

**IMPACT OF ANTHROPOGENIC ACTIVITIES ON WILDLIFE: A CASE STUDY OF THE FISHING CAT, *Prionailurus viverrinus* IN TWO PROTECTED HABITATS OF SRI LANKA**

**B.K.P.D. Rodrigo, A.M.P.W. Bandara, M.A.D.C.K. Anawarathna,  
E.G.D.P. Jayasekara and W.A.D. Mahaulpatha\***

*Department of Zoology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka*  
*\*mahaulpatha@sjp.ac.lk*

The fishing cat, *Prionailurus viverrinus* is a medium-sized carnivorous species native to South and Southeast Asia, typically inhabiting areas adjacent to water bodies. The fishing cat was selected as the model species for the study due to its occurrence in both human-populated areas and pristine habitats. To examine the activity patterns and activity overlaps of fishing cats in two habitats, two passive infrared camera-trap were installed each in Colombo Ramsar Wetland City (CRWC) and Kumana National Park (KNP) between June 2021 and March 2024, targeting the water bodies. A total of 26 (out of 27) fishing cat camera footages were recorded in eight CRWC and 18 KNP footages. Google satellite imagery was used to identify the settlements inside the study areas. The time of footage capture of fishing cats, stray animals, and humans was used for the activity level ( $a$ ) and overlap of activity ( $\Delta 1$ ) analysis using kernel density estimation. The satellite images showed no human or commercial settlements inside the KNP. The activity overlap between the human-fishing cat and stray animal-fishing cat ( $\Delta 1 > 0.2$ ) at CRWC was relatively higher than KNP. The fishing cats exhibited nocturnal activity at both study sites. The fishing cat at KNP had a higher level of activity ( $a = 0.45$ ), whereas the fishing cat at CRWC displayed a lower level of activity ( $a = 0.19$ ). The values demonstrated that the animals in the two study sites were active for 45% and 19% of the day, respectively. These findings revealed a significant decrease in the activity of the fishing cat at CRWC, suggesting that the anthropogenic activities may influence behavioural changes. This study offers insight into the impact of human activities and stray animals on wildlife habitats using fishing cats as a model species in Sri Lanka.

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