

ASSESSING THE CONSERVATION VALUE OF HATCHERIES; A STUDY OF THEIR IMPACTS ON GREEN TURTLE HATCHLINGS IN KOSGODA, SRI LANKA

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Hatcheries are a common conservation strategy used to protect sea turtles' eggs. However, the effectiveness of these programs has been questioned, as they have serious limitations that can negatively affect turtle populations. Since the closure of hatcheries in countries such as Sri Lanka would be impractical, there is a need for improving the poor practices employed in most of them. One such practice is to retain the hatchlings for several days as a tourist attraction. In nature, hatchlings emerge in a frenetic state and crawl to reach the sea and get away from shore as quickly as possible to avoid predators. Hatchling retention in hatcheries may result in a depletion of their energy reserves, thereby reducing their chances of survival. This study investigated the effects of such retention on locomotor performance of green turtle (*Chelonia mydas*) hatchlings. Crawling speed and swimming power stroke were examined at intervals during the hours of retention. The results indicate a detrimental effect on locomotor performance. Average hatchling speed was reduced by 28% after 24 hours, and 35% after 48 hours of retention. Power stroke rate also decreased by 12% after 12 hours, 14% after 24 hours and up to 17% after 48 hours. The results of this study provide experimental evidences of the importance of hatcheries releasing hatchlings immediately after emergence to maximize their chances of survival. These findings can be used to improve practice in Sri Lanka and indeed, in hatcheries worldwide, in respect to their contribution to sea turtle conservation. However, they should also be considered in the light of the other contributions hatcheries might make to sea turtle conservation through nest protection, public awareness, education and conservation revenue generation.