

# **Citizen science-based radio-telemetry study on the conservation of introduced Philippine crocodiles (*Crocodylus mindorensis*) in Paghungawan Marsh, Siargao Island Protected Landscapes and Seascapes – Initial findings**

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*Abstract:* A total of 65 Philippine crocodile (*Crocodylus mindorensis*) have been introduced last 2013 and 2017 in Paghungawan Marsh, Siargao Island Protected Landscapes and Seascapes as part of the conservation introduction program of the Philippine government. Citizen science-based radio-telemetry of Philippine crocodiles is currently being conducted to expand the current knowledge on the home range and activity pattern of the introduced *C. mindorensis*, as well as enhance the capacity of local communities in participatory Philippine crocodile research. Five crocodiles have been attached with Holohil R1 2B radio-transmitters and were tracked using ICOM V80 handheld radio transceivers from July 2018 to December 2019. Transmitter detachment has been observed a few months after attachment for some individuals which has been attributed to the size of crocodiles. Both ZoaTrack open-source telemetry software and adehabitat HR package v.0.4.16 in RStudio v.1.2.5033 were used to determine and visualize the home range and core areas via Minimum Convex Polygon and Kernel Utilization Distribution analysis respectively. Initial results showed that one of the introduced Philippine Crocodiles' home range is 5.9ha having a core area of 0.05ha. Individuals have also been observed inhabiting elevated limestone crevices and caverns on steep slopes. This also increased the daytime sightings probability which contributes to the developing community-based sustainable eco-tourism. These novel findings will help in redefining future Philippine Crocodile release programs and in redesigning population survey techniques.

*Keywords:* Philippine Crocodile, Paghungawan Marsh, Home range, Radio-telemetry.

*Type of presentation:* Oral

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