

****PRESS RELEASE****

New Study: Camera traps as biodiversity sentinels?

- **Familiar wildlife monitoring tool may bring more arrests, prosecutions for wildlife crime in protected areas**
- **Monitoring efforts can detect illegal activity in remote areas that are difficult and dangerous for rangers to patrol**

(Dhaka, Bangladesh – August 30, 2016) – A newly released study led by a team from the Bangladesh Forest Department and King Mongkut’s University of Technology Thonburi, and supported by conservation NGOs in Bangladesh, shows that use of camera traps in protected areas can potentially lead to increased detection of wildlife crime, increase arrests, and provide evidence that will aid in criminal prosecutions.

The news could not come at a better time for the world’s biodiversity.

“There are fewer than 200 tigers estimated to still exist in the Sundarbans forests. If we are to preserve tigers, along with dolphins, crocodiles, and fish resources that sustain human life, we must better safeguard protected areas,” said lead author Abu Naser Mohsin Hossain. “At the same time, resources are limited for ranger patrolling, but we have technology at our disposal that can help to monitor the forest when rangers are not around.”

Camera-traps – devices set up in remote locations and activated by motion sensors—have traditionally been used for detecting and recording images of wildlife. That data can then be used to identify individuals, estimate population size, determine animal movements and behaviors, estimate distribution and more.

The new study was conducted in the Bangladesh Sundarbans, the world’s largest mangrove forest (>6,000 sq km.), and assessed how camera-traps might be used to identify forest intruders and extend the reach of ranger patrol teams in remote areas. While the devices are presently being used to detect wildlife crime in other countries, this is the first assessment using the approach in dense forested areas.

During the study, camera-traps were set up with the intent of maximizing detection of criminal activity while minimizing the theft or damage of equipment.

Using an occupancy modelling approach, the researchers quantified illegal human activity (IHA), and detected spatial and temporal variation in IHA across the West (715 km²), South (370 km²) and East (312 km²) Sundarbans Sanctuaries, which may be due to variation in enforcement effort as well as underlying threat levels.

A total of 872 IHAs were recorded in camera trap photos over 1039 nights. The modeling indicated that 91 percent of camera trap locations in the West Sanctuary, 84 percent in the South Sanctuary and 74 percent in the East Sanctuary had IHA in them during the study survey period.

“In this study we turned the tables on poachers and illegal fishers by monitoring their intrusions in the flooded forests of the Sundarbans”, said co-author Tommaso Savini. “Using camera-traps we captured evidence of illegal activity thus helping us identify perpetrators and demarcate threat areas that need greater attention by ranger patrols.”

Since poaching and other IHA often occur repeatedly in the same locations preferred by or vital to wildlife, the scientists suggest using the camera-traps to monitor threat 'hotspots' to elevate detection of IHA. Date and time stamps on identifiable photographs can potentially provide actionable supporting evidence for securing prosecutions for forestry or fishery crime.

Also, the authors point out that while proactive patrol is still the preferred method of surveillance, using cameras that transmit photos to the authorities in real time rather than those that need to be downloaded manually, where possible, would greatly enhance response time.

“Assessing the efficacy of camera trapping as a tool for increasing detection rates of wildlife crime in tropical protected areas,” appears in the July Issue of the journal *Biological Conservation*. Authors include: Abu Naser Mohsin Hossain of King Mongkut’s University of Technology Thonburi (Thailand), and the Bangladesh Forestry Department; Adam Barlow and Christina Greenwood Barlow of WildTeam, Surfside of UK; Antony J. Lynam of the Wildlife Conservation Society; Suprio Chakma of WildTeam, Bangladesh; and Tommaso Savini of King Mongkut’s University of Technology Thonburi (Thailand).

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