



AMALI MALLAWARACHCHI

SEA TURTLE HATCHERIES

SAVING THE ANCIENT MARINERS FROM PREDATORS

The World Sea Turtle Day 2018 was celebrated on June 16, emphasizing the importance of saving these ancient mariners that have dwelled the oceans over 100 million years. Every year these magnetic headed navigators cross thousand seas to reach the sandy beaches of Sri Lanka faithfully looking for their birth place and a safe haven for their hatchlings.

Of the seven sea turtle species in the world, five of them come to Sri Lankan shores for nesting. Those species include Loggerhead (*Caretta caretta*), Hawksbill (*Eretmochelys imbricata*), Green (*Cheloniemydas*), Olive Ridleys (*Lepidochelys olivacea*) and Leatherback (*Dermodochelys coriacea*). According to the World Wildlife Organization, all species of sea turtles are classified endangered. They are slaughtered for their meat, eggs, skin, shell and their existence is threatened by poaching and over exploitation. WWO observes that habitat destruction, accidental captures in fish gear and climate changes have drastic effects on the sea turtle population.

In the public eye, sea turtle hatcheries have become sanctuaries that provide safety to these sea turtles from human or otherwise predators and environmental hazards.

Sea turtle tourism

Daily News spoke to several local and foreign tourists who visited these sea turtle hatcheries and most of them sounded blown away by the experience. Few among them took time to be a little more specific than others. According to Gabriel, an Australian citizen, father of two kids, said that his family "enjoyed every minute there and the kids especially loved releasing the turtles into the water. However, we had to pay 1,500 SLR per person," he chuckled.

Kristine, 29, spoke with a little discomfort when she said "donating" money to hatcheries when releasing baby turtles at any given time of the day didn't seem quite correct. She wasn't sure the big sea turtle they released would be caught again by the same people, because the sea turtle "looked almost the same!" that was in some other pictures at the hatchery. Upuli, a grade nine student who has recently visited a sea turtle hatchery said that they were able to "touch baby turtles that were 2 to 3 days old." She chirped, "They were only three days old!" Mitchel, a volunteer, who happened to have visited a sea turtle hatchery in the recent past said when she arrived at the hatchery about a hundred of baby sea turtles who have "hatched a few days ago, were swimming in small tanks. After four or five days, I went back to see

these hatchlings getting released back to the sea."

The darker side of the trade

While these comments seemingly do not raise any alarms, Environmentalist Supun Jayaweera says things are not as rosy as they seem to be. Jayaweera, voicing his concerns on the matter says that ever so popular sea turtle hatcheries only use "sea turtle conservation" as a catchy slogan to attract local and foreign tourists. Jayaweera calls majority of these hatcheries "rackets" that dodge all good practices of a proper conservation project. He furthers that these so called hatcheries are functional thanks to political interferences. Absence of monitoring topped with political infiltration over the past decade or so has paved way for the hatchery owners to act according to their own whims and fancies.

"One can easily find hundreds of these so called sea turtle conservation centers scattered all over the southern and western coastal line of the country. These places have two or three cement tanks and they call themselves sea turtle conservation centers. But they are just profiteers. They have done this for almost two decades now, unauthorized and politically backed up," Jayaweera pointed out.

According to Jayaweera, these sea turtle hatcheries pay for the sea turtle eggs collected by fishermen and roughs in the surrounding areas. As it is reported, a sea turtle egg is sold for approximately Rs. 30, however, the price apparently changes according to the species. Even though the act seems harmless, Jayaweera says this gives rise to a chain of misfortunes. He points out that the sex ratio of the sea turtles has undergone drastic imbalances due to unsystematic digging up of eggs from their natural nests. According to Jayaweera, 97 percent of the hatchlings coming out of these hatcheries happen to be males, which is a major sex ratio imbalance. Poor conditions of the hatcheries are extremely unhealthy for the sea turtles kept at these places, Jayaweera also said. The hatcheries are also violating the Fauna and Flora Ordinance by not abiding by its provisions, Jayaweera also pointed out.

Unregulated

Professor Devaka Weerakoon of the Zoology Department, Colombo University responding to queries by the *Daily News* in relation to the above concerns, pointed out that absence of proper regulations on sea turtle hatcheries has created a cobra effect.

"On one hand, sea turtle hatcheries

are a reasonable initiative for the conservation of these precious creatures. Before, people used to predate on these eggs. The concept of sea turtle hatcheries was developed to convert potential exploiters to conservationists. In that aspect it was a positive measure. When the hatcheries were introduced, the number of hatchlings that go into the waters tremendously increased. But unfortunately, what we are lacking here is proper regulation," Professor Weerakoon pointed out.

Speaking of the removal of sea turtle eggs from their natural nests, Professor Weerakoon said that egg collectors lack basic awareness on protocols to follow when removing eggs. "The sexes of sea turtles are defined by the temperature to which the eggs are exposed. The temperature will be decided by how deep the eggs are buried, when mother sea turtle dig the beach and lay eggs, she deposit them in a certain balanced pattern. If we just dig it up and randomly incubate these eggs, they will result in complete different sexuation than what was intended by sea turtle mother." Professor Weerakoon explained.

He pointed out that technically there are two methods to conserve the eggs laid by sea turtle mothers on natural beaches. "First method would be to protect the nests as they are, and it is the ideal situation. But there comes times when these eggs need to be removed from their original location. Then this problem we discussed earlier arises, because one has to dig up these eggs and re-bury them. However, if we don't follow protocol the sea turtle mother has followed, we will probably not reach the same depth she has laid her eggs. Hence the temperature of the eggs will change and affect the sexual ratio of the hatchlings," he further explained.

"This is one of the issues that we have to overcome by proper training.

These people just randomly collect eggs, they don't know the proper procedure to follow," Professor Weerakoon added.

Professor Weerakoon also said that studies have found

out that the sea turtles have a unique physical feature to identify the location of their nesting grounds. Accordingly, the sea turtles have the ability to imprint on their birth beach. The ability to memorize the characteristics of their birth beach allows them to return to these places. He also pointed out that the hatchlings, as soon as they are born, scurry towards the water, get in and swim. The condition is called juvenile frenzy. The hatchlings have a natural store of energy given to them by the egg yolk, which last for 48 hours. This energy gives them strength to survive the waves. However, when the hatcheries keep these hatchlings in cement tanks for days, they neither can memorize the beaches they were born at nor can they survive the waters without the energy they had stored in their bodies. According to many visitors who have been to sea turtle hatcheries, they were allowed to release the hatchlings into the water during the afternoons, whereas the ideal time for the hatchlings to go into the waters is the night time.

"So these are some of the issues relating to sea turtle hatcheries. I believe the whole conservation process we have here needs to be properly regularized. These hatcheries definitely are doing something, but not the right thing. The responsibility of monitoring these hatcheries falls under the purview of the Wildlife Department. So DWC must monitor if they follow the protocols correctly. What should be done is not bringing pressure on the hatcheries, but making sure the procedure is followed," Professor Weerakoon said.

The *Daily News* also spoke to Senior Environmental lawyer Jagath Gunawardena who explained the legal position of the matter in concern.

"Usually no one is allowed to take eggs or keep eggs in possession or under custody of anyone because the sea turtle is a strictly protected category of animals. But there are always exceptions where the action is for the sake of conservation or the study of a species. So certain actions that would be otherwise illegal could be permitted by the Wildlife Conservation Department under the Fauna and Flora Protection Ordinance. So the sea turtle hatcheries are allowed under that exception. So these hatcheries can be allowed under certain conditions by the DWC," Gunawardena explained.

However, Gunawardena pointed out that the hatcheries only receive an



Prof Devaka Weerakoon.

authorization from the DWC to operate. "It is an authorization, not a license. A license is issued to an action that is permitted, but an authorization is given as a special provision to an action that is otherwise prohibited. It is not something that a person can ask as a right. It is an exceptional provision offered to people," he furthered. Gunawardena pointed out that the hatchery owners should exercise this privilege with utmost caution and care.

According to Gunawardena, there are two important conditions to which all the sea turtle hatcheries are subjected to. "One condition is to release the hatchlings within a particular time period after they hatch. Another condition is that they cannot run a commercial venture with these animals as an attraction."

Queried if the DWC monitor the privately owned hatcheries, Gunawardena said that he is unaware of the particulars. "But there have been many concerns over the years, particularly on political interferences. At present, I am unaware of the situation, whether DWC head office or if it is the newly established Marine Unit or the regional DWC divisions are responsible in monitoring these hatcheries," he said.

If someone violates the guidelines, the best cause of action is to invalidate the authorization given to that hatchery, Gunawardena continued. "If they continue to operate illegally they can be taken to task under the Fauna and Flora Protection Ordinance."

Asked as to who can take legal action against hatcheries that do not abide by the conditions spelled out in the authorization, Gunawardena said that the Fauna and Flora Protection Ordinance provisions any member of the public to take legal action against such a breach. "They can initially inform the DWC of the breach in writing and if the department fails to take any action for 60 days, the person who lodged the complaint can take a



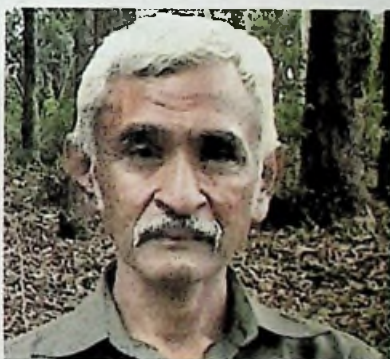
Turtle hatchlings.



Environmentalist Supun Jayaweera.



Assistant Director, Marine Protection Unit of the DWC Channa Suraweera.



Senior Environmental Lawyer Jagath Gunawardena.

private plaintiff to the Magistrate Court."

Sea Turtle Survey

The *Daily News* spoke to the Assistant Director, Marine Protection Unit of the DWC Channa Suraweera who said that the sea turtle conservation projects initiated or monitored by the DWC in all national parks such as Kumana, Boondala and Kalametiya are strictly functioning under regulations. He said that most of these conservation projects protect the natural nests without causing any disturbances to the eggs. If predators are in excess, we remove and re-bury the eggs methodically, he further said. According to him most private hatcheries allegedly do not abide by the authorizations issued to them. He added that there has been a survey in year 2016 as to how many private hatcheries exist in the country. According to the data collected by this survey, only 15-17 privately owned authorized hatcheries exist in the country; however, a walk down the coast of Mount Lavinia will prove these statistics wrong. So either these other hatcheries are not legal or have not being included in the survey, and the authorities are provisioned to find it out.

Suraweera also said that plans are afoot for a survey on sea turtles that are reaching Sri Lankan beaches. The survey will commence by the end of this year, he said. Accordingly, the survey will be carried out throughout the year 2019. He said that no data are available on sea turtles that reach the northern beaches. The survey will focus on period of times each sea turtle species reach Sri Lankan beaches for nesting, which beaches they reach most and their nesting behaviours. He also said that the DWC hopes to tag the sea turtles that reach Sri Lankan beaches to monitor and study their migration patterns.



An Albiona at a privately owned sea turtle hatchery.