they questioned how and why should they be, destroying the lake's ecology, the destruction of will in return harm themselves. Their world view of Loktak is not just a water body with mesmerising scenic view, to them the lake is their home, and its surrounding is their world. According to the womenfolk, everyone knows the reason for drastic degradation of Loktak's ecology. The installation of 105 MW Ithai Barrage is the root cause. It totally obstructs the natural drainage system, killing it rapidly. The adverse impact could be felt in multiple ways. Extinction of indigenous fish varieties, wild wetland based indigenous vegetables, water plants, drastic decrease in number and varieties of wild birds, perpetuated degradation of water quality and many more. They assert that during past decades where natural replenishment was functional, the lake was clean and pure, draining the unwanted surface away through the natural drains of 'Khordak' and 'Ungamen' during rainy seasons.

Once the Ithai Dam has been installed, it blocked the outlets, leading to stagnation and decay of water. The lake has become like a pond after the installation of the Ithai Barrage. They pointed out that National Hydro Power Corporation (NHPC) is the major stakeholder in plundering Loktak's ecology. However, they are of the view that concerned authority has failed to hold back the major responsible stakeholders of destruction. Instead, the marginalised fishing community is constantly being kept tagged as 'unfriendly/unwise' community. This according to them is a very unfortunate and biased treatment. Ithai Barrage, the phenomenal causal factor of misery is appreciated while marginalised fishers are induced into displacement and loss of livelihood. The womenfolk throw a challenge to improve the condition of the lake, the failure outcome of which they are ready to submit themselves as culprits of destroying the lake. They demand a test-check parameter of uninstalling Ithai Barrage and enquire into the condition of the lake for a few months, in case if provided promising results are not provided, they are willing to immediately eliminate their existence from the waters thereby retreating from all resistance.

Womenfolk from Champu Khangpok floating village shared their accounts on their traumatic experience in defending their right to life. Oinam Akashini, 53 yrs, shared her narratives of climbing 'water master' machine (heavy machine used to dismantle the floating huts), not bothering of getting devoured, during protest against Loktak Development Authority's (LDA) attempt to dismantle the floating huts back in 2015. The womenfolk are of the view that since time immemorial, fishing communities have been surviving in the lake with the resources supported by it. There are numerous oral histories regarding hard working fisherfolk validating

as testimonies that Loktak is their domain. Their grandparents narrated that during phases of famines and droughts they were being narrated the stories of people collecting 'heikak' (water chestnut) to supplement demand for staple food. Following the footsteps of the ancestors, the present fisherfolk is inheriting the means of livelihood handed down to them through generations. They questioned the intention of the responsible authority why should they be termed as 'occupiers,' 'encroachers' or 'illegal encroachers?' They questioned how a community which has been occupying the lake for centuries could suddenly become illegal occupants in these few decades ?

According to them, they are always unaware of the many so called proposed 'development projects,' which are antagonistic to their existence in the lake. Information gathered is only through dedicated working groups. This insensitivity on the planner's part to inform and consult the original settlers is the issue. Names of the numerous 'development projects' weigh mountains on their heads, as mentioned by them. They stressed, incidents of burning down floating huts under Loktak Protection Act 2006, in 2015 and the challenge it has ignited has fostered a pledge in their heart to die in protecting their homes. Heishnam Chaoba 55 yrs reminisces how she stood upright to fight back the LDA officials that come down to evict them while her husband was away for responding urgent matters. When she saw the reckless officials coming down to destroy their small huts, she said that she was fully prepared to fight back, whatever it took. They are the so called well educated, well-fed Government employees, with politico-economic power. To them the huts bear no value. However to fisher's family their meagre earnings are the support system, including education expenses of the kids. She emphasised that, according to their perspectives, sending their children to private schools and colleges at Imphal is nothing less than sending them to major cities like Delhi or Calcutta. Revisiting the traumatised experiences, she shared, ""During many hard times, sending 3-4 kg rice and dried fish for our children is the only support we could render, every rice bowl paying the price of sweat.

Once the floating hut is dismantled, everything will be shattered, our hopes and aspirations. Living for generations in floating huts, we are less educated, so easily marginalised. But why should we allow others to destroy our homes, and this thought made me sit unmoved in front of my hut, ready to challenge whomsoever to protect my hut from being burnt down."" The women community express apprehension of constant insecurity regarding possible uprooting of the fishing community from the surface in the name of interest for larger good. The numerous development projects targeting their existence which are always in the pipeline are the point of resistance for the community. To them, despite the voice raised by the community, attempts have been made either to subdue or side-line their voice. However, the spirit of resilience fostered them to stand upright to protect Loktak Lake for their Right to Life. The lake merely is not a scenic recreational spot for tourism, but is a living civilisation and a page of history.

They expressed their collective pledge to protect Loktak's ecology including their floating settlement sites. To them it is the shared responsibility of villagers to protect the lake that claims survivorship of the community and no bargain should be made to compromise their centuries old settlements.

Manipur: Fish farming training

<https://www.thesangaexpress.com/Encyc/2020/10/20/Fish-farming-training-.html>

"The Directorate of Fisheries has notified that the department is going to organise two days skill development training/workshop programme on 'Bio-Floc Fish Farming' starting from October 22. The training will be organised batch wise with each batch comprising of 50 trainees each to be nominated by the District Fishery Officers concerned. Interested persons may contact their concerned District Fishery Officers on or before October 21.

Manipur: Sustainable development and community aspirations : The case of Chadong

http://epao.net/epSubPageExtractor.asp?src=news_section.opinions.Opinion_on_Building_of_Tipaimukh_Dam.Sustainable_development_community_aspirations_Case_of_Chadong
By Jeebanlata Salam

"The Brundtland report of the World Commission on Environment and Development conceives of sustainable development as a blueprint of promoting social justice for all keeping in mind each of the matrixes-social-economic and environmental sustainability with an overriding focus on the poor and vulnerable sections of community. With the pledge that 'no one left behind', all United Nations Member States adopted 17 Sustainable Development goals (SDGs) in 2015 to be achieved by 2030. The SDGs are functionally interrelated that performance in one goal will affect the outcomes in others. Having played a prominent role in the formulation of the SDG agenda, India is expected to play a pro-active role in effective implementation of SDGs. In development paradigm discourse, the modern State is often identified as the principal actor in political, cultural, social and economic normative of societies. To conceptualize it, State is at the centre stage as policy making actor with the public interest carefully chartered to bring about development or to end poverty.

This indeed presents a very powerful view of the state with its notion of a benevolent leviathan as in the works of Hobbes while philosopher such as Hegel eulogized the State in the realm of higher ethical order, capable of pursuing as neutral arbiter of public interest. However, in actual practice, both the interpretations have remained a fallacy. State pursues competing agendas that tend to normalize people's grievances, especially the weak and vulnerable communities. As also observed by the British political scientist, Steven Lukes who introduced the concept of radical

power of State to convey the idea that State exercises radical power by preventing grievance narratives of people in the first place; and then gradually shape their perceptions, cognitions and preferences in ways that the aggrieved people begin to accept their roles and positions in the existing order of things. Thus, issues never arise, so neither do decisions to include or exclude them from the political agenda. This observation lends credence to the grievance narratives and collective sufferings of the people of Chadong village.

It goes without saying that the Mapithel mega dam construction in and around Chadong village in Manipur's former Ukhrul district brought structural destruction to the old-age social structure and habitus. The French sociologist, Bourdieu, on human practices, argues that social structure and habitus are constitutive of each other. Habitus constitutes a range of socially acquired human practices such as beliefs, ideas, value systems, customs, worships and rituals, traditions, human creativity, economic activities, collective identity, social relationships and so on. It's the habitus that produces practices that tend to reproduce the regularities in structures. Mapithel dam destroyed both structure and habitus of Chadong tribal populace, who once enjoyed a life of abundance and exuberance in their pristine world.

As the rising dam water began to engulf their habitat, it separated the community into two groups-one community moved to the western hillock that is easily connected to the valley population, while the eastern occupants preferring to remain in their ancestral abode moved to the higher elevated hilltop amidst surmountable obstacles ahead. During my recent visit to the village and close interaction with the community discovered that their grievance narratives are inexplicable hardships of inner pain, psychological trauma, angst and despair caused by the reverberation of losing their sacred ecology-collective habitus with which they had constant reaffirming existential ties that they are only beginning to rebuild. However, one most dominant grievance is against uprooting livelihood after the dam construction destroyed their paddy fields-the only viable source of their food security, while other subsidiary economic activities such as community fishing cannot be undertaken any longer.

Going by the Food Insecurity Multidimensional Index of the UN Food and Agricultural organisation, the Chadong community is currently facing food security crisis in terms of food availability, access, utilization and stability of food. Hence, timely and appropriate State intervention is the need of the hour to avert the crisis of chronic food insecurity and collective hunger. One of the important goals of sustainable development is to transform the conditions of the poor and vulnerable community by taking community aspirations of development into consideration alongside protection of community rights over economic resources, ownership and control over land and other forms of natural resources, access to basic services, appropriate new technology and so on. It's delightful to have witnessed the Chadong mountainous village as not

only a hot biodiversity but also awash with rich horticultural plants, fruits and medicinal herbs of different varieties – papayas, bananas, oranges, apples, pears, plum, pine-apples, grapes, cabbage, cauliflower, beans, tomato, red potatoes, mushroom, radish, beans, king chilies, black pepper, cinnamon, sesame, ginger, turmeric to mention a few.

From my close dialogical engagement with the villagers, it's understood that there is strong community aspiration for horticultural development on sustainable model as they see in it as the immense possibility of improving their economic situations and overall quality of life. Their collective demand of developing horticultural activity on sustainable model is worth considering as the best option for several reasons: it can help in improving their present socio-economic conditions by taking care of their resource base; prevents the adverse effects on their environment and its ecology or other surrounding natural resources. The community aspirations of development model also clearly align with the sustainable development model without compromising the ability of future generations to meet their own needs. What's more, the logic of the Chadong Community aspirations of development is justifiable as the famous Anthropologist Appadurai rightly stated, people's capacity to aspire is conceived as a cultural in which the ideas of the future, as much as those about the past are embedded and nurtured.

It's this culture that shape collective horizons that constitute the basis for collective aspirations located in the larger map of local ideas and beliefs that hold good for community themselves. The Chadong villagers have made enormous sacrifices - their traditional ownership over land, forest, water and other resources that cannot be compensated with piecemeal cash distribution. In unequivocal terms, the previous Government caused much humiliation, material deprivation and catastrophe to the lives of Chadong community. It can also be recalled that it was during this political culture that the State of Manipur witnessed frequent ethnic conflict and other forms of violence-a visible political climate adverse to peace and development. It was this political culture that shaped the development agenda of the State which often misused its overriding power by diminishing the poor and vulnerable communities of which Chadong community is an experiential glaring example. Taking cue from the mistakes of the past Government, it would be prudent for the present Government to bring development reforms rooted in local community's aspirations and choices to address sustainable development goals with equity and inclusion.

Manipur: This village floats between non-existence and a hard reality, made worse by Covid

<https://www.thesangaiexpress.com/Encyc/2020/10/6/This-village-floats-between-non-existence-and-a-hard-reality-made-worse-by-Covid.html>

"Among the Meiteis of Manipur, markets and trade have traditionally been handled by the women. It's no different in Loktak Lake. Although fishing is primarily done by men, women are in charge of transporting the catch and selling it in the markets. But for the last few months, these women have had little to do. "We used to go to Ningthoukhong (a town on the shore) to sell or even catch some fish there, but due to this lockdown, we have been restricted to sell at the community clubs and the people there, said 46-year-old Ningthoujam Ungbi Thasana Devi. "We sun-dry the fish and turn it into fermented fish and store them...We also have some dried fish but we cannot store them for long as it gets covered by fungus. So, we have been suffering, she said.

A history of Loktak's issues Loktak Lake, which covers an area of 287 sq km, has played an integral role in the economy of Manipur. According to the study, Insight into the Socio-economic Life of Fishers of Loktak Lake, Manipur – A Ramsar Site, prior to the 1950s, the lake contributed to 60 per cent of the fish production of the State, which has dropped to 11 per cent in recent times. About 12 lakh people of Manipur are said to be indirectly or directly dependent on the Loktak, which in the Meitei language means 'where the streams end/meet'. The lake is fed by eight rivers including the Imphal river. In 1990, it was declared a Ramsar site a wetland of international importance under UNESCO. The lake, however, has been at the centre of many controversies. Trouble started brewing back in 1983 with the commissioning of the Ithai barrage, which was constructed close to the confluence of the Imphal and Tuitha rivers to harness Loktak's waters to generate hydropower. "Before the commission of the Ithai barrage, it (the Loktak Lake) would dry up in the rainy season...during the summer we would cultivate and also catch fish. There wasn't any lack of vegetation, Deven said. The barrage ended up affecting the "hydrological regimen of the water. As a result, the water level of Loktak became more or less stagnant and the fishermen lost out on a source of income they would earn by cultivating the land. 'Encroachers' of Loktak .

Three years later, in 1986, while residents of Loktak were adjusting to the drastic ecological changes, the State Government constituted the Loktak Development Authority (LDA), "to check the deteriorating condition of Loktak Lake and "bring about improvement of the lake ecosystem. In 2006, the LDA enforced the Manipur Loktak Protection Act. According to the Act, "no person shall without the previous approval of the Authority obtain any lake resources. The Act also prohibits the setting up of a house or hut on a phumdi. Five years later, the LDA burned down about 777 of the more than 1,000 floating huts of the village. Haobijam Kumar had been living

in Champu Khangpok for 30 years before his house was allegedly burnt down on 13 November 2011.

“My family was outside on the lake for some work. We came back to find our house was all up in ash and smoke with everything that we ever had like fishing equipment, paper documents, books, clothes, etc were burnt, said the 58-year-old, who is now a fisherman in the nearby Thanga village. “Life has been an endless struggle since then...(If I could) I would definitely like to go back and live again in Champu Khangpok. The Act hasn't been struck down despite appeals from the civil society groups as well as the BJP back in 2011, when it was the Opposition party in the then-Congress ruled State. Today, only 166 families continue living in Champu Khangpok. A fight for livelihood Fifty-year-old Houbijam Biramangol Singh is a second-generation fisherman who has been living and working in Champu Khangpok for 30 years now. As the polling booth at Karang island was removed, he was forced to register his voter ID, Aadhaar card, and ration cards to Thanga where his brother lives. His day begins at 4 am, and he sets out of the house by 7.30 am to go and pick up the fishing nets suspended in the water overnight.

The nets are reeled back in by 11 am and the fishermen return to process the fish, which typically involves smoke drying them a delicacy in Manipur. Biramangol Singh returns to the waters again late afternoon and stays in the waters until 9 pm after which he comes back in, cleans, and smoke-dries the new catch. It's 17-18 hour days that yields anywhere between Rs 2,000 to Rs 15,000 a month. “Whatever our income from the work at Loktak is barely enough for our children's education and also to support the family at the same time, Singh said. “We want the PDS items to be distributed here as it takes us one-and-a-half to two hours to go by boat and get the supplies from the nearest distribution spot, he said. Every month, the fishermen and their families wait for the local authorities to announce the availability of ration on the loudspeakers placed across different spots in the lake. “Sometimes we get it but sometimes we don't. If they announce it today that they will give the PDS from tomorrow, they will distribute it only for two days, Deven said. “It's 1.5-2 hours away. Also the information can be erratic and if we go after 2 days, they will tell us that the ration is over.

Knocking on EC's doors : Compelled by the plight of the village, the Champu Khangpok Floating Village Welfare Committee on 10 September submitted a letter to the Chief Electoral Officer, Manipur, appealing for the enrolment of the 383 residents as voters of the village. The letter mentions an RTI response, filed by one Pradip Chatterjee, which reveals that electoral rolls for the village were only available for 1988, 1989, and 1990. “We are enlisted as voters in other villages even though we live in Champu Khangpok. Meaning that our legal existence at Champu Khangpok is not recognised but identified somewhere else, the letter adds. In a telephonic

interview with The Print, Joint Chief Electoral Officer of Manipur Ramananda Nongmeikapam, to whom the welfare committee's letter is addressed, said, "We have written to the Deputy Commissioner of that district (Bishnupur) to inquire (into this), to visit the particular area of the village.

"When they ascertain saying that they are ordinary residents, then we will initiate action to get them enrolled in a particular police station. We will create a police station for them, he added. Responding to a question on whether the Loktak Protection Act 2006 will have a bearing on the decision, he said, "I'm not aware of other environmental Acts, but we will act (based) on the Representation of Peoples Act... If they are citizens they should be given a voting right. "What was there before, should be revived. We should have voting rights in the place we are working in, Deven Singh said. This will, however, just be the start for the villagers of Champu Khangpok. Since 2019, the people have also been battling with the Manipur Government over their plans to develop an Inland Waterways Project in Loktak Lake that would lead to further deterioration. The pandemic is temporary but the Inland Waterways Project, the locals said, will forever alter their lives.

Manipur, Nagaland, Mizoram, Assam, Meghalaya and Bangladesh: Barak: Our economic and ecological security

<https://www.thesangaiexpress.com/Encyc/2020/9/15/Barak-Our-economic-and-ecological-security.html>

"The Barak is the second largest river in the North East Region after the Brahmaputra. Barak has a length of about 900 kilometres out of which 564 kilometres fall in India and it runs through Manipur, Nagaland, Mizoram, Assam, Meghalaya and Bangladesh. Veorii is the Poumai name for Barak and it originates as a small stream in the midst of the lofty hills covered by the thick forests of the Liyai village in the Poumai country. This stream is latter joined by Deirii stream and Makhan stream as it flows down south through the Biiso valley. The Khiiri stream joins the Barak before reaching Karong. Interestingly, a small stream originating from T Khullen flows towards the North to join Barak as Barak takes a turn towards the North and flows into the Maram country. After crossing the Maram country the Barak flows southwards into the Zeme, Liangmai and Rongmei territories of Manipur and Nagaland. As it runs further south it passes through CCP and Jiri district and enters the plains of Cachar in Assam. Finally, it flows into Bangladesh to join the Brahmaputra and Ganga. Barak changes its name as it flows down the territories different communities.

The Marams called the Barak Mbii Karii, the Zemes Mbeuki, the Liangmais Mbiuki, the Rongmeis Ahu, the Hmar Tuiruong and so on. Some of the salient features of Barak are as

follows. 1. Wildlife of Barak: Barak is said to be the second richest river in terms aquatic biodiversity. Barak is home to more than 2000 aquatic species of fishes. The highly endangered Siamese Crocodile, Susu Dolphin and Smooth coated Otter. Barak is not only a haven for aquatic species but is also a home to many mammals, reptiles and birds. The thick lush green forests of Chakha- Rienta forest, the Piulong forest, Tousem- Phoklong forest, Chingkou- Makoi forest are some of the important catchment forest of Barak and its tributaries. The bamboo brakes and tall grasses along the bank of Barak is the favourite roosting place of the migratory bird called the Amur falcon. Some of the important tributaries of Barak are Irang, Makru, Jiri, Leimatak/ Aga etc. 2. Waterways: Barak provides excellent and cheap water ways for transportation mainly for the people living in the Barak valleys. 3. Economy: The fresh water fish of varied species provide an excellent source of income for the poor people living along the course of Barak.

The fresh water fish also has high nutritional values. Fishing industry of Barak river is a thriving business. The Fishing industry provides jobs to many people and also earns a huge revenue for the Assam Government. Fishing in the upstream of Barak is an important source of income for the people living in the catchment areas. Angling, throwing nets, laying traps, throwing spears, using fish stupefying leaves and barks are some of the traditional methods practised by the tribal communities. Fishing is not only a source of income but also leisure activity. 4. History and Legends: Barak is not only rich in the aquatic life but it is also very rich in myths and legends. Many tribes of Manipur, Nagaland, Assam have their migration histories, folktales, legends and folksongs linked with Barak. Tribal myths and legends praise Barak river as gentle, benevolent and human friendly river, hence, as the legends go many streams and rivers joined Barak. According to the tribal myths and legends beautifully curved cosmic formations are believed to be the Barak river and its tributaries.

Threat to Barak: Today, Barak, the most important river is at the brink of becoming a dead river. More than half of its aquatic animals and fishes have become extinct and many species are struggling to survive due to excessive human intervention. The water flowing in Barak is not only drying up but has become highly polluted by human activities. It is alarming to see Barak being polluted right from the source area. The chemical effluents flowing into Barak from the Steel factory in Senapati town and the human waste produced by the Senapati denizens have become a serious threat to the health of Barak. Fishing in Barak and its tributaries by using detonators, chemicals, electric currents have led to destruction of many aquatic species and the river ecosystem. One serious threat to Barak was an attempt to Construct a mega dam known as the Tipaimukh Dam on Barak river at Tipaimukh in the early the part of the eighties.

However, now, due to strong public protest in India and Bangladesh the Project has been abandoned. If the construction had gone ahead many precious aquatic wildlife could have been wiped out and huge cultivable land areas could have been submerged. Another serious threat to the health of Barak is the Unregulated timber extraction by timber mafias in the Catchment areas of Barak tributaries. Heavy timber extraction has contributed in hastening the drying up of water in the Barak river. We, the tribal people who have benefited from the Barak river system have completely failed to realise the importance and benevolence of Barak. If we had followed the sustainable practice of forest management practised by our forefathers or had timely sought the intervention of the experts to help us manage our forest, we could have saved the rich natural heritage which we have inherited from our ancestors. We must also be aware that Clean air is the basic right of every human being as enshrined in Article 21 of the Indian Constitution.

No individual, group of people or Company should be allowed to indulge in any activities which can destroy the source of clean air and also pollute the environment and rivers. As responsible citizens we must not fail to point out and report all the illegal activities to the authorities for immediate necessary action. Barak has nurtured us and still has many good things to offer us. Barak offer us a good life, sound economy and a clean environment, provided we are ready to adopt sustainable methods of utilising our rich natural resources. We must also remember that the first step to conserve Barak is to conserve the catchment forest of its tributaries. If we continue with our undmindful habit of destroying our forests we will only be contributing towards the drying up of Barak and adding on to the woes and miseries to the sufferings of the people who face devastating floods every year. One significant thing we need to know is that, the health of Barak reflects the life of those who depend on it. If the Barak is healthy it is evidence of the healthy symbiotic relationship between the river and the people. However, on the other hand if Barak is drying up and the fishes are disappearing it shows that the people have become thoughtless and indigent.

This bond between man and river applies to every river. Some Ecosystem services Barak can provide are:- 1. Clean and cool environment 2. Clean drinking water 3. Stable riverine ecosystem 4. Enhance Cultural and Esthetic values 5. River Rafting 6. Angling 7. Boating 8. Traditional and recreational fishing 9. River tracking 10. River Camping 11. Healthy food supply, and the list goes on. Of late, the Barak Heritage Foundation an NGO based in Senapati has come up with a brilliant idea to conserve Barak and its tributaries. It is an idea whose time has come. This noble needs to be emulated by every village and town which are situated along the Barak. Here are some activities recommended for immediate implementation in order to conserve Barak river. 1. Identify catchment forest of Barak and its tributaries and motivate the villagers to declare them as Community Reserve or Village forest reserve. 2. Announce rewards and incentives for those villages which diligently conserve forests. 3. Set up ""Watch Barak

Volunteers". 4. Check Pollution activities polluting Barak. 5. Press Manipur Government to carry out resource mapping of Barak and its tributaries at the earliest.(Identification and documentation of flora, fauna and aquatic species) 6. Provide modern sewerage system and solid waste disposal system in the villages, towns and cities to prevent the wastes from flowing into Barak. 7. To tell the state Forest Department to immediately stop issuing permit for extraction of timbers from the catchment forest of Barak and its tributaries. The writer is former Lok Sabha MP (Manipur Outer Parliamentary Constituency)

Manipur: Stop fishing activities

<http://e-pao.net/GP.asp?src=24..080920.sep20>

"Every year, the Fisheries Department, Government of India holds a "Fishing Off" programme in the months of July, August and September to discourage fishing activities during the breeding season. The statement issued by the National Association of Fishermen, Manipur State Unit informed that by paying Rs 30 (per month) to the Fisheries Department, fishermen will receive a sum of Rs 300 in return, and a total of Rs 900 for 3 months. During this period, the association has appealed all fishermen and all involved in fishing activities to refrain from fishing or using traditional fishing equipment to trap/catch fishes, specifically the porom fish (*Channa Striata* or mudfish) which produces thousands of fries. It also appealed not to catch porom fishes which are not fully grown. However, there are no restrictions on shrimps and other small variety of fishes, it stated. It also claimed that the Fisheries Department do not seem to be fully involved in implementing the programme this year.

Manipur: Catching fishes using electrofishing method is punishable as per Manipur Fisheries Act

<https://www.thesangaiexpress.com/Encyc/2020/9/2/-Shun-electrofishing-JCCWB.html>

"Joint Coordination Committee on Wildlife and Biodiversity (JCCWB) Manipur has appealed to the people of Manipur, especially fishermen and women to refrain from practising electrofishing method. A press release issued by Sapana Laishram, Co-convenor JCCWB, said that electrofishing is widely practised in the State, even amid the lockdown, which is truly unfortunate. Catching fishes using such method is punishable as per Manipur Fisheries Act, Wildlife Protection Act and Biological Diversity Act, she said, adding that electrofishing not only stuns the fishes but also has negative environmental impacts. Electrofishing is also detrimental to aquatic plants and animals, she lamented. Appealing all to shun catching fishes

with electrical equipment, Sapana cautioned of taking legal actions against all those who are found practising the same.

Manipur: Villagers dependent on Loktak Lake narrate woes owing to Covid-19, seek govt help

<https://www.hindustantimes.com/india-news/villagers-dependent-on-loktak-lake-narrate-woes-owing-to-covid-19-seek-govt-help/story-GgN7M7QXLPrKvARLwjIkWM.html>

"The coronavirus pandemic and the ensuing lockdown imposed to contain the spread of the virus have shown the devastating impact on the locals of Champu Khangpok village who are dependent on fishing from the famous Loktak Lake for their livelihood. Loktak in Manipur is the largest freshwater lake in the north-eastern region of the country and is famed for its 'phumdis' or floating islands. The lake provides the livelihood for close to 30,000 people, and these floating islands are permanent homes of several fishing communities who have been conserving this unique wetland ecosystem. The floating islands are a thick heterogeneous mass of vegetation, soil, and organic matter that looks like small lush green islands. On the Phumdis, the fishing community builds small thatched huts to live in. About 240 fishing families from the Champu Khangpok village too are amongst those who were dependent on the lake. However, the lockdown affected them greatly since they were stuck inside the lake on the floating islands and could neither sell their catch nor buy essentials as they used to do earlier due to the closing down of the nearby markets.

To ensure their survival during the scarcity of essentials like rice and pulses, some of the villagers had started depending on available vegetables alone for their daily meals. The fishing families, who have no other source of livelihood, have now made an appeal to the government to pave a way to designate the opening of two docks at Ningthoukhong and Yangoi Karang, twice a week so that they can sell their catch and procure their daily needs from the markets. Nabachandra Oinam, a villager told ANI, "Most of us are fishermen and we are not able to sell fish in neighbouring markets due to restrictions. We are facing a lot of trouble due to this. The government should pay heed to our woes. The woes, however, do not end here as the education of children has also been impacted in this phase, due to the lack of smartphones to access the online classes. The first floating school in the north-east has however filled that gap to some extent as it continues to provide education to the children of the community even during the crisis phase.

Ningthoujam Ongbi Thasana Devi, another local, however, said that the government should pay heed to these difficulties, as buying a smartphone for education would be the last thought on mind of those who have been struggling to survive each day. Meanwhile, the villagers also raised

the issue of rising pollution in the Loktak lake. Several small rivers and streams of the valley and hills in the state find their way into the lake which is spread over an area of 26,000 hectares. This leads to waste materials from all areas pouring into the lake thereby posing a threat to the ecosystem of the freshwater lake.

Manipur: Find why the world's only floating lake in Manipur is crucial for this fishing community

<https://thenortheasttoday.com/find-why-the-worlds-only-floating-lake-in-manipur-is-crucial-for-this-fishing-community/>

"Locals of Champu Khangpok village who are dependent on fishing from Loktak Lake, the largest freshwater lake in the north-eastern region is facing the impact of the COVID-19 pandemic on their livelihood. About 240 fishing families from the Champu Khangpok village are amongst those who were dependent on the lake. However, the lockdown affected them greatly since they were stuck inside the lake on the floating islands and could neither sell their catch nor buy essentials. Nabachandra Oinam, a villager speaking to newsmen said, "Most of us are fishermen and we are not able to sell fish in neighbouring markets due to restrictions. We are facing a lot of trouble due to this. The government should pay heed to our woes. Royal Global University To thrive and survive during the scarcity of essentials like rice and pulses, some of the villagers had started depending on available vegetables alone for their daily meals. Loktak Lake is famed for its 'phumdis' or floating islands. The lake provides a livelihood for close to 30,000 people, and these floating islands are permanent homes of several fishing communities who have been conserving this unique wetland ecosystem.

Manipur: Farmers concerned as farms submerged due to incessant rain

<http://e-pao.net/GP.asp?src=16.120820.aug20>

"The heavy downpour which started yesterday midnight have poured cold water to the efforts of the farmers in Keirao Bitra area and Yaipharok Maring Khun area in Imphal East with their crops being submerged under water. The heavy rain caused flood like situation at Irallou Loukon (farmland) in Keirao Bitra area and Polangshabi Loukon near Yaipharok Maring Khun putting paddy cultivators, fish and poultry farmers in utmost distress. Brojen, whose farm (fish and poultry) at Polangshabi Loukon submerge under water, told The Sangai Express that his farm covering an area of one and half pari (local land measurement unit) was safe and above the water level safe until 4 am but rapid inundation did not gave him much time and submerged his farm. He lost around 9,000 fish weighing around one and half kg each and around 3,150 out of 3,500 chickens died due to the flash flood. The flood like situation at Keirao Bitra has submerged

around 15 per cent of farmland damaging crops. The flood reportedly occurred due to inundation of water drained from Nongmaiching Hill Range. When the water level of Iril river is low, the water from hill range is drained to Thongranbi Canal and runs through Langdum Khun before joining Iril River, says villagers of Keirao Bitra. If the water inundation at the Loukon is not discharged/drained within one or two days, the crops will be rotten under the water, said the villagers with deep concern. They had appealed to the Chief Minister when he visited Keirao Wangkhem earlier. But no visible work has been done so far to address the issues, they said, urging the authorities concerned and the Chief Minister to take up necessary measures at the earliest.

Manipur: Loktak Lake: A gem perishing in front of our eyes

[http://epao.net/epSubPageExtractor.asp?src=manipur.Moirang_Kangleirol.Loktak Lake](http://epao.net/epSubPageExtractor.asp?src=manipur.Moirang_Kangleirol.Loktak_Lake)
[A gem perishing in front of our eyes By M Asnikumar](#)

"The simple meaning of environment comes up as, ""the surroundings or conditions in which a person, animal, or plant lives or operates."" I grew up in humble and serene surroundings of a village called Keibul Lamjao with our state's gem, the Loktak Lake in the background. After two and a half decades of having lived in the hustle and bustle of Imphal city one can't help but admire the ingenuity and charm of the lake, whenever the chance arrives. But this charm and ingenuity is on the brink of fading into oblivion due to some shortsighted decisions taken 47 years ago. Atoning for that is perhaps the biggest will we can leave behind for our children. Loktak Lake, the largest freshwater lake of Manipur, is the lifebelt for the people of the state. But it has an emotional and spiritual connection with the fishermen community. This lake is their primary source of livelihood. But now it has become a fight for survival for the fishermen. Government policies announced to conserve the lake constitute huge threats to the fishermen as most of them lack alternative livelihood skills.

According to the jewel of India's folklore, Loktak was formed when gods sought the support of the valley's people. The lake has seen the very notion of Manipur take form. 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 inhabit the heart of the lake. Encompassing an area of about 26,000 hectares, the Loktak lake is our state's largest fishery resource, accounting for more than 50% of the fish producing area. About 12% of the state's population depend on its resources. No wonder, it is referred to as 'Mother' by our fishing community. Something which we often ignore while discussing our state's climate is that the lake serves as a generating base for bio energy of the region, particularly for our state. It synchronizes climatic conditions and stimulates different ethos, cultural fabrics in the area. In a sense the Loktak lake itself is a generator of all kinds of cultural and ethnic endemism for the

people of Manipur, particularly the fishing community in and around the periphery of the lake. Of which it may be cited one of the best and remarkable points is the technique of 'Phum Namba' which is still in vogue for the livelihood of the region.

The term Phum Namba is known in the region since the time immemorial. It may be described as follows: The people of the region particularly fishing community and the community of the Thanga island and people of the peripheral area of the Loktak lake who practise this technique (basically the fishing community) cultivate water weed in the form of circular as well as semi-circular just at the water level of the lake. This particular Phum Namba will be preserved for about a year. During this period the local indigenous fish species sanitate in and around the Phum. The fishing community also feed a plethora of local nutrients to the area every day. These nutrients are mainly derived from rice husking powder and some other aquatic vegetables. So, as in and around, the Phum will always concentrate inside the core of the planted Phum , all these Phums will be harvested during the lean season of the year, which commences from October and concludes in the month of March.

This type of harvesting is known as Phum Namba . It is also reported that there are more than 1000 floating Phum hut dwellers. Their basis cultivation is the cultivation of Phum and to above, i.e Phum Namba for their livelihood. There are other techniques of fishing other than Phum Namba techniques are namely: 1. Trapping by net (Lang Thakpa) 2. Bamboo Trap (Lu Thumba) 3. Pulling of Fishing Net (In Chingba) 4. Ancling and Longthinba However, the removal of a large number of fish culture ponds from the core area of the lake has led to massive economic deracination. In the 70s, the National Hydroelectric Power Corporation Limited (NHPC) pitched an ambitious project to the then government of Manipur; a power station to harness the hydropower potential of the 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 dependent on the lake. In 1983, NHPC constructed a barrage at the conflux 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. From

time to time, the fishing community are rendered unable to practice their traditional technique. Before the implementation of the Loktak National Hydro Electric Project and the commissioning of Ithai Barrage there were two different seasons of fishing to all the surrounding fishing areas; viz one on the arising of the Loktak level and another in the following of the Loktak water level and another in the following of the Loktak water level during the lean seasons. Now, as a consequence of the loktak hydel project, the lake's water level remains high throughout the year. Hence, the two seasons of fishing in the region has already been spoiled in an unreplaceable condition: over and above most of endemic plants of Loktak has also been endangered seriously. In all honesty, the lake is slowly but surely dying in all forms. There's a saying, ""We realise the value of certain things once we lose it"". Let us not be known as the generation that did nothing while perhaps our most precious resource perished slowly right in front of our eyes. Let us all; the people of Sanaleibak, take a pledge to contribute in concrete, meaningful efforts to save this god given treasure, whose immense value we have often ignored.

Manipur: COVID-19: Agriculture innovation to achieve food security & challenges

[http://epao.net/epSubPageExtractor.asp?src=education.Jobs_Career.Agriculture innovation to achieve food security By Ch Basudha](http://epao.net/epSubPageExtractor.asp?src=education.Jobs_Career.Agriculture_innovation_to_achieve_food_security_By_Ch_Basudha)

"The pandemic has created in an unprecedented economic, social and health crisis from COVID- 19 caused by a SARS-CoV-2 virus. Both lives and livelihoods are at risk from this pandemic. The coronavirus pandemic may likely have an extensive and long-term influence on the agriculture sector in Manipur. The Government implemented lockdown to control the spread of the COVID-19. On 24th march a 21-day lockdown was announced in India including Manipur. Agriculture was exempted and over the following weeks guidelines were published that exempted related activities, such as inputs in fisheries and food processing. The lockdown and closure of public transport led to an exodus of labourers. This lockdown period coincided with the harvesting season of the winter-planted crops, vegetables like tomatoes, potatoes, watermelon etc in the state which faced a record good harvest after a good monsoon.

However, wholesale markets were closed and there was a shortage of farm labourers. It has resulted in logistic difficulties in food production and supply chains, especially in the high value commodities such as fruits, vegetables, meat, fish, milk etc. Shortage of fish seed, feed, fertilizers, medicines and other inputs could affect fish production. Closures of markets, restaurants and less frequent grocery diminish demand for fresh meat, fish, poultry and their products affecting producers and suppliers Covid19 reduces demand & supply: The lockdown immediately led to a drop in domestic demand and trade. Some farmers growing high value fruits and vegetables for upmarket. Though, dairy sector showed a mixed picture. Just after the lockdown follows consumers initially crowded milk parlour to stock up. However, within a week

milk prices started collapsing as office canteens, restaurants and sweet shops remained closed. In fishery sector, during February and March normally prepared fish ponds on a normal supply of fish seeds.

However, the official COVID-19 lockdown at the end of March significantly impacted the supply of fish seeds and the subsequent stocking of ponds, which resulted in a drastic fall in fish seed production and prices. Because of the resulting uncertainty in markets and also disease outbreaks, farmers carried out emergency harvests of ponds and marketed at low prices. Normally, most farmers that stocked their ponds between March to early April, have been stocked late and could not stock till today due to non-availability of fish seeds. Strategies for facing the pandemic in the state through Agriculture There should be a provision of quality seeds to farmers by the seed sector- both public and private. Amidst the current tensions, good seeds and other farm inputs must reach farmers in time for kharif season. Adoption of superior cultivars also demand higher usage of resources like water and fertilizer.

Increased water use efficiency and fertilizer use efficiency is essential to derive maximum production per unit quantity of resources used. Short duration or less water requiring crops, (e.g. rapeseed & mustard, lentil, etc) should be encouraged. Such crops have better cost benefit ratio and help farmers obtained highest possible return on their investments. Automated machines should be introduced for the planting of seeds which need only a machine driver for sowing and harvesting. Indigenous manufacturing of automated machines should be promoted by the government to cut down the overall cost. Subsidies should be provided to the manufacturers of such machines so that farmers can buy them at economical prices. High yielding variety seed is another way of contributing to food and nutrition benefits while boosting agricultural production besides reducing a post-harvest loss. Synchronized efforts should be made for conservation practices such as crop diversification, zero soil tillage.

An increase in the availability of nano nutrients to boost crop production will be an added advantage. Efforts should be made to grow more crops that rely less on nitrogen as it proves to be good for acclimating with climate and resolving malnutrition at the same time. Organic production, packaging and processing of Ginger, Chilli, King chilli, vegetables, etc. Mushroom cultivation especially Oyster and Shiitake integrated with spawn production, processing and packaging. Bee keeping integrated with Honey processing and agro-forestry plantation Smooth livestock farming is accomplished of advancing nutrition both by raising producer and consuming high protein animal sources of food. Aquaculture farming is another accessible, affordable option in some regions of the state. The amalgamation of farming is required to improve the status of food security and nutrition in the state.

The government also has announced number of packages to protect the vulnerable sections including farmers from any adverse impacts of this COVID 19 pandemic viz., advance release of Rs 2000/- to bank accounts of farmers as income support under PM Kissan Scheme; Pradhan Mantri Garib Kalyan Yojana etc. The Reserve Bank of India (RBI) has also announced specific measures that address the “burden of debt servicing due to COVID19 pandemic. Agricultural term and crop loans have been granted a moratorium of three months (till May 31) by banking institutions with 3 percent concession on the interest rate of crop loans up to INR 300,000 for borrowers with good repayment behaviour. The Indian Council of Agricultural Research (ICAR) has also issued state-wise guidelines for farmers to be followed during the lockdown period. The advisory mentions specific practices during harvest and threshing of various rabi (winter sown) crops as well as post-harvest, storage and marketing of the farm produce including fisheries and animal husbandry.

The ongoing lockdown in the state needs to be reviewed and replaced with cluster specified restrictions (as required) based on epidemiological assessment, as there is no conceivable scenario of control or elimination in a short period. An interdisciplinary team of public health specialists and social scientists, along with grassroots political and social leaderships and volunteers, should continue raising awareness about the COVID-19 modes of transmission and methods of prevention in the community. There should be a proper implication of digital technologies to directly sell the produce (E-Commerce) so that farmers can sell their product directly to the consumer. The time demands to actively activate social safety nets (in form of cash or in-kind transfers) to protect the worst affected and most vulnerable ones to keep up their production. Simultaneously, it would be important to prepare trainers at government institutions to train farmers about the changing farming methods and aware them about the safety measures they need to take even after COVID-19 like social distancing, use of masks, regular washing of hands through behaviour change communication. Dissemination the right awareness through the right channels is important at present. Since the prevention is always better than cure. All need to bring out changes in lifestyle, dietary and behavioral modifications.

Manipur: Police arrest three with illegal fishing equipment

<http://e-pao.net/GP.asp?src=17..010620.jun20>

"A team of Bishnupur commandos seized illegal fishing equipment and Led light from three persons while conducting a search operation in and around Ningthoukhong, Thanga and Thinungei Patton (Loktak Lake), today. A press release issued by Bishnupur SP said that the three individuals have been identified as Moirangthem Inaocha Singh (28), S/o (L) M Samu Singh of Thinungei Makha Leikai; Laishram Abungcha Singh (28), S/o L Irabot Singh of Thinungei Makha Leikai and Laishram Bishorjit Singh (21, S/1 L Ibomcha Singh of Thinungei

Makha Leikai. Saying that the seized equipment includes two batteries (12 volts), two LED lights, two dynamos, four bamboo sticks attached with copper wires and iron net and 5 oars, it added that the arrested persons along with seized articles were handed over to Bishnupur Police Station. On further questioning, they revealed that they were coming with one of their colleagues namely Oinam Bheiga Singh (33), S/o O Yaima Singh of Thinungei Makha Leikai who escaped from the spot by taking advantage of darkness, said police.

Manipur: Obstruction of traditional fishing

<https://www.orfonline.org/research/the-ithai-barrage-of-manipur-to-decommission-or-not-66917/>

"The Ithai Barrage impounds the Manipur River just below the confluence of the Imphal River and the Tuitha River south of Loktak Lake, and is part of the Loktak Hydroelectric project that supplies hydropower to the seven Northeast states. Over time, the dam has affected the hydrology of the lake and caused harm to the ecology and economy of the region. The Manipur government is now urging the Centre to consider decommissioning the barrage. This brief assesses the present condition of the Loktak lake and the hydroelectricity project to arrive at a policy recommendation on whether or not the Ithai Barrage should be shut down. In August 2017, the N. Biren Singh government in Manipur wrote to the union government seeking a review of the Loktak Hydropower project and removal of the Ithai Barrage. Nothing like this has ever been done in India the country does not have a history of systematic dam decommissioning due to ecological concerns.

Obstruction of traditional fishing The construction of the Ithai Barrage has impacted the natural hydrological regime and obstructed the migratory routes of fish through the Manipur River. As a result, there has been a substantial decline in the population of riverine fish like Pengba, Khabak, and Shareng. **Ataphum and phumdi proliferation** The people living around the lake were dependent on it for fishing. With the loss of their residential and agricultural lands and a decline in the fish population, they have become more dependent on the ataphums (floating fishing ponds). Traditionally, ataphum fishing was a monsoon activity. But with the construction of the Ithai Barrage and the continuous high water level, ataphum is now carried out through the year, resulting in a proliferation of ataphum and phumdis. However, the presence of many ataphums obstructs the movement and circulation of the water and sediments in the lake. An estimated 25 percent of the lake's water-holding capacity has been lost due to the annual deposit of 336,325 tonnes of silt. The enhanced sedimentation is partially due to the obstructed flow pattern inside the lake caused by the proliferation of phumdis and ataphums.

The lake's navigational benefits have also decreased due to the ataphum's interference. Some fisherfolks have started using non-traditional practices such as using insecticides that have had an extremely detrimental impact on the water quality and aquatic biodiversity. Such hazardous chemicals not only poison but also increase the nitrogen levels in the water, leading to an unhealthy burst of the phumdis. The phumdis and other suspended vegetation eventually meet effluents brought to the lake by the Imphal River from Imphal's sewages. This causes a horizontal proliferation of surface vegetation over the lake, obstructing sunlight and causing harmful vegetation blooms that could choke the lake.

Manipur: Alien fish species pose threat to Manipur's indigenous breeds: Experts

<https://www.hindustantimes.com/india-news/alien-fish-species-pose-threat-to-manipur-s-indigenous-breeds-experts/story-VPifoE7r15EsMCe3JTnqRP.html>

"A fish from the Amazon River basin in South America has been found in Manipur, raising concerns among experts of an invasion of the northeastern state's aquatic ecosystem by alien species. This came to light when Amazon Sailfin Catfish, also known as suckermouth catfish, was caught by a fisherman from the Waishel canal in Manipur's Bishnupur district probably for the first time on April 22. Bishnupur district has the largest freshwater lake in the northeast region. Experts said the Amazon Sailfin Catfish was found in the Ganga in Bihar's Patna some years ago and also in the Brahmaputra in lower Assam. But this species was not reported from any other northeastern states yet. "Report of catching of such alien species from the water bodies of the state is not a good sign because their presence may demolish the aquatic diversity of the region, Dr Ch Basudha Devi, a senior scientist of the Manipur centre's Indian Council of Agricultural Research (ICAR), said. "Subsequently it will affect the region's biodiversity, she added. The one-foot long fish is said to be a fast-spreading species. As per reports, this alga eating fish, which can grow up to 49 centimetres and weigh up to 310gm, has become a local pest to eliminate fish in a few countries.

"Above all, they will start expanding and try to occupy the entire habitat and start competing with our native species, which are in low fecundity rate as there is no native predator to control them, Yumnam Lokeshwor, an associate professor with Assam Don Bosco University's department of zoology, said. Manipur's water bodies are increasingly becoming populated by alien fish species. Some of them have been let out for commercial purposes by the state while some have been released accidentally from captivity due to lack of necessary regulations. Yumnam said more than a dozen alien species, including seven authorised exotic food fish, two authorised larvicidal fish, three unauthorised exotic food fish and five other freshwater ornamental fish, were found in the state's water bodies after their introduction. "Some of them have already established a good breeding population and have emerged as a threat to the native

species, he said. The International Union for Conservation of Nature (IUCN) had listed seven native fish of Manipur as endangered freshwater species. Even the state fish, Pengba, has vanished from wild and is only bred in farm ponds. "Therefore the state fishery authority must adopt new policy to monitor the introduction of new species including the aquarium species (exotic) as this hobby has been increasing day by day, Yumnam added. Sharing a similar sentiment, ICAR scientist Basudha also expressed the need to form a state-level assessment committee to monitor the aquarium fish trade and introduction of exotic species. N Gojendro, the newly-appointed director of the fisheries department, acknowledged the recent development. Gojendro said they have appraised the matter to his seniors to formulate a comprehensive guideline for importing, culture and marketing of fishes in the state.

Manipur: operation of fish farms and fishing and fish feed plants will also be allowed

<https://timesofindia.indiatimes.com/city/imphal/manipur-launches-e-books-to-mitigate-academic-losses/articleshow/75219833.cms>

"The Manipur government on Thursday launched e-textbooks for students from Classes VIII to X to help mitigate academic losses caused by the lockdown imposed to contain the spread of the novel coronavirus. Launching the textbooks, education minister Thokchom Radheshyam said this was part of many such initiatives that the state government is taking to address problems that the education sector is facing. The minister added that there are around 71 textbooks for students from Class I to X and it will take around 2 weeks to upload their digital versions. He said books of tribal dialects would be uploaded subsequently as well. Radheshyam said the whole world is affected by the Covid-19 pandemic and it has also impacted the education sector. "Once the textbooks are made available in electronic format, it will help in developing e-contents as study material by various stakeholders. The textbooks will be easily accessible to the students and teachers at times of crisis," a statement issued by Manipur information and public relations department read. It added that this will give provision for the improvement of textbooks by seeking comments from the public and it will also become the source of early printing of textbooks in times to come.

Manipur Cabinet decides to relax lockdown in 15 sectors

<http://e-pao.net/GP.asp?src=1..210420.apr20>

"The current lockdown which would continue till May 3 has been relaxed in 15 sectors. The State Cabinet adopted a resolution to this effect today. The Cabinet meeting held in the Chief Minister's office with N Biren in the chair deliberated on the State's prevailing situation regarding COVID-19 and the lockdown clamped to prevent spread of the highly contagious

disease before arriving at a decision to relax the lockdown in 15 sectors. Briefing media persons at the Babupara SSA conference hall after the Cabinet meeting, Education Minister and Government spokesman Dr Thokchom Radheshyam informed that the State Cabinet agreed to relax the lockdown for activities related to 15 sectors.

The lockdown would be relaxed for activities related to transportation and sale of essential commodities, health care, public utility services, farming, fish farming, dairy farming and poultry farming. The relaxation also covers finance and social sector, online teaching, MGNREGA works, certain commercial and private establishments, construction works, emergency services, State and Central Government offices. However, the relaxation would be subject to observance of the National Directives for COVID-19 Management and standard operating procedure (SOP) for social distancing, Dr Radheshyam said. Subsequent upon the Cabinet decision, Chief Secretary Dr J Suresh Babu has issued an order along with an annexure which gives details of the relaxation apart from mentioning the National Directives for COVID-19 Management and SOP for social distancing. The order issued by the Chief Secretary said that social distancing should be maintained by all and mask should be compulsorily put on by any person visiting public places and activities that may be permitted from April 21 to May 3 include; Fisheries: a) Operations of fish farms and fishing. b) Fish feed plants.

Importance of Fish & Fishery in Manipur

http://epao.net/epSubPageExtractor.asp?src=education.Jobs_Career.Importance_of_Fish_Fishery_in_Manipur_By_Sanjenbam_Jugeshwor

"Manipur state is nestled in the Eastern-most corner of North-East India, covering a total area of 23,327 sq.km with suitable climate and soil condition for crop farming. Agriculture forms the back-bone of state's economy, contributing 50-60% to the state's GDP and engaging about 80% of the state total populations. The climatic condition is widely influenced by the topography of the hilly regions and hence ranged from tropical to sub-alpine with average annual rainfall of 1467mm. Around 80% of the total state populations are non-vegetarian and the food items includes chicken, fish, beefs, muttons, pork's etc with pork ,chicken and fish are the most preferred. Fish is however the only animal protein sources widely accepted and consumed by almost all the people including the vegetarian sect of the people.

Manipur has diversified water bodies with 56,461.05 hectares suitable for fish farming of which only 18,600 hectares or 32.94% of the total potential water areas are so far developed and used for fishery purposes. With Barak River as the biggest river basin, the state has more than 15 meandering rivers, covering a length of 2000km. Each of the river system has characteristic ecological conditions and diverse fish population. The water-logged marshy and swampy areas,

canals and wetlands of the state covered about 5,000 hectares(Economic Survey of Manipur-2008-09). The state is also home to the largest fresh water lake of North-East India, the LOKTAK LAKE, covering an area of 24,672 hectares. It is the most important inland water resources of the state with floating mat vegetation (basically called Phum). Fishing and other fishery activities carried out in and around the lake accounts for about 50% of the total fish production of the state.

The state has around 153 floodplains wetlands (locally called Pat) accounting for 28.34% of the total valley area. The Loktak Lake and Pats supports a huge fisher flock's livelihood. Being an agrarian state, Manipur has huge area covered by paddy field especially in the valley districts. Keeping fish along with the paddy has been in practice since ages ago. Though there is no systematic method followed, integration of fish –cum paddy with fish as the secondary crop has been considered as one of the best alternatives for ensuring the diversity of food basket without compromising on the sociological and environmental functions of the fields. Manipur shares a part of the Indo-Burma biodiversity hotspot and is immensely endowed with diverse biological resources. The state fish faunal diversity has been seen to be influenced by the Burmese fish faunas which has been clearly highlighted by the presence of many indigenous fish species in Manipur and Myanmar (Burma) water but not found in any parts of India. The number of fish species found in Manipur was reported to be 125. Pengba which is also state fish of Manipur was found abundantly in the water bodies of Loktak Lake and Nambul River.

However with the construction of the Ithai barrage across Manipur River for the operation of Loktak Hydro Electric Project, the fish population was reported drastic reduction in the wild. The water bodies of Manipur are diverse and harbour various aquatic grasses. Hence grass carp and common carp are the mainstay carp species in the extensive aqua system. The fox nuts (locally called Thangjing) which is a delicacy in the state is widely culture by many farmers in homestead ponds. Most of the aquatic plants are highly marketable for their flowers, roots, rhizomes and stems, fruits and seeds for various purposes including medicinal use. Fisheries has been playing an integral role in the Manipuri society as fish forms a part and parcel of every Manipuri dish served on the table. Fish has thus been termed to be the most widely accepted food items in the state. It is consumed by almost all people irrespective of age, culture, religion and food habits including the vegetarian sect of people.

Fishes of all sizes and varieties are found in the market in the form of live and fresh, frozen, dried, smoked, canned and fermented and consumed as curry, boiled, fried or chutney. Fish plays a major role in many customary and religious rituals of the Manipuri such as traditional use of fresh Nganap and Catfish in the marriage rituals, Ngamu in healing rites, Ngamu and Phabounga in rituals conducted for newly born child. Being one of the most commonly accepted food items,

fish is generally used to serve in most of the common feast. The pool barb has been widely consumed by the Manipuri's in fermented form (locally called Ngari). Due to its flavour and nutritive value, Ngari has become an irreplaceable and inseparable ingredient of almost all Manipuri dishes such as Kangsoi, Iromba, ametpa, Singju etc. As the state fish production could not meet the consumers demand, Manipur imports various forms of fish (frozen, Dried, smoked, canned) from other states like Assam, West Bengal, Andhra Pradesh etc. Canned or tinned fish widely consumed in the state are imported from Myanmar. The price of fish and fishery product in the state are thus very high. Fish culture in Manipur was believed to have started since paddy culture began, fish-cum paddy culture in the paddy fields traditionally with the fish as the secondary crop.

With the increase of demand of fish for food, slowly fish culture in separate pond began and later improves with better culture practices and technologies. Fish farming practices in the state is more or less pond-based with several species stocked in the same pond (Poly-culture) or integrated with agro/animal husbandry taking advantage of the rich aquatic microorganism and aquatic floras of the water. Monoculture practices are rarely seen or reported. Aquaculture methods in the state are mostly traditional especially in the hilly regions though few semi-intensive and intensive system are being taken up in the valleys. Integration of fish with horticulture, agriculture crops and livestock has been a traditional practices in Manipur over the centuries. The present estimated per hectare production of fish in the state is 700- 1800 kg/ha/year. There are 123 fishing villages in the state with 34,064 fishermen out of which 8,395 fishermen are full time fishers. The fishermen of the state are mostly concentrated in and around Loktak Lake in Moirang. Around 55 rural and urban hamlets encircled the water bodies and the lake, thus has a population of about 1, 00,000 people harbouring the majority of the state total fishermen in and around it.

Marketing of fish is one of the biggest business in the state because the state consumed a huge amount of fish. Though there is huge demand for the fish in the state, state farmers and fishers faces many constraints and issues in fish production. Some of the constraints are: technical constraints; financial constraints; social constraints; environmental problems and other issues. The water resources of the state have a potential of producing around 64,000 metric tons of fish annually with multiple water bodies not utilized/ poor utilized or sparsely stocked. To make Manipur a self-sufficient state in fish production, the various underutilized water bodies' needs to be judiciously explored and utilized sustainably. Proper stocking strategy with diverse fast growing fish species, up gradation of quality fish seed production for natural water bodies' management and development will enhance the fish basket of the state. The state should take vehement steps in conserving the native fish species which are threatened in their natural system. Judiciously harnessing the untapped and potential resources using modern technologies can not

only bridge the demand- supply gap of the fish in the state but also produce surplus that can be supplied to the neighbouring states too, which will directly or indirectly uplift the livelihood of many resources dependant fishers, exalt employment and income generation and elevate the nutritional security of the people.

Manipur: Fishing communities strive to save Loktak Lake oppose inland waterways remove weeds from lake waters

"Small Scale Fishing Communities are by far the largest primary non-consumptive stakeholders of our water bodies. They are also the natural custodians of the water bodies for the simple reason that Good Fish Needs Good Water. The Government of India in the Ministry of Shipping has approved an Inland Waterways Project in the Loktak lake of Manipur. The lake, a Ramsar site, is the life line of Manipur. It provides livelihood to more than 50,000 fishers and many more in the downstream. The lake is unique. It has the world's only floating national park. The lake is already under severe pressure because of a hydel power plant and Ithai dam. The government did not care to consult the fisher people, let alone taking their consent before sanctioning the project. All Loktak Lake Areas Fishermen's Union of Manipur and National Platform for Small Scale Fish Workers (Inland) have demanded cancellation of the Inland Waterways Project in Loktak.

All Loktak Lake Areas Fishermen's Union of Manipur (Allafum), Indigenous Perspectives, Manthan Adhyayan Kendra-Pune and Manipur Nature Society has prepared a more detailed critique of the Loktak Inland Waterways Improvement Project. Blockage of water inflow and outflow from Loktak has been blocked by construction of Ithai dam on Manipur river. It has resulted in reduced replenishment of fish stock in the lake from river, reduced flow of lake water and massive weed infestation of the lake. The small scale fishing communities of Loktak, under the leadership of ALLAFUM has taken the initiative to clear the lake of weeds to appeal to the larger sections of the society and morally pressurise the Government of Manipur to come forward. NPSSFW(I) warmly greets ALLAFUM and its associates for their exemplary initiative and extends all support to them. We believe, together we shall be able.

Manipur: NPSSFW(I) protests against Loktak Inland Waterways Project

"The Government of India in the Ministry of Shipping has approved an Inland Waterways Project in the Loktak lake of Manipur. The lake, a Ramsar site, is the life line of Manipur. It provides livelihood to more than 50,000 fishers and many more in the downstream. The lake is unique. It has the world's only floating national park. The lake is already under severe pressure because of a hydel power plant and Ithai dam. The government did not care to consult

the fisher people, let alone taking their consent before sanctioning the project. National Platform for Small Scale Fish Workers (Inland) demands cancellation of the project.

Manipur on the move to conserve indigenous fish species

<https://www.easternmirrornagaland.com/manipur-on-the-move-to-conserve-indigenous-fish-species/>

"Manipur's Fisheries Minister N Kayisii said steps have been taken up to conserve indigenous fish species in the state. Replying to a question raised by opposition MLA K Ranjit Singh at the ongoing Budget Session on Wednesday, he said with non-availability of indigenous fish species namely pengba, Meitei-ngamu, porom, ngamu-bogra and Meitei-ngakra, 10 Murrel Hatcheries (6 in Imphal West district 2 in Bishnupur 1 each in Imphal East and Thoubal) have been opened to conserve and production of indigenous fishes under National Fishery Development Board, Hyderabad. Also, he said with the implementation of Bio FLOC, a new technology of rearing fish, there will be sufficient production of indigenous fish in the state. The minister however informed the House that the state is yet to take up necessary move for making "ngari, traditional dry fish in the state. Agriculture Minister V Hangkhanlian informed the House cultivation cannot be taken up at an estimated area of 99,153 hectares due to drought. Due to scarcity of rainfall, drought like situation in the state, the state cabinet decided to declare drought in the state on August 31 last year, he said.

Accordingly, he said report was submitted to Relief and Disaster Management Department and as per the report and Inter ministerial central team visited the state during October 11-17 the previous year for spot verification. Proposal of the State for Relief Assistance is under consideration in the ministry. For the drought affected areas, an amount of INR 6,02,93,000 was sanctioned for procurement of different Rabi seeds from state fund as per contingency crop plant proposed by the department, he added. Replying to another question by congress MLA K Ranjit Singh, the minister also informed that 100 water pumps have been procured and distributed to the beneficiaries for use in the drought affected areas in the state. He further informed that a memorandum of understanding was signed between the pump beneficiaries and District Agriculture Officer (DAO) that the pump allotted to them will be returned to the concerned Officer.

Manipur: Loktak Lake chokes from a catastrophic project flagged off 50 years ago

<https://www.thehindu.com/sci-tech/energy-and-environment/manipurs-loktak-lake-chokes-from-a-catastrophic-project-flagged-off-50-years-ago/article30759633.ece>

"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. Lady of the lake 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 boats 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. What lies beneath 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 paralysing or sterilising 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.

Manipur: Vanishing wetlands: Another outcome of anthropogenic pressures

http://epao.net/epSubPageExtractor.asp?src=news_section.editorial.editorial_2020.Vanishing_wetlands_Outcome_of_anthropogenic_pressures_TSE_20200203

"Once lost, it would be impossible to retrieve or regenerate any of the wetlands which are closely associated with our world view and of course, livelihood. The report that all wetlands of Manipur except Loktak and Pumlentpat have virtually vanished is a wakeup call for the

Government, NGOs, the civil society and the general public to do something significant to save these dying wetlands. Observing the World Wetlands Day every year on February 2 will be of little value if it is restricted to just impressive speeches and power-point presentations without any action. Generally, a wetland is defined as an area of land that is saturated with water – either through the year or for varying periods of time during the year. Wetlands are typically shallow so sunlight can penetrate the surface to facilitate subterranean photosynthesis, making these ecosystems one of the most biologically productive areas on the planet. If one goes by this definition, classifying the Loktak Lake as a wetland is highly debatable. One may classify Loktak as a wetland or a lake or both, but Loktak is central to a vast portion of the State's history, cultural evolution, mythology, folklores and undoubtedly ecology.

Loktak Lake and the other wetlands which are now fast vanishing have been constant sources of varied aquatic food, in addition to water creatures such as fish, mollusc and others. Legends talk of how various water bodies have supported livelihood of the general populace of Manipur. People living in the vicinity of such water bodies, developed skills, which later on became traditional occupation of the area, passed down from generation to generation as forms of knowledge. Then is it the traditional occupation of the people living in the vicinity which has been threatening wetlands or has led to loss of wetlands?. Perhaps, people dependent on these wetlands might have harmed them inadvertently, out of compulsion to some small degree. But it is largely modernisation and urbanisation projects which have taken a very heavy toll on wetlands. Unfortunately, almost all these modernisation and urbanisation projects are directly executed or patronised by the State. Modern state is often quite pervasive in its action. Welfare is the catchword. Every available means would be used in the name of development for welfare and justice, yes, in the name of the people.

All the urbanisation projects and construction works executed after filling up wetlands were directly or indirectly exonerated by the State in the name of 'development' and 'welfare'. However, it never bothers to pay attention to the structural violence unleashed in the process of undertaking development or preservation and protection project. The Loktak Protection Act 2006 is one such instrument which is embedded with structural injustice. First point worth considering is the restriction placed upon the people in terms of access to the lake for livelihood purposes. The notified areas are too small to accommodate the people who have been traditionally dependent on the lake. In this denial mode, what is being suppressed is use of one's knowledge and skills, which ultimately form the core of one's occupation and source of livelihood, passed down from generations, and the related issue of transformation of one's identity, for example from a fisherman to an agricultural labourer. Encroachers need to be punished but one also has to distinguish between an encroacher and a dependent on the lake. Wetlands across the world have been increasingly facing several anthropogenic pressures and

Manipur is no exception. Rapidly expanding human population, large scale changes in land use/land cover, multiple development projects and improper use of watersheds have caused serious impacts on wetlands. As such, it is these areas which the State, NGOs, the civil society and the general public must pay extra attention if the vanishing wetlands of the State must be saved. It is a hard fact that our ecosystems have been shrinking exponentially as the wetlands vanish one after another.

Manipur: Community fish farming may change the economic landscape of our wetlands

<https://www.thesangaiexpress.com/Encyc/2020/2/2/Free-ThinkerToday-one-of-the-focuses-of-our-economy-is-wealth-creation-I-am-not-an-economist-but-certainly-I-am-committed-to-the-development-of-my-State-and-prosperity-of-my-people-The-Union-.html>

"Today one of the focuses of our economy is 'wealth creation'. I am not an economist but certainly I am committed to the development of my State and prosperity of my people. The Union Budget and the Economic Survey 2019-20 provides ample scope for rethinking or reworking on our economic activities. Pisciculture and fish production is going to be one of the priorities. The objective is to produce 200 lac tons of fishes in the years to come, by 2023. And 500 fishing organizations are going to be encouraged. Here our state may take a pro-active role. We are a fish consuming state. We are importing fishes from other States and also from Myanmar. According to an estimate we consume approximately 52 thousand tons of fishes in a year and our annual production is about 32 thousand tons . That means we import nearly 20 thousand tons of fish from outside. New initiatives and incentives are in the pipeline from various agencies for pisciculture and for increasing the fish production. We the people of Manipur and particularly those who are living in the appropriate locations must take the advantage of the new policy .

Hopefully the DoNER and NEC will also be activated to give importance to fish production in the northeast. Those who are already in fishing or fish - farming may look for the novel opportunities which are likely to come sooner or later. Our fishing communities may organize themselves as fishing co-operatives or organizations and do business unitedly. They may pull in resources and do fish farming in the local water bodies. Community fish farming may change the economic landscape of our wetlands. The State Government may extend all kinds of support to such activities. As projected by the Fisheries Dept we are likely to become self-sufficient in fish within a few years from now. Fish farmers will definitely be benefited if they play an active role in the new policy initiative of the Government of India. The proposed PPP (public private partnership) model in the health sector will prove to be a boon for us. This positive signal may bring about a boom for medical tourism in the State. Our doctors and nurses are one among the

best in country. If we are in a position to set up better and bigger hospitals thousands of patients will come to us for treatment.

As of now many patients are coming from Myanmar and neighbouring States. This PPP model will also give us a boost in setting up super specialty hospitals in the State which is again going to be a blessing for us. This will not only encourage medical tourism but generate huge employment in the State. We will be able to establish more number of private hospitals like Shijas, Babinas, Chambers, Christians, etc. I am extremely confident that the entire people in the northeast will come to our State for treatment. We will have more patients than Assam. Another wealth propagation initiative is the use of MGNREGA for fodder farming. We certainly need fodder for our cattle, pony and pigs. If MGNREGA fund is utilizable for fodder production this will create more money for the rural folks. This option is going to bring financial comfort to many families in the remote hills and valley. One Fruit one district may prove very beneficial for the State. For instance orange for Tamenglong.

We have plum friendly areas, lemon suitable sites, pineapple plausible region accordingly we may arrange and take advantage of the schemes and program as stipulated by the Budget and subsequent policies. Another focus is on assembling things. By assembling alone China becomes the biggest supplier of electronic items, computers and mobile phones. Our State Manipur may follow the dragon model and become an assembling hub for mobile phones which is futuristic. The components can be procured from the ASEAN countries through Myanmar. Now we should be more open with Tamu and Mandalay. The most important thing is that we must keep our eyes and ears open so that we become aware of what is going on in the economic front. And in the interest of the State and people we must take up and pursue the economic activities and pursuits which are best suited for us. We must explore all possible opportunities for creating wealth for the people. Finally for creating wealth I would like to say ""Buy land, they are not making it anymore "" Mark Twain.

Manipur: More than 1000 trained in fish & sea food processing

<http://e-pao.net/GP.asp?src=28..290120.jan20>

"After the launching of the 12 hours' (3 days @ 4 hours per day) training programmes on ""Job role: Fish & Sea Food Processing Technician"" on December 18, more than 1000 beneficiaries have been given proper training till date, under the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Recognition to Prior Learning (RPL) phase-1 of the Skill India Mission. A press release issued by Director, DDU Centre for KAUSHAL, DMU stated that the ongoing training programme is being organised at the existing infrastructure of the DM Community College by the Unique Trust, under the sponsorship of the Food Industry Capacity & Skill

Initiatives (FICSI), New Delhi, with a targeted goal of training to 2000 beneficiaries within the age group of 18 to 56 years.

Students of DMC of Science, DMC of Arts, DMC of Commerce, GP Women's College and LMS Law College (under DMU), Imphal are actively participating at the training programme as an add-on course to their undergraduate degree courses, it added. Self Help Groups, local clubs & organisations in the peripheral areas of Loktak lake, womenfolk, unemployed educated youth, drop outs and several other people including retired employees are also found actively involved in the training course, which is organised to enhance their skills in the fish and sea food processing and the economic growth of the State. The training programme will continue till February 15 to cover a targeted goal of 2000 beneficiaries, it added. The training courses are now conducted in two shifts per day i.e. Morning shift (from 8 am to 12 noon) and evening shift (from 1 pm till 5 pm) with an intake capacity of 50 in each batch. A stipend of Rs.500 per trainee along with the qualifying certificates, issued by FICSI, will be awarded to those who successfully completed the training and qualified in the assessment conducted (under FICSI) at the end of every three days of training. No fee is charged for joining the training, it said and added that anyone who have passed class VIII, attained the age of 18 years and willing to join the workforce in the fish and sea food processing sub-sector can come to the Community College along with their Bank passbook for transfer of stipend, Adhaar card for registration in the Skill India Portal.

Manipur: Biofloc technology: The new and improved technique in aquaculture

<http://e-pao.net/GP.asp?src=22..210120.jan20>

"A three day training programme on fish farming using Biofloc Technology under the topic, ""Biofloc technology and fish management"" was kicked off at CAU HQs in Lamphel today. The training programme was organised by the Directorate of Extension Education, CAU under the sponsorship of ICAR-ATARI, zone-VII. CAU Vice Chancellor professor M Premjit graced the function as the chief guest while Fisheries Department Director N Gojendro attended as guest of honour and Extension Education CAU Director Professor RK Saha as president. Altogether 40 people took part in the 2nd batch training programme. Speaking at the inaugural function, Vice Chancellor M Premjit said that Biofloc technology first started in Israel while adding that the technology has now reached Manipur, which is fortunate and fitting as well. People of Manipur consumes fish considerably while many farmers are engaged in fish farming as well, he said. There are more than 280 fish species in the State and as such it is important for regular farming to be converted into modern farming.

Biofloc technology is a technique of enhancing water quality in aquaculture by recycling nutrients and maintaining the water quality, Premjit said while adding that this technique will make fish feeds 60 percent cost effective. Biofloc technology is eco friendly and has less environmental impact with zero or limited water exchange which in turn increases fish production and its survival period, maintained Premjit.

Manipur: Video: Loktak Lake: Fate of the floating wonder

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

"Loktak Lake, the largest freshwater lake of Manipur, is the lifeline for the people of the state. But it holds much more significance for the fishermen community. This lake is their primary source of livelihood. But now it has become a fight for survival for the fishermen. Government policies announced to conserve the lake is posing a huge threat to the fishermen as most of them lack any alternative livelihood skills. ""When I was young and was following my elders' footsteps, we could invest Rs 500 in fishing equipment, and catch fish worth Rs 1,000. However, now we have to invest Rs 20,000 in the equipment and we catch fish worth only Rs 500. The quantity of fish in the lake is going down,"" said Sanatomba, a local fisherman. Sanatomba spends most of his time on this floating lake, doing what he is best at, fishing and supporting his family. There are about 3,000 others, like Sanatomba. For them, Loktak is the only way to provide two square meals for their families. Situated at a distance of 53 km from Imphal, the state capital of Manipur, Loktak Lake is best known for its floating islands and floating huts or Khangpok built on the phumdis, a series of floating islands, by the fishing community.

With an area of about 26,000 hectares, Loktak is the largest fishery resource of Manipur accounting for more than 50% of the fish producing area. About 12% of Manipur's population depend on its resources. No wonder, Loktak is referred to as their 'Mother' by the fishing community. However, the removal of a large number of fish culture ponds from the core area of the lake has led to massive economic displacement. Enakhunba, who is a second-generation fisherman, is now struggling to make ends meet. "This Khangpok on the 'Ema' (mother) Loktak Lake allows us to earn a living and take care of my family. If I stay at home (house on the land, a small island on Loktak Lake called 'Karang') I can't afford to send my kids to school or even feed them. The way we are living (fishing from hut) is because we are poor and don't have a choice. I owe money to other people. I built this hut on 'Ema' Loktak so that I can lead a normal and respectable life in the society. I don't know why people say it is fun to catch fish but to us fishermen it is a hard life, said Enakhunba.

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. Making things worse for the fishermen, in November 2011, an eviction drive to vacate the fishermen 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. This resulted in sharp decline of earning capability of the fishermen resulting in untold hardship for them. Kh Deven, president of the All Loktak Lake Areas Fishermen's Union, termed the Manipur Loktak Lake (Protection) Act. They are now demanding a Fishermen Welfare Rights Act from the state or the Central government. ""On the govt policy front, one would find that the govt has initiated a lot of policies, but they are not eco-friendly and also not people-oriented. As a result, a fisherman still faces a lot of problems. Today what we (fishermen) want is a Fishermen Welfare Right Act from the state or the central govt, it is our foremost demand. We don't have any policy to do with fishermen specifically, due to which the fishermen have no right of fishing and have no access to central govt sponsored schemes,"" said Kh Deven.

The Manipur Loktak (Protection) Act of 2006, which is making the lives of fishermen more difficult. The act stipulates a core zone of around 17.3 square kilometres, which is a totally protected area and is a no-development zone and inside this area, we have revenue villages like Thanga, Karang, Ithing. You also have restrictions on fishing. Inside the core zone, one cannot use 'laang' (fishing net), ropes, stones, but how do we fish without a fishing net?"" asked Deven. ""We don't want to criticise govt policies, but what we want is that government should engage with the public before the formulation and implementation of any project, so that it becomes a success,"" he added. Despite being surrounded by rich resources; most families now living there do not have enough money to buy fishing equipment. This has forced the women folk to sell their ornaments in exchange to buy a large fishing net, locally known as 'Innjao' and other fishing gadgets.

""To purchase an 'innjao' (large net), we have to sell our women's gold ornaments since we did not have the cash to buy nets. Each net costs Rs 3000 to 4000 and along with solar panels, battery and lights we spend around Rs 60000 to 70000 on fishing equipment. A poor man like me does not have such a large sum of money so I have to beg and borrow as well. With fishing, we manage to earn Rs 2,000 to Rs 3,000 on a good day and Rs 200 on a bad day,"" said Enakhunba. Fisherman Sanatomba laments that the degrading value of the lake due to various factors is alarming as the pulsating lake, which is about 500 sq km during the rainy season shrinks down half during winter. He fears that Loktak might soon lose its sheen if proper steps to safeguard the lake are not taken. The water level in the lake is surplus from May to November but the level depletes during the rest of the year.

""The quantity of fish in the lake is going down, if this continues, by the time my grandchildren grow up they will only see fish in photographs,"" said Sanatomba. Life for the women folk is not easy. Enakhunba's wife Purnima has to continuously juggle between treating the fish and making them market ready and taking care of her family.

Manipur: PFA says worried about development of Loktak Inland Waterways

<http://e-pao.net/GP.asp?src=17.041219.dec19>

"Asserting that the development of Loktak Inland Waterways project will bring the same amount of loss as gain, People for Animals Manipur has urged the State Government to consult experts before it goes on with the project, which has been approved by the Ministry of Shipping. PFA has raised concerns over numerous impacts of the project that will bring rapid destruction to the environment and the biodiversity of the lake in terms of noise pollution, water pollution etc while adding that the project might also harm the beauty of the lake and the natural environment of the species. Maintaining that the lake is the home for many indigenous and endangered species including Sangai, varieties of birds, insects, fishes etc, it added that Loktak is also the feeding ground of many hibernating birds. It continued that these species are dependent of each other and they are crucial as it maintains the balance in the eco-system of the lake. PFA also appealed to all the people residing near the lake and its surrounding areas to help conserve the lake and the species living there. Warning the residents that PFA will take legal help against those who use LED lights or illegal equipment for fishing, it urged the people not to harmful equipment to catch mass fishlings/fishes. It added that the destruction it causes to the surrounding can be levelled as the aftermath of the project too. PFA further appealed to the State Government to consult experts before taking up such project and consider the consequences before initiating it.

Manipur: Inland waterways project will destroy Loktak Lake's biodiversity, says fishing community

<https://indianexpress.com/article/north-east-india/manipur/manipur-inland-waterways-project-will-destroy-loktak-lakes-biodiversity-says-fishing-community/>

"The fishing community residing in and around the Loktak Lake area has strongly objected to the Inland waterway project to be developed on the water body claiming it will destroy its biodiversity and the livelihood of fisherfolks. Mansukh Mandaviya, minister incharge for Shipping and Chemical and Fertilizers, last Thursday informed the Parliament that the Ministry of Shipping has approved a project for the development of Loktak inland waterways.

The estimated cost of the project is Rs 25.58 crore. The minister claimed that the project will help boost tourism and connectivity in the largest freshwater lake in the entire Northeast. Some people have already raised a red flag for the proposed project on the grounds that it will be harmful to biodiversity. O. Rajen, secretary Loktak Lake Area Fishermen's Union Manipur (ALLAFUM), contended that the project could spell disaster for both the fishing community and sensitive biodiversity. He claimed that people residing in and around the lake have been eking out their living from the water body since time immemorial and fishing is their main occupation. At least 4,000 fisherfolks reside in and around the lake.

“Uses of motorboats will greatly disturb the eco-system of the Lake. It will only affect the breeding of fish but also disturbed the annual migratory birds that visit the lake, said Rajen. Accordingly, the Ministry of Environment, Forest and Climate Change has also put a ban on uses of motorboats on the lake, he added. Rajen further pointed out that the project is also against the order passed by the Manipur High Court on August 7, banning new project or development programme in the Lake asking the authority concerned to furnish a status report on the conservation of the Lake. Environmentalist Ram Wangkheirakpam said the project goes against the idea of conservation of the lake which has international importance under the Ramsar Convention. Moreover, the project has also ignored the National and State Wetland rules, he asserted.

“How can the ministry give approval to a project of such scale without even conducting a proper environmental impact assessment of an eco-system which is very sensitive. This is not a wise decision? questioned Wangkheirakpam. Loktak Lake is situated in Moirang in Bishnupur district about 45km from Imphal city. The lake is home to many indigenous fish species and flora besides being home to migratory birds. Each winter season, Manipur witnesses a spectacular gathering of migratory birds around Loktak Lake. Some of these birds, mainly wild ducks, come to Loktak from Central Asia, Tibet, Siberia, and Yunnan province- flying 3,2000-4,800 kilometers over the Himalayan ranges. These migratory birds come to the state every October till early March. December and January are the peak season.

Manipur: Doubling fishermen’ income: Fishcopfed opens office in Manipur

<http://www.indiancooperative.com/fishcofed/doubling-fishermen-income-fishcopfed-opens-office-in-manipur/>

"Despite being unable to obtain service charges from the GOI, the apex body of fisheries cooperatives- Fishcopfed opened its 9th office at Imphal, Manipur last week. This is the second office of Fishcopfed in the North eastern state. Sharing the news with Indian Cooperative, Fishcopfed MD B K Mishra said, “Manipur has a huge potential for fisheries development. The

Department of Fisheries, Govt. of Manipur has provided the office space. “In addition to the office, one aqua shop shall be operational from the Directorate to provide quality fishery inputs to the fish farmers of Manipur at competitive rates. Besides fisheries cooperative development, Fishcopfed shall focus on the smooth implementation of PMSBY and PMJJBY Schemes in the State, he underlined. The federation has also participated in the Annual Fish Mela. The presence of Fishcopfed in the state was well appreciated by the Minister of Fisheries, Govt of Manipur, said Mishra to this correspondent.

Now fishcopfed has its offices in all the north east states and these offices will extend technology training to fish farmers in order to increase their production capacity. During the launching the Fisheries Minister and the Addl. Chief Secretary of the State were also present. It bears recall that the federation failed to get service charges of Rs 2 crore from the govt which has been pending for the past seven years. Earlier in 2017, Agriculture Ministry has asked the fishery cooperative body to open their offices in each state without providing for financial resources. Fishcopfed has its offices in states like Assam, Bihar, Odisha, Chhattisgarh, Maharashtra, Telangana, and Tamil Nadu. Mishra reiterated his view that the enhanced contribution of Fishcopfed can play an important role in ushering in Blue Revolution in India. In last financial year 2018-19 fishcopfed provided insurance cover under a PMSBY policy through Oriental Insurance Company Ltd to 30,39,374 fishermen from 24 states and 5 Union Territories.

Manipur: Loktak Lake gasping for breath due to haphazard planning

<https://www.eastmojo.com/in-depth/2019/10/26/manipur-loktak-lake-gasping-for-breath-due-to-haphazard-planning>

"Famous for its floating islands (phumdis) and picturesque landscape, the condition of the Loktak Lake in Manipur is, sadly, deteriorating. Researchers blame changes in the hydrology due to the construction of dams, blockage of migratory routes for fish, drying up of wetlands from siltation and exploitation for declining indigenous fish variety in the lake. A study funded by Society of Wetland Scientists indicated that the highest loss of land used class was in phumdis with thin vegetation (49.38 sq km) followed by phumdis with thick vegetation (8.59 sq km), while there was an overall increase in open water bodies (27 sq km) in the past 38 years. The 266-sq-km Loktak is Northeast India's largest freshwater lake and a Ramsar site of international importance. This ancient lake plays an important role in the economy of the state. It serves as a source of water for hydropower generation, irrigation and drinking water supply. The lake is also a source of livelihood for the rural fishermen who live in the surrounding areas and on phumdis, also known as phumshongs.

Loktak Lake is fed by the Manipur river and several tributaries and Ithai Barrage (Ungamel Channel) is its only outlet now. The origin of the Manipur river system and its tributaries, which flows in a north-south direction and drains into the lake is from the hill ranges immediately to the west of the lake. The five major rivers with indirect catchment area of 7,157 sq km are Manipur, Iril, Thoubal, Sekmai and Khuga. The other streams which drain into the lake and which bring in lot of silt are Nambul, Nambol, Thongjarok, Awang Khujairok, Awang Kharok, Ningthoukhong, Potsangbam, Oinam, Keinou and Irulok. The lake is located on the southern side of the Manipur river basin and is at the lowest elevation in the valley and no other major river flows into the lake, except a few rivulets. Impact of the Ithai Barrage Ithai Barrage was constructed in the downstream of Manipur river as a part of the National Loktak Multipurpose Hydro-Electric Project, to maintain sufficient water volume in the lake by making it a reservoir for maintenance of the project.

The project was commissioned in 1983. With the construction of the Ithai Barrage, there have been certain changes in the climatic condition and socio-economic life of the people and environment of Manipur. One major impact of the Ithai Barrage on the environment of Manipur is the flooding of several thousand hectares of agricultural land around the Loktak Lake. The maintenance of constant water level of Loktak Lake due to the Ithai Barrage has flooded the agricultural land around the lake, which were previously utilised for cultivation. Secondly, phumdis have been disappearing. Maipakchao Oinam, president of the Loktak Eco-tourism Development Organisation, explained that the phumdis float during the rains and sink during the dry months, sucking nutrients from the lake bed to replenish their roots and float again when the next monsoon cycle begins.

“This has been their life cycle for centuries but it is now at grave risk. The Loktak Hydroelectric Project constantly keeps the water level in the lake high. Unable to feed from the nutrients on the bed, the phumdis are thinning out and even breaking away. Worse, local residents themselves are breaking off pieces of the biomass to sell elsewhere as rich fish culture soil, he added. The third impact of Ithai Barrage is high level of siltation in Loktak Lake. The blockade of water current in the outlet of Loktak Lake through Manipur river has affected the normal flow of river and helped in depositing of silts at Loktak Lake itself from different inlets of the catchment areas. Fourthly, ecology of the peripheral areas of Loktak Lake, which were used as grazing ground of cattle in the past, have become inundated due to the maintenance of constant water level of Loktak Lake by Ithai Barrage. Even the existence of endangered brow-antlered deer of Keibul Lamjao National Park is at high risk. “The environment around Loktak has been changed and the number of cattle and buffaloes has been reduced to a great extent in the last five years.

It directly and indirectly affects livelihood of the villagers, says a village elder of Thanga. Most importantly, indigenous fish varieties of Loktak Lake have vanished in last two to three decades following the construction of the Ithai Barrage across the Manipur river. KH Deven, a local NGO worker of Loktak, explained, “Fish prefer shallow areas for breeding but the constant high level of water in Loktak for the functioning of the barrage has destroyed their breeding habitats. In addition, the run-off from chemical fertilisers used in agriculture and untreated sewage from Imphal also directly affects the biodiversity of the lake. “Before the construction of the barrage, minor carps such as Pengba (popular fish in Manipur) used to migrate from Myanmar to Manipur and enter Loktak Lake upstream for breeding and spawning, Deven said. Last year, Manipur governor Najma Heptulla claimed, “As many as 16 species of indigenous fishes are believed to have become extinct due to the blocking of water by the Ithai barrage. Heptulla was speaking at a closing function of the 63rd Wildlife Week celebration organised by the Manipur state forest and environment department.

Damage to the indigenous fishing community Catching fish has been the main source of livelihood of people of Thanga and its surrounding villages. “In the past, some 70-80 years ago fish was found in abundance in Loktak Lake. The catch was so abundant that we (fishing community) had to develop the skills and process of preserving fish for future uses by drying in the sun and smoking in the fire and further keep dry fish over long periods for sale, said Henthoyi, a resident of Thanga village and a retired fisherwoman. In 1990, the Ramsar Convention declared Loktak a wetland of international importance. And in 2006, the Loktak Development Authority (LDA) enforced the Manipur Loktak Lake (Protection) Act, under which the government began to clear the lake of human encroachment and fisher folks were asked to leave the phumdis. But the fishing families refused to leave their traditional habitat. The LDA issued a notice on November 11, 2011 and asked phumsang dwellers to evacuate their settlement and take Rs 40,000 each as compensation. LDA officials claimed that 519 families received the compensation and the rest refused to accept the compensation, saying it was too little and protesting the disruption to their means of livelihood.

After few days, LDA officials and armed policemen torched their huts and around 777 huts were burnt down. Oinam Rajen of All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) alleged that the eviction was “illegal. He questioned, “How Th Ibobi Singh (then director of LDA) ordered the eviction? Only magistrate can sign such order but LDA ignored the constitution and burnt down our houses. Later they moved the Gauhati High Court and currently only 333 families live in their phumsangs at Loktak after High Court passed a stay order on eviction on February 25, 2012. However, Leishangthem Susindro Meitei, who was recently appointed as the chairman of LDA, said, “Central government is continuously monitoring the insurgency activity in Manipur. The eviction was carried out by the Congress government as a

part of maintenance of internal security of the state. However, Rajen demanded scrapping of the 2006 Loktak Development Act. “How they can label us ‘encroacher’ while Champu Khangpok (his village) was mentioned as revenue village in 2001 and 2011 census with population of 1,687 and 2,002 respectively, asked Rajen with a document as proof in his hand. Rajen further explained that the rights of fisher folk are being curtailed in the name of conservation and they are prevented from carrying traditional fishing equipment inside the lake as per provisions of the act. Sharing a similar sentiment, another senior member of ALLAFUM said the demand for fish has increased in past decades. However, adequate fish is not available in the lake. There is a need to balance ecological protection and human needs.

The government needs to take up some development schemes for the fishing community of the Loktak and others around the lake. Manipur High Court Division bench passed an order on August 7 this year, prohibiting any of the state government departments, even the Manipur state wetlands authority, from taking up any new project or development programmes concerning Loktak Lake without permission from the court. The order was passed in connection with a PIL taken up by the High Court on its own, for the preservation of Loktak Lake. According to LDA chairman Leishangthem Susindro Meitei, decommissioning of Ithai Barrage is the only way to restore the natural ecosystem of Loktak Lake. “NHPC caused the major damage in the lake by constructing the dam. Even the unplanned design of the dam flooded thousands of hectares of agricultural land, he said. He further claimed that LDA has repeatedly requested NHPC to clean Khodrak channel that could control of flood in the agricultural areas around the lake but NHPC is not interested to do so. Before the dam was constructed the excess water of Loktak used to be discharged to Manipur river through Khordak.

In view of the development, the villagers -- particularly the younger generation of Loktak -- expressed their desire to have certain development programmes including the skill development for the improvement their livelihood through eco-tourism activities. Suresh Laishram Singh, a recent graduate of Moirang College, said, “Hundreds of foreign tourists came every year to see Loktak Lake but hardly any people know about our homestay. I opened my homestay inside Loktak Lake two years ago but I have no idea how to get promoted. I have reached out to tourism department but nobody cares. The LDA chairman explained, “The state has very low budget but we have already taken up many positive steps towards restoring the livelihood of local communities. We have given 5 square km of lands to communities in many villages for agriculture and fishing. Moreover, there is a need for regular monitoring and implementing proper land use practices in and around the lake in order to restore the degraded ecosystem plagued by pollution and an altered aquatic regime. Many calls and text messages to local MLA of Bishnupur and chairman of Manipur Pollution Control Board Laishram Radhakishore Singh went unanswered.

Manipur: Fisheries department formulates measures to meet State's fish demand

<https://nenow.in/north-east-news/manipur-fisheries-dept-formulates-measures-to-meet-states-fish-demand.html>

"In order to meet the State's fish requirement, the Fisheries department of Manipur with the help of Indian Council of Agricultural Research and other related departments have formulated certain measures. As part of these measures, training programmes are being conducted by the Fisheries department of the State. This was disclosed by the additional chief secretary MH Khan of Fisheries, Rural Development & Panchayati Raj/Relief & Disaster Management while inaugurating a 3-day skill development programme on "Fish farm Management & Different type of fresh water Fish culture system. The programme has been conducted at the District Rural Development Authority hall of the DC complex at Chandel. Additional chief secretary Khan said the total annual requirement of fish in the State is 52,000 metric tons whereas the total production is only 32,000 metric tons. He said the gap is being filled up by purchasing from other parts of the country and this way a large amount of money is going out of the State. Khan also said the department at its head office in Imphal has started a mill for fish feeds which are being made available at Rs 55 per kg and will soon be available at Rs 45 per kg.

Regarding loan facilities, he informed that the department is facilitating loan for the interested farmers through different banks. The top official further added that Rural Development programmes like MGNREGA can be incorporated with this programme. In his speech, Chandel deputy commissioner Krishna Kumar said it is a part of the Mission Self-sufficient 2020. He further said people of the district should join hands and make it a mass movement. Kumar also said Chandel being an Aspirational district, this programme is also a part of the Aspirational district programmes. Giving her presidential speech, director Bidyarani Ayekpam of Fisheries department said the programme is being taken up for farmers with an objective of doubling their income. She added the government is always ready to support and providing an assistance of 40 pc subsidies for making new fish pond. The training is being conducted as part of the capacity building, said Ayekpam. She asked all the farmers present to take advantage of the presence of all the expert trainers and learn as much as possible. Tuesday's training programme was organised by the District Fishery Office, Chandel under the aegis of National Fishery Development Board.

Manipur: The Loktak Lake Fishermen Union (LLFU) hails HC order

<https://www.thesangaiexpress.com/Encyc/2019/8/27/IMPHAL-Aug-26-The-Loktak-Lake-Fishermen-Union-LLFU-has-lauded-the-August-7-order-issued-by-the-High-Court-of-Manipur-for-the-conservation-and-protection-of-the-State-s-wetlands-.html>

The Loktak Lake Fishermen Union (LLFU) has lauded the August 7 order issued by the High Court of Manipur for the conservation and protection of the State's wetlands. Speaking to media persons at Manipur Press Club today, the general secretary of the union, Oinam Rajen, said that after Loktak lake was included in the Ramsar site on March 20, 1990, the Central Government provided funds to the tune of Rs 86,696 crore to conserve the lake but to no avail. Even though such a huge amount was given by the Centre, no change could be seen in the condition of the lake, he alleged adding that the conditions of the lake, instead, worsened with time. In view of the grave situation, the High Court intervened and ruled that no projects or works can be taken up in the lake without approval from the Court, he added. Rajen continued that even though the Manipur Loktak Lake Protection Act 2006 exists, it has not been properly implemented till date.

With the coming of Ithai barrage, the lake's eco system and environment became severely affected, he said, claiming that Loktak Development Authority has failed to acknowledge this fact even till date. As such, if the LDA remains as the authority governing and monitoring the lake, Loktak will surely vanish within a decade, he alleged. He narrated that in the name of cleaning the phumdis in the lake, LDA targeted the fishing sites of the fishermen at Loktak from 2008 to 2013. By claiming that there were 8000 athaphum at the core zone (which did not even have 2000 athaphum), the authorities concerned looted huge amounts of money, he alleged adding that till now, there is no information regarding where the dumping site of the 8000 athaphums is. He continued that on November 11, 2011, the Project Director of LDA issued a notice stating that all encroachers at Loktak Lake would be evicted and following the order, LDA destroyed 777 huts at Loktak. Till date, the owners of 258 huts (out of the 777) are yet to receive any compensation, he added.

Manipur: Floating lake occupants mourn environment loss

<https://www.thehindubusinessline.com/blink/shoot/manipurs-floating-lake-occupants-mourn-environment-loss/article29108870.ece/photo/1/#>

The Meiteis of Manipur fight all odds to continue living on the floating huts of the Loktak and demand the removal of the Ithai Hydropower Dam that results in flooding of nearby areas, destroying livelihoods. They call it the “floating lake” for the numerous phumdis or biomass of vegetation and other organic matter that float on the lake’s surface. Thanks to its rich biodiversity, Manipur’s 287 sq km Loktak Lake was recognised as a wetland of international importance under the Ramsar Convention in 1990. The lake is home to the indigenous fishing folk Meiteis, who live on the phumdis in phumsangs or floating huts, upholding their age-old

way of living and fishing in the face of tremendous hardship. Aside from the environmental degradation that is impacting the biodiversity of the lake, the Meiteis live in constant fear of eviction.

In 2011, the Loktak Development Authority (LDA) burnt down more than 200 phumsangs and evicted their occupants, citing the Manipur Loktak Lake (Protection) Act, 2006. Rajen Oinam, a lake-dweller on the Loktak, says, “Over 700 huts were dismantled by 2013. Several of those who resisted eviction found their huts burned down. The Act prohibits dwellings on the phumdis and the dwellers were termed occupiers.” The fisherfolk of Loktak build phumsangs mostly for fishing, which is a tax-free occupation in the region. But things have been steadily deteriorating for the locals over the years. The construction of the Ithai Hydropower Dam in 1983 flooded over 80,000 hectares of farm and pasture land in the vicinity of the lake, besides impacting the fish population and its breeding cycle. Climate change has further aggravated matters. “These days, we really need to make an extra effort to catch fish. Numerous native species have disappeared from the lake,” says Suresh Laisaram Singh, a lake-dweller. The Meiteis are demanding the removal of the dam.

Manipur, Mizoram, Nagaland and Tripura: Local trade between India and Bangladesh in the Meghna Basin

<https://www.thethirdpole.net/en/2019/07/24/local-trade-between-india-and-bangladesh-in-the-meghna-basin/>

With the declaration of river Barak as National Waterway-16 (NW-16) by the Inland Waterways Authority of India, the navigational prospects of the Meghna river system have come to limelight. The Meghna basin, fed by a number of rivers originating in the hills of Manipur, Mizoram, Nagaland and Tripura, supports the lives of local riverine communities with its extensive systems of wetlands, flood plains and fisheries. Inland navigation in these rivers would not only improve hinterland connectivity of this isolated landscape but would also integrate it with mainland India through the Bangladesh-India Inland Waterways Protocol Routes. Karimganj in the state of Assam in India and Zakiganj, in Sylhet Division of Bangladesh, both located on the banks on Kushiya River, are the entry and exit points of trans-boundary cargo through Protocol Route 3 (Kolkata-Karimganj). Improving navigability up to Karimganj and linking it with NW-16 from Bhanga to Lakhipur (121 kilometres) will provide better transit connectivity between Kolkata and the hinterlands of lower Assam, Tripura, Nagaland Manipur and Mizoram.

It can facilitate cargo movement to and from Bangladesh for key commodities such as fly ash and food grains. The dredging operation between Bhanga and Silchar has already been completed. India and Bangladesh have initiated joint dredging from Ashuganj to Karimganj to improve the navigability of protocol routes. Given these developments, as part of an on-going

Oxfam programme on Transboundary Rivers of South Asia (TROSAs), CUTS International has conducted a study in the rivers of Kushiya, Haora and Gumti to explore the prospects of cross-border trade through inland waterways and its possible impact on riverine communities. At present, bank to bank cargo movement using row boats takes place from Karimganj to Zakiganj across the international border of the Kushiya River. Zakiganj on the Bangladeshi side is hardly 300 metres away from the Indian side. Mostly fruits and horticulture commodities such as apples, citrus fruits, grapes, oranges, kinnows, pomegranate, betel nuts, and ginger are exported from India to Bangladesh after their customs clearance.

Interestingly, except for oranges, citrus fruits, betel nuts and ginger which are locally produced in Meghalaya and Manipur, other fruits come from North Indian states of Rajasthan, Himachal Pradesh and Maharashtra which are hundreds of kilometres distant. This trade mostly caters to the local demand across the border in Sylhet, Bangladesh. The total value of export for the year 2018 from Karimganj steamer station was INR 154 million (USD 2.2mn). This arrangement sustains a local support system by engaging people for loading, unloading and transportation of traded commodities from nearby warehouses, thereby providing livelihoods to 400-500 people in each country. All 12 registered boats plying across the border are Bangladeshi boats and the cargo movement is from India to Bangladesh. There are about 40-50 small trucks/pick-up vans engaged in this trade as well. There is also a high demand for Bangladeshi rice and tomato varieties in the border districts of India, but an absence of proper linkages with traders on the Indian side has limited their trade to the informal sector. However, traders in Karimganj are hopeful that if the river is made navigable until the town of Ashuganj in Bangladesh, goods from Assam, Meghalaya and Manipur can reach Sylhet's market, which is a major trading hub in Bangladesh.

On the other hand and unlike Assam, inland navigation is not popular in Tripura, India. Haora and Gumti rivers originate from the hills of Tripura and are primarily used as a source of irrigation and drinking water. Extraction of huge amounts of water from the Gumti River for irrigation purpose has considerably reduced its discharge and velocity and increased sedimentation downstream, thereby impacting navigation. Unlike the trans-boundary trade happening though the land customs stations in Assam and West Bengal, custom stations in Tripura were mostly busy with imports from Bangladesh. Cement is the single most important imported product, accounting for more than 84% of the value of trade on average through the Srimantapur custom station over the last five years. Interestingly, in 2018, more than USD 350,000 worth of coal was imported from Bangladesh, which has no coal deposits of its own, and imports coal itself. Following the ban on coal mining in the Indian state of Meghalaya, Tripura's requirement for its brick kilns and tea factories has been met through these imports, which originally come from Indonesia, South Africa and Australia through Bangladesh's Payra and Chittagong ports.

It is then transported to Daudkandi by medium sized vessels/barges. From Daudkandi, it is transported by trucks to Bibir Bazar custom station in Comilla, which is adjacent to Sonamura, India. Our study has found that the Gumti River is navigable between Daudkandi to Comilla during the whole year. Considering the low lying bridges over the river between Comilla and Daudkandi, small boats of 20-25-tonne capacity make a good case for trans-boundary movements of local goods. For this to come about a few shallow locations close to the border need to be cleared by dredging and Daudkandi-Sonamura stretch should be considered as part of Bangladesh-India Inland Waterways Protocol Routes. Though coal is a commodity of immediate interest to Indian traders, local farmers can also benefit by trading vegetables and other agricultural products provided non-tariff measures related to their standards and port restrictions are addressed. Small-haul trans-boundary trade between Sonamura and Daudkandi through the Gumti River is a promising as it can be done by using 20-25 tonnes vessel capacities. Traders can avail facilities at the land custom stations of Srimanapur and Bibir Bazar in India and Bangladesh, respectively.

This is not the case for the Haora river, though. The proximity to well-developed infrastructure at the Integrated Check Post in Agartala, Tripura and the railway connectivity being developed between the two countries through Akhaura makes land and rail based trade easier. Additionally the Haora River is not only very lean but also does not have navigable depth. In short, the wetlands in the Meghna basin on the Bangladeshi side are rich in fisheries resources and these are of high demand in India. Similarly, vegetables grown in Tripura, India can fetch a good market in Comilla, Bangladesh. Such localised trade can provide better support to the lives of riverine communities, provided necessary regulatory infrastructure for trade facilitation is created. Trade-related infrastructure development such as cargo terminals, warehouses and support services will provide further employment opportunities to the local population.

With 29 trans-boundary rivers between India and Bangladesh in the Meghna basin, riverine livelihoods in border areas are vulnerable. Such locations are generally characterised by inadequate infrastructure, which result in widespread, multi-dimensional poverty. With little or no industrialisation, these border areas are prone to illegal activities including human trafficking and smuggling. Trade-induced improvements in physical and regulatory infrastructure will eventually improve the quality of life of these communities as there will be more employment opportunities leading to decent education and healthcare, among other benefits.

Manipur: Keibul Lamjao: World's only floating national park

<https://www.india.com/news/keibul-lamjao-worlds-only-floating-national-park-in-manipur-3725334/>

Located on the floating Loktak Lake of Manipur, Keibul Lamjao National Park is the world's only floating national park. It is a sight to behold; with acres of wetland overgrown with deep

floating vegetation called phumdi, the park is home to rare and unique fauna. The most beloved animal of the region is the endangered Sangai or the brow-antlered deer. In fact, the entire Loktak Lake was declared a sanctuary in 1966 in order to save the deer which was threatened by extinction. This particular species of deer is fondly also called Manipur's dancing deer because of its delicate gait as it makes its way along the floating wetlands. Other species of deer seen here include the hog deer, musk deer, sambar and muntjac, isolated populations of which occur in the park and the surrounding hills. Among the primitive primates, the commonly spotted ones include slow loris, Assamese and stump-tailed macaques and the hoolock gibbon (restricted mainly to the hills) and rhesus monkey.

The large Indian civet, small Indian civet, common otter and wild boar are some of the large mammals seen in the area. The population of tiger, leopard, panther, fox, jackal and wild dog has reduced drastically so much so that you'll hardly spot them anymore. Other rare animals to be sighted occasionally are the wild cats like the marbled cat and Asian golden cat, Himalayan black bear and the Malayan bear. A variety of avifauna can also be spotted at Keibul Lamjao and Loktak Lake. The birds are primarily of the smaller reed-dwelling species, such as the waterfowl, hooded crane, black eagle, Shaheen falcon, eastern white stork, bamboo partridge and green peafowl. If you're a hornbill lover, you're in for a treat because a lot of hornbill species are spotted here including the brown-backed hornbill, rufous-necked hornbill, wreathed hornbill, and the great pied hornbill.

Manipur: Fish farmer's day observed in Manipur

<https://www.easternmirrornagaland.com/fish-farmers-day-observed-in-manipur-2/>

In a move to recognise and promote fish farming, the 19th edition of the National Fish Farmer's day was observed in Imphal on Wednesday. The hard working fish farmers who produce both quality and quantity fish in the context of Manipur were also honoured by giving certificates and cash awards during the event. Fish is a super food with lots of health benefits specifically to reduce cardiac related ailments. In India, the awareness of fish consumption is very low. More than 70 percent of states consume less than six kg fish per person per annum whereas WHO recommends consuming 12 kg fish in a year. The global per capita consumption is about 22.3 kg per year. Director in charge A Subhas of Agriculture Department, Joint Director I Meghachandra of Indian Council of Agricultural Research (ICAR) Manipur, Senior scientist Ch Basuda of ICAR and Director Bidyarani Ayekpam of Fisheries department attended the observation in Imphal. Most of the speakers during the day's function highlighted that lack of awareness about the benefits of fish and fish farming is an important issue to be addressed to boost fish production in the country and state in particular.

Joint Director Meghachandra of ICAR expressed the need to expand fish farming in the state not only in the valley but also in the hills considering the public demands and also as an initiative to

take water bodies conservation activities while scientist Basuda appealed to regulate indiscriminate fishing during its breeding season(July). In his speech, Director in charge A Subhas of Agriculture informed that the government had been providing necessary loans (financial assistance) to the genuine fish farmers as part of promoting the fish farming so as to overcome the shortfall of fish production in the state and also to reduce the financial burden while importing fish from outside. On the other hand Director Bidyarani of Fisheries department informed that there are 25,000 registered fish farmers in Manipur. So the fish production in the state will be increased if half of them take up the intensive fish farming in the state, she felt. On the other hand, both Director-in-charge of Agriculture and fisheries Director appealed to the genuine fish farmers to apply for farming loans (financial assistance) provided by the state government in order to increase fish production and also to cut down financial burden in importing fish from outside.

Manipur: Conversion into fish farms will be disastrous

<https://www.thesangaiexpress.com/Encyc/2019/5/4/By-Our-Staff-ReporterIMPHAL-May-3-Central-Agricultural-University-CAU-Imphal-Vice-Chancellor-Prof-M-Premjit-has-categorically-warned-that-conversion-of-paddy-fields-into-fish-farms-on-account-of.html>

Central Agricultural University (CAU) Imphal Vice Chancellor Prof M Premjit has categorically warned that conversion of paddy fields into fish farms on account of declining rainfall and irregularity in rainfall pattern will bring about serious crisis in the State in future. He was speaking at the opening session of an awareness programme on Agrometeorological Advisory Services held today at ICAR, Manipur Centre, Lamphelpat. The awareness programme was jointly organised by Agrometeorology Field Unit, Imphal and District Agrometeorology Unit, Chandel. Prof Premjit said that conversion of fertile paddy fields into fish farms would bring about serious crisis in the State where rice is the staple food. However there is no harm in converting low-lying paddy fields into fish farms which are not suitable for paddy cultivation, he said. On account of the global climate change, a number of pests and insects which are seen much in the past are now very common in the State, he noted. Extension of agro-advisory services to farmers would be highly beneficial and drones can be employed to take pictures of pests or diseases which are infecting plants, Prof Premjit said. ICAR Joint Director in-charge Dr I Meghachandra said that on account of the global climate change, the State's climate condition has also changed and it is now suitable for double cropping of paddy.

There is a growing need to harvest rain water so that they can be utilised when needed, he asserted while advocating rigorous afforestation activities. During the technical session of the awareness programme which was attended by farmers from different districts of the State, Dr I Meghachandra and Prof L Nabachandra spoke on different topics. On the other hand, according to a report published by ICAR Imphal after studying weather data from 1958-2014 under the National Innovation on Climate Resilient Agriculture (NICRA), the State's mean annual

maximum temperature rose by 0.1 degree Celsius in one decade while mean annual minimum temperature rose by 0.3 degree Celsius in one decade. It further projects that the State's mean temperature would rise by 1.7 degree Celsius by the end of the 21st century. Southern districts will become hotter and agricultural productivity would decline by 10 per cent in 2030, says the report. Incidence of heavy rainfall (above 100 mm) will grow, there will be shortage of potable water and the State's food grain deficit would rise to 2218,000 tonnes in 2050, mentioned the report.

Manipur: Declining rainfall turns paddy fields into fish farms

<https://www.thesangaiexpress.com/declining-rainfall-turns-paddy-fields-into-fish-farms/>

On account of the declining annual rainfall in the State, a number of paddy fields where double cropping was done have been converted into fish farms. The average rainfall rate was 1473.9 mm in a year but the rainfall rate has been declining since a few years back. As a result, a number of paddy fields where paddy was cultivated twice a year are being converted to fish farms. Compelled by the pervasive impact of climate change, large tracts of paddy fields located on the eastern side of Loktak Lake along Mayai Lambi are being converted into fish farms. One Sarangthem Inaoba (44) of Yumnam Huidrom said that a number of paddy fields have been converted to fish farms as the seasonal rainfall was quite unpredictable and inadequate during the past five years or so. Like many other farmers, Sarangthem Inaoba was seen making a fish farm out of his Mayang Imphal paddy field. Even though paddy is still cultivated in paddy fields located close to Loktak Lake as water is available from the lake, large tracts of paddy fields located further off the lake at Paobitek, Yumnam Khunou, Chirai, Chabung Company, Konchak and Mayang Imphal are being converted into fish farms.

While fish ponds have been dug in a considerable number of paddy fields, there are many paddy fields which remain dry and uncultivated. Fish ponds which are dug anew must wait for seasonal rainfall before they can be used for rearing fish. One Sitara Begum (40) of Wangoi Paobitek said that paddy is no longer cultivated in a large number of paddy fields since the last 10 years. Some farmers did cultivate paddy but the paddy plants were flooded and completely destroyed for three consecutive seasons. Sitara said that large cracks have surfaced on her paddy field but there is no source of water to irrigate the dry paddy field. She said that the nearby river and canals have all dried up. Unique Wildlife Protection Committee, Sekmai jin member Budha Elangbam said that many farmers have been able to earn more after converting their paddy fields into fish farms. Cultivation of paddy over one Sangam could earn Rs 20,000 to Rs 30,000 in a year but if one Sangam of paddy field is converted into a fish farm, a farmer can earn over Rs three lakh in a year, he said. ICAR Imphal's Agrometrology Advisory Services Nodal Officer Dr Irengbam Meghachandra said that the impacts of global climate change have already reached the State. The thunderstorms which swept across the State recently in which three people were killed was one phenomenon of the global climate change, he said. Felling of trees has been adding more

destructive power to cyclones and windstorms as they face little obstruction on their way in the absence of trees, Meghachandra.

Even though the average rainfall rate has been declining in the State, many parts of the State faced floods as there was excessive rainfall during certain months of the year. In January this year, the State received 3.4 mm of rainfall against the expected or normal rate of 13.5 mm. The corresponding figures for the months of February March and April are 20.3 mm against 40.9 mm, 36 mm against 75.9 mm and 70.1 mm against 123.4 mm. As the rainfall rate is quite inadequate, paddy seeds on jhum fields are unable to germinate. Likewise, many paddy fields in the first phase are not yet fit for first phase of paddy cultivation, he said. Farmers need to understand the climatic changes before the situation grows worse and there is an urgent need to expedite afforestation activities, said the Nodal Officer. To avoid drought or drought like situation, small dams must be constructed at different places across rivers flowing down from hills. It would be more beneficial if fishes are reared in the water held up by these small dams, he added. Directorate of Environment's Climate Change Nodal Officer T Brajakumar said that conversion of dry paddy fields into fish farms is a traditional practice aimed at adapting to climate change and the same was done by farmers in the past too. Nonetheless, the departments concerned need to support the farmers' initiative to rear fish in place of cultivating paddy by providing technical inputs so that their initiative is more productive, Brajakumar said. He also underscored the growing importance of harvesting rain water.

Manipur: Climate change hits hard fishing community of Loktak Lake island

<https://nenow.in/north-east-news/manipur-climate-change-hits-hard-fishing-community-of-loktak-lake-island.html>

The fishing community of Karang which is India's first cashless island located in the middle of Loktak lake in Manipur is still facing various forms of hardship due to climate change and factors relating to the commissioning of the Loktak Project in the eighties, according to the villager elders. The villagers who buy everything except water in their daily life, also claimed to have spotted a new kind of unknown aquatic insects around the island in the recent past besides experiencing rise of mosquito population. This was shared by some of the elders and local club functionaries of Karang, a picturesque lake island located in the middle of the Loktak which is the largest freshwater lake in north east India when a team of journalists working in different districts of Manipur visited the island last week. The journalists' team visited the Island which was named as the first cashless island in India by the Union Ministry of Electronic and Information technology under its Digital India Programme in January 2017, as part of two day media workshop on climate change reporting organized by the Khelen Thokchom Trust in association with the Directorate of Environment and Centre for Media Studies, Delhi. "The environment around Karang has been changed and it directly and indirectly affects livelihood of the villagers after the commissioning of the Loktak Project," says a village elder.

Sharing a similar sentiment, president S Kheda of Karang Island Development Organisation (KIDO) said that the normal income of the fishing community of the island has also been declined and affects the school education and subsequently the school drop out rate is on the rise in the last few years. "So now the government needs to take up some development schemes for the fishing community of the island and others around the lake," he said. Citing degradation of the lake environment and various forms of fishing activities in the lake, he said, adding, "Unlike the past, the villagers cannot earn much." Earlier a fisherman usually earns around Rs 500 by selling fish and aquatic plants available in the lake on a daily basis. In view of the development, the villagers particularly the younger generation of this picturesque lake island located about a two-hour drive from Imphal including boat ride expressed their desire to have certain development programmes including the skill development for the improvement their livelihood through eco-tourism activities and others over come the challenges which are being faced by the villagers. Karang is inhabited by about 3,000 villagers, according to KIDO.

Manipur: State needs average fish production of 3,000 kg/ha to be self sufficient: Expert

<http://e-pao.net/GP.asp?src=19..160319.mar19>

A three day training programme on skill development and capacity building in fisheries sector for fish farmers, entrepreneurs from Imphal West district started yesterday at the Training hall of Directorate of Fisheries, Lamphel. The programme on the topic "Advance Fish Culture Practices for enhancing fish production" organised by Department of Fisheries, Manipur under the sponsorship of National Fisheries Development Board (NFDB), Hyderabad was attended by Bidyarani Ayekpam, Director Fisheries, Manipur as chief guest and Dr RK Saha, Director (Extension) CAU, Lamphel and Dr Ch Basudha Devi, Senior Scientist (Fishery), ICAR for NEH Region, Lamphel as guests of honour respectively. Speaking at the event, Dr RK Saha said that even though the potential is very high, the State is yet to meet the per capita consumption requirement. The Directorate of Extension Education, Central Agricultural University (CAU), lamphel has received fund from the NFDB for setting up Aquatic Animal Health Laboratory, which will help the State farmers to identify fish disease, test soil and water quality etc, he said. He appreciated the Director of Fisheries for installing a fish feed mill in Imphal, which he said will help increase fish production.

Senior Scientist, Dr Ch Basudha said that skill development and training programme for the farmers are very important for exchange of scientific technology. The average fish production of State is less than 1,000 kg/ha whereas in Andhra Pradesh it is more than 7,000 kg/ha, she said. The State needs to produce an average of 3,000 kg/ha to be self sufficient, she added. Director of Fisheries, Bidyarani Ayekpam said that the State has high fish production potential. The department is giving due importance to augment the gap between production and requirement of the State. Even if the State Government and Centre give financial assistance in the form of subsidy or grants to the fish farmers, it will not be materialized unless the farmers take the

initiative to utilize the resources, she said and encouraged the farmers to culture high priced and high yielding species of fishes to generate more income. Fishery specialists from ICAR, KVKS and experts from other institutes attended the programme. 55 fish farmers from Imphal West district are attending the training programme.

Manipur: Banks are providing loans to 239 fish farmers

<https://www.thesangaiexpress.com/govt-working-on-rs-10000-pension-for-retired-scribes-biswajit/>

Out of Rs 7,97,80,608 sanctioned for the State under Ayushman Bharat scheme for 2018-19, Rs 2,58,80,329 has been spent. Against, 56,728 people who applied for the scheme, medical assistance has been given to 1,109 beneficiaries, Jayantakumar said in response to a query raised by O Henry. Replying to another question raised by Surjakumar, Fishery Minister N Kayisii said that the total annual fish requirement of the State is 52,000 metric tonnes and the State's total annual fish production is 32,000 metric tonnes. As such, the gap of 20,000 metric tonnes are imported from outside the State and its total cost may be around Rs 400 crore, Kayisii said. With a view to make the State self-reliant in fish production by 2020, the State Government has constituted the Manipur State Fisheries Development Technical Committee. At the recommendation of the State Government, banks have given loans to 239 fish farmers against 2871 fish farmers who applied for similar loans. Machinery required for setting up a fish feed mill in Imphal West will arrive in the State within the next couple of days, Kayisii added.

Manipur: Steps on to achieve self sufficiency in fish production by 2020

<https://nenow.in/north-east-news/steps-achieve-self-sufficiency-fish-production-2020-manipur.html>

Manipur government has taken up various steps to achieve self sufficiency in fish production by 2020, the state fisheries minister N Kayisii said. A committee under the banner Manipur state fisheries development technical committee initiated by the state chief minister N Biren Singh has been constituted in this regard. All banks operating in the State were invited to extend financial help in terms of loans to fish farmers in the State, minister Kayisii said while responding to a question by opposition Congress MLA Surjakumar Okram of Khangabok Assembly constituency in Thoubal district during Assembly session on Saturday. So far, a total of 239 loans out of 2871 applicants were sanctioned as the first phase as on February 8 this year, he said. A fish feed mill plant is being established at government fish farm Imphal west district for producing quality fish feed at affordable price. He also informed that 18 fish farms will be opened in 10 districts of the State following the guidelines of the Central scheme. He assured the House that a Cabinet memo will be prepared for regularisation of the 87 contract employees of the Fisheries Department and it will be put up for Cabinet decision.

Opposition members K Meghachandra of Wangkhem and P Brojen Singh of Wangjing Tentha constituency moved policy cut on fishery department in the day's session. Participating in the demand discussion, leader of the House and chief minister N Biren Singh informed the House that as a measure to increase the fish production in the State, the Government has identified suitable areas for fish farming at Moirang, Oinam, Bishnupur, Wangoi, Konthoujam and Lamshang. He said that the officials of Fisheries Department have met the fish farmers of the concerned areas and has tied up with banks to provide timely loans to the beneficiaries. Stating that 2,871 fish farmers applied for the fish loan, he informed that 239 beneficiaries were provided fish loan. Informing the House that the Government will prohibit fishing during breeding season of the fishes, he said that various types of fish culture will be adopted to increase the fish production in the State. He said the department has procured fish feed machine which will help to manufacture fish feeds within the State. Noting the importance of high consumption of Ngari (fermented fish) in the State, he said that the State needs to focus on large scale production of phabou-nga (*Puntius chola*) which is used in making fermented fish and noted that the import of the particular fish from outside the State poses threat on health.

Manipur: ICAR and Fisheries Department push for improving fish production

<http://e-pao.net/GP.asp?src=18..190219.feb19>

ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata, organized an interactive workshop on 'Openwater Fisheries Management of Manipur' in collaboration with Directorate of Fisheries, Department of Fisheries, Manipur today at the conference hall of the Directorate of Fisheries, Lamphelpat. The objective of the workshop was to share vast works and achievements of ICAR-CIFRI in managing and enhancing fisheries in large waterbodies, especially in reservoirs and wetlands of the country and how to plan and implement similar activities in the State of Manipur. The major focus was on simple and low-cost technologies (such as pen and cage aquaculture) and guidelines (fish stock enhancement) that are to be popularized in reservoirs, large lakes, swampy areas and rivers of the State for improving fish production. Fish forms an important food item for the people of Manipur with more than 95 percent of the State's population being fish eaters. The present level of fish production in the State is 32,000 tonnes (2016-17) as against the total requirement of about 52,000 tonnes of fish, showing a shortfall of about 20,000 tonnes. This shortage is partly met by importing fish from other States. Manipur has got a production potential of about 65,000 tonnes of fish per annum. For harnessing this, sustainable utilization of available inland fisheries resources and application of modern scientific fisheries management protocol, including enclosure aquaculture techniques developed by ICAR-CIFRI, needs to be implemented.

Manipur has unique, vast and varied inland fisheries resources comprising of 30,171 hectares of natural lakes/flood plain wetlands, 13,888 hectares of rivers and streams, 11,442 hectares of ponds/tanks and 960 hectares reservoirs covering 56,461 hectares, which is approximately 2.52

percent of the total geographic area of the State. Inland openwater fisheries resources such as lakes, rivers and reservoirs are largely un-exploited and have high potential for increasing fish production from them. The major theme of the workshop is dissemination the knowledge generated by ICAR-CIFRI for development of inland fisheries in the State of Manipur without compromising ecosystem and environmental sustainability. During the inaugural session, Dr Sona Yengkokpam, Scientist, ICAR-CIFRI Regional Centre, Guwahati, welcomed the invitees, guests and 50 participants from the Department of Fisheries, Manipur. Dr BK Das, Director, ICAR-CIFRI, Barrackpore and convenor of the workshop, emphasized that the Department of Fisheries, Manipur, should look into diversification of fish species having local preferences. He assured all support in terms of technology back stopping for management of open water fisheries in the State.

Khamsing Ahum, Additional Director of Fisheries, Manipur urged his Departmental officials to take full advantage of the knowledge generated by ICAR-CIFRI on management of Inland open waters. Dr AK Das, Principal Scientist, ICAR-CIFRI, Barrackpore, expressed his optimism that food fish demand and supply gap of Manipur can be minimized if inland openwaters of the State are optimally utilized. In the Technical session of the workshop, Dr BK Das discussed management of openwaters of India by ICAR-CIFRI and encouraged the Departmental officials to take interest in developing openwaters of the State/. He also shared his vast experience in cage aquaculture across different reservoirs and wetlands of India. Khamsing Ahum presented the status of openwater fisheries resources of Manipur, Dr Sona Yengkokpam discussed pen aquaculture demonstrations and experiments done in different NE States, which proved to be successful in terms of economic viability and Dr Dipesh Debnath, Scientist, ICAR-CIFRI, RC. Guwahati, discussed cage aquaculture demonstrations and experiments done in different NE States, that can be replicated in Manipur. In the valedictory session. Bidyarani Ayekpam, Director of Fisheries, Manipur thanked Dr BK Das, Director, ICAR-CIFRI and all the scientists of the ICAR-CIFRI for organizing the workshop at Imphal and sought active collaboration and support in future endeavours of the Directorate of Fisheries, Manipur.

Manipur: Wetlands Day: Tapping methane gas from Loktak Lake under study

<http://e-pao.net/GP.asp?src=24..030219.feb19>

State Wetland Authority, Manipur, convener Dr T Brajakumar has conveyed that the State Wetland Authority is planning to conduct a scientific study for tapping methane gas from Loktak Lake. Speaking at the World Wetlands Day Observation under the theme "Loktak Lake for Our Future Generations" which was organized by All Loktak Lake Areas Fisherman Union Manipur (ALLAFUM) at Langolsabi Champu Khangpok Floating Village, Loktak today, Brajakumar (who is also the Deputy Director of Department of Environment, Manipur) went on to inform that sophisticated tools for conducting the scientific study have already been ordered from outside the State and it (the scientific study) will be initiated once the tools reach the State. If the

scientific study is a success, the tapped/extracted methane gas from Loktak Lake can be used for many useful purposes, he added.

Stating that the Central Government had approved the State Government's proposed project for cleaning solid waste from Nambul River and that the said work will begin this year, the convener exuded confidence that pollution level at Loktak Lake will be minimized to a great extent if the said project is completed. Reminding that World Wetlands Day is celebrated on February 2 every year under different themes to mark the date of adoption of the Convention on Wetlands on February 2, 1971, in the Iranian city of Ramsar, Brajakumar also highlighted that this year's theme for the observation of World Wetlands Day is "Wetlands and Climate Change" . INTACH, Manipur Chapter Convener Dr RK Ranjan opined that the condition of Loktak Lake has changed immensely compared to the past. He further pointed out that the number of migratory birds coming to Loktak Lake has drastically declined in the last few years while informing that British environmentalist Humes had given an account of finding more than 30,000 birds and a large number of species in the same lake, during the 1930s.

The commissioning of the Loktak Hydro Electricity Power Project and Ithai Barrage project have led to immense and adverse impacts to Loktak Lake as well as to its surrounding villages causing the disappearance of many indigenous fish species/varieties apart from submerging large areas of cultivable lands/paddy fields in the surrounding villages, he said. While maintaining that Manipur no longer has food security due to extinction of cultivable lands, he also contended that demanding right to food security will be quite beneficial towards the conservation of Loktak Lake. He then observed that the proposal for construction of ring roads nearby Loktak Lake will amount to destruction of the lake's ecosystem. ALLAFUM advisor Kh Ibochou said that the Government has not attended to the issue of ever increasing siltation in Loktak Lake due to draining of solid waste materials from major rivers like Nambul River. He continued that the Government has been putting efforts on cleaning useful phumdis but the unwanted phumdis have not been cleared.

Saying that the Government is introducing mechanized boats in the name of developing Inland Waterways Transport System at Loktak Lake, the advisor noted that mechanized boats emits lots of oily residues which will increase the pollution level. Noting that Loktak Lake is providing a source of livelihood for many fishermen apart from being a prestigious natural gift to all Manipuris, Ibochou asserted that the World Wetlands Day observation was organized with the main objective of preserving Loktak Lake. Imphal Free Press Editor Pradeep Phanjoubam, MU Professor W Vishwanath and Green Foundation member Thiyam Rinita, among others, also attended the function as presidium members.

Manipur: Protest against proposed bird sanctuary in Manipur

<https://www.thehindu.com/news/national/other-states/protest-against-proposed-bird-sanctuary-in-manipur/article26055282.ece>

The Manipur government's plan to set up a bird sanctuary at the Loktak lake in Bishnupur district has met with stiff opposition from the villagers in nearby areas. A large number of residents of Thingnunggei village took out a massive procession against the government's proposal on Sunday. "The villagers of Thingnunggei are poor and they have no other means of earning a livelihood except for catching fish and plucking vegetables from the lake. If fishing is banned in the lake, the villagers would starve. We are all for protection of birds, most of whom are migratory, but the new scheme should not be implemented at the cost of the poor villagers," said one of the protesters. Declining number Thousands of migratory birds flock to the Loktak lake, the largest freshwater lake in north-eastern India, every year.

However, in the past few years there has been a sharp decline in the number of migratory birds coming to the lake. Reports indicate that bird poachers are active in the area, targeting the winged guests. Officials of the forest department's wildlife wing say in view of the widespread bird poaching at the lake, setting up of the sanctuary is a must. Birdwatchers on the other hand blame human intrusion, bird poaching and hydroelectric power project near the lake for the decline in the number of migratory birds and brow-antlered deer in the Keibul Lamjao national park in the vicinity. Brow-antlered deer Some decades ago, the villagers of the lake islets had agitated against setting up of the Keibul Lamjao National Park, the natural habitat of the endangered brow-antlered deer. They wanted the land demarcated for the park to be made available to them for cultivating paddy. Now, several years later, the latest census suggests that there are only 260 brow-antlered deer in the Keibul Lamjao national park.

Manipur: Fishing for a life and livelihood in Loktak

<https://www.thehindubusinessline.com/specials/india-interior/fishing-for-a-life-and-livelihood-in-loktak/article25745235.ece>

Fisherfolk dwelling on this unique Manipur lake face many challenges, including a dwindling catch Neighbours Ibohal and Babu, who live on Manipur's Loktak lake, are pulling their phum-shang (meaning dwelling in the local language) towards a new area. Their wives are helping them in the task. They are being forced to do this as the fish around their habitat has started to dwindle, so it is better to move towards an area where they feel they will find more fish and other edible water plants. Phum means floating biomass and shang means hut. These phum-shangs are small huts of fishermen families built upon the floating biomass of Loktak lake. Moirang, where the lake is situated, is about 40 km on the southern side of Imphal, the capital of Manipur. The lake stretches to about 287 sq km in surface area and for centuries, families have lived on the biomass area that roughly covers 30 sq ft of the lake. Families here are primarily fisherfolk,

whose sole livelihood is catching fish — the harvest of the lake. But things seem to be deteriorating for the lake dwellers.

“These days, we really need to make an extra effort to catch fish,” says Ibohal, as he explains the reason for shifting his shang towards a greener pasture. The shifting of the hut includes shifting of the entire biomass on which the hut stands, and this indeed is physically a very challenging job. The phumdi, on which the hut stands, is encircled with a strong rope. The rope is tied and rolled to a pole and pulled on the other end of the rope towards whichever direction it has to be moved. Thus, the phum slowly sways and moves. The movement from one place to another is usually not far, approximately 200 ft. Once this is achieved, the lake dwellers fix their fishing nets in and around the huts and in various places across the lake. In the night, the fisherfolk paddle in their wooden boats through the lake, waiting for the fish. With lanterns and, in recent times, re-chargeable torches, they remove the catch from the nets and take it early morning to the market to be sold. It is transported across the State and, most importantly, to markets in the Capital city of Imphal. “These days the catch is small” laments Ibohal. “Earlier we used to get good income from selling fish. Nowadays we earn only between Rs. 50 and Rs. 100 a day”. The 63-year-old has been fishing and living on the lake ever since he learnt to catch fish as a child while assisting elders in the family.

Hit by eco degradation, evictions But life has become even more hard than before. That could, perhaps, be one reason why a fisherman like Biren has turned his shang-hut into a cosy, one-room homestay on the lake. “I used to take students or tourists to study or view the lake in my boat, that’s how I realised that a homestay on the lake would be ideal,” he says. He and his wife are managing the home and going that extra mile to ensure they follow all the green norms regarding waste and plastic. Of late, Loktak lake dwellers face tremendous hardship and challenges. Besides the environmental degradation that is impacting the biodiversity of the lake, and decreasing fish species, the major challenge for them are evictions. Several families have fled the lake due to their dwellings being demolished. Until 2010, there were more than a thousand such dwelling huts on the Loktak. Today, only around 200 shangs remain. “Fortunately, we have not faced any untoward incident so we continue to stay put here,” says Ibohal. Post enactment of the Loktak Protection Act, 2006, by the State government and subsequent court order, eviction of Loktak phum dwellers began in 2011. According to media reports, over 700 huts were dismantled by 2013. Several of those who resisted the move found their huts burned down. The Act prohibits dwellings on the phumdis on the lake and the dwellers were termed “occupiers”.

The Act was purportedly for providing the administration control for the protection, improvement, conservation and development of the natural environment of the lake. Babu, Ibohal and Biren say that the huge Ithai dam construction has caused tremendous rise in the level of water in the lake and this has also impacted the fish population. If you try to speak to the dwellers on the evictions, you are met with a studied silence. They have escaped it and want to

be left alone. And that is not surprising, as the unique and picturesque Loktak is the only freshwater waterbody in the entire North-East of the country. The traditional fishing community has lived for centuries on the floating biomass with the lake's natural resources as its main source of sustenance. Considering its ecological status and biodiversity value, the lake was designated as a wetland of international importance under the Ramsar Convention in 1990.

Manipur: Government Mulls Road Map to Boost Fish Production

<https://www.northeasttoday.in/manipur-government-mulls-road-map-to-boost-fish-production/>

In a bid to boost fish production in the State, the Manipur Fisheries department is planning a road map. The road map is aimed at increasing fish production by utilising available natural resources, besides encouraging beels. Speaking at a daylong meet on 'Innovative approaches for development of freshwater aquaculture in Manipur' at the ICAR Manipur Centre here on Tuesday, Manipur Chief Minister N Biren Singh said that the State Government has taken a slew of initiatives to promote aquaculture in the State by involving the youths. "We will introduce new schemes for unemployed youths so that they can become self-reliant through fish production," the Chief Minister said. Participating in the programme, Director Bidyarani said, "We are trying to focus on skill development programmes for fish farmers in order to boost production."

The meet was organised jointly by the ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar, ICAR-Manipur centre, Fisheries department, Manipur, and the Central Agricultural University, Imphal. Additional Chief Secretary MH Khan appealed to scientists of different government institutes to share their inputs for the successful running of fisheries in the State. In his speech, Prof W Vishwanath of the Life Science department of Manipur University highlighted the importance of conservation activities while taking measures to increase fish production in the State. He also underscored the need for integrated farming for better results. Director N Prakash of the ICAR, Northeastern Hill region, Joint Director Dr I Meghachandra of the ICAR, Manipur centre, and Director of Extension Education of the Central Agricultural University, Dr Ratankumar Saha, also attended the programme.

Manipur: Will become self-sufficient in fish production by 2020: Fisheries Minister

<https://indianexpress.com/article/north-east-india/manipur/will-become-self-sufficient-in-fish-production-by-2020-fisheries-minister-5439690/>

Manipur Fisheries Minister N. Kayisii said Manipur will strive towards achieving self-sufficiency in fish farming and would discontinue import of fishes from outside the state by 2022. Kayisii was speaking as the chief guest at the Fish Fair-cum- Fish Crop Competition 2018 held at DM College of Arts, Thangmeiband, Imphal Thursday. Of the 52,000 metric tonnes of fish required for consumption in the state only 32,000 metric tons are being produced by the fish

farmers of the state annually while the remaining gap is filled by importing it from other states. Minister Kayisii said that fish farming activities are mainly concentrated in the valley when hill areas have the potential for fish farming. Observing that fish farming can be a great tool to solve unemployment and poverty, he encourages people to take up fish farming. This year's fish fair saw a wide participation of fish farmers from all over the state where approximately 90,000 kgs of fishes were put up on sale. Altogether 90 fish stalls from different districts and fish farms including stalls of Fisheries Department, ICAR, CAU and College of Fisheries, were opened.

Fish fair cum fish crop competition is being held to facilitate buyers and also to encourage fish farmers by giving marketing facilities. Amom Tiken, general secretary of All Manipur Fish Farming Society Association said that proper growth of fish takes time and aquaculture farmers will have to suffer three years due to the flood that occurred this year. Noting that 30,000 hectares of land in the state is suitable for the fishery, he said fish from Manipur can be exported rather than import if the fishery department helps the farmers in using the suitable lands for fishery which will, in turn, generate employment in the state too. Tiken further said though water is the most important raw material for fishery, land and a proper market is also very essential for developing it. In June last during a meeting with the fishermen of the state, Chief Minister N. Biren Singh also assured to enhance fish production in the state. He said there is vast scope for fish farming as there are abundant water bodies in the state. He also mooted to set up fish feed factory at an estimated cost of Rs. 1.5 crores in the state soon under the PPP model.

Manipur: CM launches 'Loktak Livelihood Mission' around 1000 hectares area identified for pisciculture

<http://e-pao.net/GP.asp?src=1..241018.oct18>

To protect the largest Freshwater Lake of the NorthEast India and to provide employment opportunities to fish farmers and youths of the State, Chief Minister Shri N.Biren Singh today launched the Loktak Livelihood Mission. The launching function was held at Ningthoukhong, Bishnupur District today. Speaking as Chief Guest of the function, Chief Minister said that our State is spending of about Rs 400 crores annually for the procurement of fish from outside the State, Chief Minister assured that State would have self sufficient fish production by 2020 . Farmers would be encouraged to take up pisciculture, he added. Altogether around 1000 hectares of land have been identified in areas like Mayang Imphal, Bishnupur, Wangoi and Thanga for fish farming, he added. With such cage culture farming, fishes would be matured and can be produced in three months, he added. Chief Minister spoke elaborately on the harmful effects of fertilizers and other chemicals on human health. He mentioned that prolonged usage of such chemicals and fertilizers are the main cause of various deadly diseases among the people of the State.

Mentioning the advantages of organic fertilizers and vermicompost during farming, Chief Minister said that it will benefit in two ways i.e. cost effective and healthy living. He said that Self Help groups would be formed in villages to prepare vermicompost and other organic fertilizers. Chief Minister said that people of the State want a government that is result oriented and the present government is committed to fulfil the aspirations of the people and wouldn't give any false promises. The government is committed to work at grassroots and uplift the lives of the poor people. The government has introduced various welfare programmes such as CHMT, CMST, and Start-up Policy etc. Encouraging the farmers and unemployed people of the State to apply Manipur Start-up Policy, Chief Minister said that subsidized loans have been given to hundreds of unemployed youths, entrepreneurs recently. He mentioned that he had sacrificed the rest of his life for the welfare of the people of the State. While delivering his Presidential address, Minister for CAF&PD Shri Karam Shyam said that it is the bounden duty of the people of the State to protect and preserve Loktak Lake.

Stressing on the Loktak Livelihood Mission, Minister said that the farmers and unemployed youths should seize the opportunity. Mentioning various initiatives of the government, Minister said that the Cabinet decision to institute Lok Ayukta in the State is a clear stand of the present government to bring transparency in governance and root out corruption. Minister for Agriculture Shri V. Hangkhanlian, Minister for PHED Shri Losii Dikho, Chairman Manipur Pollution Control Board Shri L. Radhakishore, Chairman PDA Shri T. Robindro, Deputy Speaker Shri K. Robindro, Chip Whip, Government of Manipur Shri P. Sharatchandra, MLA Sekmai AC Shri H. Dingo, MLA Yaiskul AC Shri Th. Satyabrata, Former Union Minister Shri Th. Chaoba, Addl. Chief Secretary Dr. Suhel Akhtar, DC and SP Bishnupur and others attended the function.

Manipur: Impact of the Ithai Barrage on the Environment of Manipur: An Overview

http://e-pao.net/epSubPageExtractor.asp?src=news_section.opinions.Opinion_on_Building_of_Tipaimukh_Dam.Impact_of_Ithai_Barrage_on_Environment_of_Manipur_By_H_Tombi

Ithai barrage was constructed in the downstream of Manipur River (Imphal River) as a part of the National Loktak Multipurpose Hydro-Electric Project, to maintain sufficient water volume in the Loktak Lake by making it a reservoir for maintenance of the project. The construction of the national multipurpose project was taken up by the Ministry of Irrigation and Power in 1971. The project was executed by National Hydro-Electric Power Corporation and commissioned in 1983 at an estimated cost of Rs. 115 crores. It was installed to generate 105 MW of power by 3 units (each producing 35 MW.) and to provide Life Irrigation facilities for 24,000 hectares of land. In fact, the Imphal River is the only outlet of draining water from the central valley of Manipur, since all the rivers, streams and major water bodies in the valley are connected directly or indirectly through the Loktak Lake, and subsequently drained outside the state joining the Chindwin-Irrawaddy system of Burma. Hence, Ithai barrage can be considered as the main gate

which control quantity of water of Manipur Central valley, playing an important role in the environment of the valley as regards to the water supply, water storage, flood, drought, agriculture, fishery, irrigation, power production, aquatic flora and fauna etc. of Manipur central valley in particular and Manipur state in general.

It appears that the barrage which was constructed as a part of the Loktak Hydro-Electric Project has now become a major problem for the socio-economic life and environment of Manipur. With the construction of the Ithai barrage and initiation of Loktak Hydro-Electric Project, there have been certain changes in the climatic condition and socio-economic life of the people and environment of Manipur in general. Environmental Impact of Ithai Barrage: A preliminary survey on the environmental impact of the Ithai barrage has revealed certain points of merits and demerits of the project in the socio-economic and cultural life of the people of Manipur along with the changes in the environment of Manipur. The Merits: With the completion of Ithai barrage and commissioning of the multipurpose project there have been certain environmental changes, benefiting the people of Manipur which are really considered to be the merit points of the project as described below. 1. Preservation of the Lake and Conservation of Water: The retention of constant water level of Loktak to 768.5 above mean sea level, with the help of the Ithai barrage, could be considered as a means for the preservation of the lake. It has stopped the usual practice of land encroachment in the peripheral areas of the lake.

It helped in the accumulation of sufficient water volume to supplement water storage and water supply problem of the state, which are related to various environmental problems of the states e.g. flood, drought and buffering the climatic condition of the state. There could be altogether a different scenario of Loktak Lake by now, if we leave the lake to continue the natural process with the increasing siltation and land encroachment in the past 2/3 decades. The existing areas of Loktak Lake (276 sq. km.) could have been reduced to a great extent by about 50 sq. km. only with an average depth of less than 1 metre if we did not take up the project. 2. Generation of Power: The generation of 105 MW of electrical energy (in 3 phases of 35 MW each) has been a significant contribution of Loktak Lake. Out of the total production of 105 MW only 35 have been used for Manipur state and the rest 70 MW have been sold to other neighbouring states. Thus the state could earn in income of nearly 21-22 crores of Rupees per year (nearly 6 lakh rupees per day) from the power generation of Loktak project. In the year 1991-1992 the project could generate excess amount of energy increasing the income to about Rs. 30 crores in one year thereby increasing the power production by 17.3% over that of the previous year 1990-1991. 3. Irrigation Facilities: In addition to the power generation Loktak Multipurpose Project has been able to provide water for lift irrigation of nearly 25,000 hectares of cultivated land area thereby giving the facilities for double-cropping in these areas.

4. Employment Opportunities: The initiation of Loktak Hydro-Project has given employment to about 500 people directly as staff of the project itself. Besides, the project has given the opportunity for starting various small scale industries in the rural areas using the power

generation to giving employment for at least 2,000 people. 5. Supply of Water for Loktak Down Stream: Besides, the power generation from the Loktak project itself the project will be giving the water supply for the proposed Loktak down Stream Project also which is proposed to produce 96 MW of power supply for the state. The Demerits: Despite the various merit points of Loktak Project there are several points of demerit for the project affecting the socio-economic and cultural life of the people of Manipur and environment of the state as a whole as described below: 1. Flooding of the Agricultural and Land Surrounding the Lake: One major impact of the Ithai barrage on the environment of Manipur is the flooding of several thousand hectares of agricultural land and around the Loktak Lake. The maintenance of constant water level of Loktak Lake due to the Ithai barrage of the project has flooded the agricultural land around the lake, which were previously utilized for cultivation. It is also reported that certain agricultural areas beyond the Ithai barrage on the other side of Loktak lake is also flooded with the water from Chakpi River since there is no counter current from Imphal river due to the blocks with Ithai barrage (Ibomcha Singh, '92). It is estimated that nearly 20 hec. of agricultural areas have been submerged under the water spread of Loktak Lake due to Ithai barrage.

In fact, Ibomcha Singh, (1992) reported an estimate of about 83,450 hac. of agricultural land affected by the Loktak project, and a loss of about 400 crores by the Loktak project, and a loss of about 400 crores of rupees from the products of the flooded areas. 2. Damage to the Naturally Fishery of Manipur: A recent survey on the disappearance of several indigenous fishes of Manipur e.g. Ngaton, Khabak, Pengba, Tharak, Ngara, Ngatin, etc. indicated the Ithai barrage as one of the major cause for the disappearance of the fishes and loss of our natural fishery. It has been observed that these fishes migrated from the Chindwin-Irrawady system of Burma to the course of Imphal/Manipur River for breeding in the adjoining lakes and streams of Manipur valley. In the past, these natural fisheries constituted about 60% of the fish products in the state since the culture fishery was not common in Manipur till 1960. With the construction of Ithai barrage the migratory route of these fishes were blocked and they could not reach the valley and disappeared from our waters. This caused a great loss in our state fishery and economy. 3. Damage to Aquatic Plants of Flood and Commercial Importance: The increase in the water level of Loktak Lake due to Ithai barrage has caused a great damage to the production of aquatic plants of food and commercial importance.

As for instance the production of about 23 aquatic food plants e.g. Heikak, Thangjing, Tharo, Thambal, Loklei and Pulei etc. has been significantly reduced due to the failure in the germination and extension of their roots to the bottom soil of the lake. On the other hand, the water level in the southern part of Manipur river beyond Ithai barrage has been greatly reduced due to the blockade of water flow by Ithai barrage, caused the failure in the growth of 'Nungsam' which normally grew on the pebbles under the water current. These also caused a great loss in the economy of our state. Besides the food plants a number of plants of commercial importance like, Tou, Singnut, Imom, Charot etc. of commercial importance have also been disappeared or

greatly reduced due to the increase in the water level of Loktak lake. These caused a heavy loss in the state's economy. 4. Affecting the Ecology of the National Park: The maintenance of constant water level of Loktak Lake due to the Ithai barrage has a serious effect on the ecology and existence of the seriously endangered Brow-Antlered Deer of the floating Wild Life National Park of Keibul Lamjao. The seasonal floating and sinking of the Phumdies in the National Park which play an important role in the nutritional cycle of the vegetations in the National park has not been possible due to the constant water level of the lake.

The vegetations which serve as the food and shelter of the seasonal sinking of the Phumdies to get the nutrients from the bottom soil of the lake. Further, the Phumdies become thinner in the peripheral areas of the park and small factions got detached from the main body of the phumdies thereby decreasing the area of phumdies for existence of the deer. Many deer are also killed when they are carried away along with the Phumdies which get detached from the main mass of phumdi. 5. Increasing Siltation Rate of the Loktak Lake: The blockade of water current in the outlet of Loktak Lake through Imphal River due to Ithai barrage has affected the usual removal of the silt with the current of water from Loktak Lake. Then it helped in depositing the silts to Loktak Lake itself from different inlets of the catchment areas of the lake. This led to the increase rate of siltation in the lake thereby raising the lake bottom. 6. Increasing Accumulation of Phumdies Inside the Lake: The blockade of water current in the outlet of the Loktak Lake through Imphal River due to Ithai barrage also blocked the floating away and removal of the phumdies from Loktak Lake to Imphal River. This caused the increased mass of phumdies inside the lake itself which covered nearly 75% of the surface of the lake. This is another problem for increasing the water level of the lake due to the floating mass of phumdies of nearly 1-2 metres in thickness. The increasing phumdies have spoiled the normal ecosystem and beauty of the lake.

The removal of these phumdies at least 50% will be very necessary in the management of the lake. 7. Grazing Ground of the Cattle: The peripheral areas of Loktak Lake and several elevated areas inside the lake which was used as the grazing areas inside the lake which was used as the grazing ground of cattle in the past have become inundated due to the maintenance of constant water level of Loktak Lake by Ithai barrage. This caused a great destruction in the grazing grounds of the cattle that cattle rearing and buffalo rearing in the villages in and around Loktak Lake has become difficult. Subsequently, the number of cattle and buffaloes has been reduced to a great extent in the past 5/6 years. 8. Unemployment Problems of the People: With the inundation of peripheral areas of Loktak Lake several thousands of hectares of land could not be used for agriculture and it caused the loss of the employment opportunities for more than one lakh people. Apart from the failure in agriculture, cattle's rearing was also not possible since there is no grazing ground of the people. The indigenous technique of Phoom fishing in Loktak Lake also becomes difficult due to the constant rise of water level in the lake. Hence, the Ithai barrage caused unemployment to more than one lakh people in and around the lake.

Conclusion From the observations of our preliminary study on the impact of Ithai barrage on the environment of Manipur it appears that there has been several points of demerits, of Ithai barrage causing serious environmental problems in general especially with regards to agriculture, fishery and socio-economic aspects of the people in the state. These could have been avoided to some extent if we could have taken up an environmental impact assessment of the project before its initiation. Now, it is expected that the Loktak Development Authority would take up certain management plans as remedial measures with due consideration of the maintenance of the natural ecosystem of the lake as much as practicable. The primary objective of the management plan could be (1) control of flood in the agricultural areas around the lake; (2) to improve the natural fishery and fish production of the lake; (3) to retain the power generation and irrigation facilities from the lake; (4) to improve the ecology of Keibul Lamjao Wild Life National Park as far as practicable; (5) to take up special measures to stop any further process of siltation, eutrophication and encroachment of the lake; (6) to improve the natural fishery and fish production of the lake; and (7) to retain the natural ecosystem of the lake as far as possible. These could be possible through a dialogue between the local administrators, expert members and representative of the inhabitants in and around the lake, with advice and suggestions from external experts.

Manipur: Native fishes in troubled waters

<https://india.mongabay.com/2018/10/12/manipurs-native-fishes-in-troubled-waters/>

Hailing from a fishing village in Manipur's Loktak Lake, which has seen indigenous fish varieties flounder in recent decades, Tongbram Amarjit Singh's dream project since his school days was to document and showcase the slowly fading traditional fishing practices of his community. Mapping the decline in indigenous fish species, fish catch and the concurrent waning of traditional techniques of fishing through his grandparents' and parents' experiences, Singh was stirred to act to preserve and conserve a culture integral to the identity of his community. Now a 35-year-old, Singh, an English translator at the state Legislative Assembly, has given shape to his dreams, with the help of his family and community, in the form of the Loktak Folklore Museum, in the island village of Thanga in Loktak Lake. Presenting an array of fishing gear – basketry items, traps ("lu thamba"), impalers, hooks, fishing rods, cotton and fabric twine and more, this private collection is dedicated exclusively to Loktak and its environment, said Singh, who belongs to the Thanga Tongbram Leikai locality. "While growing up we used to see our parents and their parents bring in steady amounts of fish both for consumption and for sale.

Now due to growing population and environmental changes, the consumption and production is imbalanced. Indigenous species that form the mainstay of our diet are disappearing from the lake and so are the fishing tools," Singh said. To say fish ("nga" in Manipuri) is an important source of protein for the Manipuris is an understatement. About 90 percent of people in the state are fish

eaters. Anything from 1 cm to 100 cm has value. Swimming in stews to smoke-dried to fermented (“ngari”), fish is ubiquitous. Social functions and ceremonies also involve fish. In the “nga-thaba” wedding ritual, for example, a pair of “ngamu” or Ceylon snakehead (*Channa orientalis*), is let go in water, symbolising the newlyweds’ journey. They relish fish and consequently fishing gears are customised to suit this dietary staple. “But in some decades, these tools may go out of fashion and documenting them is important for our cultural memory,” Singh told this visiting Mongabay-India staff writer. Loktak is northeast India’s largest freshwater body, a sub-basin of the Chindwin-Irrawaddy river of Myanmar and a Ramsar Wetlands of International Importance site.

Of at least 200 species of indigenous fish in Manipur, Loktak, at present harbours 38 of them, researchers said. Scientists at Manipur University and Zoological Survey of India (ZSI) blame changes in the hydrology due to construction of dams, blockage of migratory routes, drying up of wetlands due to siltation, eutrophication, water quality deterioration and overexploitation (open access nature of resource) for declining indigenous fish diversity in the lake. As many 16 species of indigenous fish are believed to be extinct due to blocking of water by the Ithai barrage according to Manipur Governor Najma Heptullah. Capture of indigenous fish from the wild for trafficking for their ornamental value and absence of ban periods also add to the mix of conservation challenges. “There was nothing you could not get from the lake. What little you get now is in a poor quality and quantity. There isn’t any pengba (*Osteobrama belangeri*) in the water,” said Mashinga, a former member of the women’s social movement “Meira Paibi” (“women torch bearer”), who sells waterchestnuts and fermented fish for a living. Off the menu Pengba, a minor carp, is the state fish of Manipur and is reported to be “regionally extinct in the wild” due to obstruction of its migratory route from Myanmar on account of the Ithai barrage constructed three decades ago, said ZSI scientist Laishram Kosygin. It is now mainly sourced from fish farms and is a prized delicacy both for its protein as well as for the price it fetches. In festive seasons, it can sell for as much as Rs. 800 per kg.

“During our grandparents’ and our parents’ time they did fishing in more traditional ways. Now it takes a lot more effort to catch a about a kilogram of fish through traditional gears in contrast to the period before the barrage. The effort does not translate in economic gains,” said Singh in the presence of his parents and siblings who have branched out to different professions. They still fish but the condition of the Loktak Lake has rendered traditional fishery techniques economically infeasible, said Singh and members of his community. Kosygin observed that before 1950s the lake, a breeding ground of indigenous fish, contributed 60 percent of the total fish production of the state of which migratory fish from Chindwin-Irrawaddy system formed 40 percent of the capture fisheries. In 2004, the lake was reported to fetch the state only about 11 percent of fish. Fish diversity and yield plummeted in the last two to three decades, Kosygin said, following construction of the Ithai barrage across the Manipur River. According to Amarjit

Singh, the constant high water level maintained in the lake for the functioning of the dam destroyed the breeding habitats.

“They (fish) prefer shallow areas for breeding. In addition, the run-off from chemical fertilisers used in agriculture also directly affects the biodiversity of the lake,” Singh said. Before construction of the barrage, minor carps such as *Labeo angara*, *L. bata*, *L. dero* besides Pengba used to migrate from Chindwin-Irrawaddy river system of Myanmar to Manipur River and Loktak Lake upstream for breeding and spawning, said Kosygin. “Their fingerlings migrated downstream with the onset of monsoon. Construction of hydraulic structures, particularly, the Ithai barrage blocked the migratory pathways of these riverine fish species. These fishes have already disappeared from the lake ecosystem,” Kosygin told Mongabay India. In addition, as pollution poisoned the lake, it became tough for the native species to survive. However, hardy Indian Major Carps (such as rohu, catla) and exotic species (grass carp), which were introduced into the lake, were able to brave and thrive. “The fishery department of Manipur introduced Indian Major Carps along with common carps in the Loktak Lake in the 1960s. Although, there is no report on the formal introduction of exotic fish like *Ctenopharyngodon idella*, *Hypophthalmichthys molitrix*, *Oreochromis mossambica* in the Loktak Lake, they entered the lake through peripheral fish culture farms,” Kosygin added.

Veteran researcher Waikhom Vishwanath of Manipur University noted that the introduced fish varieties are also prolific breeders, expanding their population significantly while the population of native fish was not able to compete with the new arrivals. “Such is the condition that native species are fighting a losing battle in their own habitat, and now the lake is dominated by the exotic carps,” Kosygin lamented. Hopes float in hills Manipur consumes around 52,000 metric tonnes of fish a year and produces 32,000 metric tonnes. To bridge the supply demand gap, Manipur depends on fish brought in from other states of India. “As the native fish declined in numbers, traditional traps became obsolete. To ensure adequate catch, fisherfolk resorted to unscientific methods such chemical poisoning and LED illumination,” said Amarjit Singh. LED illumination messes up the lifecycle of fish. The time required for their resting and feeding, changes, said Waikhom. “It really disturbs their day-night cycle, they mature early in more light and the eggs they bear will be less in numbers,” he said. “So if you want to revive those old techniques then there should be proper water level and it should be replenished by the freshwater from rivers during the rainy season, then water quality will improve and population of native fish will also go up but that is not happening,” said Waikhom.

In 2011 International Union for Conservation of Nature (IUCN) listed 15 fish species from eastern Himalayas, including seven from Manipur as “endangered freshwater fish species”. However, there is hope, believe Waikhom and fellow Manipur University researcher Rameshwori Devi. “There are more than 200 indigenous varieties and we are updating the list with discovery of new species. We are also looking at hill streams. More of them (indigenous species) are adapted to hill streams so even if Loktak Lake is deteriorating due to pollution and

water flow changes, in hill streams they are present,” Waikhom said. The researchers have urged the state government for the exploration of indigenous varieties, their conservation and if possible, exploitation in a sustainable manner using laboratory breeding techniques. “There is legislation on paper (Manipur Fisheries Act 1988) but to implement them in hill areas is difficult. Some villages are much aware of the problem of loss of diversity and they have started certain restrictions in fishing in collaboration with NGOs,” Waikhom said. On the agenda is conservation of habitats.

“There are few species that will survive and breed only in pebbles and sands. But sands are being mined out for construction and their feeding and breeding habitats are being destroyed. So there needs to be restriction to preserve these breeding grounds,” he said. Since most of the food fish are also ornamental in nature, Rameshori stressed on the necessity to clamp down on trafficking. “Most of the food fish in their juvenile stages have ornamental value. The Chocolate Mahseer (*Neolissochilus hexagonolepis*) and our state fish, for example, are quite popular aquarium fish. The problem begins when people capture them from wild. Captive breeding can be sustainably used. DNA barcoding can help in identification and control of trafficking,” she said. However, Mashinga has different concerns. “Youth is no longer interested in traditional vocations, they have aspirations and environmental changes have driven them to pursue different fields. Who will look after our water bodies,” lamented Mashinga as she laid out batches of fermented fish for potential customers. - The Loktak Folklore Museum documents fading indigenous practices and is dedicated to Loktak lake and its environment. - With the construction of Ithai barrage and water pollution, indigenous fish species in the Loktak Lake have declined. - The lake was the breeding ground of indigenous fish species, including the Pengba – also the state fish – which is now regionally extinct in the wild, owing to blockage of its migratory route by the Ithai barrage.

Manipur: Taste of fresh and supple fish can be relished only if Government undertakes needful action

<http://e-pao.net/GP.asp?src=15..260918.sep18>

The people of Manipur would be able to relish varieties of fresh and supple fish caught from Inle Lake (in Shan State of Myanmar), Irrawaddy river and Chindwin river of Myanmar if the State Government initiates necessary steps to bring in the fishes within a short period of time to the State. After the official opening of International Border of Myanmar-India on August 8, Directorate of Information and Public Relations (DIPR) Manipur organised a nine days media tour to Myanmar on September 9, during which the media persons visited different tourists destinations of the country. During the tour, The Sangai Express witnessed several travel destinations, visited many locations and places of interest including Taunggyi city of Shan State, Inpawkhon village, Inle Lake (which is 22 km long and 10 km wide). The Myanmar check post located 4 kms away from the beautiful Inle Lake verifies the tourists and gives entry tickets at the rate of Rs 650 (1350 Kyatt).

Apart from promoting the Lake to the tourists, the ticket system is a means of livelihood for most of the locals in the area. Later, the media persons reach Hotel Paradise near the freshwater Inle Lake. People can experience the beautifully set up hotels, shops near the Lake as the locals set up different hotels which present beautiful views of the Lake to attract the tourists. The people of Shan State can also be seen promoting local made products and vintage items to the tourists as a means of generating income. The team of media persons enjoyed a boat ride (nine people for a boat) witnessing beauty of Inle Lake. The Sangai, Express also observed the people of Myanmar setting fish traps, gathering plants/ vegetables which grow under the Lake and plantation of various plants on the islet (Phum) which are important sources for income generation. Many pagodas were also seen along the Inle Lake as well. Myanmar provides large opportunities for the people to earn their livelihood by selling souvenirs and through the attraction of tourists by the beautifully built monasteries, hotels, markets etc. After the boat ride, the team reached a restaurant built on the Lake and relished a variety of foods offered by the restaurant and continued their journey by visiting Khit Sunn Yin Lotus, Silk and Cotton Hand Weaving Centre at Inpawkhon village.

The Sangai Express also came across the womenfolk weaving threads from lotus stems and making them into clothes and garments. While speaking to The Sangai Express, a local person conveyed that at least 20 varieties of fish are found in the Lake including Shareng, Tunghanbi, Ngapurum (eel). Claiming that the number of eels are slowly decreasing in the Lake, the person stated that necessary steps are being undertaken to save and protect the fish. The person proudly claimed that Myanmar Scientists have declared that maximum varieties of fish are available in Inle Lake. The Sangai Express found that the freshly fried and cooked fish caught from the Lake had a unique and different taste which differs from the ice-packed fish, brought into Manipur after long period of shipping. On the other hand, Act East Policy convenor RK Shivachandra conveyed that fishermen of the country are generating their income by selling Pengba fish, which they catch in large numbers from Irrawaddy and Chindwin river (which runs in Myanmar). He claimed that building of Ithai river probably blocked the said fish from swimming up the rivers into Manipur which decreased its availability in Manipur as well.

The people of Manipur would be able to taste these fresh and supple fish within two nights time from the neighbouring country of Myanmar if the State Government takes up appropriate steps. These fishes, which are only two nights away, will contain more health benefits as compared to the ice packed fish imported to Manipur, which usually takes a long time to reach the State. It is believed that around 52 metric tonnes of fish are consumed in a year while the Fishery Department has often claimed that only 32 metric tonnes of fish are produced every year in Manipur. The majority of the people are consuming spoilt ice packed Shareng. However, the freshly caught Shareng from Irrawaddy and Chindwin river will definitely taste better and have better health benefits as well. During the tour, DIPR Director H Balkrishna stated that Inle Lake is quite similar to Loktak Lake and both the freshwater Lake are famous worldwide. He claimed

that the Myanmar Government, through Public Private Partnership (PPP), is undertaking steps to protect and promote the Lake and around 1000 hotels are being set up on the Lake. One difference between Loktak Lake and Inle Lake is that there are less infrastructure and minimum number of tourists visiting the Loktak Lake.

He conveyed that a total of Rs 20,000 was paid as entry fee for 28 member team, while entering Inle Lake and added that only the fee alone would help in boosting the country's income. Balkrishna claimed that such kind of revenue does not come from Loktak Lake. Stating that varieties of vegetables including tomatoes, brinjal, pulses and dais are planted on the islet (Phum) of Inle Lake, the Director conveyed that Shan State is successfully trading their produces with China, Laos and Thailand (which are its neighbouring countries). It would not be an exaggeration to say that the State's revenue will improve if such kind of initiatives are taken up in Manipur as well. If plantation, farming is carried out extensively at Loktak Lake similar to Inle Lake, the problem of unemployment will be solved to an extent and the State will be able to generate some income, he added.

Manipur: Save northeast wetlands for human well being

http://e-pao.net/epSubPageExtractor.asp?src=education.Science_and_Technology.Save_northeast_wetlands_for_human_well_being_By_Debapriya_Mukherjee

Maintaining healthy ecosystems is cost effective whereas restoration of contaminated ecosystems is cost prohibitive. To what extent do concerned authorities in India have high values and regards for the environment, especially wetlands considering its value in human life? Are they doing it right? The wetlands are the most productive ecosystem in the world that provides food, agricultural production, fisheries, water quality maintenance and recreation and also one of the key life support systems on Earth, acting to purify water, control floods, replenish groundwater and recycle nutrients. All these benefits or services that wetland ecosystems provide are essential for people's livelihoods – particularly in developing countries like India. Despite these benefits, wetlands are consistently being destroyed, devastated, contaminated and converted to other land uses at a rate more rapid than any other ecosystem.

In this context, it is pertinent to mention that ecosystem services provided by the wetlands are not being fully captured in commercial markets and as a result not adequately valued during development decisions in India. India has about 757.06 thousand wetlands with a total wetland area of 15.3 m ha, accounting for nearly 4.7% of the total geographical area of the country. Out of this, area under inland wetlands accounts for 69%, coastal wetlands 27%, and other wetlands (smaller than 2.25 ha) 4%. Among them, 26 sites have been designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 689,131 hectares covering the many states in India. The Northeast covering seven states has a vast network (7731 medium to

large and 11736 small) of wetlands constituted by ponds, marshes, rivers, lake, water-logged area, ox-bow lakes and reservoirs covering an area of 1.66 million hectares that is around 4.17% of total geographical area of NE. All these wetlands are distributed among the seven states (Assam- 3513 including Deepar beel, Island Majuli and others; Arunachal Pradesh -43; Nagaland-267 including Doyang lake, chite reservoir; Manipur-167 including Loktak lake, Mizoram -88, Tripura-432 including Kuda sagar, Gomti reservoir, Sipahijala reservoir and others, Meghalaya- 135 including Barapani lake, Sikkim-160 wetlands greater than 2.25 ha including Gurudokmar Tso and Lashar Marsh Land).

The NE forms a complex geomorphology with vast flood plains, valleys, hills and ridges of varying elevations and shares a common migration route for many of the avifauna that flies over Bhutan, Tibet, China, Myanmar and Bangladesh. The rural landscape of the state is endowed with wetlands of various types identifiable on the basis of their micro-geomorphic characteristics and associated human response and perception. The pattern of their utility also varies according to the social background, tradition and economic condition of the people around the rural lives in NE are intrinsically linked mainly with the subsistence mode of farming, livestock rearing and traditional fishing closely connected with the wetlands. However, with the modernization of society, particularly during the last few decades, the traditional use of wetlands has experienced remarkable changes. The overexploitation of wetland resources, irrational mode of fishing, invasion by weeds, siltation, proliferation of invasive species, change of land use patterns and developmental activities and pollution caused have posed serious threats to the wetland ecosystems leading to partial or complete loss of the wetland habitats.

Many birds and other species are reported to be absented themselves from these areas due to loss, fragmentation and degradation of their habitat. Our study clearly reveled that increment of pollutant load in wetlands far exceed their capacity to retain pollutants and remove them through nitrification, sedimentation, adsorption, and uptake by aquatic plants. This adversely affects the wetland water quality; contamination of vegetables and crops; the cradles of biodiversity and key constituents of our environment. In addition, the continued poverty among the villagers, their ignorance and indifferent attitude towards the wetlands and unsustainable ownership pattern have also adversely affected the wetland ecosystems. Moreover, lack of proper attention to the rural situations; defective development policy instruments particularly those based on macro-regional considerations; social inequalities and poor planning amplifying the environmental pressures of economic expansion and profit-maximization approaches by the exponential growth of real-estate markets have significantly impaired the wetlands. The concerned authorities do not realize the importance of holistically analysing the complex eco-social systems of these wetland as per the guidelines of Ramsar convention and role of the local community who gained it as Ramsar site to explore the different strands of urban ecology ecosystem.

The continued spree of loss and degradation of these wetlands in different parts of the NE has over a period of time brought the ever-deepening ecological crisis to the fore. The status of three

wetlands in the northeast – Deepor Beel in Assam, Loktak Lake in Manipur and Rudrasagar Lake in Tripura- recognized as Ramsar sites is the clear evident of poor environment governance as discussed below . Deepor Beel The Deepor Beel wetland area of 4000 ha housing 219 species of birds including more than 70 migratory species; and wild asian elephants, leopard, jungle cat and the protected barking deer, Chinese porcupine and sambar and providing natural resources for the livelihood of 14 indigenous villages has reduced to 405 ha due to continuous encroachment and waste dumping. In January 2006, nine storks were found dead due to severe environmental pollution originating from domestic and industrial sources. Construction of a broad gauge railway line has badly blocked the centuries-old elephant corridor. Loktak Lake Loktak Lake in Manipur is well known for the phumdis (heterogeneous mass of vegetation) floating over it and the Keibul Lamjao National Park located on this phumdi is the only floating national park in the world, and home to the endangered Sangai and Manipur brown-antlered deer.

The lake's rich biological diversity comprises 233 species of aquatic macrophytes of emergent, sub-emergent, free-floating and rooted floating leaf types and 57 species of water bird. Development activities such as hydropower generation, irrigation and drinking water supply for economic expansion are the major stress factors and cause rapid conversion to other uses and their function in a wider economic sense. Rudrasagar Lake Rudrasagar Lake, a unique natural sedimentation reservoir, receives water from three perennial streams and removes the sediment from the water and discharges into the river Gumati through a connective channel — Kachigang. Among the rarer species recorded are the endangered Baer's Pochard and near-threatened Ferruginous Duck. Uncontrolled Growth of invasive aquatic weeds like water hyacinth has created anoxic conditions in the lake, thus raising toxicity and disease levels leading to loss of aquatic biodiversity mainly due to dumping of garbage, deposition of solid waste and storage of construction materials along the shoreline . In addition to these, large-scale use of pesticides and fertilizers in the area adjacent to the lake is posing threat to the unique lake ecosystem.

In view of the existing status of these three important wetland, it is pertinent to mention that wetland authority responsible for boundary demarcation, wetland character detection, pollution measures, awareness programs, and biodiversity conservation in accordance with Ramsar convention has miserably failed to protect continuously shrinking of the wetland. Based on Wetland (Conservation and Management) Rules, 2010 issued by the Government of India (under the Environment protection Act, 1986), the concerned authorities have identified several major threats to the wetland but they have failed to strengthen urban wetland governance to prevent ecological transformation and loss of wetland. In developing countries, wetlands are still considered as wasteland due to the unconsciousness of the people about wetland potentials and deüciency of the techniques of wetland uses.

Technically in addition to Wetland Authority for conservation and management , the wetland comes under several legal institutions including the Municipal Corporation, Public health

authority, Forest department, the Housing and Infrastructure Development Corporation that is concerned with urban development, the State Pollution Control Board (SPCB) that is concerned with cleanliness of environment, and Department of Fisheries of respective states. Strategically Wetland Authority framed cross-sectoral policy integration , conservation , community participation etc but another authority- Municipal Corporation in all the states with the political support of the Ministry of Urban Development and financial support of state, central and corporate can supersede the decision taken by Wetlands Authority. Thereby Wetland Authority is not in position in policy advocacy in other sectors. In meetings, top level officers strongly advocate the necessity of these developmental activities for public interest and also assure to create eco-park, water park, tourist hut, attractive commercial shopping mall for the tourist etc without addressing optimization of ecosystem service delivery, development of sustainable urban and wetland management, "wise use " of wetland, community participation to guarantee social equity in environmental governance.

Then what "public interest" and for whom! Practically this "public interest" is meant for the corporate who are interested only to develop infrastructure by reducing the wetland thereby depriving the local community in expectation of their livelihood and threatening the ecosystem services delivery. If shrinkage and contamination is going on due to poor environment governance, ecosystem services will be severely hampered due to declining crop and fish yield and high land price. Declining the profitability will open the door to capture the wetlands for real-estate market and urban development in name of public interest. Recently the Ramsar Convention has undergone significant conceptual transformations to adopt the principles of 'wise use' for wetland conservation; wetland restoration and creation; understanding the value of wetlands; community participation and integrated planning. The "wise use" based on these practical guidelines have a crucial and positive impact on wetland management theory and practice. In this view it is pertinent to mention that in NE, wetland degradation and loss of wetlands through rapid conversion is one of the emerging challenges against sustaining such worthy environmental capital having plenty of goods and services.

Many researchers all over world strongly advocate the uniqueness and opportunities of the wetland ecosystem by calculating its economic value adding to the economy of the local community and demonstrate its potential of biodiversity particularly avifauna and other animals and ecosystem services. The wastewater if discharged in controlled way can be used as nutrient source for pisciculture and agriculture by the local communities. These wetlands can play, if protected by the concerned authorities, a strategic role in the process of economic development of a country particularly in NE. It has already made a significant contribution to the economic prosperity of advanced countries and its role in the economic development of less developed countries is of vital importance.

The central government, in place of giving thought to the economic expansion without addressing the environment and society, must encourage the state governments to tackle it where

these valuable ecosystem is in the verge of disappearing. Then these wetlands will be a unique example of sustainable socio-economic development pertaining to resource recovery wetlands in the present scenario of economic recession and pollution problems. Now the protection of cultural values and community use of wetlands as well as conservation and restoration of wetland are the emergent needs. According to Ramsar Convention, the policy integration and integrated planning by institutional arrangement must be encouraged. In addition to these arrangement, local community and NGO who are trying their best to protect the degradation of ecological features in an urbanized landscape, must be included with formal institutions for technical support that would be a key strategy in urban wetlands governance.

Manipur, Madhya Pradesh, Jharkhand, Bihar and Odisha: Training on fish feed underway at CIFA

<https://www.dailypioneer.com/state-editions/bhubaneswar/training-on-fish-feed-underway-at-cifa.html>

A NFDB-sponsored five-day national training on “Recent Trend on Feed and Feeding Strategy for Various Life Stages of Commercially Important Freshwater Fish” from August 21 to 25 at the ICAR-CIFA here is underway. Inaugurating the programme, ICAR-CIFA Director Dr BR Pillai emphasised the production of cost-effective diet for different life stages of fish by using locally available feed ingredients. She also expressed that in order to increase the present fish production of 3.0 tons/ha to 6.0 tons/ha, supplementary feed is essentially required. She had advocated for the sustainable and eco-friendly aquaculture.

Course Director Dr KN Mohanta opined that for doubling the income of fish farmer, the input optimisation is the need of hour. He also spoke about the different feeding strategies to be followed to reduce production cost and increase the profit margin. Programme Coordinator Dr KC Das gave the outline of the training program and ICAR-CIFA Principal Scientist Dr SC Rath offered a vote of thanks. Fisheries Department officials from the Government of Manipur, Madhya Pradesh, Jharkhand, Bihar and Odisha and Officers from the other Central Governments, entrepreneurs, progressive fish farmers and the trainers from the Aqua Field School (AFS) participated.

Manipur: Saving the world’s only floating national park and its dancing deer

<https://india.mongabay.com/2018/07/27/saving-the-worlds-only-floating-national-park-and-its-dancing-deer/>

Manipur’s iconic Loktak Lake and its floating islands (phumdis), the last natural refuge of the critically endangered Sangai deer or the Indian Eld’s deer (*Rucervus eldii eldii*), are losing ground to mushrooming agricultural practices and human settlements, reports a study. These changes in land use patterns may be linked to the construction of the Ithai barrage in 1979 at

Ithai (downstream of Manipur river) for the Loktak Hydroelectric Project, the study notes. The 246.72 square km lake, slightly smaller than the Caribbean islands of St. Kitts and Nevis, is a Ramsar Wetland of International Importance cradled in the floodplain of the Manipur river. About an hour and a half from Manipur's capital Imphal, the lake and the resident Sangais are the principal attractions for travellers. It is also northeast India's largest freshwater lake and like a jewel in a crown, it is positioned almost centrally in the state of Manipur that shares borders with Myanmar (earlier known as Burma). Teeming with a diverse range of flora and fauna, the lake ecosystem lies in the Indo-Burma Biodiversity Hotspot.

A source of water for hydropower generation, irrigation and drinking water supply, the lake has become a hotbed of tourism and related developmental activities. And since time immemorial, the ancient water body has nurtured fishing and agriculture shaping, the region's socio-economy. According to the folklore of the Meitei, Manipur's culturally dominant indigenous group, the lake was home to India's very own Loch Ness monster, a mythical horned python called Poubi Lai. Now, the wetland system is in the crosshairs of development and tradition with environmental conflicts underpinned by changes largely ascribed to the 40-year old barrage. Using satellite data from 1977 to 2015 (from the pre-barrage to post-barrage period), scientists have mapped the decline of the phumdis that are critical in supporting the weight of these animals (also called dancing deer for their dainty gait) as they negotiate their way through the floating islands. "We have observed a loss in phumdi area that is equivalent to more than double the increase in agricultural areas in a span of 38 years from 1977 to 2015 (from the pre-barrage to post-barrage period)," Rajiv Kangabam, from Assam Agricultural University and lead author of the study, told Mongabay-India.

Deer that dance across the phumdis Protecting the wetlands ecosystem with the phumdis is crucial to conserve the Sangais, because the beautiful animals are concentrated in the 40 square km Keibul Lamjao National Park (KLNP), that is actually a floating meadow or island (phumdi) in the southern rim of the lake. It is considered as the only floating reserve in the world. Only 260 dancing deer remain, as per the forest department while wildlife biologists from Wildlife Institute of India stack the figure at less than 100 adult breeding individuals. The endemic Sangai was believed to have gone extinct until a remnant population was discovered in the early 1950s. Ubiquitous in folk art and lore, the Sangai is also the state animal of Manipur. The emblematic species also lends its name to the annual festivities (the Sangai festival) organised by the state government each year in November. The KLNP was created in 1977 to conserve the last of the Sangais and the lake biodiversity within the phumdi ecosystem. Tourists who opt for boat rides in the waterways within the phumdis can step on them and feel them pulsate. This is because phumdis are floating mats of soil, plants and organic matter at various stages of decomposition all naturally bundled together.

Part submerged, part floating they are the elements that impart uniqueness to the Loktak ecosystem. Two-thirds of the saucer-shaped lake is dotted by these floating meadows. The study

highlights the loss of floating islands from the southern and northern part of Loktak as a “major concern” that will lead to the “destruction of the only floating national park in the world.” It indicates an increase in open water area, human population and agricultural area. In the study, in terms of land use changes, the highest loss is reported in phumdis with thin vegetation (49.38 square km) followed by phumdis with thick vegetation (around nine square km), while there was an overall increase in open water bodies (27 square km), agricultural areas (25.33 square km) and settlement (5.75 square km). Kangabam said the rapid growth in human settlements is associated with the submergence of vast swathes of agricultural lands, a fall out of the construction of the Ithai barrage. “It was estimated that 20,000 ha (83,000 ha unofficial) of arable land was submerged resulting in the loss of employment of the local people. This led to increase in human pressure on the lake resources leading to increase in human settlement and a high demand for fish,” he said.

The authors also identified the need for the proper implementation of the Manipur Loktak Lake (Protection) Act, 2006 in order to guide the increasing anthropogenic activities in the lake area, to protect the Loktak through sustainable management and conservation of the rich biodiversity. The analysis also underscored the need for regular monitoring and implementing proper land use practices in and around the lake in order to restore the degraded ecosystem plagued by pollution and an altered aquatic regime. “There is a need to balance ecological protection and human needs. Without provision of alternative livelihood options, the human pressure on the lake will go up and this will be disastrous for the lake,” Kangabam said. Oinam Rajen of All Loktak Lake Areas Fishermen’s Union Manipur (ALLAFUM) agreed with the inference. “At least two lakh people are directly dependant on the lake for fishing. The demand for fish has increased. However, adequate fish is not available in the lake. This is mainly because the migratory fish from Chindwin-Irrawaddy river system to Manipur river system have declined steadily after the barrage came up. Human settlements have gone up and so has paddy cultivation,” said Oinam Rajen. However, Rajen demanded scrapping of the 2006 Act.

“This is compounded by the fact that we are prevented from carrying traditional fishing equipment inside the lake as per provisions of the Act. Rights of fisherfolk are being curtailed in the name of conservation. We are importing fish from other states to make up for the deficiency,” rued Rajen. Around nine percent of the total population of Manipur (0.2 million/2.2 lakh) dwell in 12 towns and 52 settlements placed in and around the lake, earlier dubbed a “lifeline” of the people of Manipur. By absorbing the annual monsoon flood, the lake plays an important role in flood control and conserves water through the dry months. The cultivation of paddy is the traditional practice in the phumdis, explained Kangabam, adding that it also the source of livelihood for the rural fisherman who inhabit the surrounding villages and also on the phumdis in traditional huts called “khangpoks.” Some paddy varieties can also grow in the submerged conditions of the phumdis. Resembling green rings, man-made aquaculture

ponds called “athaphums”, created by segregating portions of phumdis, are used for fishing. Fresh and fermented fish hold sway in the Manipuri diet.

The operationalisation of the Ithai barrage in 1983 for hydroelectric power generation and irrigation purposes, without proper planning, has been linked to a multitude of problems shrouding the once pristine lake. In 1986, the Manipur government constituted Loktak Development Authority (LDA) to check the deteriorating condition of the lake and to bring about improvement of the lake ecosystem along with development in the field of fisheries, agriculture and tourism while conserving the catchment area. Decline in fish resources affecting the livelihoods of the fisher communities, enhanced soil erosion leading to wetland sedimentation due to shifting cultivation and loss of vegetal cover in the catchment area, reduction in water holding capacity of wetlands as a consequence of siltation, encroachments and prolific growth of aquatic vegetation are some of the problems listed by the LDA on its website. Gradual degradation of the lake and associated swamplands sparked international concern with the water body being included in the Montreux Record in 1993 as a result of problems such as “deforestation in the catchment area, infestation of water hyacinth, and pollution.” Serving as the receptacle for about 30 rivers and streams, the lake has turned into a dumping ground for the untreated waste that is drained into it from these water bodies, including the highly polluted Nambul and Nambol rivers.

The barrage is the only outlet for the rivers. “In addition, the establishment of the Ithai barrage has disrupted the normal flushing pattern of the lake and also interfered with the natural process of synthesis and breakdown of the phumdis,” Kangabam said, referring to the unique sink and swim cycle of the floating islands critical to its growth and function. Earlier, during the monsoons when the water level would go up, the phumdis would float on the lake surface and in the dry season they would sink to the lake bed and sponge off the nutrients there which were essential for the growth of vegetation. When the rain came, the islands with nutrient-laced plant roots would float again. However, the Ithai barrage (10.7 metres high and 58.8 metres long) for the Loktak hydroelectric project has resulted in “permanent flooding” of the lake. “Now, there is continuous storage of water in the park area as a result of the barrage and islands float throughout the year even during the winter season. This has prevented nutrient uptake by the islands, thereby reducing their thickness,” said Kangabam. Kangabam and co-authors of the study have flagged this reduction in thickness as a “major concern” for the Sangai. Oinam also pointed out that water pollution and resulting enrichment of nutrients, fuelled the growth of the aquatic weeds and led to the proliferation of the phumdis at a certain point in time after the barrage came up. “Before the construction of the Ithai barrage, the phumdis would proliferate and during the rainy season, they would be discharged from the lake to the Manipur river thereby maintaining the population.

But the construction of Ithai barrage blocked the passage and changed the flushing mechanism,” Kangabam said. Oinam claims it was due to the efforts of the fishing communities that the

phumdis were prevented from pervading the entire lake. “We took it upon ourselves to clear off the excess phumdis. Since time immemorial, the fishing communities have maintained the lake,” Rajen said. The subsequent decrease of phumdis from the central part of the lake is due to the removal of the biomass (by authorities) to maintain the water quality, said Kangabam. “The proliferation of phumdis has decreased from the central part. In the northern and southern part the phumdis remain as it is. But human activities have increased in those parts so overall phumdi area has gone down,” Kangabam said. Bioprospecting for bacteria in the phumdis Saving the lake is also advantageous for bioprospecting of potential bacteria for their use in agriculture as plant growth promoters (biofertilisers). Recently, a team of scientists isolated 26 bacterial strains from the phumdi sediment and lake water, which they say, can be used in sustainable agriculture. These isolates from Loktak Lake have the potential to be used for the production of industrially important enzymes and in agriculture as plant growth promoters (such as siderophores, indole acetic acid or IAA), said Milind Mohan Naik of Goa University’s department of microbiology in a study.

For example, among the 26 Loktak bacterial isolates, *Enterobacter tabaci* strain KSA9 is found to produce siderophore, IAA, involved in nitrogen fixation, phosphate solubilisation and ammonia production. The presence of plant growth promoting microorganisms was expected from phumdi sediment, due to the fact that the local people use phumdi sediment as a biofertiliser in agriculture. It exhibits good plant growth promotion that may be attributed to the presence of bacteria. The bacterial diversity is facing threats due to the overall disturbance of ecosystem. Trading barbs Beset with dwindling water quality and ecosystem, the lake has been battleground between the LDA and a section of fishermen with both parties trading charges on who is responsible for destroying the wetlands. The fishermen’s union claims that in the name of cleaning the lake, the LDA is damaging lake while the authority alleges the fishermen and their floating huts are the ones harming the lake. “Enforcing the Manipur Loktak Lake (Protection) Act, the government (under the then Chief Minister Okram Ibobi Singh) began to clear the lake of human settlements in 2011. There were 1100 huts built on the phumdis. 777 huts were burnt and hundreds of families and more were evicted since then. The fisherfolk were dubbed ‘occupiers’,” Rajen said.

According to activist and researcher Ram Wangkheirakpam of Indigenous Perspectives, the Loktak Protection Act requires a “proper review” for the fact that it does not conform to the requirement of the Ramsar Convention nor to the more recent National Wetland Convention Rules 2017. “The Act does not cover the whole of the lake. It excludes the water sports area at Takmu that they have carved out as also the Keibul Lamjao National Park. There are two resorts, and two hotels coming up, they are also trying to evict some 450 families for the resort in the name of tourism promotion in the state,” the activist said, adding that Loktak Development Authority is a failed institution and requires a comprehensive revamping of its constitution and composition.

“It is clear that this Act has been twisted to fit in certain kind of activities while putting traditional users as victims. Traditional livelihood options have somehow been sidelined while non-traditional activities are being promoted. The local community must be included in conserving this wetland,” Wangkheirakpam said. - Manipur’s iconic Loktak Lake and its floating islands (phumdis), the last natural refuge of the critically endangered Sangai deer are losing ground to mushrooming agricultural practices and human settlements, reports a study. - Changes in land use patterns may be linked to the construction of the Ithai barrage in 1979 at Ithai (downstream of Manipur river) for the Loktak Hydroelectric Project. - There is a need for regular monitoring and implementing proper land use practices in and around the lake in order to restore the degraded ecosystem plagued by pollution and an altered aquatic regime.

Manipur: Food safety awareness drive conducted

<http://e-pao.net/GP.asp?src=21..250718.jul18>

Food Safety and Standards Enforcement officials of Bishnupur district conducted an awareness drive aimed at fermented fish producers, fish and poultry sellers, at Ningthoukhong bazaar, Bishnupur bazaar, Nambol bazaar and Moirang bazaar. A press release issued by the Designated Officer of FSA Bishnupur stated that the team, led by Heisnam Premkumar Singh (FSO) and Dr Moirangthem Dinesh Singh (FSO) under the supervision of Y Surendro Singh (DO), gave instructions to the fermented fish producers on how to prepare the fermented fish in a proper and hygienic way. The food safety officials also instructed food business operators selling fish and poultry to maintain hygienic condition like cleaning of wooden blocks, covering of meat, cleaning of walls, floors etc. The team also instructed those concerned to store any leftover meat or fish in deep freezers and they were also advised to obtain FSSAI licence or registration from the authority concerned. It explained that fish and poultry are protein rich food which are consumed daily by the people of Manipur and the awareness drive was carried out today as many food business operators manufacturing or selling fish and poultry lack awareness about good manufacturing practice and good hygienic practices.

Manipur: People, govt opt for organic fish

<https://news.webindia123.com/news/articles/India/20180712/3387395.html>

The Manipur valley is associated with lakes, rivers, wetland including one of the biggest fresh water lake the Loktak. People of the state had been depending on the water bodies to get fish. With the rise in population the demand for fish has grown up drastically. Fish remains the favourite dish. Manipur Fisheries Minister N. Kayisii said the government is trying to increase fish production. He said the state produces 32,000 metric tonnes of fish against the annual estimated requirement of 52,000 metric tonnes. Kayisii said his ministry is working for "Better Management Practices for Fish Culture" and a booklet was also prepared for dissemination to the farmers, Fish is imported mostly from southern states and as the journey is long and arduous it

was suspected that formalin was used to preserve the fish. The fear led to the ban of import of fish by the state Food Safety department in June last. It was also suspected that the imported fish was not properly maintained and hormone used to increase weight. As formalin and hormone used in the process were harmful to the human bodies the ban was imposed. The ban has led to serious debate between fish traders and the state government officials and test was done on the imported fish. Formalin was found in many cases and after the government clamp down , use of formalin was stopped and import partially allowed.

The people of the state however were reluctant to use the imported fish and health conscious people stopped using the imported fish. It led to drastic increase in rise in prices of local fishes and on special occasion shortage of fish was experienced. People continued to buy imported fish for two reasons, low price and easy availability. Preserved and processed fish are also imported in huge quantity from Myanmar through the border town of Moreh but Myanmar is not able to provide fresh fish to Manipur. Fish traders said as people were conscious about health and test kits were available to detect formalin, use of formalin has been stopped and ice was used to preserve the fish. Loktak lake remains the biggest source of fish in the state but the construction of Ithai barrage has led to non -availability of large numbers of fishes in the lake. The barrage stopped the upward flow to the lake from the rivers and fishes which flowed towards the lake from the downstream area have stopped coming the lake. Fishers at Loktak lake said the fish from downstream areas were in high demand and the sudden stopping of upward water flow led to serious changes in the availability of fish and environment of the lake.

Experts and the Manipur government have demanded demolition of the barrage as serious environmental hazards were caused. It also led to decrease in size of the lake. Water bodies were gradually decreasing as people have filled up water bodies to construct houses. Only few water bodies remain and of the biggest water body area like Lamphelpat has no trace of water now. Government offices, quarters have been constructed resulting in serious floods in the city areas. The other sources of fish that is the river were mostly polluted hence it was not possible to seriously take fish farming in the rivers, officials said. The only solution was digging ponds in the low lying areas and taking up fish farming. Fish farming can't be done in hill areas in large scale hence it was concentrated in the valley areas. The farmers said frequent flood caused serious problems . In the flood that occurred last month the fishes were washed away hence the farmers lost all their investments , they said. It is problematic as it has to be done in low lying areas prone to flood. Flood management should be given special attention to help the farmers. With people demanding good quality tasty fishes, land availability decreasing day by day supply of the favourite food of the state remains the greatest challenge today.

Manipur: Prepares for mass production of fish as import banned

<http://www.uniindia.com/~manipur-prepares-for-mass-production-of-fish-as-import-banned/States/news/1281415.html>

Manipur Chief Minister N. Biren Singh on Friday said the present government is keen to enhance the fish production in the state so that the state would have a self sufficient fish production by 2020. Manipur government has banned import of fish as formalin and other harmful chemicals were used to preserve the fish. Addressing the gathering at the first ever 'Fish Farmers' Meet' held at Durbar Hall, Chief Minister's Secretariat today, Mr Biren said there is vast scope for fish farming as there are abundant water bodies in the State. He maintained that a Fish Feed Factory would be set up at an estimated cost of Rs. 1.5 crores in the state soon. Fish feeds would be easily available in the market, he added. Mr Biren stated that a bigger factory would also be constructed under the PPP model. Chief Minister further said a state level Committee has been formed to increase the fish production in the State soon.

He highlighted that such kind of meeting is especially convened to chalk out the plans with the officials of Banks, NABARD, Fisheries Department and Fish Farmers to improve the fish production in the State. Around 200 fish farmers attended the meeting. During the three hour long meeting, farmers gave their opinions and suggestions to increase the fish production in the state. Many farmers appreciated the government for organising such meeting. During the meeting, the farmers were made aware of the existing Central and state sponsored schemes for fish farming in the State. It may be mentioned out of the 50,000 Metric Tones fish required for consumption in the state, only 30,000 Metric Tones are being produced by the fish farmers in the state annually.

Manipur: Formalin treated fishes: Fishery Dept on high alert

<http://e-pao.net/GP.asp?src=16..300618.jun18>

Following the recent seizure of imported fishes laced with formalin, a preservative with harmful side effects, at Nagaland and various other States, the Secretary (Fisheries) of the State has instructed the State Fishery Department to investigate the possible presence of formalin in the fishes imported into the State as well as to submit a detailed report regarding the issue at the earliest. On the other hand, the State Government has directed the Nodal Officer (Food Safety) Manipur to ban the sale of ice packed fishes containing traces of formalin in the State. Speaking to The Sangai Express, Secretary (Fisheries) Maranchan Luikham said that it is estimated that Manipur consumes around 52000 metric tonne of fish products in a year. Out of this, the State produces around 32000 metric tonne while the remaining 20,000 metric tonne are imported from outside. Most of the fish products imported from outside the State have the potential to be laced with preservatives. But till date, there has been no report about the presence of formalin treated fish products in the State, he said.

Pointing out that news have been heard about the presence of formalin in fish products in Nagaland and Kerala, Luikham said that in the interest of the people, the State Government has directed the Director of Fisheries to investigate and see if the fishes in the market are treated with formalin and to submit a detailed report regarding the same at the earliest. It may be mentioned that there was a recent case of seizure of fish products laced with formalin in Nagaland, Kerala and some other places. Such fishes were disposed by the authorities. Formalin is a poisonous/toxic chemical. It is mainly used in hospital mortuary to preserve dead bodies and to prevent them from decomposing. The chemical is colourless and as such it cannot be identified at a glance and needs to be tested in a lab for its presence. In huge doses, formalin has the ability to cause cancer in humans. On the other hand, Luikham said that the State Government, under the supervision of the Chief Minister, is working tirelessly to make the State self reliant when it comes to fish products by 2020. The Government is working towards increasing the quantity of fish products under schemes like Rashtriya Krishi Vikas Yojana (RKVY) and Neel Kranti, Luikham said.

Under RKVY, which is taken up under the Ministry of Agriculture, steps like digging of ponds, rearing of fishes at wet lands, funding fish farmers and fish farmer societies and imparting necessary training to the fish farmers for increasing fish produce are carried out. Under Neel Kranti, fish farmers and societies are also funded to increase the fish produce. Technical support, cage culture, rearing of fishes in water bodies, development of hatcheries, insurance for fishermen and fish farmers are also provided and the State Government is working tirelessly to improve the fish production of the State under the said schemes, he added. Pointing out that the State Government is trying to implement fish rearing at hill areas by building dams under funding of the North Eastern Council, the Secretary added that steps are also being taken up to ensure the presence of good quality fish fingerlings. He claimed that most of the fish fingerlings from private hatcheries are not of good quality and often fail to grow to the desired size. Luikham informed that the State Government and a firm based in Chennai are working to establish a hatchery at Leimakhong Mapal under Public Private Partnership (PPP) model. The State Cabinet has also approved the signing of an MoU and the launch of the project, the Secretary added. The State Government will dig and manage the ponds for the project while the firm will produce the machinery required.

This will facilitate the production of around 5 to 7 million fish fingerlings per year, he added. The State currently has 7 hatchery units and this project will help boost the productions of fishes in the State. Speaking about fish feed, the Secretary informed that the State Government is planning to establish a fish feed production unit at Lamphel at the cost of around Rs 1.5 crore. The necessary funds have been sanctioned and process of finalising the building blueprint and the machinery required is underway. The unit will be able to produce 5 to 7 tonne of fish feed per day. Pointing out that the ever increasing population and industrialisation has led to vanishing of water bodies, Luikham said that even in the face of such odds, the State Government will try to

create more fish ponds and water bodies. A special committee called Manipur State Fish Development Technical Committee was formed and it recently submitted its recommendation regarding the steps to increase the fish produce of the State. As per its recommendation, the State Government is trying to organise a meeting of all the Departments concerned at the earliest, he added.

Manipur: Loktak lake facing serious ecological threats

<http://www.dailypioneer.com/nation/loktak-lake-facing-serious-ecological-threats.html>

Home to rare flora and fauna and locally revered as a “mother” — provider of life to all — Loktak Lake in Manipur is facing serious ecological threats due to intensive human activities, siltation and pollution, environmentalists have cautioned. In a study published in the latest journal of the Current Science, they said North-East’s largest lake, spread over 287 square km area needs urgent conservation, being one of the most productive ecosystems that support livelihood of locals as well as diverse and unique habitats, including that for Sangai, endemic and endangered deer found only in Manipur. The most unique feature of the Loktak Lake is the presence of a series of floating islands locally known as phumdis — the massive heterogenous masses of soil, vegetation and organic matter in different stages of decay and present in various sizes. Locals use these structures for agriculture purpose and even build houses on them. On one of the largest phumdis lies world’s largest floating park, Keibul Lamjao National Park. However, the researchers have noted that the construction of the Ithai barrage without proper planning has led to uncontrolled proliferation of Phumdis, thus reducing the open lake area.

“This has blocked the migratory pathways of a number of fish species and degradation of catchment areas. Thus, owing to versatility of this natural habitat of diverse groups of micro and macroflora, there is an urgent need for conservation of this fragile ecosystem. “The life of thousands of people living in this area is dependent of the lake itself. The destruction of this lake will ultimately result in the loss of natural habitat for birds, fishes, wild animals, livelihood and also industrially and agriculturally important microbes,” said the team of researchers including Komal Salkar, Milind Mohan Naik and Vishwanath Gadgil from Goa University, Santosh Kumar Dubey from BHU and Radha Raman Pandey from Manipur University.

The lake is home to a rich ecosystem harbouring 81 species of birds, 25 species of reptiles, six species of amphibians and 22 species of mammals, migratory fish from Chindwin-Irrawaddy basin of Myanmar, migratory waterfowl and an endangered species of Eld’s deer, the Sangai. People of Manipur are dependent on Loktak Lake and phumdis for different economic activities like fishing, agriculture, fish farming, trading of lake products, traditional handicraft made of lake products such as mats, baskets and other woven goods, etc. The ethnic group of Manipur, Meitei see the lake as a mother-provider of life to all. The lake has been included under the Ramsar Convention, an international treaty for the conservation and sustainable use of wetlands.

The study has been supported by SERB-DST Fast track Young Scientist Project, Science and Engineering Research Board - Department of Science and Technology.

Manipur: Union finger at LDA for Loktak pollution

<https://www.telegraphindia.com/states/north-east/union-finger-at-lda-for-loktak-pollution-229833>

The All Loktak Lake Areas Fishermen's Union, Manipur (Allafum), strongly condemned the statement made by the Loktak Development Authority (LDA) on May 4 regarding the conservation of cultural heritage, ecosystem management, control of catchment area and water pollution, including removal of phumdis (floating islands). A press statement released by the fishermen's union said the LDA has been institutionalised for 10 years but it fails to mention NHPC and its Ithai barrage, which are the main agents causing irreparable damage to Loktak's ecosystem and its people. "The LDA has been blaming the people of Loktak for polluting Loktak, however, the main problem is the solid and liquid wastes that comes from the streams and rivers, particularly Nambul river. All kinds of biomedical waste, domestic waste, agricultural residues such as pesticides, fertilisers flow directly into Loktak. The LDA has been turning a blind eye and has done nothing about this issue," the statement added. "The LDA is polluting Loktak by their use of machineries like motorboats, dredging machines, and water master which leaks oil directly into the wetland," it said.

The LDA had claimed it has finalised three long-term projects after it had completed the short-term action plan (Stap) for conservation of Loktak. It also claimed to have preserved the natural and cultural heritage, but they have illegally burnt down 777 phums out of 1,147 phumsang inside Loktak thereby directly threatening the unique cultural heritage, which is also a Ramsar site, countered the fishermen's union. "The construction of the road through Loktak from Toubul to Mayang Imphal is another glaring example that directly threatens the lake. The proposed surface ring road of 80km will directly threaten the ecosystem of Loktak and affects food sovereignty. The people who depend on Loktak wetland have been surviving by locally conserving, managing and promoting the wetlands. The LDA must learn lessons from Loktak wetlands dependents," the statement said. The union urged the government to repeal the Loktak Protection Act, 2006, "as a contravention to the existing laws of the land and its equivalent to AFSPA" to save Loktak.

Manipur: Reclamation of eutrophicated water bodies through EM Technology

<http://e-pao.net/epSubPageExtractor.asp?src=education.Science and Technology.Reclamation of eutrophicated water bodies through EM Technology By Pandey>

Manipur is dependent mostly on the rain water collected in the water reservoirs. The largest water reservoir in Loktak Lake of Manipur, which is highly eutrophicated (polluted) water body of the North East India. Besides in Manipur numerous small and mid sized ponds are also maintained by almost every farm. These water bodies serve fuel purpose of catching water during the dry season and fish farming. Most of the water bodies in valley of Manipur are getting water from the rains and this water contains a lot of organic matter, most of the times domestic effluents also mixed in this water. A study revealed that 90% of the water bodies in Manipur is having eutrophication. This is not only a threat to the aquatic life but also a potent health hazard for the humans due to the toxins released by the algae. There was an article in the The Sangai Express, 4th May, 2018, titled “Large number of fishes perish in Nungleng Pukhri at Kangla”, which states the probable reasons for this fish death is lack of oxygen, high content of carbon monoxide, etc. Eutrophication is the enrichment of an ecosystem with chemical nutrients, typically compounds containing nitrogen, phosphorus, or both.

Runoff from agricultural fields, pollution from septic systems and sewers, and other human-related activities increase the flux of both inorganic nutrients and organic substances into terrestrial, aquatic, and coastal marine ecosystems. Consequences of eutrophication include excessive plant production, blooms of harmful algae, increased frequency of anoxic events, and mortality in fishes. Economic losses attributed to eutrophication include costs of water purification for human use, losses of fish and wildlife production, and losses of recreational amenities. Eutrophication has become a global problem that is likely to intensify in coming decades because of increases in human population, excessive phosphorous from sewage, demand for food, land conversion, fertilizer use, and nitrogen deposition. When these algae die, they start decomposing and the nutrients contained in the organic matter are converted into inorganic form by microorganisms. This decomposition process consumes oxygen, which reduces the concentration of dissolved oxygen.

The depleted oxygen levels in turn may lead to fish kills and a range of other effects reducing biodiversity. Enhanced growth of aquatic vegetation or phytoplankton and algal blooms disrupts normal functioning of the ecosystem, causing a variety of problems such as a lack of oxygen needed for fish and shellfish to survive. The water becomes cloudy, typically coloured a shade of green, yellow, brown, or red. Eutrophication also decreases the value of rivers, lakes and aesthetic enjoyment. Health problems can occur where eutrophic conditions interfere with drinking water treatment. To address this problem of eutrophication and its related adverse effects like decrease in oxygen, formation of toxic gases like methane, ammonia, hydrogen sulphide, etc. EM Technology (Effective Microorganisms) from Japan is an innovative biological solution. EM Technology is been used worldwide in more than 140 countries for the last 30 years. Maple Orgtech (India) Limited, having their Head office in Kolkata, is the authorized manufacturer of EM Technology in India.

Their product MAPLE EM.1 AQUAMAGIC is the only answer to all these problems without the use of any chemicals. It is a complete microbial product and safe for the aquatic environment. Maple Orgtech (India) Limited has worked with many state governments, NGOs and Municipalities with their EM Technology and successfully restored many lakes and ponds. One such example is the restoration of Ulsoor Lake in Karnataka. Before Treatment After Treatment Maple EM.1 Aquamagic can be used in the Nungleng Pukhri at Kangla to reclaim the water body and maintain a healthy aquatic life through the use of EM Technology from Japan. This technology will help to increase the dissolved oxygen level which is cited as one of the key reasons for the fish deaths.

Manipur: NERCOMP launches fish cage-culture in CCpur

<http://e-pao.net/GP.asp?src=18..240418.apr18>

The North Eastern Region Community Resource Management Project (NERCOMP) today inaugurated a pilot project for boosting fish-cage culture in the State with the launching of a floating fish cage for aqua-culture project at the man-made Khuga lake in Churachandpur. The project titled "Stiner initiative" is financed by the Ministry of DoNER, Gol. The cage culture, according to K Hrishikesh Singh, Director (admn) NERCOMP, is taken up with the sole intention to populate water bodies with fishes to increase production as the fish fry or fishlings have very little chances of survival without culturing. The cage-culture will raise the survival chances from a mere 40 percent to 70 percent. However, the real test of the project lies on the locals who will have to ensure that ethical methods of fishing are strictly adhered to and help sustain the plan; otherwise the very purpose of the project will be defeated, he said. The visiting team headed by SN Pradhan, Jt Secretary Ministry of DoNER were accorded a warm reception on their way by NERCOMP and its NGO partners prior to the project launching event at Mata Mualtam, Churachandpur district. Dr Sailendra Chaudhari, Managing Director NERCOMP who also addressed the event maintained that the cage-culture project launched today and another one to be launched tomorrow at Ukhrul are an experimental one whose success and failure will determine the future policies of the ministry.

They were the first such initiative DoNER has taken up in the entire North-Eastern region. SN Pradhan, meanwhile, explained the concept behind the introduction of cage-culture saying some good things can happen in a short period of time with the right technology, and the cage culturing is one such experiment. Dr Ketaki Babat, Scientist and Principal Scientific Advisor to Government of India also spoke on the occasion. The Deputy Commissioner Churachandpur Shyam Lai Poonia while hailing the project reiterated the massive role to be assumed by the locals. The livelihood project will have enough for everybody's need, but not enough for everybody's greed. A massive crowd graced the event that was hosted by NERCOMP Churachandpur and its partner NGOs. The Project Directors of NERCOMP Ukhrul and Chandel

also graced the event along with the SP Churachandpur and several other DLOs, reports our correspondent.

Manipur: Make agriculture a fully viable occupation: VP :: 'Focus on pisciculture, aquaculture'

<http://e-pao.net/GP.asp?src=8..190418.apr18>

Vice President M Venkaiah Naidu has asserted that agriculture should be made a fully viable occupation in all parts of India to boost the country's economy. He was speaking as the chief guest at the valedictory function of the "One-day State Level Workshop on Biodiversity and Sustainable Agriculture for Doubling of Farmers' Income", jointly organised by the Government of Manipur and Central Agricultural University at City Convention Centre, Palace Compound, Imphal East today. M Venkaiah Naidu also stressed on the need to practise agriculture in a manner which may help in restraining global warming. Stating that the North East is gifted with good rainfall and vast water bodies, the Vice President said that the region should focus on pisciculture and aquaculture for economic development. He also mentioned about boosting farmers' economy through large scale production of indigenous items like scented black rice (Chakhao), king chilli, ginger, turmeric, orange, pineapple etc., which are suitable to the soil of the State. In order to work towards this end, the State Government needs to put in effort with assistance from Central institutes like ICAR, IBSD, CAU and KVK etc, he added.

Development bears no meaning if it does not reach each and every citizen of the State and the country, Venkaiah Naidu said while adding that enhancement of connectivity is a must to ensure development even at interior areas. Instead of discussing about issues, reasons and problems, one should focus on finding solutions, he said while adding that researchers should come up with ideas on training farmers and stakeholders, develop marketing and export strategies, establishment of value addition facilities and packaging etc. The State Government needs to focus more on implementation and development to increase farmers' income, he added. He further said that Manipur is not a poor State but rich in different fields. People should learn to tap dividends from its potentials, the Vice President added. Stating that the Government of India has not undermined talents but recognised it, Venkaiah Naidu said that Mary Kom, Sanjita Chanu and Mirabai Chanu had done the whole country proud in the recently concluded Commonwealth Games at Gold Coast in Australia. And it is because of these talents that the Government of India had decided to set up the only National Sports University of the country in the State, he said while adding that size of any State does not matter but talent matters. He said that every citizen of the country should think India as a one Nation forgetting all differences of community, religion, region and language.

Chief Minister N Biren Singh attended the function as president while Governor Najma Heptulla, Deputy Chief Minister Yumnam Joykumar, Forest and Environment Minister Th Shyamkumar

and Central Agricultural University Vice-Chancellor M Premjit attended as guests of honour. Governor Dr Najma Heptulla said that agriculture and allied activities are the mainstay of Manipur's economy as about 70 per cent of the people depend on it. Industrial growth in the State is very insignificant and the growth of agriculture in the State also has been quite uneven and unsatisfactory as it still depends on seasonal rainfall, she added. Stating that lack of connectivity and short working season are constraints on the economic development of the State, Heptulla said that the State is still lagging far behind other States of India in terms of availability of infrastructure for social and economic development. Chief Minister N Biren said that doubling farmers' income would be possible only if the State can best utilize the vast untapped potentials of reservoir of resources present in major farming systems.

He said, "We have large untapped area in the hilly regions. What we need is introduction of appropriate technology for these areas to increase productivity and make the farming system competitive and sustainable. We need to promote farming systems based on high value agriculture like horticulture and animal husbandry. Not only this, we need to adopt successful three-dimensional cropping as well as sustainable farming system involving crop -livestock-pisciculture integration." Ministers, MLAs, high ranking officials of the State and Central Government and scientists from different parts of the country were also present at the occasion. The workshop had two technical sessions.

Manipur: Impact of temperature on fish growth analysed

<http://e-pao.net/GP.asp?src=26..250318.mar18>

A three-day workshop cum brainstorming session on the topic "Impact of Temperature on Physiological Stress, Survival, Growth & Reproductive Competent of Fishes of North East India' under NICRA organised by ICAR Research Complex for NEH Region, Manipur Centre from March 22 concluded today at its Lamphelpat premises. A total of 41 participants including students and research scholars from different universities and officers from Department of Fisheries participated in the programme. Dr Samarendra Hazarika, Principal Scientist & Principal Investigator of NICRA; Dr SK Das, Principal Scientist & Head of Fishery Division, ICAR Research Complex for NEH Region, Umiam; Dr L Kosygin Singh, Zoological Survey of India, Kolkata; Dr Ch Basudha Devi, Senior Scientist, ICAR Manipur Centre and S Gojendro Singh, Scientist ICAR, Umiam addressed many issues regarding the potential stresses, changes in the fish behavior, diseases in fish and mitigation and adaptation strategies in fisheries and aquaculture in the North Eastern region.

The dignitaries observed that most of the water bodies in the North East region are seasonal and as a result fish and other aquatic live are more vulnerable to temperature changes due to limited dispersal ability within hydrographic networks in which they live. They conveyed that the early life of fish suffers most due to temperature change and warming hampers ovarian development,

fertilization, incubation of eggs and embryo formation of fishes. They suggested a holistic approach study on the changes caused to fish by climate change in the region be developed.

Manipur: Shrinking wetland in Manipur: Culture constraints

<http://e-pao.net/epSubPageExtractor.asp?src=education.Science and Technology.Shrinking Wetland in Manipur Culture constraints By Mamta Lukram>

Water bodies and wetlands have an edifice in the socio-cultural fabrics of Manipur. Folklores, myths and mythology are imbued with values coded with the wetland ecology. From community fishing down to rituals, in diverse forms, the multi-myriad communities inhabited in the state eulogises the intrinsic core of wetlands' relevance to their lives. The Meitei cosmology is described to have faith in sky-water syncretisation, where water; the ultimate sacred sanctity, God dwelt upon. Manipur is a land whose narratives blended perfectly with natural water bodies. The fragile ecology of the state is inbuilt with numerous wetlands and riverine ecology. 'Pat' a local nomenclature of the word wetland is a word of frequent parlance with its multiplicity in number and limited cover like the Waithoupat, Wairipat, Loushipat, eekoppat, eeshokpat, pumlenpat, heinganag pat, Porompat, Lamphelpat, Yaralpat and so on. Every single wetland entails a transit of myths and narratives, accounting to history. Life ways, food habits, trade and commerce, transport, belief systems, socio-cultural aspects and many more life patterns could easily be reflected from the backdrop history of the lakes. Through the survivorship claimed by the wetland ecology, the matrix of the social-economic and cultural life could be unplugged.

One Hyderabad environmentalist from 'Save Our Urban Lake' (SOUL), Dr Lubna remarked "Lakes are our lives, men fish, women sell the fish on the lake side, families with children would come in row to buy the fish. Local transactions circulate and community life saturated around the lakes, dying lakes gulped our culture". A conceptual parallelism with Manipur can be laid where 'pat' in recent days are being internalised community names. Porompat in Imphal East district is a community name where important government office, institutional buildings, hospitals, settlement sites are available and vis-à-vis Lamphelpat in Imphal West. Instances are abundant of 'pat' becoming integral community names. The modern day's concept of development and tourism bring in urban values to the rural scape. The expanding urbanisation demand more spaces for which wetlands are the soft targets for landfills. Concretised structures are considered parameters of urbanisation/modernisation. Every inch development steps attacked the water bodies multidimensionally. Unhygienic dumping, construction debris, sewerage, pollutants, wastes and garbage finds water bodies as the ultimate destination, thereby degenerating the purity through pollution.

The wetland reclamation through landfills for expanding development purposes demolishes the cultural entirety. The theme of International Wetland Day 2018, by the standing committee of the

Ramsar Convention, "Wetland for a Sustainable Urban Future" bear utmost significance in Manipur where wetland day is observed by diverse groups both from the urban and the rural, 'Loktak Wetland' as the centrality. National Hydro Power Corporation (NHPC)'s Ithai Barrage commissioned over the Manipur River, blocking the natural inflow-outflow system of the Loktak Lake, transforming the lake into a reservoir for the hydropower generation has irreparably destroyed the lake ecology, submerging many thousands prime agricultural land of the valley that constitutes 10% only out of the total physical area of the state, jeopardising the food security in the name of development. Disrupting the natural replenishing system is the epitaph for advancing stage of Loktak Lake's natural death. Waste mismanagement in the expanding urban centres utilising naturally flowing rivers and streams as direct dumping spaces generated crucial polluting factors of the Loktak Lake. Feeder streams and small tributaries meander through the urban centres scoop up tonnes of waste before finally conjoining rivers that drain directly into the lake.

The insensitive perception of water bodies as uninterrupted dumping zones in absence of effective waste management system pollute and destroy the wetland ecology. When Nambol river that cut across the heart Imphal city become the unattended dumping zone, the conservation awareness of the Loktak Lake amongst the lake dwellers bear less resemblance. Yangoi Maril where the Nambol and Nambol River enter the lake is the vivid example where pile of floating untreated waste validates the tragic testimony. Urban waste management failure is one of the prime factor for the sporadic increase of pollution in the Loktak wetland ecology. The legal version towards lake conservation connotes a uniqueness. The fisherfolk whose livelihood solely rely upon the lake are alleged responsible for deteriorating the Loktak Lake's ecology. Fishing community dwelling in the floating huts are held responsible for polluting the lakes. Nevertheless, the fact is, from centuries back, the indigenous communities have been managing the wetland ecology through the traditional knowledge system transmitted orally from the forefathers/ancestors.

Apart from it, the lake has been sustaining wholesomely propelling prosperity to the mankind, before the blocking of its natural drainage system, the critical health threat of the lake. The identification tips of the transgressing factors for plundering the wetland ecology is rated over the activities of the fishing community, nurturing a blind sight over the culmination of the cumbersome acts deteriorating the lake ecology. The Loktak Protection Act (LPA) 2006, was hence adopted and enacted to evict the 'phumshang' (floating hut) dwellers around a demarcated 'core zone' in the name of conservation of the Loktak Lake. The International Wetland Day 2018, observation at Langol Sabi Leikai, Chaphu Khangpok Leikai, the fishing community shared stern concern over reliable information of re-enacting the same act. The shared responsibility of NHPC and the urban dwellers to preserve the Loktak wetland ecology for a sustainable urban future need be overemphasised on the International Wetland Day observation, rather than naming and blaming game of the fisherfolk solely. The Loktak Lake is specifically tied up with

tangible and intangible aspects of the culture. Therefore, the shrinking wetland thereby demolishing the cultural constructs of the traditional community need be ponder upon.

Manipur: 45,000 tonnes of fishes will be produced annually

<http://www.thesangaiexpress.com/45000-tonnes-fishes-will-produced-annually/>

Director of Fisheries Department, David K Shimray has claimed that if the initiatives/projects take up by the Department are successfully implemented in the State, fish production will increase to such an extent that the people will never face shortage of fish and the State can even begin exporting these fishes outside the State. He made the statement yesterday, during the ongoing press meet organised by Directorate of Information and Public Relations (DIPR). He said that an action document for 3 years (2017-18 to 2019-20) has been conceived and vision documents for 7 years (2017-18 to 2023-24) and 15 years (till 2032) have been created as well. If the first three year action plan is properly implemented, the fish production of the State will greatly increase and the State can even begin to export the fishes to other States. The Department is planning to produce around 45,000 tonnes of fishes annually during the three year plan.

There are also plans to culture around 300 million fish eggs and to rear/distribute around 65 lakhs fish fries during the said plan, he added. He further pointed out that creation of a fishery estate in various waterbodies (with every fish farm/pond measuring one hectare each), creation of new fish farms with an area of 10,000 hectares, developing paddy cum pisciculture system in the hill districts, conservation of indigenous fishes, establishment of pen and cage culture in open waters, providing advances and upto date tools and methods to the fish farmers and establishment of Fish Diseases Detection and Controlling Lab, are also included in the plan. David also explained that the 7 years and 15 years plans also include similar objectives with the only difference being that the scope and production targets are bigger compared to the three year plan.

The Director explained that out of the total 42,000 Mega Tonne (MT) of fishes consumed by the people of the State annually, 32,673 MT is produced in the State and the remaining 10,000 MT are imported from other States like Andhra Pradesh, Assam and West Bengal. He also pointed out that despite the presence of around 56,461 hectares of potential and scientifically farmable water bodies (including rivers, ponds, lakes etc), only 22,000 hectares have been utilised till date. The greatest challenge faced by the fish farmers in Manipur is the constant occurrence of flood, sometimes even two-three times a year. During floods, the fish from the farms are usually carried away by the flood, thus leading to great loss for the farmers.

Manipur: Why Manipur wants fishermen to stop using LED bulbs

<https://timesofindia.indiatimes.com/city/imphal/manipur-warns-fishermen-dont-disturb-migratory-birds-stop-fishing-by-night/articleshow/62376844.cms>

The state forest and environment ministry has warned that stern action will be taken against fishermen who used light emitting diode (LED) bulbs at Loktak Lake by night. While the government has conceded that fishing is the prime livelihood for people living around the lake and the activity cannot be stopped, it has said the use of these bulbs disturbs the habitat of the several migratory birds who flock here. Forest and environment minister Th Shyamkumar Singh has advised fishermen to refrain from venturing into the lake at night at Loktak. Thousands of migratory birds, mostly water fowls belonging to around sixty different species, are currently staying at the 237 sq km lake, the largest freshwater lake in the northeast. Chief conservator of forest and environment, Anurag Bajpai, told TOI on Thursday, "This new trend of fishing by night with the use of Chinese LED lights has drastically disturbed the migratory pattern of our feathered guests. Owing to this and lack of food, the birds are shifting to nearby safer climes. We cannot say now how many birds have shifted but we are planning to hold a counting exercise at Loktak in the latter part of this month."

Manipur: Shyamkumar talks tough against threatening Loktak lake

<http://e-pao.net/GP.asp?src=29..040118.jan18>

Maintaining that Forest Department is keeping a strict vigil to safeguard the Loktak lake including the wildlife, Forest and Environment Minister Th Shyamkumar said that the Department will take stern action against those who are found hunting and trapping migratory birds. Releasing 2018 calendar of Loktak Development Authority (LDA) at his office chamber at New Secretariat today, Shyamkumar who also holds the portfolio of MAHUD warned fishermen to abstain from fishing using electric current at night time. He said that Project Director, officials and staff of LDA have been working tirelessly to conserve the Loktak lake, the largest freshwater lake in North East India and is home to the endangered brow-antlered deer, Sangai. He made an appeal to the locals in and around the lake to extend cooperation to the State Government and LDA in protecting the lake from various threats. The Minister expressed grave concern over the dwindling of migratory birds in the lake. He also appealed to the locals to refrain from bird trapping using net and other means. He said that the LDA calendar depicts the development projects undertaken during the previous year including pictures of the wildlife and periphery of the Loktak lake. Kshetrigao MLA Nahakpam Indrajit; Project Director of LDA L Bhagaton and several officials attended the release function.

Manipur: Environment minister warns against polluting Loktak lake

<http://www.uniindia.com/environment-minister-warns-against-polluting-loktak-lake/states/news/1095424.html>

Forests and Environment Minister Thounaojam Shyamkumar today said the government is keeping a strict vigil to safeguard the Loktak Lake and the wildlife associated with the lake. The Keibul Lamjao park, the only floating park in the world and an integral part of Loktak Lake, is inhabited by the Sangai (Brow Anteloped Deer). He said the department will take stern action against those who are found hunting and trapping migratory birds. The minister also warned the fishermen against fishing at night...

Manipur: CM promises loan to women street vendors to start new businesses

http://www.business-standard.com/article/economy-policy/manipur-cm-promises-loan-to-women-street-vendors-to-start-new-businesses-117112900445_1.html

Manipur Chief Minister N Biren Singh on Wednesday promised soft loans to thousands of women street vendors who have taken over virtually all the footpaths and other available space in Imphal. "This will enable the women vendors to earn a livelihood through some other means of earning, far away from the city," he said on the sidelines of a function commissioning a garbage truck donated by the State Bank of India to the Imphal Municipal Corporation. In Manipur, all markets are exclusively run by women. Biren Singh said: "The squatting women vendors are obstructing traffic and pedestrians in the fast-growing city. With the bank loans, the vendors could start weaving, rearing of ducks and hens and the like and do the business elsewhere. "In such an eventuality, there will be no overcrowding in the city," he added.

This is the second attempt by the government to clear away the street vendors. Some months back, Minister T. Shyamkumar, who is in charge of the Imphal Municipal Corporation, had evicted the street vendors as he had planned to have a clean city. But the women returned to their respective places within hours. Shyamkumar, who was present in Wednesday's function, said: "We seek the cooperation of the women vendors and appeal to them not to scatter fruit and vegetable peels on the streets." Women vendors sharply reacted to the Chief Minister's suggestion that the women vendors take loans to embrace new businesses. Fish vendor Pishakmacha said she made purchases from a number of fishermen coming to Imphal and ran her family "with the meagre profit" she made. "I cannot make a living by rearing hens or ducks." Nungshitombi Laishram is a greengrocer who reaches Imphal daily by 3 a.m.

"I am over 70 years of age and I cannot do any other work," she said. Piyari Lisam, who sells cookies and sweets under a flyover, said: "Street vendors are an evil necessity in all cities. The corporation has recognised us. The Chief Minister should not speak irresponsible things." In the past, an alternative market was allotted to the women vendors but they refused to shift to the new place, saying it was customer-unfriendly. Another vendor, Lukamani, spoke menacingly: "The BJP government has not learned any lesson from history. The mighty British could not browbeat us even after bayoneting the women vendors."

Manipur: 6th commemoration of Loktak Lake Arson Day held

<http://e-pao.net/GP.asp?src=24..161117.nov17>

The All Loktak Lake Areas Fishermen's Union Manipur, with an aim to commemorate the atrocities meted against fishermen and phum huts of Loktak Lake, observed the 6th commemoration of Loktak Lake Arson Day at Thanga Chinglak Thongkha today, followed by a public meeting. All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) advisor H Yaima Singh, Chairman Committee on Human Rights, Phullindro Konsam, CORE president Dr Debabrata Roi Laiphungbam, All Manipur Farmer's Association president Dhana attended the event as presidium members among others. People from different areas of Thanga participated in the ceremony and a two minutes silence was observed to mark the commemoration. Meanwhile, the public meeting which was conducted after the observation, deliberated on Manipur Loktak Lake (Protection) Act 2006 and Wetlands (Conservation and Management) Rule 2017.

The dignitaries expressed that the Act and rules which were formed with the objective to safeguard and protect Loktak Lake have almost sidelined the source of income for the fishermen and people who earn their livelihood from the flora and fauna of the lake. The Wetlands (Conservation) Rule prohibits setting up of houses above the lake and any kind of work or task which would affect the lake at large. On the contrary, NPHC has set up the Ithai barrage greatly affecting the water level of the lake and the removal of the barrage is necessary to ease the hardship of the people.

The dignitaries further expressed that establishment of infrastructures/industry around the Lake has been prohibited according to the rule and added that setting up of new infrastructures around the lake by the Government in the name of promoting tourism should also be prohibited. The meeting also questioned the progress of the lake since the coming of Loktak Development Authority. It also discussed on how to improve or change the former Acts, present Acts and RAMSAR rules so that mutual benefit is achieved by all. ALLAFUM president O Rajen Singh, while commemorating the atrocities committed against the fishermen in 2011, by burning hundreds of fishermen's phumhuts, destroying fishing equipment, personal belongings etc, stressed on the need to abolish Loktak protection Act and added that the Act gave power to the authorities caused grievances among the fishermen.

Manipur: Government relieve as more fish produce in fish fair

<http://www.nagalandpost.com/ChannelNews/Regional/RegionalNews.aspx?news=TkVXUzEwMDEyMjY3OA%3D%3D>

People as well as Manipur government authorities were Friday relieved after fish farmers came up with over 85,000 kg of fishes in the fish fair cum fish crop competition organized every year on the eve of Ningol Chakouba. The Ningol Chakouba, the biggest and unique non-religious festival of Manipur in which married women are invited in their parental houses for a special feast will be celebrating on Saturday. The festival which was earlier concentrated only to the

Meitei community is expanding with other communities settling in the state too joined and enjoyed the festival in the last few years. With fish being the main curry of the special feast to be prepared in each family, authorities of Manipur government as well as people had apprehension of shortfall in supply of fish this years as most of the fish farms were feared damaged by the frequent floods during the last rainy season. The state government was worried about the possible shortage of fish as the state faced flash flood for five times in the last couple of months. With this expectation and encouraging the fish farmers, chief minister N Biren Singh had even announced cash award for the fish farmer who produced most in the fish fair this year.

However, on seeing the fish farmers coming up with large quantity of fish from their farm, it appeared that there would be no dearth of fish in this year's Ningol Chakkouba. In the fish fair cum fish crop competition organized by the state fishery department at Hapta Kangjeibung, Imphal, it was estimated that over 85,000 kg of fishes were produced by the fish farmers. On seeing the quantity of the fish displayed at the fair, state commissioner (Fisheries) Thaituilung Panmei said, despite repeated flood this year, farmers managed to produce more fish than the expected quantity. It showed that fish production has considerably been increased in the state, he added. State deputy chief minister Y Joykumar who opened the fair said government was trying to develop water bodies as a measure to control flood and to develop fisheries in the state. The deputy chief minister said, "Development of wetlands and water bodies and also rain water harvesting are the key areas where proper system need to be introduced so that fisheries can be made successful in the state."

He added that water bodies in the state have to be developed as a measure to control flood and also to use as reservoirs where fisheries can be practiced. Singh said that fisheries can easily be practiced as a means of livelihood and employment generation of people. "Majority of us preferred fish. Fish is an important food of the people of the state. Fish production has to be increased so as to meet the growing demand. Natural habitats as well as artificial habitats have also need to be developed to encourage indigenous fish farming in the state," he said. He added that streams mostly in the hilly areas have to be developed where fish culture can be practiced easily. Commissioner of fisheries Thaituilung Panmei said that despite repeated flood in the state this year, fish production has considerably been increased. In fact, the relentless effort made by the farmers made it possible and it is an encouraging step, he said.

He added, fishery department has been trying to develop fisheries upto the level that export of fish to the neighbouring states after meeting the state's requirements can be made possible. Over 85,000 kilograms of fish were produce in today's fair-cum-competition. As announced earlier by the chief minister, cash awards of Rs one lakh will be given to the highest producer of fish, Rs 75,000 and Rs 50,000 respectively to the second highest and third highest producer. An award of Rs 20,000 will also be given to the highest producer of indigenous fishes.

Manipur: Loktak Folklore Museum aims high to preserve dying practices of fishing community

[http://e-pao.net/epSubPageExtractor.asp?src=manipur.Folks.Loktak Folklore Museum aims high to reserve dying practices of fishing community](http://e-pao.net/epSubPageExtractor.asp?src=manipur.Folks.Loktak_Folklore_Museum_aims_high_to_reserve_dying_practices_of_fishing_community)

Growing up in a small floating biomass in the vicinity of the largest fresh water lake in North East India, the Loktak Lake, Tongbram Amarjit always had an spiritual and emotional bonding with the majestic lake characterized by series of floating islets, the slopping Thangjing hill ranges surrounding it and the only floating National Park in the world-Keibul Lamjao. 34-year-old Amarjit hailing Thanga Tongbram Leikai locality, located some 53 km south of the capital town, to pursue his higher studies and currently works as a Manipuri to English translator at the state Legislative Assembly. The passionate poet who published a collection of poetry "Labuk ki Manam" literally meaning "The Aroma of the Paddy Fields" in 2013 had always harboured the concept on how to preserve the folklores, myths, legends associated with the Loktak Lake as well as the tools employed by the fishing community based nearby the 287 sq km surface area but limited resources continues to hold him back.

Establishment of the Folklore Museum Pursuing his Ph.D. in English literature from Manipur University, Amarjit told PTI that he always wanted to present and preserve the rapidly diminishing techniques and tools used by the early fishing community of Thanga area and peripheral areas of Loktak Lake in Bishnupur district, but have been hampered by lack of support from certain quarters. Nevertheless, a determined Tongbram, from his early days understood that unless he establishes a platform; the objective to preserve the culture and tradition associated with the historic Loktak Lake will never materialize. Henceforth, he voluntarily took up the difficult task of taking a step forward. The painter artist lamented that though it is an absolute necessity, substitution of early fishing and agricultural techniques with that of modern tools has further deprived the upcoming generations to learn the actual practices associated with the past of Loktak Lake, which presents the "face of Manipur, when it comes to tourism and livelihood" in the state. This is when the literature enthusiast and painter Tongbram Amarjit with the active assistance of his father Tongbram Ahongjao and siblings decided to turn his dream and passion into reality by establishing the "Loktak Folklore Museum" back in October last year at his own residence after cleaning up the cow-shed in their courtyard.

He continued that he is always on the lookout for any antique items wherever he goes for his infant museum but also had to purchase some items as many of items used in the past are hardly found. Several of the collections displayed in the tin-roofed infant museum are bamboo-made materials used by the fishing community of Thanga area, bamboo made conical hats, musical instruments, traditional weapons and others. Another uniqueness of this infant museum is the inclusion of a separate section which displays several "medicinal plants grown in flower-pots and

used for healing purposes in the past, particularly fever". Amarjit has high hopes to gradually expand the four-room Museum over the course of years, and that "his foremost priority is to develop a separate gallery for oil paintings" so that it vividly illustrate visitors about the ancient and medieval lifestyle and "the civilization which grew and flourished around Loktak Lake since time immemorial." President of "Sahitya Thoupang Lup", an organisation, which promotes contemporary Manipuri literature, Amarjit took more than six months to find and convince an elderly person to purchase the two medium sized wheels of which is being kept at the entrance of the museum. Of these two medium sized wheels, Amarjit opines that "its necessity lies in the fact that it symbolises the development of agriculture."

Historian Professor Gangmumei Kabui in his "History of Manipur" mentions about the presence of Moirang principality which eventually became part of the ethnic Meitei community. Recalling his great grandfather's narration, Amarjit said "one of the paintings displayed in the folklore Museum illustrates an ancient practice pursued by the early settlers of Thanga on how to lure and catch tigers and other wild animals when it comes to prey upon the livestock reared by the common people of the time." Despite the financial constraint faced by Amarjit, to enlarge the Museum, he has already spent some Rs 3 lakhs from his own pocket to reach the present level of the museum. On the other hand, construction of Ithai Dam and deposit of wastes by rivers has rapidly changed the eco-system of Loktak making it more vulnerable to gradual diminishing of the traditional purposes. Sangai Festival 2017 and Folklore Museum Hopes rose high for Amarjit after the newly elected state government decided to organise a 21-km Sangai Run Half Marathon as a prelude to the largest festival of the state.

With the objective to promote the tourism potentiality of the lake, and its historical and tourism values, Chief Minister N Biren Singh had launched a website on October Monday last. On the other hand, co-founder of an athletic organisation, Ajanta Moirangthem had informed that runners from African region, particularly from Nigeria will be invited for this ten-day long annual event. Accordingly, an enthusiast Amarjit has been moving around between his Thanga residence and his Imphal residence, more than twice a week, to draw and put up signboards with directions to enable to let "interested individuals" have a look of his museum. Nevertheless, he acknowledges that his museum lacks varieties of items, required to be called a proper museum, but is quite confident that his primary focus which is to highlight the ways of fishing community of Loktak Lake will succeed and tourist can learn more about the development of the early settlers of Thanga locality. Despite his hectic official and governmental workload, Amarjit Tongbram is charting out ways to be present at his museum most of the time to narrate more on the items kept in his museum. Thanga locality is part of the Moirang principality and has deep relationship with the ethnic Chiru and Chothe inhabiting the southern portion of the state, according to the ancestors of his locality, concluded the poet painter Tongbram Amarjit.

Manipur: Freshwater fishes in North East facing threats

<http://www.assamtribune.com/scripts/detailsnew.asp?id=sep2817/oth052>

The freshwater fishes in Northeastern States are facing threats from overexploitation, water pollution, flow modification, habitat loss and invasion of exotic species, as well as climate change, according to reports. North East has been regarded as the country's future powerhouse. In 2001, the Central Electricity Authority while assessing the hydro-electrical potential of various river basins in the country, found the Brahmaputra basin to rank the highest with capacity for 168 projects and a power production potential of 63,328 MW, according to a scientific report in the journal, Aquatic Ecosystem and Health & Management. "However, the construction of dams has been found to have a great impact on freshwater biodiversity," opines Prof W Vishwanath of Manipur University's Centre for Advanced Studies in Life Science in his report on 'Diversity and conservation status of freshwater fishes of the major rivers of Northeast India'.

"For instance, with the construction of Ithai barrage in Loktak Lake of Manipur, there has been disruption in the migration of fish from the lake and some species have lost their spawning habitats", he said. Ithai barrage, a 35 ft high dam and a major component of Loktak Multipurpose Project which was taken up in 1983 to provide regulated storage to generate 104 MW of power and lift irrigation, maintained the water level of Loktak lake at a constant level of 768.9 metre throughout the year. As a result, it not only adversely affected huge agricultural as well as settlement area on the periphery of the lake, but it changed the entire hydrology of Loktak, the so called largest freshwater lake in NE preventing the natural breeding of Manipur's State fish – Pengba (*Osteobrama belangeri*) at Loktak and its connecting major rivers as the fish comes upstream from Myanmar's Chindwin through Manipur river.

Species such as *Syncrossus berdmorei* and *Raiamas guttatus* that were widely found in swamps, streams, and irrigation canals have been lost from these habitats around Loktak lake, Prof Vishwanath added. North East has a rich freshwater fish diversity which is attributed to past geological history and the Himalayan orogeny which played an important role in the speciation and evolution of groups inhabiting mountain streams. Stating that NE region is criss-crossed by numerous rivers belonging to the three major drainage systems: Barak-Brahmaputra, Kaladan and Chindwin, the report said. About 100 species of fish have been described from the region. As many as 40 species of fish are endemic to Chindwin drainage and 22 to Brahmaputra basin. The fish fauna of Kaladan is poorly explored. Of the fish species in the Brahmaputra basin, 34 per cent have not been evaluated for IUCN red list criteria, while in Kaladan, 48.2 per cent have not been evaluated, it added.

Manipur: Natural resources must be protected, indigenous people consulted before commissioning large-scale development projects in Manipur

http://e-pao.net/epSubPageExtractor.asp?src=news_section.Press_Release.Press_Release_2017.Indigeno

[us people must be consulted before commissioning large scale development projects 2017 0910](#)

The floods that took place in mid-June in northeast India severely impacted the lives and livelihood of over 17 lakh persons, many of whom were displaced from their home villages. The Asian Human Rights Commission (AHRC) had earlier noted that the damage caused by the floods was heightened by the construction of numerous dams and hydropower projects, none of which had been subjected to Environmental Impact Assessments (EIA) as mandated by the law. These included the Ithai barrage constructed under the Loktak Multipurpose Hydroelectric Project and the Pare Hydro Power Project. Both were created despite protests from local communities, who live downstream from these projects and face great loss and severe damage, when these dams inevitably overflow during the monsoon season. Most of the projects in the state are financed by external entities, such as the Asian Developmental Bank and the Japan International Cooperation Agency.

These institutions do not appear to take the wishes of residents into account, despite residents being the biggest stakeholders in such projects, due to the direct impact on their well-being. Under the Hydro Power Policy of 2012 <<http://manireda.com/wp-content/uploads/2016/02/Hydro-Power-Policy.pdf>> , there was a proposal to construct ten dams across the rivers in Manipur, despite the failure of most hydro projects/dams <<http://www.ifp.co.in/item/3338-recognise-peoples-right-in-development-process>> in the state. In addition to these failures, the entities responsible for monitoring the projects – the North Eastern Electric Power Corporation (NEEPCO) and the National Hydroelectric Power Corporation (NHPC) – are negligent in their administration, as evidenced by constant delays in opening dam gates during floods. Moreover, these entities are concerned with maximum power generation <<http://www.ifp.co.in/article/item/3126-nhpc-s-105-mw-loktak-project-a-curse-for-manipur>> rather than the good of the people, creating a situation of conflicting interests, wherein corporate interests are given precedence over the rights of the residents.

In addition to the impact on the people, these projects have a marked adverse impact on the ecosystem, and in particular on indigenous communities in the area. The social and environmental impacts of the project have direct implications <<http://www.ifp.co.in/article/item/2750-loktak-project-corporate-unaccountability-in-manipur>> for indigenous communities, most of whom depend on agricultural activities for their livelihood. In their hurry to “develop” the state, the government has failed to even sign an MoU defining the terms and conditions of the operations of the project, leading to a regulatory abyss and lack of accountability. Much as how the agitation to save the Silent Valley in Kerala <<http://www.thehindu.com/opinion/op-ed/A-rainforests-quos-saga-of-survival/article16851225.ece>> in the 1980’s led to the stoppage of a hydropower project in the region, the government must take account of the adverse impact of these projects on people and the environment. On 03 September 2017, there was a consultation on this matter attended by

parties including the Loktak Project Affected Areas Action Committee, Mapithel Dam Affected Villagers Organisation, JAC-Mapithel Dam Downstream Affected Peoples, Loktak Fisheries Welfare Association, Centre for Research and Advocacy, Manipur, and the Committee on Human Rights.

The parties unanimously decided to petition the state <<http://e-pao.net/GP.asp?src=1..030917.sep17>> and central governments to decommission problematic projects, including the Ithai Barrage project, the Tipaimukh dam, Pabram dam, as well as oil exploration projects all over the state. The idea behind these demands is to ensure a more spirited form of participative democracy and to recognise <<http://www.ifp.co.in/item/3338-recognise-peoples-right-in-development-process>> “the people’s rights in (the) development process” The AHRC stands with the groups and organisations in demanding an independent Environmental Impact Assessment and ensure people’s participation during the commissioning and decommissioning of large projects that could have a deleterious effect on their lives, environment and livelihoods. The Central and State governments must take note of the adverse effect of these projects on the lives of residents in the area, as well as the fact that many of these constructions are unlawful, due to them being undertaken without fulfilling requirements under the relevant environmental laws. By ignoring the desires of the indigenous people who are the primary occupants of the land, the State is violating the provisions of the United Nations Declaration on the Rights of Indigenous Peoples <http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf> . It is essential that the demands made at the consultation on 03 September are acceded to, and that provisions for compensation to affected persons are made.

Developmental policies including the North East Hydrocarbon Vision 2030 <<http://pib.nic.in/newsite/printrelease.aspx?relid=136255>> , Manipur Hydro Power Policy of 2012 and the Manipur Loktak Lake Protection Act, 2006 <http://www.cseindia.org/userfiles/Manipur_Loktak_Lake.pdf> . The Asian Human Rights Commission (AHRC) works towards the radical rethinking and fundamental redesigning of justice institutions in order to protect and promote human rights in Asia. Established in 1984, the Hong Kong based organisation is a Laureate of the Right Livelihood Award, 2014.

Manipur: Northeast faces overexploitation of freshwater biodiversity

<http://www.easternmirrornagaland.com/northeast-faces-overexploitation-of-freshwater-biodiversity/>

The freshwater fishes in India’s Northeast states are facing the threats from overexploitation, water pollution, flow modification, habitat loss, and exotic species invasion, as well as an additional factor, climate change, according to reports. Northeast India has been regarded as the country’s future powerhouse. In 2001, the Central Electricity Authority while assessing the

hydro-electrical potential of various river basins in the country, found the Brahmaputra basin to rank the highest with capacity for 168 projects and a power production potential of 63,328 MW, according to a scientific report in the Aquatic Ecosystem and Health & Management journal. “However, the construction of dams has been found to have a great impact on freshwater biodiversity,” opines Prof W Vishwanath of Manipur University’s Centre for Advanced Studies in Life Science in his scientific report on ‘Diversity and conservation status of freshwater fishes of the major rivers of northeast India.’ “For instance, with the construction of the Ithai barrage in the Loktak lake of Manipur, there has been disruption in the migration of fish from the lake and some species have lost their spawning habitats.”

Ithai barrage, a 35ft high dam and a major component of Loktak multipurpose project which was taken up in 1983 to provide regulated storage to generate 104 MW of power and lift irrigation, maintained the water level of Loktak lake at a constant level of 768.9m throughout the year. As a result, it not only adversely affected huge agricultural as well as settlement area on the periphery of the lake, but it changed the entire hydrology of Loktak, the so called largest freshwater lake in NE India preventing the natural breeding of Manipur’s state fish-Pengba((*Osteobrama belangeri*) at Loktak and its connecting major rivers as the fish comes from Myanmar’s Chindwin to upstream through Manipur river. Species such as *Syncrossus berdmorei* and *Raiamas guttatus* that were widely found in swamps, streams, and irrigation canals have been lost from these habitats around the (Loktak) lake, Prof Vishwanath added.

Northeast India has rich freshwater fish diversity which is attributed to past geological history and the Himalayan orogeny which played an important role in the speciation and evolution of groups inhabiting mountain streams. Stating that the (NE) region is criss-crossed by numerous rivers belonging to the three major drainage systems: the Barak–Brahmaputra, the Kaladan and the Chindwin, the report said. About 100 species of fish have been described from the region by workers from India, as well as from other countries. As many as 40 species of fish are endemic to the Chindwin drainage and 22 to the Brahmaputra basin. The fish fauna of the Kaladan is poorly explored. Of the fish species in the Brahmaputra basin, 34% have not been evaluated for IUCN red list criteria, while in the Kaladan, 48.2% have not been evaluated, it added.

Manipur: Many say No to oil exploration, mega dams in State

<http://e-pao.net/GP.asp?src=1..030917.sep17>

A one day consultation on "Protection of Land and Natural Re-sources in Manipur" was organized at Manipur Press Club today by Loktak Project Affected Areas Action Committee, Mapithel Dam Affected Villagers Organi-zation, JAC Mapithel Dam Downstream Affected Peoples, Loktak Fisheries Wel- fare Association, Centre for Research and Advocacy, Manipur and Committee on Human Rights. Speaking at the function, Jiten Yumnam, secretary, Centre for Research and Advocacy, Manipur, stress-ed on the need for effective protection of land and

natural resources of Manipur. He said that most of the development processes, both policies and projects, are introduced without consulting the people and without obtaining their consent, and are often incompatible and against their development wishes and aspirations. Pantiliu Gonmei, secretary, Rongmei Lu Phuam said that the ongoing effort to drill oil in Tamenglong areas and build dams over the Barak River are big concerns.

She opined that indigenous communities of the State need to strive collectively for protection of land and resources in the State. Panmei Tinglung, CPNRM, expressed concern with the ongoing push for oil exploration in Manipur without the consent of the indigenous people and without conducting proper assessment of possible impacts on the land and the eco system. Gopen of Irabot Foundation, deliberated that the Loktak Project has led to loss of agricultural lands and stressed on the need to assess its economic impacts. Chairman of Committee on Human Rights, Phulindro Kongsam, stated that international financial institutions like the Asian Developmental Bank, Japan International Cooperation Agency are facilitating loot and plunder of the State's land and resources through their road and railway projects as these projects failed to recognise communities' rights over their own lands. Advisor of AMESCO, Brojen, shared that projects like the 105 MW Loktak Project is intended to undermine the food sovereignty of Manipur and foster dependency on outsiders.

Haobijam Kumar, president of All Loktak Area Fishermen Union, pressed for the repeal of the Manipur Loktak Lake Protection Act, 2006, and decommissioning of the Ithai Barrage of Loktak Project. He alleged that the NHPC remains irresponsible and unaccountable for the destruction of agricultural lands and the suffering and hardship caused to the people. The Ithai Barrage is clearly a curse for Manipur and the recent announcement of the Environment Minister to evict encroachers from Loktak wetlands and its peripheral area is a clear concern.

Any development processes impacting Loktak needs to consult and take the consent of the communities, he added. Majabung Gangmei, speaker of Zeliangrong Baudi, stated that development policies like the Manipur Hydro Power Policy, 2012, was formulated proposing around 10 dams all over the river of the State and this policy came despite the failure and under-performance of many of the dams built in Manipur. Many other attendees also shared their views and ideas during the consultation programme. Seven resolutions were also adopted at the programme. The resolutions included decommissioning of Ithai Barrage, stopping the commissioning of Mapithel dam and ensuring free flow of Thoubal River, stopping oil exploration in Manipur and revocation of all licences, contracts given to Jubilant Energy, Oil India Limited and Asian Oilfields, scrapping and repealing of all developmental policies like the North East Hydrocarbon Vision 2030, Manipur Hydro Power Policy, 2012 and the Manipur Loktak Lake Protection Act, 2006.

Manipur: NHPC's 105 MW Loktak Project: A Curse For Manipur

<http://www.ifp.co.in/article/item/3126-nhpc-s-105-mw-loktak-project-a-curse-for-manipur>

The deep rooted and multifaceted adverse impacts of the 105 MW Loktak Multipurpose Hydroelectric Project, commissioned by the National Hydroelectric Power Corporation (NHPC) continues to haunt Manipur for long. A simple interaction with denizens of Loktak wetlands, within and peripheral part of the wetland would unravel the alteration, a change more of nightmarish experiences to communities, of loss of land, of loss of fish species and seasonal plants, of a change in culture, that brings lamentations to memories of abundance, of freedom and glories in their bygone days, prior to the dam. Much has been discussed and written on wide impacts of Loktak Project and the NHPC, a multinational company, responsible for altering Loktak wetlands ecology and the endless sufferings seems to be least concerned. Rather, denying its role in the devastation of Loktak and refuting the call of communities and even the Government of Manipur to decommission Ithai as emanating from sheer 'Ignorance', simply constitute an utter disrespect and insult to the people of Manipur.

NHPC even boldly absolved and deny responsibility for the sufferings unleashed in Loktak wetlands in legal processes with communities seeking compensation for crop damages by the project. This is a clear evidence of how the NHPC functions with a clear impunity, far away from any sort of monitoring and regulatory mechanism. Unfortunately, the Loktak Development Authority (LDA) in a scandalous manner facilitate the NHPC's unaccountability and assertion of impunity by unleashing merciless brutalities, adding to the woes and suffering of the fishing communities, displaced by NHPC's Loktak Project itself since 1983. The formulation of the Manipur Loktak Lake Protection Act, 2006 and LDA's subsequent eviction notice on 11 November 2011, that lead to atrocities in Loktak is all aimed to clear Loktak of people and all vegetation and all life in it, to ensure an unhindered flow of water for NHPC's Loktak power station through the Ningthoukhong canals.

Unfortunately, the merciless arsoning of floating huts and displacement of fishing communities in mid-November 2011 inside Loktak wetlands by LDA with the aid of Manipur police will remain as the darkest moments for Loktak and in the history of the Manipur. The entire process of NHPC's operation of Loktak Project with impunity and LDA's atrocities in Loktak wetlands simply has commonalities of maximizing profits simply by exploiting Loktak wetlands and inflicting wide sufferings to fishing communities. The CBI now prepares to investigate the corruption of around 300 crores in phumdi clearance in Loktak wetlands by K-Pro Company with LDA in 2011. The NHPC's Loktak Project is simply becoming a symbol of ruthless plunder and exploitation of Manipur. The project is now also synonymous with the oppression of the people of Manipur and the suppression of the indigenous peoples' legitimate exercise of their self-determination over their land, lives and future. It seems the Loktak Project is designed perfectly to destroy and weaken Manipur, by usurping its agriculture land and destroying its key primary economic base.

Manipur indeed has long been reduced to a food importing state for long, ever since the commissioning of Ithai Barrage. The NHPC continues to reap maximum profit at the cost of Manipur's land and suffering for its people. The economic loss due to submergence of more than 80,000 acres of agriculture land and subsequent economic loss of communities in Loktak wetlands need a careful assessment. A cost benefit analysis of Loktak Project would only indicate the extensive loss for Manipur. The percentage of revenue received by the Government of Manipur from Loktak project is simply and far disproportionate to its loss. A continued operation of Loktak Project for the next Ten to Twenty years will simply cause havoc and completely destroy Loktak. Given the fast rate of sedimentation of Loktak Wetlands from the Rivers flowing into Loktak Wetlands due to denudation of forest in their catchment areas, Loktak Wetlands simply will disappear. Rivers like Khordak River and Manipur River is all silted up already.

Any amount of dredging through the Canadian Government funded dredging programme or any amount of corruptive cleaning of Phumdis by companies like K-Pro, all ostracizing and undermining traditional and sustainable management of Loktak Wetlands by communities, can never save Loktak Wetlands. The proposal to fund further cleaning with help from Japan, as indicated by the recent visit of Japan's Ambassador to India early this year in Manipur, or any other agencies will never lead to any positive change in Loktak, except for harassment on communities, corruption and irrationality of such initiatives. Notwithstanding the multiple impacts and the continued unaccountability of the NHPC, the objectives and performance of the Loktak Project need be clearly scrutinized as well.

The Loktak lift irrigation project, which originally intends to provide irrigation and rejuvenate more than 30,000 hectares of agriculture land, now languish useless and non-functional, while farmers also lament of the land loss due to the construction of the irrigation canals at Bishenpur, Moirang, Tronglaobi and many other areas in vicinity of Loktak wetlands. Despite the worsening situation in Loktak wetlands and the nonfunctional nature of the key objectives of the Loktak Project, there is no mechanism to monitor the impacts and the performance of Loktak Project. NHPC seems to function above the people of Manipur and the Government of Manipur. Loktak project also contribute in worsening flood situation in Manipur. Every time the rain comes, communities in Loktak wetlands area have to make fervent appeals to NHPC due to floods, submergence of their agriculture land and damage to their livelihood. The NHPC always responds late, opening few gates, only after extensive damages are inflicted and this ordeal persist for the last three decades. For communities depending on Loktak wetlands, the NHPC is simply a curse, a project that brings so much of miseries and hardship for them and that extinguished hopes for them and for their generations. For NHPC, the priority is to maintain adequate water level for maximum power generation to generate maximum profits, irrespective of the damages it inflicted on communities and on Loktak itself.

And the question is how long such ordeal and NHPC unaccountability will continue and how long will the people of Manipur suffer? There is no clarity how long the project will continue and with the recent confirmation of an absence of a clear agreement between NHPC and the Government of Manipur, that defined the terms and conditions of the operation of Ithai Barrage, the end to such ordeal is nowhere in sight in near future. The NHPC seems to enjoy complete freedom to destroy Loktak Wetlands and all the traditions and cultures associated with it in its ultimate for an indefinite period of time. Manipur's indeed reeling and enduring a time, where corporate bodies are increasingly ruling the roost. For long, the NHPC has taken the people of Manipur for a ride for long. It is simply involved in exploiting its land and resources, all with the reliance of the Indian Armed Forces, which are deployed in Manipur under the Armed Forces Special Powers Act, 1958, which also led to a fundamental question if the Indian army deployed in Manipur is also to facilitate the full- fledged exploitation of its land and resources. The deployment of Indian armed forces in key infrastructures like Ithai Barrage, Loktak Power Station, Ningthoukhong Canal for Loktak project indicates that there is also a larger interest of the armed forces of India in Manipur, other than countering and suppressing its ongoing self-determination movement.

The same question is also application in the ongoing process to expropriate other minerals and natural resources, like oil exploration move by Oil India Limited (OIL), which incidentally is also preparing to explore and drill oil in Loktak wetlands areas. It is really unfortunate that a project like Loktak project, that is already a curse for Manipur, that has inflicted so much of suffering with no responsibility and accountability of the project proponent, NHPC, there is no review of the project, for its relevance and rationale even after nearly forty years of project operation. The NHPC all the more seems to insist on reinforcing its practice of exploitation and plunder of Loktak wetlands, by trying to garner more profits from CDM mechanism by renovating Loktak power station and also by building another dam, the 60 MW Loktak Downstream project to harness the water released from the power Station.

This indeed will be the height of India's imperialist expansionist policies of exploitation, loot and plunder of Manipur, akin to British' economic exploitation of India. Decommissioning or removing the Ithai Barrage from the Manipur River is the only solution at this point to save Loktak Wetlands and to recover its vibrant and fragile ecology. The decommissioning of the Ithai Barrage should be carried out as per the recommendations of the World Commission on Dams, 2000, that outlined the key steps and procedures to decommission mega dams like Ithai Barrage. The current management plan and process in Loktak by negating communities' rights and role in such management goes against the spirits and provisions of the Ramsar Convention and the provisions of the United Nations Declaration on the Rights of Indigenous Peoples. For all violations and unaccountability, NHPC should completely be banished from Manipur. The MoU with NHPC for the construction of the Loktak Downstream Project and the 1500 MW Tipaimukh dam should be revoked by the Government of Manipur.

Other corporate bodies like the K-Pro company and officials of Loktak Development Authority involved in corruptive practices in Loktak wetlands should be prosecuted. Policies like the Manipur Loktak Lake Protection Act, 2006 that unleashed sufferings to fishing communities and which are incompatible to the sustainable practices and ethos in Loktak wetlands should be scrapped altogether. It is high time the people of Manipur and the Government of Manipur take responsibility for their own land, rivers, wetlands, forest and its minerals. Manipur's sustainable development practices can be best achieved by involving its people, by taking care of its land and resources and by ensuring accountability for all stakeholders involved in its development, primarily companies like NHPC and other financial institutions. Removing unsustainable projects like NHPC's Loktak Project, already a curse for Manipur will be a virtuous beginning for fostering sustainable development in Manipur.

Manipur: GRPC restricts quarrying, electric pulse fishing along Gundung river

<http://e-pao.net/GP.asp?src=12..180817.aug17>

The Gundung River Protection Committee (GRPC) has come up with stringent measures, today, in an attempt to preserve and protect the Gundung river and its ecosystem. The committee said that as per the resolution adopted in a joint meeting of all village chiefs along the Gundung river labourers and the labourers working in the river at the residence of Mangkeng, (Chief of Sapormeina) on August 13, various restrictions will be imposed on numerous activities in the river. It said that quarrying using JCB and electric pulse fishing on the Gundung river have been strictly prohibited with immediate effect and also warned the quarry labourers not to encroach or work near at the base of paddy field and the residential areas. "Whosoever violates the restrictions adopted by the committee will be fined with a sum of Rs 30,000 by the GRPC", it said and added that the committee will strictly monitor all activities along the river.

It is worth mentioning that, quarry activities along Gundung river have become immensely popular, particularly from Keithelmanbi area to Luwangsangol via Motbung in Kangpokpi district, as it serves as one of the common livelihood source for many unemployed people. However, the river has, at the same time, expanded in length and depth due to the activities and it is a commendable decision on the part of the Gundung River Protection Committee to come up with such restriction so as to ensure preservation and protection of the river. It is also a common practice among denizens of Kangpokpi and even outside residents, to go to fishing along the Gundung river using electric current by means of dynamo which has gradually led to the extinction of a variety of fishes along the river.

Manipur: Loktak Project & corporate unaccountability in Manipur

[http://e-pao.net/epSubPageExtractor.asp?src=news_section.opinions.Loktak Project and corporate unaccountability in Manipur By Jiten Yumnam](http://e-pao.net/epSubPageExtractor.asp?src=news_section.opinions.Loktak_Project_and_corporate_unaccountability_in_Manipur_By_Jiten_Yumnam)

Of the most ambitious and controversial mega projects in Manipur, the 105 MW Loktak Multipurpose Hydroelectric Project (Loktak Project) hit news headlines in early August 2017, again for wrong reasons. Several media establishments published the non-existence of memorandum of understanding or agreement (MoU) on Loktak Project between the Government of Manipur and the National Hydroelectric Power Corporation (NHPC), as confirmed by the NHPC on 9 May 2017 in response to an RTI filed by Mr. Joy Haobijam of Thanga, Manipur. The arsoning of floating huts in Loktak Wetlands and the merciless brutality unleashed by the Loktak Development Authority (LDA) and the Manipur Police in November 2011 and the scandalous corruption in the cleaning of 'Phumdi', floating biomass in Loktak Wetlands involving the K-Pro company, also hits news headlines in recent years. The absence of an MoU, that should be defining the terms and conditions of the operation of the Loktak project, simply led to series of unanswered questions, especially on who should be regulating the operation of the 105 MW Loktak Multipurpose Hydroelectric Project concerning its project duration, on responding to social and environmental impacts, the decommissioning period, and the rights and role of the State Government and to address the lingering grievances of the communities, challenged by the project.

With the absence of a MoU, it seems the Government of Manipur is divesting its responsibility to regulate a project marred with wide social and environment impacts on its land and resources, which provides a critical livelihood source for several indigenous communities of Manipur. The NHPC seems to be conferred with a free hand to just plunder and expropriate the wetlands and other natural resources of Manipur without any monitoring, regulation and accountability mechanism. The construction of Loktak Multipurpose Hydro Electric Project was taken up by the Ministry of Irrigation and Power, Government of India in 1971 and was commissioned by the Government of India in 1983 with the National Hydro Electric Power Corporation (NHPC) executing the project. The Ithai Dam or barrage was constructed in the downstream of Manipur River (Imphal River) to generate 105 MW of power by and to provide Lift irrigation facilities for 24,000 hectares of land. The Ithai barrage constructed has already led to submergence of more than 80,000 acres of agriculture land.

The construction of the Ithai Dam has brought a reverse picture in economic status of Manipur from a self-sufficient to borrower's position with a large number of agricultural lands submerged under water. Manipur continues to lose around 300 crore rupees annually, if one calculates the annual loss of crop yield, fishing and other seasonal vegetable harvest from the land destroyed by Loktak Project in and around Loktak wetlands, over 80,000 acres of land. Manipur has incurred a loss of more than 10,000 crores of rupees since the project operation from 1983 onwards. A careful calculation of economic, social and environment impact of Loktak project is a serious and critical need of the hour. The NHPC Company refused to concede to the demands of the community affected by Loktak HEP project in Manipur for their rehabilitation and resettlement. Many of the displaced people are forced to seek refuge in Loktak Lake, building floating huts

over phumdis, floating vegetation mass formed due to seasonal fluctuation of water level of the Lake. However, the Government of Manipur unleashed a reign of state terror by burning down these floating huts in November 2011. The arsoning was carried out by Loktak Development Authority (LDA) and the Manipur Police based on the eviction notification of LDA on 11 November 2011 under the Manipur Loktak Lake Protection Act, 2006.

Loktak Lake is already designated as a Ramsar Protected Site under the Ramsar Convention and one of the key obligations of the Government is to ensure that communities depending on Loktak Wetlands are fully involved in all management process of the Lake as also endorsed by the resolution VII.8 and VIII.19 of Ramsar Convention's Conference of contracting parties held at Costa Rica in May 1999 and at Spain in November 2002. Notwithstanding these resolutions, fishing communities of Loktak Lake are evicted and their intrinsic survival dependence on the Lake curtailed. The Impact of Ithai Barrage is not limited to only submergence of agriculture land and destroying peoples' livelihood. The Ithai Barrage has been responsible for series of floods in Manipur as the NHPC in several occasion, refuse to open the sluice gates of Ithai Barrage, leading to widespread submergence of agricultural areas. Manipur already experienced more than five major floods from April till July 2017. Acknowledging the role of Ithai Barrage in the worsening flood situation in Manipur, the Chief Minister of Manipur, Mr. Biren has even requested Mr. Narendra Modi, Prime Minister of India in July 2017 to remove the Ithai Barrage that blocks the Manipur River. Unleashing environmental impacts, the Ithai Barrage also led to disappearance of several indigenous fishes from Loktak Lake such as the Ngaton, Khabak, Pengba, Tharaak, Ngaaraa, Ngaatin etc. It has been observed that these fishes migrated from the Chindwin-Irrawady river system of Burma to the course of Imphal/Manipur River for breeding in the adjoining lakes and streams of Manipur valley.

The production of at least Twenty Three (23) indigenous varieties of aquatic edible plants, e.g Heikak, Thaangjing, Loklei, and Pulei etc has been reduced. The Loktak Project has contributed in militarization in Manipur as Indian paramilitary forces are deployed to protect the facilities of the project, such as Ithai, Leimatak and Ningthoukhong etc. There are several cases where military officials manning the Loktak Project facilities committed human rights violations, viz arbitrary killings and summary execution of indigenous populace of Manipur. The Loktak Project has become a real symbol of plunder and exploitation of the land and resources of Manipur and is also a key factor for undermining food sovereignty of Manipur. The continued operation of the Loktak Project without any accountability of the NHPC and the State undermines the significance of Loktak wetlands, which is classified as a Ramsar site, a wetland of international importance under the Ramsar Convention. The Loktak project is also responsible for continued suffering of fishing communities, such as due to promulgation of the Manipur Loktak Lake Protection Act, 2006. The NHPC reaps huge profits while unleashing wide suffering to indigenous populace and undermining food sovereignty of Manipur. Further, NHPC has plans to accrue additional profits by renovating the Loktak Power Station by reaping and

market carbon credits from the Clean Development Mechanism of the United Nations Framework Convention on Climate Change, which is also a false solution to climate change.

In a clear disrespect and insult to the people of Manipur, the NHPC even claimed in the High Court of Manipur that it is not responsible for the submergence of land and devastation of Loktak Wetlands ecosystem. The indulgence of NHPC by profiteering from the destruction of land and environment and impoverishing and suppressing indigenous communities of Manipur and absolving of any responsibility constitutes a highest form of corporate unaccountability. The most unfortunate thing is the NHPC is also being entrusted by the Government of India to build the colossal 1500 MW Tipaimukh Multipurpose Hydroelectric Project along the Barak River and also the 60 MW Loktak Downstream Project, both of which will entail wide submergence of both agriculture and forest land in Churachandpur and Tamenglong Districts of Manipur. Such massive destructive of land will further undermine food sovereignty and foster Manipur's dependency on outsiders. Corporate bodies like the NHPC that remained unaccountable for the sheer destruction of the land and resources in Manipur should not be allowed to operate further in Manipur. NHPC should also stop unethical ways of reaping financial gains by seeking carbon credits from upgrading the Loktak Project operations. Such practices will only reinforce the unethical practices and the violations within.

The NHPC should stop reaping profits from Manipur by destroying its wetlands and by harassing its indigenous peoples. Such process will be akin to perpetuation of violations. NHPC should be held accountable for the violations and the disrespect of the people of Manipur. The Government of Manipur and the Govt of India should explain to the people of Manipur on the absence of an agreement or an accountability mechanism for 105 MW Loktak Multipurpose Hydroelectric Project. The Government of Manipur should also urge upon the NHPC to take responsibility and accountability for the sufferings unleashed on communities and for the environment devastations in Loktak wetlands. The Government of Manipur should take full responsibility by reviewing 105 MW Loktak Project and to take appropriate steps in coordination with the Government of India to decommission the Ithai Barrage at the earliest. There is a larger question if the operation of Loktak Project with an annual loss of more than 300 Crore for Manipur is still feasible? Moreover, North East India is already power surplus and people of Manipur buy power irrespective of where it is generated.

The Manipur Loktak Lake Protection Act, 2006 should also be repealed to recognize the rights and role of fishing communities in the sustainable management of Loktak wetlands. NHPC should be held accountable for the multiple violations unleashed in Manipur. A development process that inflicted suffering to the communities and that devastate their livelihood and that insisted on corporatization and perception of land and resources only as sources of profit amidst absence of any accountability mechanism for corporations and the State can never lead to sustainable development and such development processes should be rescinded.

Manipur: Consultation on national policy on fisheries held in Manipur

<http://www.easternmirrornagaland.com/consultation-on-national-policy-on-fisheries-held-in-manipur/>

One day state level consultation on national policy on fisheries (inland) was organised by All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) and Bishnupur based NGO called People's Resources Development Association (PRDA) on July 28 at Tribal Research Institute Hall, Imphal. The fishing community mostly those living in and around Loktak, the largest freshwater lake in North East India have expressed their desire to have their own identity in order to claim their fishing rights for a sustainable livelihood. "So far we have no platform to raise their concerns or demands. Thus we need our identity card and start demanding our rights for the welfare," said Kh Kiran Devi, a fisherwoman. "In fact, we the fisherwomen need space in markets and other necessary facilities." Kiran, a fisher woman from Langolsabi, a floating locality in Loktak, was sharing her opinion during a daylong state level consultation. Sharing similar sentiment, fisherwomen namely Khopirom Ongbi Kiranbala, N Thasana, Maisnam Pramo and Eche Ekashini and fishermen N Nando from Karang, Kumar from Thanga and Oinam Nabachandra from Langolsabi also expressed their desire to have their labour or smart cards and work for a better livelihood like others.

They are also demanding to incorporate their security on fishing, proper rest house cum jetty at suitable site, market place, transport support etc while formulating the national policy on fisheries (inland). On the other hand, Secretary of Upokpi Khunou club Premjit highlighted the issues of siltation and pollution in the lake while some of them suggested for the re-development of natural way to get back the vanishing indigenous fishes in wild particularly in Loktak by taking up certain steps. Environmentalists Dr RK Ranjan and Salam Rajesh spoke on certain issues with fishing communities besides sharing inputs from national consultation on the matter while Milan Das, member of national fish workers forum on impacts of conservation: Indian lessons and experiences. PRDA Secretary L Suranjoy Singh gave the introductory remark, ALLAFUM secretary Oinam Rajen presented a key note address and Director Indigenous Perspectives Ram Wangkheirakpam as the moderator of the consultation. Altogether more than 100 fishermen and fisherwomen attended the programme.

Manipur: Fishing community stresses sustainable livelihood

<http://www.assamtribune.com/scripts/detailsnew.asp?id=jul3117/oth054>

The fishing community, mostly those living in and around the Loktak, the largest freshwater lake in the North East, has expressed their desire to have their own identity in order to claim their fishing rights for a sustainable livelihood. "So far we have no platform to raise our concerns or demands. We need our identity so that we can demand our rights for the welfare of our community," said Kh Kiran Devi, a fisherwoman, adding, "in fact, we the fisherwomen need

space in markets and other necessary facilities.” Kiran, a fisherwoman from Langolsabi, a floating locality in Loktak, shared her opinion during a day-long State Level Consultation on National Policy on Fisheries (Inland) held here on Friday. The consultation was organised by the All Loktak Lake Areas Fishermen’s Union, Manipur (ALLAFUM) and the People’s Resources Development Association (PRDA), a Bishnupur-based NGO, at the Tribal Research Institute hall here. Sharing similar opinions, fisherwomen Khopirom Ongbi Kiranbala, N Thasana, Maisnam Pramo and Eche Ekashini, besides fishermen N Nando, Kumar and Oinam Nabachandra also expressed their desire to have their smart cards and work for a better livelihood.

They demanded proper rest house cum jetty at suitable sites, market places, transport support, etc. and formulation of the national policy on fisheries (inland). On the other hand, Premjit, secretary, Upokpi Khunou Club, highlighted the issues of siltation and pollution in the lake. Environmentalists Dr RK Ranjan and Salam Rajesh spoke on certain issues related to the fishing communities, besides sharing inputs from the national consultation on the matter. PRDA secretary L Suranjoy Singh gave the introductory remark, while ALLAFUM secretary Oinam Rajen presented the key note address. Indigenous Perspectives’ director Ram Wangkheirakpam was the moderator of the consultation which was attended by nearly 100 fishermen and fisherwomen.

Manipur: Can hope float Loktak’s phumdis?

<http://www.thehindu.com/society/can-hope-float-loktaks-phumdis/article19276922.ece>

Tomba, 45, used to be a fisherman till about 15 years ago. His day would begin at dawn, when he and the other men in his phumdi (islet) would set off for various parts of Loktak lake to fish. Their children rowed country boats to get to their schools on the Manipuri mainland. By afternoon, the day’s catch would reach Moirang, Ningthoukhong and Bishnupur. And the fishmonger women would take the fish across the State for sale. Today, Tomba sells plants for a living. For a while, after being relocated from his phumdi, he had tried to earn an income plying a cycle rickshaw, but failed. His neighbour Leirentombi is penniless and doesn’t know how to feed or school her children. Their neighbour Manihar is luckier. He is among the few to own a tin-roofed house near Moirang town, about 45 km south of Imphal, and runs a small grocery with his wife.

There is growing resentment, however, against the government among these former residents of Loktak lake, the largest freshwater lake in the Northeast. It’s close to six years since they were forced to leave their homes in the phumdis as part of conservation efforts, but little has been done by way of rehabilitation, they say. “The Chief Minister is going out of his way to ensure the welfare of the people in Manipur. But he has not said a single word about us,” says Mangijao, a former fisherman and phumdi resident. Monsoon cycle Lake Loktak (meaning end of the stream) pulses with life, stretching to about 500 sq. km during the rains and roughly half that in the dry

months of February and March. It is famous for the floating biomass islands or phumdis, a rich source of vegetation that have supported humans and animals for decades. In the heart of the lake is the largest phumdi, the 40 sq. km Keibul Lamjao National Park, home to the endangered brown-antlered deer, the sangai, whose habitat is under threat just as the islands are. The phumdis float during the rains and sink during the dry months, sucking nutrients from the lake bed to replenish their roots and float again when the next monsoon cycle begins. This has been their life cycle for centuries but it is now at grave risk.

The Loktak Hydroelectric Project constantly keeps the water level in the lake high. Unable to feed from the nutrients on the bed, the phumdis are thinning out and even breaking away. Worse, local residents themselves are breaking off pieces of the biomass to sell elsewhere as rich fish culture soil. Edible plants, fruits and roots endemic to the phumdis, and once a thriving food source for Manipuris, are slowly dying. About 12 lakh Manipuris are said to depend on Loktak lake, directly or indirectly, putting immense pressure on the waterbody. Waste and sewage from nearly 30 streams and rivers find their way into the lake, choking it with plastic and toxins. The various dams, most prominently the ones that are part of the hydroelectric project, have dramatically altered the lake's hydrology. Roads and other urban works encroach into and diminish Loktak. The floating phumdis and the fisherfolk who live on them have multiplied manifold, slowly polluting and poisoning the waters. Foreign fish introduced into the lake are killing indigenous species. Sneak back In 1990, the Ramsar Convention declared Loktak a 'wetland of international importance', and in 2006, the Loktak Development Authority (LDA) enforced the Manipur Loktak Lake (Protection) Act, under which the government began to clear the lake of human encroachment.

Fishermen were asked to leave the phumdis. A ₹360-crore grant was approved to clear the lake of water hyacinths and compensate the fishermen. But the fishing families refused to leave the islets. In 2011, LDA officials and armed policemen torched their huts and around 800 were burnt down. According to LDA officials, ₹40,000 each was paid as compensation to 519 families whose huts were torched. The rest refused to accept the compensation, saying it was too little and protesting the disruption to their means of livelihood. Now, the fisherfolk hope the BJP government, which came to power in the State early this year, will come to their aid. Among the party's rallying cry during campaigning was a promise to expose the Loktak "scam" and bring justice to the poor fishermen. Many villagers have already started to sneak back to the lake every day. The more daring ones have built thatched huts on the phumdis. For now, the authorities are looking the other way. Locals suspect the issue will remain unresolved until the next elections. Environmental activist Salam Rajesh said, "The involvement of the fishermen is a must to conserve the lake." Loktak is a complex problem that needs a multi-dimensional solution, something successive governments have been unable to provide. Will anything change before it's too late for the lake?

Manipur: The World Environment Day 2017: Loktak Ema Laments

http://e-pao.net/epSubPageExtractor.asp?src=education.Science_and_Technology.World_Environment_Day_2017_Loktak_Ema_Laments_By_Mamta_Lukram

Overwhelming enthusiasm leads all the way long to participate 'The World Environment Day 2017,' observation at Loktak Wetland. Swayed in the wave of the sparkling water, the traditional wooden boats sweep across the core of the lake, where small floating huts could be seen scattered along the heart, detached from one another, yet floating in cohort. The introspecting-self grappled developing a topographic silhouette of the lake and its surrounding- the forest, hillocks, islands, villages, floating parks and so on, sitting vaguely on the boat, trickling the calm surface. Attempting to recollect the number of development projects, all proposed and planned over the Loktak; my seniors' matter of frequent discussion- the Oil exploration and Drilling Plan at Loktak, the Keibul Lamjao National Park expansion plan, the World Largest Floating Solar Power Plan at Loktak, the Loktak Ring Road, the Integrated Fishery projects, the Cable Car Network Plan, the Tourism Expansion, Privatisation of the Loktak, the Core Zone, Buffer Zone, the NHPC's Ithai Dam submerging thousand acres of land, the underperforming lift irrigation canals of NHPC etc, etc, jerked my intuition into endless confusion.

"SAVE NATURE SAVE OUR FUTURE," was the theme of the observation, organised by The All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM), at the Longol Sabi, Champu Khangpok village of Loktak Lake, with the praxis of emphasising the need to conserve and preserve the Loktak wetland ecology. The side banners with capital red letters on the white background "DECOMMISSION ITHAI BARRAGE OF THE 105 MW LOKTAK, GO BACK NHPC, STOP PLUNDER OF LOKTAK WETLAND" and "STOP OIL EXPLORATIO IN LOKTAK WETLAND" decode more intrinsic meanings of the observation. Prominent personalities, eminent activists, artist, media, researchers, academician and fishing community filled the little floating elementary school located at the core zone of the Loktak Lake, a 'no development zone' where human habitation is forbidden according to the Loktak Protection Act, 2006. The striking key of the opening remark was the commemoration of the traumatic experiences, the Loktak fishing community have been subjected to, during the forceful eviction of the floating huts during 2011, under the said act. The quality deliberations revolve around the contestations of interests between the public's conception/perception and the Government's expectation. Positivistic outlook contends that environment degradation has become a parcel of human civilization, but the advancement of science and technology has devised successful intervention against the challenges poised by environment degradation.

One noted personality even contentedly quoted that "Had NHPC's Loktak Project not been there, the lake's existence may not have been apprised by people" Another prominent personality critiqued how the NHPC have been responsible for depleting the lake environment for decades. Neither the DPR, nor the MOU of NHPC is available till date since the last 25 years of its operation. Unaccountability reels high in NHPC. It has destroyed the Aesthetic entirety, both the

tangible and intangible, the lives and culture of the people. Nevertheless, the collectivity unanimously agreed that Loktak environment is fast depleting during the past few decades, which bear direct and indirect impacts- both physically and psychologically, since the lake has immense socio-economic importance in the lives of people of Manipur. Interacting the 'Imas': Beyond the Observation Beyond the realm of the observation, interacting the womenfolk decipher the reality. Their participation was maximal, filled with the sense of responsibility. The interaction started with few women, evolving into in a small group, all expressing their frustration in a row. Meishnam Promo, ignites the conversation; "Hainingbadi yamkhrajatni...(meaning...have lots say), Though we survive from the lake's resources, it's not solely the fishing populace, harvesting the wetland's benefits, whether its fish, vegetables or whatever resource we collect, we sell it at the markets to make our living.

It's the people beyond this lake who are harnessing the prime benefits. (...alleging as if I was responsible...in a disheartening expression...) Then why you the people want to dismantle and burn down our floating huts??? Do you conceive of fishing community as ignorant and arrogant that we want to destroy the ecology of our own 'Loktak Ema' (Mother Loktak). Please do convey the responsible authorities that we the indigenous fishing community do treasure 'Loktak Ema' more than our lives...she is our life...she is our children's and grandchildren's future...." The womenfolk shared many of their hardships and trauma. One after another, the women joined the informal interaction, sharing the haunting traumas afflicted by the aggressive eviction during the 2011, and their frustration over the recent information on the renewal of the same 'Loktak Protection Act, 2006.'; Later, Heishnam Chaoba, 52 years, shared her experience "Thousands of we the fishing community lost our homes, our world and our lives during the whole eviction drive during 2011, where more than 700 huts have been burnt down. Nowhere left to go, (...a breaking voice..."saijin-sayada tangduna, uchek-wayadouna"...) like birds we fled from our burnt huts and seek refuge at our relative's huts which were not yet gulped by 2006, Act.

Our solidarity and resistance have been protecting the few huts left and slowly we resettled and thus the number increases. We resisted at the risk of our lives and will ever, we will put to bargain, our lives" The narratives of the women, projecting life as ordeal like situation portray how insecure must be the lives subjected under such disoriented, chaotic situations. The Reality Check of Loktak Ecology Protection: The Hiyang Khong Experience At a recent visit at Hiyang Khong, of Laphupat Tera area, on the recent Keibul Lamjao National Park extension plan which will shatter the village, the villagers express great discontentment regarding the framing up of new policies without discussing the people. As expressed by the villagers, the Soibupat and Khoibupat inhabitants have been surviving solely on the lake's resources since time immemorial. The construction and the commissioning of the Ithai Barrage have plundered the villager's means of sustenance. Village elders shared their experiences how many indigenous fish varieties diminishes at the verge of extinction due to the Dam.

According to them, the quantum of the fish available in the lake ecology is fast depleting, and they shared critical concern over how this degradation possess threat on the loss of food sovereignty for the villagers. The multiple impacts out of the Ithai Dam in Loktak Lake, and the NHPC's unaccountability and false promises have been plundering the lives of the indigenous communities. On Development and Oja Soyam Lokendrajit's Epilogue Days later, Oja Soyam Lokendrajit was delivering an insightful lecture endeavouring to unwrap the myth and riddles of the development debate, development's impacts on the identity of the indigenous community. He quoted of the indigenous community's identity as "thamnathakta happa liklagummi," unpredictable enough like the droplets over the lotus leaf. According to him, the ongoing Trans Asian Railways construction works needs an efficient check mechanism. The framework of 'connectivity' in the name of economic boost through the 'act east policy' was put to the critical lens as; 'we are and were not isolated, we have been in global dialogue.' We need to monitor the height of safe modalities for the indigenous communities in such policies for many reasons.

The Quotes from the Epilougue reads as; "Our Dream is, we want development in our own way, by our own hands, through materials and social forces generated from within ourselves. Our fear is, to be lectured on nationalism and patriotism- only to be branded as anti-nationals. Our hope is, one day the world will know that we also love our motherland in our own way, no less than any other counterparts elsewhere..... Money and development is our fear, for, they are ways of seduction, the song of sirens. Our hope is, we still have simple goodness left in us to fight evil forces projecting thousand images" The meaning of the lines lay the epitaph of reinterpreting the 'development model' for the indigenous community which must not be antagonistic, but adhere to the hopes and aspirations of the marginalised community. Conclusion: The heart wrenching life episodes shared by the womenfolk of fishing community stamped emotions so numb that I strive against my limited knowledge and skill to bring it out. The ordeal like situation which they have gone through must have made these little hearts into high spirits. Ima Chaoba's story; "We starved and resist because we can't think of going beyond the periphery of the lake to trade the products, in the dire fear of the LDA coming to destroy our huts anytime...they come well feed and all full...and we fight with empty stomach...with our passion...."

Bewildered and all blurred in the glass ceiling understanding about development, I go through again the lines of The United Nation (UN) Special Rapporteur on Adequate Housing, as "The right of every woman, man, youth and child to gain and sustain a safe and secure home and community in which to live in peace and dignity'

Manipur: School on a Phum: Innovative Learning Place

http://e-pao.net/epPageExtractor.asp?src=education.School_on_a_Phum_Innovative_Learning_Place_By_Ingudam_Yaipharemba.html

Loktak Lake is nature's gift to the people of Manipur; the lake is also ancestrally interwoven with history and rich culture of Manipur. Many families survived with resources reaped from the lake, may it be aquatic resource or a place of habitation on phum/phumdis. When the Loktak Lake (Protection) Act 2006 implemented, authorities destroyed many hut built on phum that rendered many families homeless. The burned ones are mostly fishermen's who thrive in the lake for daily livelihood. After the eviction, their life gets scattered and sources become dwindled, leaving little income to send their sibling to school for formal education. The evictions indirectly affect the child's education. The Loktak Floating Elementary School, a community initiative school for dropout's children in Langolsabi Leikai of Champu Khangpok floating village in the northern part of Loktak Lake elucidate a belief of enlightenment among many underprivileged children and others. The floating village takes a journey of 1 1/2 hour to reach the choice of land area on their boat. Instead of travelling to the nearest school that might consume time and money, the village community and concern NGO's emerge together to establish a primary school in the vicinity on a phum itself.

Thus, the Loktak Floating Elementary School was born on December 2016 and formally inaugurated on World Wetlands Day on 2nd February 2017. Geographically, the school is on a phum in the middle of the Lake. To reach the school from the nearest comfortable land area which is Ningthoukhong Project Gate, a travel time by wooden boat of 1 1/2 hours is needed. Other than the Project Gate, there are two spot, one is Nachou and another is near IIIT Ningthoukhong. Although, three different spots are available, the choice spot for their embarkation & debarkation is Ningthoukhong Project Gate due to adequate availability of surface transport to another part of the town and Imphal city. There are government as well as private schools in the nearby land area in Thanga, Ningthoukhong but the children have to transverse a long distance on the boat themselves and consume a good time on the journey, therefore the parents decided not to send the children to the school. Another reason is the lack of income, after the Loktak Lake (Protection) Act 2006 implemented, the fishermen drastically reduce income owing to eviction leaving little for their siblings to send to the school instead the children help the parents in the daily chores and fishing activities to earn extra income.

The Loktak Floating Elementary School target to admit 40 students ranging from Class I-V, though, presently only 25 students were admitted including 9 girls. The school has no proper infrastructure such as desk, table, but planning is on ways to make the floor of the school wooden solid to equip the required furniture. Right now, bamboos were used to make the flooring and carpet topping to give a usable stage. In the classroom, two blackboards were used as a basic teaching mode. In spite of improper facilities, the school is a blessing for the floating villager's kids that inculcate an environment of learning process and breeding education among them which tends to eliminate gap period for the children. Imparting the dropouts and providing a beacon of hope for education is the very purpose of establishing the school. For effective transportation of the children from their village to the school, a wooden boat costing Rs 1 lakh 20

thousands having a capacity of 20-22 persons have been purchased by People Resources Development Association (PRDA), but due to crunch of the fund, life jackets have yet not been purchased yet. An interesting aspect of the School is that besides providing primary education to the dropouts, it also caters adult education to the illiterate adults of the floating village numbering 40 or more; mostly women and few men, some of them are from nearby Khomjao. Currently started, the women belong to two self help groups of the villages namely Champu Self Help Group, Langolsabi and another is Langolsabi Ngamee Lup.

The participating women age ranges from 25 to 60 and some man are about 70 years old. For the Adult education program, an amount of Rs 1 lakh is donated by Manipur Rural Bank (Nambol Branch), from that amount necessary requirement of the education has been met in addition to fishing material and solar lamp for the night school. Still, there is a regret of inadequate lighting at the night schooling. After the school, the learners pursue their fishing activities at the lake. It is a classic example of learning and earning together. The Governor of Manipur, Dr Najma Heptulla donated 40 school bags, text books and note books required, for up to Class V. The Governor's gesture in improving education by contributing to the study materials to the Loktak Floating Elementary School children is a noble effort to spearhead the cause of education in Manipur. The education at the school is free for the students and the two Teaching Volunteers received an honorarium of Rs 3000 per month from the NGO, PRDA under a project title "Empowering Local Vulnerable Community for Sustainable Development" funded by Action Aid India.

Assimilation of provisions of Right to Education (RTE) to the floating school has been discussed. As soon as any related scheme gets available the School can be covered under the preview of India's Right to Education Act giving full benefits to the students. It is the aim of the Floating school that the dropouts can be cater basic schooling for a couple of years and when their parents' income again attains good posture, the students can be transferred to the school of choice for higher schooling. Now, for the time being the dropouts are given schooling at the floating school. There is a desire to have a small floating playground, suitable enough for kids play and recognition from the Manipur Government. If such floating playground came up near the school, it will be again a trophy for the School and the villagers. The Government recognition will develop the school further. The dream is high for the School and the dedication are exemplary. The more solar lamp is planning to install at the school and if the resource is enough to buy a solar powering system; computer facility will be provided at the school.

It is very interesting to know that the adult along with education utilised the school as a community hall for meetings. For the floating villages which are incapable to build a public hall, the school act as a multipurpose venue. What the villager wants to have in their village is an Anganwadi facility or a Kid Day Care Centre to cater their young ones, when both the parents went for fishing activities at the lake the young ones were left alone at the house, protecting with a 3 foot bamboo makeshift so that the kids stay inside the house and not wander around. It is a

common practice to safeguard their children in the floating village. Since the school as well as the village fall under the core zone area as prescribe under the LLP Act 2006, no human settlement is permitted at the lake within the core zone. But after due consideration for the time being, the school is formally running with success and the Governor's interest for the school further more strengthens the foundation of the school in the core zone.

There is wide believe that concerning the unique nature of the school, concern authorities might have a soft hand in the establishment. On the other hand, the fishermen have every responsibility to protect the fragile ecosystem of the lake and minimized pollutions. Loktak Lake is the face of Manipur and the home of many aquatic animals as well as many foreign migratory birds. So, the fishermen in particular must safeguard the ecosystem and act as a first line of defence against the man-made pollution. People living near and within the lake drained their waste into the lake, causing a great concern for the authorities also.

Manipur: Fishful thinking! Will GST on dried fish be worth it?

<http://blogs.economictimes.indiatimes.com/onmyplate/fishful-thinking-will-gst-on-dried-fish-be-worth-it/>

At a recent meeting of the new Goods and Service Tax (GST) Council, the Finance Ministers of Indian states had to discuss tax rates for 1,210 items. Yet, according to a report, they spent half an hour on dried fish. Manipur's FM argued for exempting dried fish from duty, and received support, but finally it was agreed to tax it at the lowest possible rate. This was a welcome acknowledgement of the importance of dried fish in many Indian diets, especially as the monsoon begins. Dried and smoked fish is important in the Northeast, but it is also vital on the Western Coast where wild monsoon seas stop boats from venturing out. Dried fish was the one source of protein that helped coastal communities through the monsoon months. It wasn't surprising though that it was Manipur's FM championing dried fish, rather than FMs from Maharashtra, Karnataka or Kerala.

Northeastern states have real pride in their local foods, even those with strong, funky flavours — and you don't get much funkier than dried fish. West Coast people seem embarrassed by them, or are represented by FMs from state interiors who ignore coastal concerns. Dried fish smells strongly both in drying and cooking it and this is why restaurants rarely serve it and people who live in apartments stop making it for fear of antagonising neighbours. Chef Ananda Solomon always regretted not being able to serve the dried fish dishes of his native Mangalore at his signature Konkan Café restaurant, but the luxury hotel it was in would never have allowed it. Dried fish was particularly important in Goa. The Catholic Church in Europe decreed Friday to be a fasting day, but fish was allowed. This created a huge demand for dried fish and the Portuguese brought this practice to Goa where it meshed neatly with existing dried fish

consumption. But while most people just ate the local dried fish and shrimp, the more prestigious option was dried cod from Europe, called bacalhau.

This requires much soaking before it can be used, and even then the flavour can be a bit overwhelming. Perhaps the best way to have it is the way the restaurant Chef Fernando's Nostalgia in South Goa serves it, fried into delicate little balls, an ideal appetiser to have with drinks. Dried fish might actually be best as a flavouring rather than a main ingredient, adding a strong yet subtle powerful back of the palate flavour. This is how the Japanese use it, immersing katsuoboshi, dried tuna flakes, in boiling water to give the savoury stock that underlies many of their recipes. Closer to home, Sri Lanka depends on umbalakada, dried tuna from the Maldives for the characteristic deep, rich taste in their food. Taking a cue from that, try using the tiny dried shrimp called jawala in Maharashtra by adding it to stock or powdering it to use like a spice. It is certainly worth paying a small tax for the subtle savour it will add to your cooking.

Manipur: Fishing banned in Takmu, Hubidak

<http://e-pao.net/GP.asp?src=Snipp8..010617.jun17>

The CEO of Fish Farmers' Development Agency has declared Takmu experimental fish farm as 'Off season' for three months. As such, fishing inside Takmu and Hubidak site using any type of gear is completely banned and no fishing license will be issued. The licenses already issued will stand cancelled during the off season.

Manipur: When GST Council discussed Manipur's dried fish for half an hour

<http://www.livemint.com/Politics/OonlYpjpZllIn4tfx7aREO/When-GST-Council-discussed-Manipurs-dried-fish-for-half-an.html>

With the goods and services tax (GST) Council signing off on most of the game-changing reforms last week, the humble 'dried fish' has become a symbol of the emerging template of lateral or cooperative federalism. On 18 May, during the discussion on the fitment of goods against specific tax rates, Manipur's finance minister Y. Joykumar Singh raised the demand for including dried fish in the exempted list. Surprisingly, several other state FMs lobbied on behalf of Singh and the discussion went on for nearly half-an-hour.

Significant, given that the GST Council had to decide on the fitment of 1,210 other items—many of which had a far bigger consumption base compared to dried fish. FMs saw the discussion as an instance of the emerging bond among states as India explores new federal norms with GST implementation, wherein both states and the Union government have pooled their sovereignties by sacrificing taxation powers. Dried fish is pungent delicacy in the north-eastern states and a 'must' accompaniment for any meal. It is generally mixed with Raja mircha or Naga chilli to make a paste and is extremely spicy. Participating in a panel discussion hosted by Mint on the

sidelines of the GST Council meeting in Srinagar, Himanta Biswa Sarma, Assam's finance minister, said that in a first, the GST Council had evolved a new model of cooperation between the states. "It (dried fish) was raised by the finance minister of Manipur. But on that issue we probably spent half-an-hour discussing whether dry fish should be exempted or not," said Sarma, adding, "So that kind of cooperation, mutual trust, mutual confidence between the states has never been witnessed...I think this can be a foundation of the new India—that is what I feel as a student of political science." Arguing similarly, Haseeb Drabu, finance minister of Jammu and Kashmir, said, "A lot of time was spent discussing whether dried fish should be exempt or taxed at 5%. Now that is the granularity of discussion which happens and that also shows the involvement of the state governments in the national policy making."

According to Drabu, the GST Council is India's first federal institution. "I see the seeds of lateral federalism in India now. In a first you begin to look at states helping states, aligning policies perhaps...you are trying to move from what was a classical vertical federation to a horizontal federation." Eventually the spirit of compromise drove the fitment of dried fish in the tariff schedule. While it missed out being classified along with essential items of mass consumption, it was included in the lowest, 5% slab. "We will gain a lot of learning from this new institution—the GST Council—on how relations between Union and state governments as well as relations among states themselves will develop. It is an evolving federal institution one needs to keep an eye on," said N.R.Bhanumurthy, professor at the National Institute of Public Finance and Policy, New Delhi.

Manipur: Fish market mela

<http://e-pao.net/GP.asp?src=26..220517.may17>

To promote the Loktak fish market in Bishnupur district, Moirang Municipal Council started an eight-day long fish market mela at the market today. Varieties of fish caught from Loktak lake were displayed during the mela where 12 stalls for live fish and 10 stalls for dried fish were sold at prices lower than the market rate. People who came from all parts of Manipur to offer prayer to Ibudhou Moirang Thangjing Lai Haraoba visited the market and enjoyed the varieties of fish being displayed, reports our correspondent. Fisheries Department Inspector Ph Surendro stated that a total of five maund of Rohu and Mrigal fish have been sold on the first day of the mela.

Manipur: Fishery as an agenda for Barak Festival 2017

<http://e-pao.net/epSubPageExtractor.asp?src=education.Science and Technology.Fishery as an agenda for Barak Festival 2017 By ZK Pahrii Pou>

Through this write-up, I would like to humbly appeal the Chief Minister of Manipur Shri N. Biren Singh and the Shri N. Kayisii, Minister in-charge for Fisheries, Shri L. Dikho, Minister

PHED, and the Organisers of Barak Festival, to think, promote and encourage the villagers to take up fishery along the tributaries of Barak River. This will not only serve as an alternative source of livelihood but also as a means of regenerating nature. As Senapatians (or allow me to call as Tahamzamians – the people of Tahamzam) are gearing up for celebration of its annual Barak Festival, follow up action or plan must also be properly chalked out before hand. Without follow up action, Barak Festival will be just another waste of time and money. If we do not do anything to save Barak River, very soon the river will run dry and the celebration of Barak Festival will be an insult to the River. It will be unfair to celebrate Barak Festival with all pomp and show, or the Chief Guest promising to improve NHs, or construction of women's market but without mentioning anything about the well being of Barak River.

This festival should not be a mere occasion of enjoyment for the rich and the educated people of the state. The benefit of Barak Festival must reach to the River, the poor and illiterate villagers.

1. Farming water through fishery ponds: Hill areas of Manipur receive abundant rain during the monsoon period. However rain water that falls on the ground freely runs off the hills within few hours of rain. Despite receiving monsoon rain in abundance, people continue to face water scarcity. This rain water can be preserved or harvested through digging fishery ponds. As fishery ponds will collect water during rainy season and release it in small quantity, Barak River will flow throughout the year with good amount of water. This will not only keep the River alive but also help the farmers to cultivate their paddy field with sufficient amount of water. Therefore it is my earnest request to you to initiate fishery in all the tributaries of Barak River. If hundreds of fishery ponds were dug in all the Mao-Poumai villages with tributaries of Barak River, sufficient amount of rain water can be harvested and keep the river flows. Let us farm water through fishery.

When good amount of water flows in the river, life of all forms will flourish. This will be a great achievement of the celebration of Barak Festival.

2. Fishery as alternative source of income: For many villages of Poumai and Mao, cabbage cultivation is their main source of income. Many trees were cut down and burnt for this purpose. In this process the top fertile soil is exposed and rain and wind takes them away. Each year the soil fertility is decreasing forcing the cabbage growers to use chemical fertilisers which destroy the health of nature. Cabbage farming not only destroys forest and soil fertility but is also labour intensive. Fishery can be done without much labour. It can be an alternative source of income for these poor farmers. If a farmer dug a medium size fishery pond, he/she can easily rear fish for 200 kg and the income could reach Rs.50,000 (200 kg of fish x Rs 250 per kg) in a year. Fishery is an important aspect of sustainable development that needs to be actively pursued in the hill areas of Manipur.

3. Fishery as employment: With nearly seven lakhs registered unemployed educated youth in the state, government cannot give employment to all of them. Fishery can be a good source of employment for the youth.

As a pilot project, it can start from Liyai Village not because that the village has the River's main source but because of the fact that the village is exceptionally undeveloped economically and educationally. Comparing with other bigger villages, Laii 30.43%, Purul akutpa 73.75%, Tungjoy 58.37%, the literacy rate of Liyai village is extremely low at 19.48%, with 23.12% and 15.69% for men and women respectively. In this low literacy rate, one can imagine how many government service holders will be there in Liyai village. Therefore, fishery should be introduced to generate self-employment for thousands of poor villagers in the hill areas. Youth must be encouraged to take up fishery as well as dealing it in the market. 4. Fishery and natural vegetation: As hundreds of fishery ponds will retain and release water throughout the year, it will help plants and trees to grow in abundance. In return, these trees and plants will help in fertilising soil as well as recharge water source. With the flourishing of natural vegetation, the population of birds and animals will increase. Therefore, along with fishery, planting of trees that are locally suitable and ecologically viable will help in regenerating nature's health. 5. Fish an important part of food: Tahazamians heavily depend on chickens such as broiler and layer for food. These chickens are fed with factory processed feeds that are heavily chemical-ised and are proven to be health hazard. At the same time, fish that are available in Senapati market are mostly imported from outside the state.

This fish may not have much health value as it spent months of its life during transportation. Locally cultured fish will give much better taste than imported fish. Locally grown fish will have great benefit for our health. Concluding remark: I am apprehensive of the kind of suggestion from some quarters about developing tourism spot at the source of Barak River-which can cause permanent ecological degradation if not planned properly. I am also not in favour of construction of mega-dam on Barak River which would literally kill this Mighty and Blessed River forever. Fishery is one of the best means to keep Barak River alive. The state government must explore all possible means to initiate and encourage fishery that will save Barak River, regenerate nature and give employment to thousands of poor villagers. We are fortunate to have a Chief Minister who has great concern for the welfare of Hill people, and the two Ministers from Mao community, whose constituencies will be greatly benefited if Barak River is preserved and developed. It's right time to act and save Barak River- the lifeline of Poumai, Mao, Maram and Zeliangrong people. Dear Tahamzamians, let us celebrate -Barak Festival 2018 with Barak produce: Barak Rice, Barak Water, Barak Fish, and Barak Vegetables.

Manipur: Notes from Manipur

<http://www.thehindu.com/society/history-and-culture/notes-from-manipur/article17645483.ece>

In a busy market in Imphal, I catch a strong gaze on me. We lock eyes, raise our eyebrows, exchange smiles, and within five minutes, I'm hauled on the platform by two pairs of athletic but graceful arms and plonked in between three women, an array of smelly fish stacked for sale in front of us. For the next half hour, I prattle with the Manipuri ladies like old friends, haggling

with consumers on their behalf for larks, and watch them deftly chop heavy carps with ease. There are no men in this all women's market. And that is what Manipur is—perhaps troubled but an equal society. Over two hours from Imphal is Moirang, where Netaji's INA hoisted the tricolour for the first time on Indian soil. A fierce battle was fought close by at Red Hill between the Allied forces and the Japanese, and around Imphal.

We owe a lot to Manipur, many of whose forgotten heroes lie resting at the beautifully laid out World War II cemetery in the capital. The bus to Moirang is stopped mid-way by armed policemen who barge in for a random security check. It's pretty much the norm in AFSPA-ruled Manipur; men open their bags nonchalantly, women stare back defiantly. Buses better A lot of people, even those who own cars, take the public transport these days. The recently lifted 139-day-long economic blockade imposed by assertive neighbour Nagaland shot the price of petrol to a steep Rs. 250 per litre, making driving around a very costly affair. While things will take a while to normalise, a lot of locals are still doing day trips to tank up vehicles in Tamu across the border in Myanmar, where again, women rule the roost, taking charge of not just local markets, restaurants and bars, but also petrol pumps. From Moirang, I continue to Loktak, where I receive a traditional welcome by Maipakchow Oinam's family into their simple Meitei household. Oinam is president of Loktak Ecotourism Development Organisation, a small, self-sustaining effort. The Loktak lake is the northeast's largest freshwater lake with a unique ecosystem that not only supports an interesting biodiversity, but also fishing communities. Women in Oinam's family weave fishing nets (his wife also makes a succulent chutney from fresh, home-grown local olives that is to die for), while he tries to raise awareness about the lake and thrash out a sustainable tourism business at the same time, much like another Manipuri friend Rajib who is also trying to sustain a small tourism business here.

During times when the biggest question on the traveller's mind is safety, it is a pity that tourism in one of India's culturally richest states bears the brunt of regional politics. Few states have the distinction of having their own classical dance form or their own martial arts, the way Manipur does. It is also home to the sangai or the brow-antlered deer, only found here on the planet at the Keibul Lamjao national park. Row, row On my last day at Loktak, Oinam organises a day out on the lake for me. I assume I'm going with him alone, but am pleasantly surprised to be greeted by his young daughter and her bunch of friends. I tail the excited team of girls, ready for the outing with their bamboo sun hats firmly planted on their heads. As I carefully step into the handmade canoe and look around to spot the boatman, the girls pick up the oars and take their seats. Halfway through the lake with the heavy oars neatly slicing the still waters, I feel sheepish for having doubted their capability. We dock into a little island made of the floating biomass of Loktak, and I see the vast, traditional fishing nets cast around. The girls immediately get to work, and whip up a meal of smoked fish, singju (a preparation of lake greens), fermented fish salad, and my favourite olive chutney. We finish off with an amazing kheer or pudding made from naturally sweet black rice, indigenous to the region. We kickback and laze in the tiny solar-

powered hut there, laugh and joke even though we don't understand each other. And the beauty of Manipur lies in just that; its simplicity, its strong, unpretentious women, and how much it makes you feel at ease, despite what the world says about it.

Manipur: Manipur woman traders want their shops repaired soon

<http://www.thehindu.com/news/national/other-states/manipur-woman-traders-want-their-shops-repaired-soon/article17349760.ece>

The politics in poll-bound Manipur may revolve around the economic blockade, but women traders of Mother's Market here want their shops damaged in an earthquake a year ago to be repaired soon. For empowerment Mother's Market or 'Ima Kheitel' in Manipuri is centuries old and is the largest women-run market in Asia. It is not just a market but a sign of empowerment of women. More than 5,000 women sell fish, vegetables, bamboo and metal craft, dry fish, 'phaneks' (sarongs) and 'innephis' (stoles), herbs, bangles and other items in it. But an earthquake on January 4 last year damaged many structures in the market. "Our market got badly damaged in the earthquake. One year has passed but the repair work is still going on and we are yet to get back our shops," Yasomati, a trader, said. Shopping hub Earlier there used to be scattered shacks without walls where women ran their shops.

Later the State government shifted it to a more organised and safer place, Khwairamband Bazaar, where it evolved into a shopping hub of traditional Manipuri artefacts for tourists. But the 2016 earthquake destroyed part of the market and it is still lying in rubble. The women traders said whichever party comes to power should ensure that they get back their shops soon and the government comes out with social security schemes for them. "As we have shifted to a nearby place, our business has been hit as the area is very congested. We don't have much space," said Hansitha. "We are not able to work after a certain age. So we want economic and social security schemes from the government," said another trader in her 60s. Opinions on whom to vote in the elections vary, but all of them are thankful to Congress president Sonia Gandhi for gifting them the RCC market shed in 2010.

Manipur: Floating school inaugurated in Manipur

<http://www.easternmirrornagaland.com/floating-school-inaugurated-in-manipur/>

A floating elementary school for children of floating villages particularly for the dropouts, probably the first of its kind in India was formally inaugurated while observing the World's Wetlands Day at a floating village in Loktak, largest freshwater lake in eastern India on Thursday. The floating school had already started functioning with more than two dozen students since December last year at the floating village- Champu Khangpok on the northern side of lake,

located about 1 hour drive from Imphal. The school named as Loktak Elementary Floating School was opened under an initiative of All Loktak Lake Fishermen's Union, Manipur (ALLAFUM) with the support of Bishnupur-based NGO – People's Resources Development Association (PRDA) under a programme of ActionAid India. "The idea to establish such a school was floated considering the sudden high dropout rates of the children living in the floating villages," says Secretary Oinam Rajen of ALLAFUM.

"Now with the establishment of this school it will help in catering the formal education to the children in Champu Khangpok floating village." Loktak Development Authority had removed more than 700 floating huts as part of clearing the lake after the introduction of Loktak Lake (Protection) Act 2006, about five years go, resulting in largescale displacement of the fishing community. Subsequently, children of these fishing communities of Langolsabi and Komjao - two main floating localities under Champu Khangpok floating village having about 204 families and a population of 460 fishermen, were forced to discontinue their education as they are unable to support the financial burden for school education.

The newly inaugurated school in the floating village lies under Thanga assembly constituency in Manipur's Bishnupur district. It is currently providing education to around 40 children (Class I-III) by engaging two local teachers. "We are also looking for necessary help from the concerned government department to address the school education issues of our children in the lake," says a fisherman Kh Sangojiao (52) of Langolsabi Leikai, who used to earn not less than Rs 150 a day in the off season and upto Rs 1000 in fishing season. The day's formal school inauguration function was attended by Director Meghachandra Kongbam of the State Information and Public Relations, IUCN's Fish specialist Prof Waikhom Vishwanath, Zonal Education Officer of Bishnupur district, PRDA and ALLAFUM functionaries, environmentalists, educationists, NGO activists and villagers.

Manipur and Tripura: Training programme on "Value added fish products"

A three day training programme on 'Value added fish products: Technology for Empowerment of Women' which started on January 19 ended yesterday. The programme was organised by College of Fisheries, Lembucherra, Tripura (affiliated to CAU, Imphal) in collaboration with Directorate of Extension Education, CAU, Imphal and Krishi Vigyan Kendra, Imphal East. The training was conducted under the guidance of Dr RK Majumdar, Associate Professor of the College of Fisheries and to promote women entrepreneurship and empowerment in the fishery sector. 30 women between the age of 20 and 35 participated in the training programme. Preparation of different value added products viz fish pickle, fish cutlet, fish finger, fish momo, fish pakora, fish sandwich from locally available low cost fish were demonstrated during the training.

Manipur: State to work in convergence mode to boost fish production

<http://e-pao.net/GP.asp?src=13..180117.jan17>

With a view to boost fish production in the State, College of Fisheries, a two-day workshop on "Co-management of Fisheries and Aquaculture in Manipur" organised by Central Agricultural University (Imphal), Tripura in collaboration with the Directorate of Fisheries, Government of Manipur has kicked off today at College of Agriculture, CAU (I), Iroisemba. The workshop is organised under DBT, Government of India sponsored project "Centre of Excellence in Fisheries and Aquaculture Biotechnology (COE-FAB)". The main objective of the workshop is to bring different stakeholders including ICAR research institutes, line department, Krishi Vigyan Kendra and most importantly the progressive fish farmers of the State so as to undertake collaborative and integrated management of the fisheries resources of the State and to facilitate enhancement of fish production in a sustainable manner through adoption of scientific aquaculture practices.

The workshop is being attended by more than 70 participants including scientists from different institutes of the State besides of Central Agricultural University, line department officials and progressive farmers from all the districts of the State. Speaking at the inaugural programme of the workshop, David Shimray, Director, Directorate of Fisheries, stressed on initiating linkages among various fisheries related institutes and organizations for reducing the demand-supply gap faced by the State. Prof M Premjit Singh, Vice Chancellor, CAU (I) in his presidential address mentioned the role of CAU with regard to technological interventions in the sector. He also highlighted the role being played by College of Fisheries, CAU (I), Tripura in the development of package of practice for Pengba (*Osteobrama belangeri*) farming. Dr Pramod Kumar Pandey, Dean, College of Fisheries, CAU (I), Tripura in his speech pointed out the need to develop region specific package for the State and highlighted the research and extension activities the college has been undertaking through the DBT funded COE-FAB project in the recent times. Other dignitaries who attended the programme were Dr CA Srinivasamurthy, Director of Research, CAU (I), Dr N Prakash, Joint Director, ICAR RC NEH Region, Manipur Centre and Dr N Iboton Singh, Dean i/c, College of Agriculture, CAU (I). The inaugural programme was followed by a technical session.

Manipur: Manipur blockade: It's business almost as usual at Imphal's famed Mothers' Market

<http://www.hindustantimes.com/india-news/manipur-blockade-it-s-business-almost-as-usual-at-imphal-s-famed-mothers-market/story-uAvs1HbyZpaq6rqueuBI6RN.html>

Manipur is reeling under an economic blockade for nearly two months now. But one place that seemingly has remained unaffected is Ima Keithel – Imphal's iconic Mothers' Market. Located at Khwairamband Bazaar, Asia's biggest all-women market still has the usual hustle and bustle with women shopkeepers haggling with customers to sell their wares. "The blockade by United Naga Council (UNC), in protest against creation of new districts, hasn't had any impact on my

business,” said Lalita Meitei (60), who has been selling fish at the market for more than 30 years. That is because the fish that she sells comes from local fisheries and the Lok Tak Lake—the largest freshwater lake in northeast India, located nearly 50 km away from Imphal. The market, believed to have been set up nearly 500 years ago, is run entirely by women and sells a variety of wares from fish, vegetables, fruits to traditional snacks and local garments.

UNC’s blockade, which began on November 1, has led to a crisis of essential items including fuel. It has severely affected businesses in other parts of Imphal Valley and led to a steep rise in prices. But since most of the products sold in the Ima Keithel are locally produced, the market hasn’t witnessed a slide in business. “Since all the products I sell, like honey, ‘puja’ items, sweets made from puffed rice, sesame seeds and jaggery are produced locally, my business hasn’t suffered,” said 72-year-old Ibiembi Devi. Prices of certain items like potatoes, onions and fruits which get supplied from outside the valley have, however, seen an increase. “Usually the fruits I sell come from other states, but due to the blockade I am selling apples, oranges and grapes which arrived from Myanmar via the Moreh border, at prices higher than usual,” said Bimata Devi. Vegetable vendor Thoibi Meitei said prices of most vegetables have increased by 10-20% percent, but the costliest item in her shop was potato, which is selling at Rs 100 per kilogram. Considered the nerve centre of Manipur famed for its matriarchal society, the women from Ima Keithel have led movements against policies of the British in the early 20th century and against excesses by security forces in the state in the past years.

While women stall owners at Ima Keithel aren’t affected much by the economic blockade, the story is not the same in markets elsewhere in the state capital. The past two months have seen their businesses nosedive. In Paona Bazar, located close to Ima Keithel, most shop and business establishments have recorded low sales or are waiting for the blockade to end to get fresh stock for customers. “Businesses like mine where we rely almost entirely on goods coming to Imphal Valley from other states have been worst affected,” said Bimal Singh, a hardware store owner. Shelves are empty in many shops across the city. The UNC says the creation of new districts hurts the interests of Nagas in the state and benefits other communities. It plans to continue with the blockade of two highways – NH2 and NH37 - connecting Imphal to other states, despite repeated appeals by the authorities to lift it. To ease the situation, the authorities have begun to escort trucks, laden with goods and stranded on the highways, into Imphal under heavy police escort. Several hundred trucks reached the state capital on Monday, raising hopes of fresh supplies being available to replenish stores. The supplies, though, remain sporadic and Manipur is worried about what the future holds. The women shopkeepers of Mothers’ Market, however, betray no such concern with business being as usual.

Manipur: 'Development and Displacement' consultation held at Imphal

[http://e-pao.net/epSubPageExtractor.asp?src=news_section.Press_Release.Press_Release_2016.Development and Displacement Consultation held at Imphal 20160927](http://e-pao.net/epSubPageExtractor.asp?src=news_section.Press_Release.Press_Release_2016.Development_and_Displacement_Consultation_held_at_Imphal_20160927)

The Centre for Research and Advocacy, Manipur (CRAM) organized the Manipur State Consultation on "Development and Displacement" at Manipur Press Club, Imphal on 26th September 2016. The Consultation is aimed to reflect on the pattern of the introduction of unsustainable development processes and forced eviction in Manipur and the arbitration of developmental and human rights based approach to development. Miloon Kothari, Former UN Special Rapporteur on Adequate Housing & Land Rights, Ms. Shivani, Executive Director, Housing and Land Rights Network, Phulindro Konsam, Chairman, Committee on Human rights, Maibam Nganbi Leima, JAC on Lamphel Yaipha Leikai Eviction victims graced as presidium members. Haobijam Kumar, All Loktak Lake Areas Fishermen Union (ALLAFUM) shared how the 105 MW Loktak Multipurpose Hydroelectric Project has led to inundation of more than 80,000 acres of agriculture land, causing untold miseries on fishing communities depending on Loktak wetlands for their survival. The forced imposition of the Loktak Lake Protection Act, 2006 by the Government of Manipur has led to arsoning and displacement of fishing communities from Loktak Wetlands. He stressed on the need for decommissioning of 105 Loktak Project and to recognize peoples' rights. Mr. Dominic, Chairman, Mapithel Dam Affected Villagers Organization (MDAVO) shared how the Govt violated the agreement on rehabilitation and resettlement in 1993 and how the Government manipulated the rehabilitation and resettlement processes. The Mapithel dam unleashed endless violations.

By destroying the livelihood sources, by submerging the land, forest and other livelihood sources, the Mapithel dam has led to severe food shortage and impoverished affected communities.. Affected communities are further restricted from gaining access to their catchment areas treatment plan. The Mapithel dam construction has violated India's forest laws. He insisted that the Mapithel dam should not be commissioned and release water from dam reservoir. Mr. Gongchalung Gangmei, JAC Marangching on Trans Asian Railway, shared how the ongoing construction of Trans Asian Railway works has led to widespread environmental and social impact in Tamenglong district. The direct discharge of mud and earth debris from railway tunnels and cutting of forest land into the Rivers, streams and agriculture land has led to loss of livelihood and survival sources in Tamenglong District. Mr. Mandir Laishram of Heirok Agriculture Land Protection Committee, shared that the proposed Heirok Branch Canal of Thoubal Multipurpose Project will led to forced acquisition of agriculture land. Ms. Shivani of Housing and Land Rights Network, New Delhi express concern with the range of mega development projects that led to forced eviction in Manipur.

She stressed the need for stronger adherence to human rights principles and practices in development processes in Manipur. Miloon Kothari, former United Nations Special Rapporteur on Housing and Land Rights shared that forced Eviction constitutes a gross violation of human

rights. The right to Remedy and right to land as rehabilitation for forced acquisition of land is completely neglected and sidelined in Manipur. The disrespect of legal provisions with safeguard for communities and recommendations of Nations Human Rights bodies is a serious concern in Manipur. Mr. Miloon also stressed to ensure accountability of the state, corporate bodies and other involved in development injustice in Manipur. The consultation adopted a general recommendation to urge the Government of Manipur to stop all forms of forced eviction and displacement without the free, prior and informed consent. All development processes should respect the rights of indigenous peoples over their land and resources and to take their consent before any development processes. The Government of Manipur should stop all forms of forced eviction in Manipur and also to adhere to all human rights and development standards, including the recommendations of the United Nations Human Rights special procedures on controversial development projects in Manipur.

Manipur: Filmmaker reflects on strife-torn Manipur in Loktak Lairembi

<http://timesofindia.indiatimes.com/city/imphal/Filmmaker-reflects-on-strife-torn-Manipur-in-Loktak-Lairembi/articleshow/54160282.cms>

Noted documentary filmmaker Hoabam Paban Kumar said his debut feature film Loktak Lairembi (Lady of the Lake) is reflection on the contemporary socio-political reality of strife-torn Manipur. The 71-minute film, directed and produced by Paban, will premiere at the 21st Busan International Film Festival in South Korea. This is the first time a feature film from the state to get a world premiere. An alumnus of the Satyajit Ray Film and Television Institute and a recipient of numerous national and international film awards, Paban said it took him a year to film Loktak Lairembi. The film portrays the hardships faced by the fishing community of Loktak, the biggest freshwater lake in the northeast, after their 'phumshangs' (huts built on floating biomass in the lake) were destroyed by the government in the name of cleaning the water body. "Loktak is a unique ecosystem," Paban said, adding that authorities had burnt down hundreds of these huts in 2011, leaving thousands of fishermen homeless. The film follows the sufferings of Tomba and his family. Tomba is haunted by fears of displacement by the authorities. One morning, Tomba accidentally finds a gun. The implications of this discovery and its impact on Tomba and his family are depicted in the film.

"Today when I look at Manipur, I see guns all around. Whoever has a gun is the ruler here ... be it insurgents or state authorities," Paban said. Decades of insurgency and socio-political uncertainty have thrown the society into disarray. People have been forced to withdraw into a cocooned existence, devoid of any space for free self-expression, Paban added. "My birthplace, Manipur, has always been a troubled area since the Independence of India," Paban said. "Our only hope and possible saviour is our cultural spirit," Paban added. In the 10-day festival, beginning October 10, the film will compete with 10 other Asian films for the Busan International Film Festival New Currents Award with a prize of \$30,000 on offer, Paban said.

Paban has showcased his films at international film festivals in Germany, various cities in India, France, Greece, Pakistan, Poland, Egypt and Canada. "Few filmmakers get a chance to premiere their films in the festival ... Paban will be able to promote his film on a global platform at this prestigious festival," director of the newly set up Manipur State Film and Television Institute said. Lauding Paban for bringing out a string of internationally acclaimed films, director of Manipur information and public relations and film critic Meghachandra Kongjam said Manipur is leading in the production of quality films among northeastern states.

Manipur: Displaced Families at Loktak Recount Tale of Eviction to Irom Sharmila

<http://thewire.in/64226/families-displaced-from-loktak-lake-area-recount-ales-of-eviction-to-irom-sharmila/>

Underneath the vast open sky the morning sun played with the huge expanse of water of the Loktak Lake, creating a mesmerising sight. The largest freshwater lake in Northeast India is well known for the floating islands of biomass on it that are called phumdi by the locals. Beginning in Manipur's Imphal West district, the lake – encompassing an area of about 286 sq km – spreads to the neighbouring valley districts of Bishnupur and Thoubal. This expanse makes Loktak – a Ramsar site – a prized natural possession of the state. The largest phumdi, Keibul Lamjao, also houses the world's only floating national park, which is also home to the endangered sangai deer. For generations the lake has been inhabited by fishermen who live in traditional huts that precariously stand on bamboo stilts placed on the phumdis. But a lot of that has changed since the Loktak Lake (Protection) Act, 2006, was introduced by the state government to conserve the lake and develop the area for tourism. Most of the fishermen have since been removed from the lake by the Loktak Development Authority (LDA), after a report by Wetlands International claimed that detrimental fishing practices and proliferation of phumdis had led to the degradation of the lake. Since then the fishermen are no longer allowed to fish in the core area of the lake and many have turned into boatmen for tourists or into hawkers selling sundry items by the lake side.

On the morning of September 3, a bunch of such fishermen-turned-boatmen expectantly waited with their colourful vessels for the arrival of tourists along with some fishermen-turned-hawkers, who waited with cold drinks, biscuits, betel nuts, chips, dried fish and watercress plucked from the lake waters. As the clock struck 9:30, they suddenly saw a row of cars passing by on the concrete four-lane approach road. Hoping that visitors had arrived at the Sendra Park and Resort – the sole accommodation for tourists in the lake's core area, which for the past three years has been operated by a top private player of Manipur's nascent hospitality industry as per the public private partnership model – their eyes lit up. Instead, the entourage was led by one of the most prominent faces of the state, Irom Chanu Sharmila, who was accompanied by a few civil society activists and journalists. The vehicles went past the resort and stopped at the community shed of Ithing Sendra village, which is situated along the lake. Since August 3 the community shed has been a temporary shelter for 17 families of the village that were evicted by the state government

from a piece of land adjacent to the lake called the Sendra public ground. According to a village elder and a member of the state's Thanka part two gram panchayat, Jiten Singh, these families have been residing on one part of the public ground for past three years since they were evicted from another area of the village for its development.

“Though the government then made an informal promise to arrange alternate land for them, nothing came their way,” he told *The Wire*. A fellow elder and also a gram panchayat member, M. Ibosna added, “A part of the public grounds, measuring 2.08 acres, was also being used by the village youth as a club for the last 30 years. With the number of tourists visiting the lake growing in the last few years, the local youth constructed a waiting shed and a toilet next to the club for visitors. Even though it was a registered society and possesses a dagshita [a legal document], the club house, along with the shed and the toilet, were also razed to the ground on August 3.” Exactly a month later on September 3, as soon as Sharmila arrived at the community shed, the displaced families and the club members surrounded her. The sight under the shed, covered by GI sheets, was dismal. A long worn out cloth was tied around the shed in order to give privacy to the occupants, many of whom were women. While two sides of the shed were lined with beddings, the other two were being used for cooking and storing whatever little they could save from their razed huts. Recently, there was an outbreak of Japanese encephalitis in the area, which is why all the beddings were placed under mosquito nets, a young man from the crowd told this correspondent.

A seven-year-old boy with high fever was lying underneath one such net. His mother was worried that he may have encephalitis. A banner inside the hall read “Stop forced eviction in Loktak wetlands; Uphold indigenous peoples' rights; Repeal Manipur Loktak (Protection) Act, 2006; Decommission 105 MW Loktak project,” indicating the effort of civil society to mobilise the affected families to fight for their rights. Men and women who held young children in their arms soon sat next to Sharmila on the mud floor to relate what they had undergone on August 3. “We were born in this village, lived all our life here, our families have lived here for generations; fishing in the lake has been our livelihood, now we are being removed from our own homes in the name of development. If we are removed from this area, how can we fish in the lake? Nobody listens to us just because we are poor. Where will we go now?” a middle-aged woman tearfully asked Sharmila. Another woman said with loud cries, “I sent my son to school that day. When he returned, the house was gone. He cried seeing his things scattered all over. He was also hungry, but I couldn't give him food.” A man joined in, saying, “In the melee, we tried to save whatever we could. We couldn't save my son's uniform; from where will I get him another pair? So we not only lost our home, but it looks like my son will lose his education too.” Soon most of the people surrounding her began to cry.

While speaking to them Sharmila broke down as well. “I can't believe what I am hearing. Is there any civil society alive in this state? Why are no human rights organisations taking it up?” she wondered aloud amidst sobs in her feeble voice. After breaking her fast nearly a month ago,

it was the first public engagement where she took up an issue other than of the Armed Forces (Special Powers) Act. In the 16 years that she was confined to a room in Jawaharlal Nehru Institute of Medical Sciences in Imphal, a lot changed in and around Sendra. What unfolded in the community shed on September 3 had its roots in 2011. According to one of the evicted men, Ibosna Singh, “Hundreds of families were evicted from the phumdis in 2011. While some moved to the side of the lake to continue fishing, some others left for other areas of the district looking for a fresh livelihood with some compensation given by the state. Since we were staying on the lake side, we thought we were safe from eviction.” “With our families growing in size, we moved some years ago to a new area in the village alongside the lake with the permission of the gram panchayat. In 2013, we were evicted from that area by the government.

The local MLA said it needs to be cleaned and beautified for tourists. He told us, it will benefit us only, so we should cooperate with the government. He also said an alternate arrangement will soon be made for us. So we agreed to move to the public ground till it was done. On August 3, the government removed us from there too, without making any alternate arrangement to stay.” A look at the file of communications between the government and the Sendra Youth Club suggests that trouble began after the club wrote to the local administration in December 2014 to grant it permission to run a parking lot for tourists. In January 2015, as per the direction of the sub divisional officer of Moirang, the office of the assistant survey and settlement officer conducted a survey of the club land. After the field survey, it informed the office that the land had been “recorded under Dag No. 4” in the name of the club. “Even then, we were given an eviction notice by the SDO’s office saying the land was shown on the records as a government property. On receiving the eviction notice, we approached the Manipur high court against it. Though the high court issued a stay on the matter on August 3 till August 29, the huts, the club and the facilities built for the tourists were rased by the state government two hours before we could get a copy of the order. Prohibitory orders were clamped so that we couldn’t assemble and protest it. Since the prohibitory orders were issued till further notice, people also couldn’t move back to the grounds before August 29.”

On September 3, villagers took Sharmila to another area of Sendra where the lone resort was “constructing a swimming pool and some other tourist facilities” by the lake. A wall had also been built along the lake to turn it into a private zone. “We have no idea how much more area of the village land had been given out to rich private players for tourism by the government. The local community had not been consulted at all. Suddenly, people get an eviction notice,” said Jiten. While she was speaking to the villagers, the LDA director P.D. Bhagaton approached Sharmila. On being asked about the eviction of the families, he surprised her by saying, “We are here only for the protection of the lake; we have nothing to do with the eviction nor have we got anything to do with these tourism projects.” “Fishermen are allowed in the lake except in the core areas. We are not against the local people. We don’t charge them anything for fishing,” he said. Meanwhile, Ram Wangkheirakpam of Imphal-based civil society organisation Indigenous

Perspectives, who had accompanied Sharmila to Sendra, told The Wire, “Nobody knows what is happening in Loktak in the name of development and augmenting tourism. From what happened in August 3 here, the tourism policy of the state government seemed not to have any space for the involvement of the local community. We have filed an RTI with LDA this past August 17 to get more details in this regard.”

Manipur: 50 lakh fingerlings liberated

<http://www.thesangaiexpress.com/50-lakh-fingerlings-liberated/>

50 lakh of advance fish fingerlings (7-12 cm) of different species such as Rohu, Catla, Mrigal and Common Carp were liberated at different points in the periphery of Loktak Lake at Sendra, Ithing, Ningthoukhong, Thanga Chingthak, Komlakhong and Thanga Haoreng Chingyang. The fingerlings were released in the presence of local leaders, representatives of NGOs and officials of the Fishery Department, Manipur. Under the financial assistance of National Fisheries Development Board (NFDB), Hyderabad, Fisheries Department has organised fish seed liberation programme for augmentation of the fish production in the State. During 2015-16, NFDB, Hyderabad has sanctioned for development of Paddy-cum- Pisciculture Scheme in Ukhrul district, for 744 beneficiaries. Under the assistance of NFDB, Hyderabad, training programmes were organized on aquaculture (scientific fish culture, fish breeding, transportation & marketing, control of diseases) for 500 fish farmers of all districts of Manipur.

60 fish farmers from Manipur were taken to Nellore, Tamil Nadu, Andhra Pradesh and West Bengal to observe modern techniques of fish culture taken up by the farmers of the respective State so as to enable them to take up high-tech fish culture system for enhancing the fish production of the State. The NFDB, Hyderabad has sanctioned 40 tricycles with insulated fish box and ancillary support items for mobile fish vendors of Manipur. On the other hand, the NEC has sanctioned projects for development of Paddy-cum- Pisciculture Scheme in 5 hill districts of Manipur. The Ministry of DoNER has sanctioned 90 per cent of NEC share and 10 per cent of State Government share to establish Regional Fisheries Estate at Khullakpat Fishery No 123, Mayang Imphal. The department fabricated two types of fibre reinforced plastic boat as part of the Fishery Extension Programme. The larger boat which is Injing Hee was sold at Rs 33,352 while the smaller one which is Lukai Hee was sold at Rs 29,295 (rate approved by the Government). Since these boats are more handy and comfortable as compared to the traditional wooden boats, they are being preferred by the fish farmers.

It is worth to mention that fisheries is considered as sunrise sector in the State. It is also an important allied activity of agriculture sector in India. The vast inland fishery resources offer a vast opportunity to enhance fish production through aquaculture diversification, proper management, species diversification, diversification of aquaculture technologies, introduction of new technologies and adoption of scientific aquaculture practices. In this context, the

Department aims to develop fisheries in the State to augment table fish production in order to meet the requirement of the State. The annual requirement of fish for the people of Manipur is around 42,000 MT whereas the present production is around 32,000 MT. The Fishery Department, Manipur is implementing various fishery schemes and extension programmes for the fishermen, fish farmers and general public in order to increase the production.

Manipur: Manipur fishery department to create 10,000 hectares of new fish ponds

<http://www.easternmirrornagaland.com/manipur-fishery-department-to-create-10000-hectares-of-new-fish-ponds-2/>

The Manipur fishery department will be utilizing the existing reservoirs, hill stream and riverine to create 10,000 hectares of new fish ponds/tanks for fish farming by introducing pen culture and cage culture activities in order to meet the increasing demands. Disclosing this to a media interaction here on Monday, Director of Fisheries David K Shimray said ,”So we’ll be releasing 6 lakhs fingerlings at Mapithel dam, 2 lakhs at Khuga dam and 1 lakh at Khoupum dam soon.” Manipur produces only about 32,000 Metric tones against the requirement of 42,000 metric tones in spite of having a total water area of 56,461 hectares as the farmers utilizes only about 19,500 hectares for fish farming, said the Additional Director Fisheries E Sulochana while participating in the media interaction. Even though the state imports table fishes from other areas, the fish farmers of the region also exports their endemic fish varieties simultaneously, the Director added. Endemic fisheries are given important and production of Pengba and other fishes have increased.

The department also provides one year certificate course on Fisheries Development and administration. Many students from Mizoram, Arunachal Pradesh, Nagaland and Meghalaya are also undergoing training. Manipur fishes will be available in canned form in the market within two to three months time once the fish processing unit which is currently under construction is commissioned, said the Joint Director H Biramani Singh of state fisheries. The department is trying to attain self sufficiency in table fish production which may be around 65,000 tonnes per annum by the end of ten years. There are many agricultural lands in hill areas where there are water permanently and development of Paddy-cum- Pisciculture is taken up in those areas. Under the programme 37 number of 1 hectare pond could be developed at Khullakpat in Imphal West district and 265 hectares of paddy cum pisciculture in five hill districts, he added.

Manipur: Manipur observes fish farmers’ day

<http://www.easternmirrornagaland.com/manipur-observes-fish-farmers-day/>

The 16th Fish Farmers’ Day was observed under the aegis of the State Department of Fisheries at its Lamphelpat complex on Sunday. The event was aimed to produce enough table fish to meet the demands of the state by promoting local fish farmers. The State Agriculture and Fisheries

minister, Md Abdul Nasir, was the chief guest of the function while the Secretary of Fisheries, ThGopenMeetei, presided as the functional president. The Director of Fisheries, David K Shimray; Director of Economics & Statistics, Peijonna Kamei; and E Sulochana Devi were the guests of honour. Many upcoming fish farmers of the state were honoured for their commendable activities by giving monetary award and citations in the Fish Fair cum Fish Crop Competition last year. A cash award of Rs 1 lakh, Rs 70,000 and Rs 50,000 were awarded to three noted farmers Ningthoujam Kumar Singh of ThangaChingmei, NingthoujamBasanta of Keibul, both under Bishnupur district and SoibamSurchandra Singh of Hiyangthang in Imphal West district as 1st , 2nd and 3rd prize winning farmers in the competition. In his speech, Director of Fisheries David K Shimray appealed the farmers to think positively and produce enough table fish for the local population.

Currently, the state produces about 30,000 metric tons of table fish annually against the requirement of 40,000 metric tons. He also highlighted some schemes for the welfare of local fish farmer for the last five years. The State Agriculture and Fisheries minister, Md Abdul Nasir, said the Farmers' Day is organized for the welfare of the farmers. In this regard, he urged the farmers to highlight their grievances at the right platform and right person(s) so that the matter could be looked into timely.

Manipur: Press statement of All loktak lake areas fishermen's union, Manipur

The All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) strongly object the statement made by the LDA in recent news caption "LDA rejuvenates Loktak Lake, claims State Govt" in some local news papers wherein the LDA (Loktak Development Authority) have claimed to have taken up activities like management of phumdis, improvement of drainage system, de-siltation at the critical areas, construction of cross regulator, catchment area conservation, construction of sanitary toilets, biodiversity, enhancement of fish resources with the establishment of hatchery, afforestation in catchment areas, overall ecosystem of the lake is improving on various parameters, restoration of the open water regime, channelization of river/streams, Phumdi compost, aided regeneration, agro forestry, small scale engineering works, contour trenching, vegetative check dam, Gabion check dam, bamboo spur, boulder saudades, water harvesting structure, alternate source of energy, community participation, institution formation of community, diversion channel, cultural operation, plantation of banana, pineapple, etc. are nothing but table work reports without field works in the Loktak. Nambul, Nambol, Ningthoukhong, Moirang and other rivers and its tributaries from Manipur hills and valley have been depositing numerous urban and rural wastes that cause pollution and siltation into a Loktak Playground even though the LDA claimed catchment area conservation, afforestation in catchment areas, etc. (For example, Salam, Heisam playground at Mukap, Thanga, Loktak Leirembi ground at Thanga Haoreng Chingyang, Toupokpi grounds, etc...) Construction of

sanitary toilets in the Loktak Champu Khangpok villages has never been implemented till date even though the MoEF &CC have directed the state government to take up its actions.

Where do LDA establish hatcheries in Loktak? Are they functioning? If fish resources have enhancement in Loktak, Why do we have to import fishes from outside the state? Does LDA have the mechanism to maintain lean season and peak season of Loktak water level in the Loktak? Is LDA a natural agency to conserve and management the Loktak? Will LDA be able to specifically identified native fishes breeding sites inside Loktak for Pengba, Sareng, Khabak, Nagton, Ngakra, Ngamu, Nganap, etc, food supplements sites like Heikak, Thangjing, Wairujara, etc.. as LDA have claimed of overall ecosystem of the Loktak is improved on various parameters. Has the Loktak water quality got improved? Where have LDA improve the Fishes breeding sites, grazing grounds, etc. in the Loktak? What about newly construction of surface road from Mayang Imphal to Toubul? Does the construction of such surface road constitute an overall ecosystemimprovement of Loktak? Surface road is directly killing the Loktak at the very nose of the LDA and Manipur State Government. Permanent immovable Phumdis like Maibram Phumlak, Kumbireihoubi, Humdang, Jawa-Phegei, Sagaisabi, and other phumdis from Toubul Mamang to Ishok Naorem, newly construction of surface road form Mayang Imphal to Toubul, etc. which directly threatens the Loktak ecosystem are clear picture that shows contradiction to the LDA tall claimed of restoration of the open water regime. LDA have claimed to have taken up aided regeneration, agro forestry, small scale engineering works, contour trenching, vegetative check dam, Gabion check dam, bamboo spur, boulder sausages, water harvesting structures, alternate source of energy, De-siltation at the critical areas, construction of cross regulator community participation, institution formation of community, cultural operation, plantation of banana, pineapple, etc. are only lip services.

If such actions and initiatives were taken up, LDA should be diligent enough to place an annual report and audit report to the Manipur Legislative assembly as per the section 26, 27 & 28 of the Manipur Loktak Lake (Protection) Act 2006. Has any Manipur State Hon'ble elected MLAs ever come across LDA's annual reports and audit reports in the Manipur Legislative Assembly? Rich cultural heritage, the LDA's irresponsible violation and disrespecting of the Hon'ble High Court's interim order dated 25th January 2012 resulting two Contempt of Court cases which are still pending in the High Court. LDA and Government of Manipur is blowing their own trumpet without realizing themselves as the most dreaded threats to Loktak ecosystem, Loktak habitat, Loktak fishers, and its wetland dependence. ALLAFUM appeals all government agencies, every section of people, NGOs, CBOs, CSOs, fishers, wetlands dependents, intellectuals, human rights defenders, environmentalists, legal experts, researchers, students and law makers to look into the matters and contribute your valuable inputs to rescue the dying Loktak. Together we can save the Loktak.

Manipur: Loktak Development Authority rejuvenates Loktak Lake, claims state government

<http://e-pao.net/GP.asp?src=7..050716.jul16>

For overall improvement and management and to check the deteriorating conditions and to bring about improvement along with development in the fields of fisheries, agriculture, tourism and afforestation of the Loktak Lake, the main tourist attraction of the State, the Govt of Manipur constituted Loktak Development Authority (LDA) in 1986. Under the project "Conservation and Management of Loktak Lake" major activities viz management of phumdis in the Loktak lake, improvement of drainage system, de-siltation at the critical areas, construction of cross regulator, catchment area conservation, construction of sanitary toilets, biodiversity, enhancement of fish resources with the establishment of hatchery, operationalisation of hatcheries etc have been taken up.

The Loktak Development Authority rejuvenated Loktak Lake through project intervention with the financial support from NEC, MOEF and Planning Commission as the overall ecosystem of the lake is improving on various parameters. Restoration of the open water regime in the central sector of the lake by removing athaphums, phum huts with the control of further proliferation is the most significant achievement. With the support of Forest Department, degraded forest areas in the lake catchment are being restored through intensive plantation works and livelihood improvement programmes. In convergence with the total sanitation programme, PHED has constructed sanitary toilets in the island and lake shore villages for improving the quality of living and ecosystem health of the lake. Fisheries have been developed by operationalising community based hatcheries in the lake shore villages to enhance the fish productivity. Management of the lake basin has been made more effective through various policy instruments and legislating supported by awareness and education programmes. Govt of Manipur aims to integrate the associated wet- lands of Loktak Lake to bring about comprehensive management of this priceless natural capital. In order to address livelihood issues of the wetland dependent communities, livelihood programmes and cultural heritage based tourism will be promoted.

The Loktak Lake serves as a source of water for hydropower generation, irrigation and drinking water supply. The lake is also a source of livelihood for the rural fishermen who live in the surrounding areas and on phumdis, also known as "phumshongs". Human activity has led to severe pressure on the lake ecosystem. 55 rural and urban hamlets around the lake have a population of about 100,000 people. The LDA has been working earnestly for maintaining of ecosystem balance and to bring economic development for the people in the area. Some of the works taken up by LDA are: desiltation at the critical areas (12.19.Lcum), removal of phumdis (257.91 Lcum), removal of athaphum/ alternate fishing gear (providing economic package to athaphum owners) flushing out phumdis in 127.25 Lsqm, removal of phumdis from drainage system in 4.20 Lcum, removal of phumhuts under livelihood programme (providing economic packages to the owner) , total sanitation coverage, establishment of 16 hatchery units, improvement of drainage system, chanelisation of river/streams, phumdi compost, six cross regulator, water master classic III, hydraulic excavators, Tata tippers, administrative building

phase II, Lake restocking, afforestation in the catchment area, aided regeneration, agro forestry, small scale engineering works, contour trenching, vegetative check dam, Gabion check dam, bamboo spur, boulder saudades, water harvesting structure, alternate source of energy, community participation, institution formation of community, diversion channel, cultural operation, plantation of banana, pineapple etc.

Manipur: 32500 kg of table fish produced in 10 months

<http://e-pao.net/GP.asp?src=12..260516.may16>

While emphasizing an overall development in fisheries sector in the State for making available fish as a source of animal protein food for general public in sufficient quantities, the State Fisheries Department could produce 32500 kg of table fish during the current financial year upto January 2016 against the target of 34000 kg for the year. The Fisheries Department has been implementing various programmes- inland fisheries development, fishery extension training, liberation of fish fingerling/yearlings, assistance to pisciculturists, development of inland aquaculture and fisheries under CSS, housing scheme for poor fishermen, accident insurance scheme etc. During the current year upto January, 2016, 218 millions of fish seed have been produced. One year training on inland fisheries is continuing at the Departmental Inland Fisheries Centre at Lamphelpat. Every year the Department organized fish seed liberation programme at Loktak Lake and other wetlands under the scheme "Augmentation of fish production". 50 lakhs of fish seed were liberated in natural water-Loktak and wetlands.

Under the devolution of powers, the Fishery Department had transferred the "Assistance to Pisciculture Scheme" for implementation through the panchayats of four valley districts- Imphal West, Imphal East, Thoubal and Bishnupur and six Autonomous District Councils of Manipur Senapati, Ukhrul, Churachandpur, Chandel, Tamenglong and Sadar Hill district council, Kangpokpi. The implementation of Rastriya Krishi Vikas Yojna (RKVY) in the Fisheries Department, Manipur had been started since the 2009-10 onwards. The total approved 'cost for infrastructure development taken up for the period from 2009-10 to 2015-16 is 2317.95 lakhs. 37 ha area unit ponds have been constructed during 2015-16 under the Establishment of Regional Fisheries Estate at Khullakpat Fishery No 123, Mayang Imphal, Imphal West, 2015-16 . Infrastructure development taken up under RKVY funding are construction of mini laboratory for disease diagnosis and controlling centre at Lamphel, Imphal West district; construction of Farmers Hostel at Lamphel, Imphal West district; construction of laboratory building at Grass Carp Farm, Waithou, Thoubal district; construction of farmers training centre at Ningthoukhong, Bishnupur district; construction of training hall-cum-laboratory at Khundrakpam Fish Farm, Imphal East district; construction of training hall-cum-laboratory in Chandel district; construction of training hall-cum-laboratory at Tuibong, Churachandpur district; construction of training hall-cum-laboratory in Ukhrul district.

The other programmes included 5% RKVY contribution for development of pisciculture in Bishnupur district under RIDF-XV of NABARD; construction of fish jetties at Thanga Khunjao and Karang of Loktak Lake, Bishnupur district; construction of mini circular hatchery at FFDA, Imphal West district; mini circular hatchery at Grass Carp farm Waithou, shifted to Leimakhong Mapal, Imphal East district; construction of 3.30 ha farm ponds at Waithou, shifted to Leimakhong Mapal, Imphal East district; construction of mini circular hatchery at Haotak, Bishnupur district; construction of 4.40 ha farm ponds at Haotak, Bishnupur district; construction of mini circular hatchery at Khundrakpam Fish Farm, Imphal East district; construction of mini circular hatchery at Purul, Senapati district; construction of training hall-cum-mini lab at DFO office, Senapati district; construction of training hall-cum-mini lab at DFO office, Tamenglong district; construction of circular hatchery, Lamphel; construction of circular hatchery at Waithou.

Manipur: Floods in Manipur cause food shortage, power cuts

<http://www.firstpost.com/india/floods-in-manipur-cause-food-shortage-power-cuts-2794928.html>

Manipur was on the verge of being cut off from the rest of the country after rockslides hit the Imphal-Dimapur highway (NH-2) near Kohima in Nagaland, even as torrential rains continued to wreak havoc in the state. The Imphal-Silchar highway (NH-37) is already blocked due to multiple rockslides. Besides this a portion of the Imphal river bank, measuring over 100 ft, was breached near Kyamgei in Imphal on Sunday night, washing away and submerging hundreds of houses. Villagers told IANS that when they went to the Irrigation and Flood Control department to take flood control materials, the officials told them that they had nothing to give them that would help the villagers with flood control. The government has been maintaining that flood control materials were well in stock and available for the people. Meanwhile, water also entered the power sub-station at Mayang Imphal forcing the officials to shut it down.

An official said: "The power supply will be stopped till the situation improves." Due to rockslides, the border town of Moreh was already cut off. Tamenglong district is also cut off from other parts of the state and has been without power for several weeks as transmission lines were brought down during cloudbursts. Farmers have incurred staggering losses as the standing crops and vegetables were destroyed. Some fish farmers said: "The flash floods have destroyed our farms. Fish worth lakhs of rupees swum away in the flood waters." Due to overflowing and breaching of banks of major rivers in Thoubal district, many villages were now submerged. Some displaced villagers said: "The government has not come to our rescue. Evacuation and relief centres are yet to be opened. We are facing problems in arranging food since everything is under water now." There were demands for providing food packets since cooking was difficult in view of the surging flood waters. An official told IANS that members of the state disaster response force were being rushed to the areas where there were major floods. "But the members faced obstruction from those who had blockaded the road," said the official. The protesters were

demanding the arrest of three Muslim youths who had opened fire at some women and students at Nungrei on 17 April, injuring 14.

Manipur: Phoomdi and locals at Loktak: Time to introspect ?

<http://www.thesangaiexpress.com/phoomdi-locals-loktak-time-introspect/>

Wetlands, one of the most important ecosystems on earth, are known as ecological supermarkets. Wetlands support extensive food chain and play a major role in the landscape by providing unique habitats for a range of flora and fauna. Loktak, the largest Pat within the Manipur river basin serves as an important source of water, fisheries and vegetation providing sustenance to a large population. It has got a rich biodiversity of 233 plant species and 425 species of animals (249 vertebrates and 176 invertebrates). Loktak provides refuge to thousands of birds which belong to 116 species (21 species of waterfowl are migratory, most migrating from different parts of the northern hemisphere beyond the Himalayas). Phoomdi is a heterogenous mass of soil, vegetation and organic matter in different stages of decay. It occurs in various sizes, small or large with thickness varying from a few centimeters to above 2.5 m. Phoomdi is a habitat of a large variety of aquatic, semi-aquatic and terrestrial plants, comprising of more than 128 species from above 46 families. Communities living in and around the wetland are directly or indirectly dependent upon the wetland resources for sustenance.

There is a significant population which harvests aquatic plants from Loktak for different purposes. It has been estimated that 33% of the wetland shore households harvest aquatic vegetation for use as fuel; 18% for use as vegetables; 2% for use as fodder and 1% for manufacturing handicrafts. Annually, 15,400 MT of plant biomass is harvested for use as fuel, 1,900 MT for use as vegetables, 230 MT for use as fodder and 40 MT for making handicrafts. However, wetland plants are reported to have a comprehensive capacity for the accumulation of numerous heavy metals. Because of their fibrous root systems with large contact area, they have the ability to concentrate higher amount of metals than the surrounding water. At present, Loktak is exposed to excess silts load, nutrients, pesticides and metals, quickening its ageing. Loktak Multipurpose Project (1983) converted the wetland with fluctuating water level into a reservoir with more or less constant water level; compounding the deposition of nutrients, metals and silts by interfering with the wetland hydro-dynamics and flushing of pollutants.

Further, lack of proper sanitation actions in the Manipur valley generates near to 77.13 million tons of solid waste and 33,148 m³ of sewage on a daily basis by 0.28 million people living within the Nambul river. Phoomdi includes plants that accumulate numerous heavy metals. A study (Singh et al. 2013) compared the concentrations of metals between Loktak and the Nambul River, a main tributary. Metal concentrations were found to be higher in the Nambul River than in Loktak, viz. 1966.7/468.4 (Mn), 1486.5/646.2 (Fe), 244.8/45 (Zn), 5.5/3.7 (Cr), 2/1.4 (Ni) and 3/0.8 (Hg) ppb. These results signify the possible role of sediments and Phoomdi acting as sinks

and accumulators. Further, another research (Meitei and Prasad 2016) reports the concentrations of Fe, Mn, Zn and Cu in the sediments of Loktak ranged upto $81.8 \pm 0.45 - 253.1 \pm 0.51$; $2.6 \pm 0.06 - 71.9 \pm 0.34$; $0.13 \pm 0.006 - 0.43 \pm 0.107$ and $0.02 \pm 0.001 - 0.09 \pm 0.002$ mg kg⁻¹, respectively. Wetland sediment enhanced with organic matter work as a potential good sink for numerous metals compared to surface water (Fe, Mn, Zn and Cu ranged upto $81.8 \pm 0.45 - 253.1 \pm 0.51$; $2.6 \pm 0.06 - 71.9 \pm 0.34$; $0.13 \pm 0.006 - 0.43 \pm 0.107$ and $0.02 \pm 0.001 - 0.09 \pm 0.002$ mg kg⁻¹), as the humic substances existing in sediment create various metal complexes.

However, a relative low metal concentration in water is ascribed to their constant uptake by phoomdi during growth and development. As the wetland function as a drinking water source, low metal concentrations sustained by phoomdi acts as a safe defense for the health of the locals and environment of Loktak. However, a study (Meitei and Prasad 2015) reported a total of 27 wild edible and 25 medicinal species used by the locals from phoomdi. Target hazard quotient, proposed by the US Environmental Protection Agency (US EPA) has been recognized as one of the reasonable indexes for health risk evaluation associated with the intake of metals by consuming contaminated food. $THQ < 1$ suggests that the exposed population is safe from the harmful effects via the consumption of the contaminated food and $1 < THQ < 5$ means that the exposed population is in a level of concern interval. In a report (Meitei and Prasad 2016), it is observed that the THQ values of Mn were higher than Fe, Zn and Cu for the 7 phoomdi edibles (*Alternanthera philoxeroides*, *Ipomoea aquatica*, *Colocasia esculenta*, *Trapa natans*, *Zizania latifolia*, *Oenanthe javanica* and *Polygonum barbatum*) from Loktak.

Target hazard quotient values of Zn and Cu for phoomdi wild edibles was below 1 ranging from 0.02 – 0.09 and 0.01 – 0.04 respectively, suggesting that consumption of the wild edibles are safe from the toxic effects of the metals (Zn and Cu). For Fe, THQ values ranged from 0.2 – 1.5; with higher values for *Zizania latifolia* (1.5), *Oenanthe javanica* (1.3) and *Polygonum barbatum* (1.1); signifying the necessity for care to be paid. Similarly, maximum THQ value of 7.9 for Mn was found in *Alternanthera philoxeroides*, followed by 2.3 for *Polygonum barbatum* and 2.1 for *Trapa natans*, respectively. Relative high THQ of Mn showed that the contamination of the metal in the phoomdi wild edibles might pose a potential health hazard. On the contrary, the mentioned phoomdi wild edibles are a common constituent of the local meal every day. Fresh vegetables are used to prepare Manipuri traditional delicacies, viz. iromba, kangsoi, kangsu, shak, singju, and utti. Iromba is prepared by boiling *Alpinia nigra*, *Colocasia esculenta*, *Hedychium coronarium*, chilli and potato. Boiled vegetables are mashed and mixed with fermented fish. Tender shoots of *Ipomoea aquatica* are boiled with potato, fish and spices in the preparation of shak. Singju is a salad made by mixing *Alocasia cucullata*, *Ipomoea aquatica*, *Neptunia oleracea*, *Oenanthe javanica*, and *Polygonum barbatum*, with fermented fish and chilli. *Alternanthera philoxeroides* and *Colocasia esculenta* leaves are used in utti.

They are boiled with green peas, chillies, spices, fermented fish and sodium bicarbonate, etc. There arises the concern, as the phoomdi of Loktak are interconnected in many ways with the

common life of the locals that environs the surrounding of the wetland. Harvesting and consumption of the phoomdi wild edibles will lead to the transfer of heavy metals to the human due to metal contamination. High amounts of Fe are reported to cause hemorrhagic necrosis, tissue injury by catalyzing the conversion of H₂O₂ to free radical ions and can activate oncogenes. Also, excessive accumulation of Mn leads to neurological disorders and brain damage. Further, Zn at high concentrations can cause muscular stiffness, loss of appetite, nausea and irritation, and high Cu lead to metal fume fever, fair skin discoloration, irritation of the upper respiratory tract, dermatitis and nausea etc. Thus, an in-depth research with constant observation and development of counter actions is required for public health interests of the locals that environ Loktak in the long run. Government of Manipur along with its responsible wing, Loktak development Authority needs to pay a serious attention to look upon and try solving or minimizing the various possible threats that haunt the locals and the wetland

Manipur: All India Fishers and Fisheries Workers' Demand Day

http://e-pao.net/epSubPageExtractor.asp?src=news_section.Press_Release.Press_Release_2016.All_India_Fishers_and_Fisheries_Workers_Demand_Day_201600517

The All Loktak Lake Areas Fishermen's Union Manipur (ALLAFUM) have organised the All India Fishers and Fisheries Workers' Demand Day on the 15th May 2016 (1100 hours onwards) at Langolsabi, Loktak, Manipur. All the Fishers and fisheries workers, wetlands dependents and other stake holders have decided to stand firm in their own best positions so as to assert their rights and livelihood with dignity without interference from others. In consonance with the All India Demands, Day (National Demands' Day) all participants unanimously resolve the following demands for the welfare of the future generations for fishers and fisheries workers. Our Demands are as follows: 1. Ensure right of fishers to fish in government and semi government water bodies 2. No displacement of fishers in the name of 'development' 3. Identity cards for all fishers including fish vendors 4. Social security benefits to all fishers including pension of Rs. 2000/- per month and health insurance including maternity benefits; free education to children of fishers 5. Housing with basic amenities like electricity, water, toilets, etc. to all fishers 6. Introduce Fishermen Welfare and Rights Act (O. RAJEN SINGH) Secretary ALL LOKTAK LAKE AREAS FISHERMEN'S UNION MANIPUR Head Office: Langolsabi Regd. No. 735 of 2011 Branch Office: Thanga Oinam Chingjil, PO & PS Moirang, BPO Thanga, Bishnupur District 795133 Manipur, India Email: allafum(AT)gmail(DOT)com Facebook: allafum, Blogsite: ourmotherloktak.wordpress.com