The three curses for the wailing Rekawa Lagoon

Something weird is happening in Rekawa: fishes are dying, lagoon is shrinking, people are falling sick after eating some fishes caught from the area. Rekawa people, half of whom rely on lagoon fishing for livelihood, are worried. For, the lagoon is showing signs of distress and, most likely, mankind, once again deserves much of the blame.

Unfortunately, this is happening in a country where almost 750,000 people depend on fisheries for their livelihood. And, Rekawa lagoon, though one of the 45 lagoons found on the coastline of Sri Lanka, is one of the few significant and well-known areas for the presence of White shrimp (Penaeus indicus)—one of the commercially most important prawn species found in Sri Lanka. The lagoon is also acknowledged by one of the studies of Food and Agriculture Organization of the United Nations as one of the ‘most significant mangrove habitat on the south coast and an important nursery area and fishing ground for the adjacent villagers, who do not fish in the open sea’.

And, such an important source of income for almost hundreds is slowly ‘losing its balance’ as Tilak Priyadarshana and Takeshi Asaeda from the Department of Environmental Sciences and Human Engineering, Saitama University, Japan, puts it in their research paper that focused on assessing the impact of ecohydrology of the lagoon.

A gift of the sea

While the concerns and worried debates continue few may now be aware that some 6000 years ago, the lagoon was actually submerged in the sea. Gradually it evolved as a water body, which is now almost 1.4 meters deep on an average and is approximately 2.5 km at its widest point.

Nature also came forward to protect this area by encircling it with a mangrove belt and constant waves and winds (which can be as strong as 23 km/hour in few months) gradually created sand dunes on its coast. In totality, the right combination of salinity and nutrient traps was so infectious that like many other water bodies Rekawa too became a unique natural resource and one of the most significant aquatic habitats in southern Sri Lanka.

The curse to the gifted

Like any beautiful and gifted area, Rekawa too attracted it all—from fishermen to farmers and even hoteliers. And, with that started the unending tug of war for resources that drastically affected the hydrology of the area.
With farmers came the need to irrigate and the three small rivers – Kirama Oya, Urubokka Oya and Rekawa Oya, supplying fresh water to the lagoon were tapped for agricultural purposes. In this context, it is essential to understand, reads another study ‘Coastal Conservation through Enterprise at Rekawa Lagoon, Sri Lanka’ that ‘Though Rekawa is a brackish water body, yet like any other lagoon, it also requires the right mixing of the fresh and sea water to maintain the right brackish water environment’ - one of the most essential features for the growth or abundance of so many species found in that area.

But, as is normally the situation for such resource abundance areas, the already reducing supply of fresh water to the lagoon started getting mixed with the agriculture runoff and sewage of the ever mushrooming hotels. For, most of the mushrooming hotels and the other inhabitants residing near the lagoon found the lagoon catchment as the best garbage dumping ground. The combined outcome was a gradual reduction in the flow of freshwater to the lagoon and increased pollution of its waters. However, this reduction and pollution was just the beginning of Rekawa’s many woes.

As another major add on to the problems happened in 1984, when the Road Development Authority of Tangalle, in an effort to link a secluded Kapuhenwala village with the rest of the area, constructed a causeway across the lagoon. The causeway was constructed in such a manner that the lagoon water was allowed to flow towards the sea via 23 cm diameter pipes. These pipes were located about 1 meter above the lagoon floor on a concrete base.

Interestingly, though the causeway did make it possible for the humans to commute, but the way in which it was constructed, hampered the to and fro movement of the prawns in the lagoon. For, the prawns are acclimatized to walking on the sandy floor mentions C Nissanka from the Department of Zoology, University of Kelaniya, Sri Lanka in his research paper ‘population dynamics of Penaeus indicus in Rekawa Lagoon’.

He goes on to add that ‘these prawns spawn in deeper areas of sea and the juvenile then move to the lagoon to grow, and then migrate back to the sea at the sub-adult stage’. Unfortunately, it was this movement that the concrete base hampered because normally used to walking on the sandy floor of sea and lagoon, the prawns found it hard to cross or jump the concrete base.

What this ‘little’ development led to was not only realized by a worried fisher community but also reiterated by statistics as the shrimp production dropped drastically. Before the causeway was constructed the annual income of the fishermen ranged from LKR 17,000 to 19,500 out of which 65% was due to shrimp. Whereas, by 1992, though the income of the fishermen did range between LKR 24,000 to 26,000 but only 35% of this income was due to shrimp.

What’s more? Unconfirmed reports also suggest that the causeway obstruction accelerated silt accumulation in the lagoon because research done by Samaranayake in the same lagoon in the year 1983 mentions the water area of the lagoon as 339 hectare, whereas as in the year 1992, as mentioned by Dr Jayakody and Jayasinghe, the lagoon reduced to almost 250 hectares in area.

Now the reduced area of this wonderful water body is again gasping for fresh interventions. But those who can intervene are deaf and blind to the requirements of a wailing Rekawa because lagoons can’t talk in a language that can make humans understand its problems, and humans are blind to the many signs of distress like excessive dying of fish through which the lagoon is trying to communicate to us its ailing and waning health. Any takers?