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Human-Crocodile Conflict in the Nilwala River Basin: Socio-Economic Impacts on Flood-Prone Communities

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Abstract

This study investigates the socio-economic impacts of human-crocodile conflict in the Nilwala River Basin, focusing on flood-prone areas such as Kadduwa, Karagoda, Uyangoda, Kirabha Ara, and Paraduwa. Primary data were collected through semi-structured interviews with 100 households located in flood-prone areas. Focus group discussions were also held with victims of crocodile attacks and community members. Frequent crocodile encounters, particularly during flooding events, have significantly disrupted agricultural activities of farmers. The number of 11 victims who were severely injured by crocodile attacks experienced long-term physical and financial hardship, being unable to return to normal life, work or farming. Moreover, out of recorded crocodile attacks, 47 were on domestic animals such as dogs and cattle, while 12 cases led to human fatalities, further heightening fear and insecurity within the affected communities. Qualitative analysis of the data revealed recurring socio-economic challenges due to crocodile attacks, including medical expenses, psychological trauma, and a loss in productivity of cattle farming. Despite the negative impact of crocodile attacks, there is a benefit for local tourism as 60% of interviewees specified that crocodile sightings during boat rides along the Nilwala River have attracted foreign tourists, generating a new source of income for the community. The study highlights the urgent need for effective mitigation strategies to address human-crocodile conflicts. These should include community awareness programs to minimize the risk of encounters while ensuring crocodile conservation, as the species is protected and plays a crucial ecological role. The study findings have further shown the importance of policies to ensure human safety, economic well-being, and wildlife conservation, supporting sustainable development in the Nilwala River Basin.

Keywords: *Human-crocodile conflict, Socio-economic impacts, Nilwala River, Flood-prone areas, Crocodile conservation*