
Alarming loss of biodiversity in protected areas

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The natural environment is in a far worse state than feared, according to the most comprehensive study so far of conditions in a large number of protected tropical forests.

The term ‘protected area’ should be a guarantee that forests do not lose their plant and animal life diversity.

But this is far from the real situation, according to a comprehensive study published in the scientific journal *Nature* [10].

More than 200 researchers from around the world have collaborated in the study, which indicates that the natural environment is in a far worse state than feared.

“This is much more alarming than we thought,” says Finn Danielsen, a biologist and one of the Danish researchers who took part in the study.

“As a target for the year 2020, countries around the world have stipulated that many new protected areas for animals and plants should be established through legislation. This is a good and very important target. But the results of our study show that setting up protected areas is not enough by itself to maintain the diversity in the Earth’s plant and animal life.”

Danielsen is the director of the Nordic Foundation for Development and Ecology – an NGO that promotes viable local development and conservation of natural resources.

Researchers studied forests around the world

In their study, the international team of researchers looked at 60 representative protected forest areas in 36 countries in the Americas, Asia, Africa and the Pacific Ocean.

In each location, the researchers had the help of four or five experienced local experts to determine whether the individual forests had been able to maintain their biodiversity over the past 30 years.

The results are anything but good.

“We can see that things have gone reasonably well in about half of the areas studied,” says Danielsen.

“They ‘function’ and ensure a degree of protection for the animal and plant life there. But the situation in the remaining 50 percent has worsened – these areas are under extreme pressure, which has led to a loss of species.”

Larger animals such as apes, large birds and amphibians have been particularly badly hit in the protected areas, but many large trees and orchids have also disappeared.

“This is the first time that researchers have had an opportunity to gather such a large amount of data about the situation in the protected areas,” he says.

“We’ve often had the impression that once a protected area has been established we were assured that there would be no loss of biodiversity there. However, our research shows that this is not the case. Establishing these areas is not enough – much, much more has to be done.”

Neighbouring areas impact on protected forests

The regression in the natural environment of the protected areas is due in part to developments in neighbouring areas.

The forests in neighbouring areas are not protected, and degradation here impacts on protected areas in a way few believed possible.

“We can see that the protected areas reflect what’s happening in the unprotected neighbouring areas, where the biodiversity has been degraded by illegal tree-felling and farming activities that have expanded into the forests,” says Danielsen.

“This means we must set completely new targets for the work of conserving nature. It’s no longer enough to protect a forest area – we must also ensure an environmentally correct way of using the land in a large buffer zone around the protected area, so we don’t see any loss of biodiversity in the protected forest itself.”

Buffer zones should be established by e.g. clarifying questions about land ownership, so it is clear who is responsible for any given area. In addition, sustainable production methods on farms and plantations must be supported.

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 [Many animal and plant species are disappearing from protected forests. More than 200 researchers have collaborated in a new study which shows that protected tropical forests are in a far worse state than the researchers believed. \(Photo: Christian Ziegler, Smithsonian Tropical Research Institute\)](#) [12]

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Fact box

In the past 30 years, 85 percent of the protected forest areas in the study have seen a reduction in forest area around them, while the forest areas have increased in only two percent of these areas.

The intention of protected forest areas has been to protect the diversity of species in the forest.

Both the extent and the impact of the environmental degradation in neighbouring areas are far greater than the researchers expected.

Fact box

In 2010, the world’s leaders signed an agreement to ensure better protection of the natural environment.

This agreement means that 17 percent of the Earth’s land areas and 10 percent of its sea areas are to be established as protected areas by the year 2020.

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[Averting biodiversity collapse in tropical forest protected areas, Nature, doi:10.1038/nature11318](#) [10]

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