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'No clear trend' in forest loss

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Tropical forests are cleared for agriculture and for timber

Data on tropical forest cover is so poor that we do not know if the forests are declining, a study has found.

Alan Grainger from the UK's University of Leeds examined UN analyses going back almost 30 years, and found that "evidence for a decline is unclear".

Writing in Proceedings of the National Academy of Sciences (PNAS), he proposes a global forest monitoring system.

The UN admits there are problems with the data, but says tropical forests are certainly in retreat.

Dr Grainger is not so sure. "People have been assuming that forest cover is shrinking," he told BBC News, "and certainly deforestation has been taking place on a large scale."

“ We can no longer put off investing in an independent scientific monitoring programme ”

Alan Grainger

But, he says, there is also evidence that in some countries, forests are expanding spontaneously.

"Our analysis does not prove that tropical forest decline is not happening, merely that it is difficult to demonstrate it convincingly using available tropical forest area data," he writes in PNAS.

Revised estimates

The UN reports are produced by the Rome-based Food and Agriculture Organization (FAO) in its regular global Forest Resources Assessments

(FRAs).

Assembled principally using data from national forest authorities, the FRAs are widely regarded as the most accurate estimates available, which is why they are used by many researchers in the areas of forestry, land-use change and sustainability.



Parts of the Amazon are now used for cattle-ranching

For his PNAS paper, Dr Grainger looked at the four most recent FRAs, published in 1980, 1990, 2000 and 2005.

Each of the individual reports showed a decline in tropical forest cover; but across the four reports, he found no trend was discernible.

This is largely because each assessment revised earlier estimates of cover. For example, in 1980 the FAO estimated natural tropical forests spanned 1,970 million hectares. But the 1990 assessment used a revised figure for 1980 of 1,910 million hectares.

The FAO says it made these revisions because better data became available, and because each assessment used different criteria.

"What you've got is a desire by the FAO for consistency inside each of its studies," commented Dr Grainger, "but that's come at the expense of consistency between studies."

Resource drain

"I agree totally that there are tremendous difficulties in tracking long-term trends in the area of tropical forest, although we are witnessing some improvements," responded Mette Loyche Wilkie, a senior forestry officer at FAO who co-ordinated the 2005 FRA.

"We know that very few countries in the world undertake regular assessments; in the tropics, that's primarily due to lack of resources," she said.

"In Africa, for example, a number of countries undertook national inventories in the 1970s and 1980s, funded by external donors; and very few have reported inventories since then; donors, and the countries themselves, have had other priorities."



Forests are key to conserving water resources and biodiversity

Despite these difficulties, she believes the assessments have shown clearly that tropical forest cover is declining.

"We saw this clearly for example in the 2000 assessment, where we undertook a remote sensing survey of tropical countries and it was very clear there had been a decline during the period 1980-2000."

In preparing for its 2010 assessment, the FAO is planning a survey of current and historical satellite data to give higher-quality estimates of forest extent, and to establish uniform and consistent standards between countries.

Alan Grainger agrees that such an analysis is needed. But he urges going further, advocating the establishment of a World Forest Observatory to monitor developments precisely.

"What is happening to the tropical forests is so important, both to the peoples of tropical countries and to future trends in biodiversity and global climate, that we can no longer put off investing in an independent scientific monitoring programme that can combine satellite and ground data to give a reliable picture," he said.

Political initiatives to tackle climate change have renewed the interest of some western governments in tropical forestry.

If richer nations are to pay poorer ones to protect forests - a concept which appears likely to form a centrepiece of a successor agreement to the Kyoto Protocol - monitoring changes in cover will become a high priority.

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