

MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

DATE: THURSDAY 18 JULY 2013

ATTENTION: Chiefs of Staff, News Directors



Satellite imaging reveals 80 per cent of Malaysian Borneo degraded by logging

A study involving University of Tasmania researchers has found that more than 80 per cent of tropical forests in Malaysian Borneo have been heavily impacted by logging.

The Malaysian states of Sabah and Sarawak were already thought to be hotspots of forest loss and degradation due to timber and oil palm production, but the rates and patterns of change have until now been poorly measured by conventional field or satellite approaches.

A research team from the University of Tasmania, University of Papua New Guinea and the Carnegie Institution for Science documented the full extent of logging in this region.

The study appears in the latest issue of the *PLOS ONE* journal.

The team used the Carnegie Landsat Analysis System-lite (CLASlite) to reveal the vast and previously unmapped extent of heavily logged forest. CLASlite's high-resolution satellite imaging uncovered logging roads in Brunei and in the Malaysian states of Sabah and Sarawak on the island of Borneo.

CLASlite, developed by Carnegie's Greg Asner and his team, has the unique ability to convert satellite images of seemingly dense tropical forest cover into highly detailed maps of deforestation and forest degradation.

The user-friendly monitoring system has been made available to hundreds of governments, non-governmental organisations and academic institutions for use in mapping tropical forests.

Analysis of satellite imagery collected from 1990 and 2009 over Malaysian Borneo showed approximately 364,000 km of roads constructed throughout the forests of this region. Nearly 80 per cent of the land surface of Sabah and Sarawak was impacted by previously undocumented, high-impact logging or clearing operations. This finding contrasted strongly with neighboring Brunei, where 54 per cent of the land area maintained intact unlogged forest.

Team leader Jane Bryan, Associate in the UTAS School of Geography and Environmental Studies, said there is a crisis in tropical forest ecosystems

worldwide and the work documents the extent of the crisis on Malaysian Borneo.

“Only small areas of intact forest remain in Malaysian Borneo, because so much has been heavily logged or cleared for timber or oil palm production.

“Rainforests that previously contained lots of big old trees, which store carbon and support a diverse ecosystem, are being replaced with oil palm or timber plantations, or hollowed out by logging.”

Only 8 per cent and 3 per cent of land area in Sabah and Sarawak, respectively, is covered by intact forests in designated protected areas. Very few forest ecosystems remain intact in either state. But Brunei has largely excluded industrial logging from its borders and has been comparatively successful in protecting its forests.

Greg Asner, of the Carnegie Institution for Science, said the results are sobering.

“The problem with previous monitoring reports is that they have been based on satellite mapping methods that have missed most of the forest degradation in Malaysian Borneo, and elsewhere throughout the tropics.

“I’m talking about heavy logging that leaves a wake of forest degradation, even though the area may still look like forest in conventional satellite imagery,” he said.

“With the CLASlite system, we can see the effects of logging on the inner canopy of the forest; the system revealed extremely widespread degradation in this case.”

Co-author of the study Dr Phil Shearman, of the University of Papua New Guinea, said “the extent of logging in Sabah and Sarawak documented in our work is breathtaking”.

“The situation in these tropical forests is now so severe that any further sacrifice of intact ecosystems to the logging industry should be off the table.”

To view the paper, visit: <http://dx.plos.org/10.1371/journal.pone.0069679> or contact the UTAS Media Office, details below.

Information Released by:

The UTAS Communications and Media Office

Phone: (03) 6226 2124/2691 or 0447 537 375

Email: Media.Office@utas.edu.au