

Expanding rubber plantations 'catastrophic' for endangered species in Southeast Asia

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Demand for natural rubber fueled by the tyre industry is threatening protected parts of Southeast Asia -- according to University of East Anglia research. Up to 8.5 million hectares of additional rubber plantations will be required to meet demand by 2024. Credit: Eleanor Warren-Thomas, University of East Anglia

Demand for natural rubber fuelled by the tyre industry is threatening

protected parts of Southeast Asia - according to research from the University of East Anglia (UEA).

A new study published today predicts that up to 8.5 million hectares of additional [rubber plantations](#) will be required to meet demand by 2024.

But expansion on this scale will have 'catastrophic' biodiversity impacts, with globally threatened unique species and ecosystems all put under threat.

Researchers say that the extent of the problem is comparable to [oil palm](#) and that it is closely linked to the growing tyre market.

They urge manufacturers such as Goodyear and Michelin to support and strengthen sustainability initiatives and drive change in the industry.

Lead researcher Eleanor Warren-Thomas, from UEA's School of Environmental Sciences, said: "The tyre industry consumes 70 per cent of all [natural rubber](#) grown, and rising demand for vehicle and aeroplane tyres is behind the recent expansion of plantations. But the impact of this is a loss of tropical biodiversity.

"We predict that between 4.3 and 8.5 million hectares of new plantations will be required to meet projected demand by 2024. This will threaten significant areas of Asian forest, including many protected areas.

"There has been growing concern that switching land use to rubber cultivation can negatively impact the soil, water availability, biodiversity, and even people's livelihoods.

"But this is the first review of the effects on biodiversity and endangered species, and to estimate the future scale of the problem in terms of land area."

The study focuses on four biodiversity hotspots in which rubber plantations are expanding - Sundaland (Malay Peninsula, Borneo, Sumatra, Java, and Bali), Indo-Burma (Laos, Cambodia, Vietnam, most of Myanmar and Thailand, and parts of Southwest China, including Xishuangbanna and Hainan Island), Wallacea (Indonesian islands east of Bali and Borneo but west of New Guinea, plus Timor Leste) and the Philippines.

"Rubber can thrive across a wide range of climate and soil conditions across Southeast Asia, and could replace a whole range of forest types containing large numbers of globally threatened and unique species.

"Protected areas have already been lost to rubber plantations. For example, more than 70 per cent of the 75,000 hectare Snoul Wildlife Sanctuary in Cambodia was cleared for rubber between 2009 and 2013.

"In Cambodia, forest areas earmarked for further rubber plantations contain critically endangered water birds like the White Shouldered Ibis, globally threatened mammals like Eld's deer and Banteng, and many important primates and carnivores.

"Macaques and gibbons are known to disappear completely from forests which have been converted to rubber, and our review shows that numbers of bird, bat and beetle species can decline by up to 75 per cent.

"Conversion to rubber monoculture also has a knock on effect for freshwater species because fertilisers and pesticides run off into rivers and streams. In Laos, local people have reported dramatic declines in fish, crabs, shrimps, shellfish, turtles and stream bank vegetation. In Xishuangbanna, China, well water was found to be contaminated.

"These findings show that rubber expansion could substantially exacerbate the extinction crisis in Southeast Asia.

"There has been huge pressure on companies to clean up their act when it comes to oil palm - with certification schemes and commitments from major players like Unilever to source sustainably grown products. But right now, there is almost no attention at the consumer level to the negative impacts rubber plantations can have.

"Rubber grown on deforested land is not treated any differently in the market to rubber grown in a more sustainable way. This is misleading, especially when some products made from natural rubber are labelled as an 'eco-friendly' alternative to petrochemicals.

"We also found that because oil palm growers cannot get sustainability certification and access to major markets if they plant on deforested land, they are replacing rubber plantations with oil palm, displacing the rubber elsewhere, and adding to the total demand for land.

"A Sustainable Natural Rubber Initiative (SNR-i) was launched in January 2015 - this now needs support from large tyre manufacturers, and attention from sustainability researchers to ensure it gains traction.

"There may be ways to integrate biodiversity into rubber plantation landscapes that should be researched and put into practice, and at the very least, companies that convert legally protected forests and protected species habitats to rubber should face restrictions to market access through a sustainability certification.

"Indo-Burma's dry forests used to be called 'The Serengeti of Asia' - full of thousands of wild cattle, deer, tigers and leopards. The animal populations are low these days after overhunting, but the habitat remains and there's the potential to restore these landscapes to their former glory - [rubber](#) is a key threat to this ever being a possibility."

Provided by University of East Anglia

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