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# 38<sup>th</sup> Annual Symposium on Sea Turtle Biology and Conservation Presentation Abstracts



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**TEMPORAL ANALYSES OF THE TRENDS OF EGG MORTALITY AND UNFERTILIZED EGGS ON TWO TURKISH BEACHES****Yakup Kaska | Eyup Baskale | Yusuf Katilmis | Musa Azmaz | Dogan Sozbilen**

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Conservation and monitoring of sea turtle (*Caretta caretta*) population studies have been carried out on Dalyan and Fethiye beaches for long period of time. Dalyan Beach has the largest nesting loggerhead turtle population in westernmost Mediterranean coast of Turkey. Also, Fethiye beach is one of the most important nesting sites of loggerhead sea turtles in Turkey. A significant increase for Dalyan has been observed in the annual number of nests although previous studies were showed a negative population trend of the loggerhead sea turtle population in Fethiye beach because of tourism and coastal development in recent years.

This research provides information on the egg mortality and unfertilized egg over the 8 nesting seasons (2010-2017). For Dalyan beach, a total of 248197 eggs were laid for last 8 years, of which 25.798 (10.4%) dead embryos were determined and 12900 (5.2%) were recorded as unfertilized eggs. On Fethiye beach, 62.610 eggs were laid totally, and 7892 (12.6%) of these determined as dead embryos and 6683 (10.6%) were recorded as unfertilized eggs. The minimum averages of the dead embryo were calculated as 3.3% (in 2010) and 7.3% (in 2015) for Dalyan and Fethiye respectively, and the maximum averages of the dead embryo were calculated as 17.2% (in 2012) and 18.5% (in 2017) for Dalyan and Fethiye respectively. Moreover, the unfertilized eggs were varied between 1-7% since on Dalyan beach and varied between 2-15% in Fethiye.

As a result of studies carried out by different researchers or volunteers every year, the annual percentage of dead embryos and unfertilized eggs were varied from year to year. These results were discussed if it is because of the data collectors or a trend in inundation of nests due to sea level rise or low level of male turtles in some populations. The fertilization rates are very important to monitor in order to save sea turtles, if the male population have enough sperms to fertilize all females in a population.