

# PROTECT PLANTATIONS AND FORESTS TO MINIMISE CONFLICT

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

A bull elephant crossing a fence near a road in Hassan. | Photo Credit: [Rajkumar](#)

Acacia and eucalyptus plantations are notorious for the ecological problems they cause. Yet, in southwest Karnataka, these monocultures have become crucial elephant habitats and need to be protected along with natural forest patches to minimise human–elephant conflict, suggests a study published in *Tropical Conservation Science*.

In Karnataka's Hassan and Madikeri — a landscape consisting of plantations (teak, coffee, acacia and eucalyptus), paddy fields and small, fragmented forest patches — human–elephant conflict is high. Reacting to this, authorities removed 22 elephants from the area in 2014. However, elephants from habitats nearby colonized the area again. With conflict rising, scientists at the Nature Conservation Foundation including Vinod Krishnan studied how the elephants — now approximately 30 in number — used 205 villages here between 2015 and 2017. They first tracked daily elephant movement (using direct observation and indirect signs such as dung). With this, they mapped the intensity of use of each village by elephants. This revealed that the large mammals were present across the landscape during the first year. However, the team found a high concentration of elephant presence in the northern part of the region in the second year. According to them, the logging of trees in abandoned coffee estates in the central zone, and the installation of barriers around these estates, clustered elephant presence in the north. This increased human–elephant conflict here, revealed an analysis of crop damage incidents and human casualties.

The team also mapped elephant distribution across different habitat types (such as reserved forests, agricultural fields and monocultures of acacia and eucalyptus) to study habitat use. During the day, elephants preferred monoculture refuges (of acacia, teak and eucalyptus) and forest fragments, and avoided other habitats including coffee and human habitations. But during the night, they used coffee plantations and agricultural fields the most. Seasons too played a role: while elephants used forests and coffee plantations more during the dry season, they frequented agricultural fields in the wet season.

Across the years, while the elephants' use of monoculture refuges and coffee increased, their use of forest fragments drastically decreased (from 15% to 2%). According to Krishnan, in areas where natural forests have been wiped out, monocultures — which serve as refugia for elephants and help them move between habitats — could help minimize human–elephant conflict and promote coexistence between people and elephants.

“Such refugia play a crucial role in keeping conflict levels low,” said Krishnan, the lead author of the study.

Researchers deduced this from a small fragmented tooth unearthed in Madhya Pradesh

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