**////Title: The Importance of Indigenous Peoples in Safeguarding Earth’s Primates**

**////Standfirst:**

Non-human primates play crucial roles in sustaining natural ecosystems worldwide. However, approximately 68% of primate species are now at risk of extinction, mainly due to agriculture and the depletion of natural resources. Dr Alejandro Estrada at the National Autonomous University of Mexico, Dr Paul A. Garber at the University of Illinois-Urbana, and a group of scientists from various parts of the world recently carried out a study to better understand the role that Indigenous Peoples play in the conservation of threatened primates.

**////Main text:**

Aside from humans, there are currently 520 species of primates, including lemurs, tarsiers, monkeys, apes, and humans. These species can be found in a multitude of habitats spread across 91 countries.

Approximately 97% of primate species are considered arboreal, and live in tropical, subtropical, or temperate forests, while others live in woodlands and savannas. In addition to being our closest living relatives, non-human primates are an essential component of natural ecosystems, as they contribute to plant pollination, seed dispersal, forest regeneration, carbon sequestration, and predator-prey dynamics. They also fulfil important roles in numerous religions and cultures around the world.

Unfortunately, 68% of primate species are now at risk of extinction, due to climate change, the unsustainable exploitation of resources, deforestation, and the conversion of natural habitats into landscapes for industrial agriculture, roads and railways, mega-dams, urban centres, and industrial development. Additionally, 93% of primate species have declining populations. This poses serious risks to the health of these ecosystems, hindering many of the natural processes that enable the survival of humans and other species.

Among the primary drivers of primate population decline is the growing rate of deforestation. Between 2001 and 2018, approximately 11 million hectares of primate habitat was deforested. Tree loss not only contributes to the loss of biodiversity, including primates, it also is a significant contributor to climate change.

However, unlike most other human societies, Indigenous Peoples are among the few communities who consistently prioritise the conservation of animals, forests, and other natural ecosystems through their cultures, languages, and systems of knowledge.

Dr Alejandro Estrada, a Senior Researcher at the National Autonomous University of Mexico, and his colleagues, recently explored the contributions of Indigenous Peoples to the prevention of primate extinctions.

In a recent paper published in the journal Science Advances, Dr Estrada and his colleagues first explained how Indigenous Peoples typically use their traditional lands in ways that benefit primate conservation. Indigenous communities often live in sustainable and environmentally respectful ways, retaining high levels of biodiversity in their lands, and promoting the resilience of the ecosystems in which they live.

Although Indigenous Peoples have lived in their homelands for hundreds or even thousands of years, hunt animals, collect forest resources and plant gardens, their systems of knowledge and beliefs have allowed them to take advantage of the resilience of natural environments to live sustainably. Such knowledge and belief systems have been passed down over many generations.

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Dr Estrada and his colleagues highlight one particular study, which found that in the Brazilian Amazon, over half of Indigenous Peoples’ lands retained 90% of their natural vegetation, while nearby non-indigenous regions only retained 52%. As primates primarily reside in tropical and subtropical forests, the management of lands by Indigenous communities can significantly aid their survival.

The researchers also point out that while many Indigenous Peoples hunt primates for meat, body parts, or traditional medicines, these activities have only posed a limited threat to primate species because most hunting takes place within 15 kilometres of Indigenous villages. Although Indigenous hunting may decrease populations of large-bodied primates near villages, primate populations outside of these hunted areas serve as a source to repopulate the area.

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To better understand the role of Indigenous activities in aiding primate conservation, the researchers mapped the distribution of primate species and their conservation status on Indigenous Peoples’ lands, protected areas, such as national parks and reserves, and non-Indigenous lands.

Overall, they found that non-human primates are spread across approximately 46 million square kilometres, 40% of which is in Africa, 30% in Mexico, Central and South America, 24% in Asia, and 1% in Madagascar. Interestingly, 30% of the total area populated by primate species is also Indigenous land. In Asia, approximately 36% of the primate range overlaps with Indigenous Peoples’ lands. This figure is 33% for mainland Africa, and 21% for Mexico, Central, and South America. Thus, even though Indigenous lands comprise only a tiny fraction of the total lands in these regions, 71% of all primate species inhabit Indigenous Peoples’ lands.

Dr Estrada and his colleagues wished to determine whether Indigenous Peoples’ lands have greater primate biodiversity than non-Indigenous lands in the same geographical regions. To do this, they compared primate species diversity in randomly selected, non-Indigenous areas with that in nearby Indigenous lands of the same size.

Their findings indicate that worldwide, Indigenous Peoples’ lands have a significantly greater diversity of primate species than nearby non-Indigenous lands. In Mexico, Central and South America and Asia, Indigenous Peoples’ lands had greater primate biodiversity than that found in protected areas.

Interestingly, the team’s analyses also suggest that endangered primate species are less common in Indigenous lands. They found that as the percentage of a primate species’ range on Indigenous Peoples’ lands increased, its conservation status was less likely to be listed as threatened. In other words, it appears that primate species living in Indigenous Peoples’ lands are less likely to become threatened with extinction because these lands remain largely intact, and are less impacted by road and rail networks, industrial agriculture, cattle ranching, mining, and dam building.

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Overall, the researchers’ analyses highlight the crucial value of Indigenous Peoples, their languages, cultures, systems of knowledge, and land-management practices for promoting healthy ecosystems and ensuring the survivorship of our closest living relatives.

Unfortunately, Indigenous Peoples’ lands are currently the target of numerous non-Indigenous activities, with multinational corporations and governments taking over and repurposing many of these regions for industrial development, oil exploration, industrial agriculture, cattle ranching, and non-sustainable resource extraction.

The recent work by Dr Estrada and his colleagues highlights the global need to support the efforts of Indigenous Peoples to protect their lands from the increasing economic interests of colonists, international businesses, consumer nations, and national governments. Ultimately, learning from Indigenous communities and allowing them to retain sovereign control of their lands and natural resources would help to protect many species from extinction, including the world’s primates.

In their concluding remarks, the researchers point to the need for scientists and organisations that are trying to protect endangered primate species to respect the rights and knowledge systems of Indigenous Peoples. Dr Estrada and his colleagues ask other researchers to join them in communicating with governments, international businesses, and global citizens about the important roles that Indigenous Peoples’ play in protecting biodiversity, avoiding a primate extinction crisis, and reducing the effects of climate change.

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This SciPod is a summary of the paper ‘Global importance of indigenous peoples, their lands, and knowledge systems for saving the world’s primates from extinction’ in Science Advances, 2022. <https://doi.org/10.1126/sciadv.abn292>

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