

WATER QUALITY

Pollution through Aqua Culture

Kolleru Wildlife Sanctuary

After the richer locals leased land/water from the poor cooperatives in the 1970s in Kolleru in Andhra Pradesh, the land has remained in the name of poor “beneficiaries”, while the real fisherfolk work on meagre wages. Ironically, those legally entitled to the benefits have been reduced to wage earners on their own land/water; the rich have not only taken over all the cooperative societies, but have also started illegal encroachments.

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Kolleru is one of Asia’s largest fresh water lakes; it is located in Andhra Pradesh and is a famous habitat for a number of resident and migratory birds, including the vulnerable Grey Pelican (*Pelecanus Philippensis*). Situated between the Godavari and the Krishna river basins, it is an invaluable wetland ecosystem. The lake spans 90,100 ha and the water shrinks or expands depending on the rains; many rivulets drain into the Kolleru and surplus waters run off into the Bay of Bengal. Abutting the lake, there are about 75 villages spread over nine mandals in Krishna and West Godavari districts with a population of 3.5 lakh as per 1991 Census. Twenty-five years ago, the water surface of the lake was 918 km². At the Ramsar convention¹ held in Spain in November 2002, Kolleru was designated one of the 11 new Indian wetlands of international importance.

Wilful Destruction

Rich in aquatic life, Kolleru has for a long time provided a habitat where there is a harmonious coexistence of birds, people and life-supporting water. The resources of the lake—many rivulets such as Tammileru, Ramileru and Budameru – that brought in the floodwaters necessary to sustain it were

being used by the local communities for fishing, agriculture, bird capturing, etc. Records of fishing licences exist since 1956. People from Orissa and other nearby places used to migrate to the region to make a living. The government had assigned lands in the lake area to scheduled and backward castes (SCs and BCs respectively); while the BCs, who are mostly fishermen converted their lands to fish tanks, the SCs used theirs for agriculture. There are various small islands in the lake that were inhabited by fisher folk from lower castes.

The fishermen would fish during the rains and take up seasonal cultivation of paddy on the land vacated by receding waters around the islands and edge of the lake during the winter and the summer seasons. During the late 1970s, under the chief ministership of J Vengal Rao, the fishermen were encouraged to form registered cooperative societies and loans were sanctioned to members for seasonal cultivation of one ha dry land per family. There were repeated floods and the banks and government encouraged them to convert agricultural land into fishponds and tanks. The beneficiaries were to practise collective cultivation and their remuneration was in proportion to their share. At this point, the better-off sections of the community entered the scene and took the land/water area on lease from the society members for periods ranging up to five years. This

continues till date; it means that the land is actually in the name of the poor “beneficiaries” – but is in fact used by the well-off sections of society while the real fishermen work for a salary of Rs 20 a day for women and Rs 40 for men. Ironically, those legally entitled to the benefit have been reduced to wage earners on their own land/water; the rich have not only taken over all the cooperative societies but have also started illegal encroachments. Till 1990, this influential class, also comprising political leaders and policy-makers who successfully did away with the real beneficiaries, were only involved in fishing – an activity that requires sweet water.

Aqua Boom, Induced Death

The fishermen, who were dependent on traditional fish capture until the lands were assigned, were encouraged by the government to go in for aquaculture. Some rich enterprising farmers, taking advantage of the government policy, reaped rich harvests through the scheme and their success and prosperity in the 1990s encouraged the outsiders to invest in fish tanks leading to an aquaculture boom and overexploitation of the lake.

From 1992-93 aquaculture has been practised in a big way. The problem is, it needs saline water to flourish and borewells have been sunk in the lake bed to pump out saline water for the aqua ponds; the lake bed level has sunk, the tides bring in more and more saline water into the lake since the banks have also sunk. Prawn seed is cultivated for one month in small ponds and then transferred to larger ponds with saline water. Both fish and prawn cultivation require use of chemical fertilisers, gobar manure, chicken waste, etc. Once the harvest is over this water stagnates and pollutes the surrounding water. Unscientific and illegal aquaculture coupled with agricultural runoff from the area that also contains chemical residue, untreated water from neighbouring industries and domestic sewage from areas like Vuyyuru, Hanuman Junction, Gudivada, Eluru, and Tadepalli Gudem, etc, flow into the lake and contribute to its pollution.

Hopeless Situation

At present aquaculture is carried out in over 80,000 ha producing more than seven lakh tonnes of products with an annual turnover of Rs 4,000 crore. However, reports say that the area under aquaculture is much higher than official estimates

since there is much illegal activity happening on this front. Many politicians from the two districts have hundreds of ha of land under their control.

The consequences of this pollution are there for all to see. There are frequent fish kills, scarcity of safe drinking water in dozens of island villages and contamination of groundwater around the lake in Krishna and West Godavari districts. This once glorious and picturesque fresh water body is now doomed to become a dead lake. It has undergone several chemical and biological changes that have contributed to its depletion and pollution. The water has turned saline, fish are contaminated with pesticides and polycyclic aromatic hydrocarbons and heavy metals have entered the lake which means that fish and prawns are unfit for human consumption. The Kolleru is now clinically dead.

Government Intervention

In 1982, the Andhra Pradesh government set up the Kolleru lake development committee (KLDC), which set up a Rs 300 crore master plan for Kolleru. The plan suggests that the lake level be maintained at +5 m above mean sea level (MSL), and irrigation and drainage regulators be constructed across the Upputeru channel from the lake to the sea. It also calls for the creation of a Kolleru lake development authority to check encroachments, regulate and monitor pollution, clear the lake of weeds and use them as compost and raw material to produce biogas. Pisciculture, a bird sanctuary and tourism have been on the cards. The government, however, is yet to allot funds for the project.

The KLDC’s scientific laboratory is equally tardy. Equipment worth Rs 3 lakh gathers dust for want of staff. The administrative officer, Satyanarayana Rao, says, “I cannot review anything in the field as I have inadequate technical and executive staff. Even all the committee members have not been appointed. We have written to the government to wind up the office if matters don’t improve.” As of now the KLDC staff just pulls out weeds from the lake.

In 1999 the state government by a G O Ms No 120 dated October 4, declared Kolleru a wildlife sanctuary called the Kolleru Wildlife Sanctuary; the area comprises all the area up to five m above MSL and is spread over 30,855.20 ha or 308.55 km². The notified sanctuary area at present spans seven mandals of West Godavari

district and two mandals of Krishna district and includes a total of 74 villages.

When Water Is Poison

The degradation of the Kolleru has many implications for the weaker sections of the community. The poor lay the blame on the rich aqua farmers who were responsible for the shift from traditional freshwater fishing to saline prawn farming.

– It is ironic that the main problem is to do with dearth of drinking water in the neighbourhood of the largest fresh water lake in the country!

It has been found that:

(a) The government does not supply drinking water to the island villages and no investments have been undertaken to rectify this situation in spite of the fact that every year this region contributes nearly Rs four crore to the election fund.

(b) The few taps that exist supply polluted water.

(c) 15 years ago the villagers used to drink only lake water and now they walk three-six km to get water for domestic use.

(d) Many buy sachets of water – a thriving local industry – but there are no quality checks; there is no expiry date on the packets and no treatment of water before packaging. But the illiterate villagers have no idea about the risk they incur and suffer from various water-related diseases like diarrhoea, typhoid, amoebiasis, etc.

(e) During the last two years the prawn and fish have been disease prone and some farms have been abandoned. These lands are useless for agriculture as well since the soil and water have been contaminated.

(f) The young men from the area migrate elsewhere in search of jobs while old people have taken to begging. This when “prawn dons” earn up to Rs 22.5 lakh per ha in four months

The fishpond “owner” (illegitimate) is different from the actual owner (“encroacher”) whose name is reflected in the revenue records. But the name of the real encroacher is not mentioned anywhere in any document and the court does not find recorded evidence to convict the actual encroacher who gets away with all kinds of illegal activities

In July 2001 the AP High Court passed an order directing the authorities to ensure removal of encroachments in lakebed and see to it that all possible endeavours are made to bring Kolleru lake back to pristine glory. This was a major victory for the backward classes and came

after a prolonged battle by various community based organisations (CBOs).

At the same time, the delay in implementation of these orders due to various reasons has been a major setback. An attempt was made to set right the land records by appointing an official who was specially assigned the task of preparing fresh records with complete details of all encroachment of lands/ponds, etc. The day before he was scheduled to submit his findings he was murdered while out on his evening walk. This indicates how high are the stakes involved in prawn/fish cultivation in the area.

The encroachments continue to take place unchecked even five years after the sanctuary was notified. It is now difficult to actually identify the boundaries of the sanctuary since it is a series of fishponds. The gravity of the situation can be judged from the fact that more than 20 per cent of the area, supposedly part of the protected region, is full of illegal settlers.

Pleas and Threats

The native fishermen want a way out of this downward spiral by reverting to freshwater fish culture so that the lake slowly regains its past glory; but they are unable to do much on account of various reasons like high indebtedness, lack of unity, political strength of their opponents, etc. The prawn cultivating rich farmers of course, believe that they are doing the poor fishermen a favour by providing them jobs and wages.

The fishermen and the local NGOs are trying to get the authorities to enforce the wildlife act and prevent further degradation while the prawn farmers do their best to legalise the encroachments in the lake and the protected area.

Cry for Help

There is a need for strong advocacy to highlight the issues enumerated in this case and mobilise public opinion from all across the globe to support and assist the local efforts to block further damage to the lake and restore its ecological health and make it sustainable again. The struggle cannot continue with local resistance alone; the prawn/fish lobby is far too strong and is capable of violently eliminating any potential threat. The local groups are particularly weak and vulnerable and the solution has to come from a platform that can guarantee a level playing field for all the stakeholders. The situation calls for a public dialogue that can bring about

practicable and workable solutions. Water networks can play a useful role in mediating and connecting local groups with similar outfits that are willing to participate in mutual exchange of ideas that can take the process forward. **EPW**

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Note

- 1 The convention on wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty that provides the framework for national action and international cooperation on conservation and wise use of wetlands and their resources. There are presently 146 contracting parties to the convention with 1,458 wetland sites, totalling 125.4 million hectares.