

Solving the Southeast Asian snaring crisis: Wire snare removal in protected areas is labor-intensive but effective

June 3 2024, by Jan Zwilling



Destroyed wire snares collected at Thua Thien Hue Saola Nature Reserve.
Credit: Phạm Việt Nước/WWF-Viet Nam

Snaring—a non-selective method of poaching using wire traps—is

widespread in tropical forests in Southeast Asia. Snaring decimates wildlife populations and has pushed many larger mammals to local or even global extinction.

Eleven years of data from ranger patrols in the Thua Thien Hue and Quang Nam Saola Nature Reserves in Vietnam show that intensive removal efforts are labor-intensive and costly but brought snaring down by almost 40% and therefore reduced imminent threats to wildlife. Further reductions were difficult to achieve despite continued removal efforts.

Snare removal is necessary but by itself not sufficient to save the threatened wildlife diversity in tropical forests, scientists conclude in the journal [*Conservation Letters*](#).

From 2011 to 2021, WWF-Vietnam and local authorities removed close to 120,000 snares from the contiguous Thua Thien Hue and Quang Nam Saola Nature Reserves in Central Vietnam. The reserves are home to several endemic, rare, and threatened species, including Annamite Striped Rabbit (*Nesolagus timminsi*) and Annamite Crested Argus (*Rheinardia ocellata*).

Snare removal is labor-intensive and costly, since rangers need to cover large areas on foot in rugged and inaccessible terrain. Snare removal is an often-employed strategy because it is straightforward and non-controversial compared to other responses such as arrests and prosecutions. To date, few studies have assessed the impact of snare removal on snaring levels over long time periods.

An international team of scientists from the Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW), WWF-Vietnam and WWF Asia Pacific as well as the Universities of Exeter and Montpellier analyzed 11 years of patrol data and concluded that intensive snare removal

significantly reduced this threat.

Over the 11-year time frame, the presence of snares in the two reserves declined by 37%. The effect was more pronounced in easily accessible locations, presumably because patrolling was more frequent in these areas.

"What we also found is that, when patrolled, an area is less likely to have many snares afterwards," says Jürgen Niedballa, a data scientist from the Leibniz-IZW. "Patrolling acts as a deterrent to future snaring, and therefore is an important measure to counteract the snaring crisis in Southeast Asia."

On the other hand, snaring levels remained relatively high in more remote parts of the forest. "The spatial analysis of the patrol data is of great importance for our daily management," adds Hung Luong Viet, project manager of WWF-Vietnam. "The maps showing the distribution of snares within the [protected areas](#) help us to target our patrolling activities to those parts of the reserves that need the most attention."

The scientists also found that the decrease in snaring levels was mainly achieved within the first six years of patrolling. After that, despite continuous efforts, snare presence remained stable.

"Our results show snare removal alone is unlikely to protect wildlife in Southeast Asian protected areas," says Andrew Tilker, scientist at the Leibniz-IZW and Species Conservation Coordinator at Re:wild. "This is especially true for rare or snaring-sensitive species, many of which are now on the brink of extinction in Vietnam."

The findings show that it is important to view snare removal as part of a wider, multi-faceted conservation response that addresses the underlying drivers, the authors conclude in the paper. "Relying solely on snare

removal will not be sufficient to address the threat at scale," says Tin Nguyen Van Tri, Wildlife Practice Lead of WWF-Vietnam.

"In collaboration with other conservation partners, we are now engaged in larger multi-disciplinary conservation initiatives such as cross-border cooperation in tackling [illegal wildlife trade](#); livelihood improvement, awareness raising and behavior change programs to complement snare removal to prevent snares being set in the first place. With these additional efforts, we can address the root cause of the problem and make the forests of the Central Annamite Mountains in Vietnam safe again for wildlife."

One of these initiatives is the CarBi II project, which is implemented over a five-year period (2019–2024) by WWF-Vietnam and Laos through the German Development Bank (KfW), and part of the International Climate Initiative (IKI).

Although the wildlife of Southeast Asia is facing an unprecedented threat from snaring, there is hope that, when intensive snare removal is combined with more holistic approaches, the threat can be addressed at the scale needed for large-scale wildlife recovery, the authors conclude. Reducing snaring across Southeast Asia's protected areas will take substantial resources and an as-yet unrealized level of political commitment from the region's governments—but it is a future that is within reach.

Snaring in the Annamite Mountains

One of the major causes of wildlife declines in [tropical forests](#) is the use of nonselective wire snares. Snares are cheap, easy to set in large numbers, and highly effective at capturing terrestrial vertebrate species. They are nonselective, because every ground-dwelling animal may step into a wire snare and get caught, whether targeted or not. Wire snares

can remain active for months.

Snaring is particularly severe in Southeast Asia, where it has depressed [wildlife populations](#) in many protected and unprotected areas, and remains a significant and ongoing threat. A recent scientific investigation showed that snaring is a more immediate and severe threat to Southeast Asian wildlife communities than forest degradation in some areas, and can empty forests of wildlife.

In the Annamites, a mountain chain straddling the Vietnam and Laos border, snaring has driven many endemic ground-dwelling species to the brink of extinction; the Saola (*Pseudoryx nghetinhensis*), Large-antlered muntjac (*Muntiacus vuquangensis*), Annamite striped rabbit (*Nesolagus timminsi*), and Silver-backed chevrotain (*Tragulus versicolor*) are all highly threatened from industrial-scale snaring across the region.

The Carbon and Biodiversity Project Phase II (CarBi II) [CarBi II](#) is set to contribute to the protection, restoration, and sustainable use of ecosystems and the conservation of biological diversity in the Central Annamites Landscape.

One of the project's approaches is the establishment of several Village Development Funds, facilitating a borrowing mechanism for the local community to generate more income from alternative livelihood and decrease incentives for illegal exploitation of natural resources.

Community-level conservation groups will also be supported to play a more active role in increasing awareness, and stimulating some positive changes in attitudes and behavior towards wildlife poaching.

More information: Andrew Tilker et al, Addressing the Southeast Asian snaring crisis: Impact of 11 years of snare removal in a biodiversity hotspot, *Conservation Letters* (2024). [DOI:](#)

[10.1111/conl.13021](https://doi.org/10.1111/conl.13021)

Provided by Leibniz-Institut für Zoo- und Wildtierforschung (IZW) im
Forschungsverbund Berlin e.V.

Citation: Solving the Southeast Asian snaring crisis: Wire snare removal in protected areas is labor-intensive but effective (2024, June 3) retrieved 4 August 2024 from
<https://phys.org/news/2024-06-southeast-asian-snaring-crisis-wire.html>

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