

'Fingerprinting' trees to stop illegal logging

March 3 2014, by Robyn Mills

The University of Adelaide will help step up the fight against illegal logging with a new two-year, DNA-fingerprinting project in Indonesia. A US\$518,833 grant for the project was announced by the International Tropical Timber Organization today.

The University of Adelaide-led [project](#) will develop DNA markers for important Indonesian [timber](#) species, allowing trees to be tracked from forest through to final product.

"Tropical rainforests play such an important role in Indonesian economic development and the [global ecosystem](#)," says Professor Andrew Lowe, project leader and Director of the University's Australian Centre for Evolutionary Biology and Biodiversity. "But, at the current rate of deforestation, the sustainability of these resources is under serious threat."

Indonesia, is the largest producer of tropical timber, producing about 34 million m³ of sawn and veneer logs a year since 2007. An estimated 10% of wood imported into Australia is illegally traded, either cut down outside designated logging areas or outside of agreed environmental controls.

Although there are new laws in place against illegal logging and trade of illegally sourced timber, practical control mechanisms to identify the origin of wood and wood products have been lacking.

"DNA fingerprinting techniques use unique characters inherent in the

timber to identify and track individual trees, logs or wood products," says Professor Lowe. "They offer a cost-effective and robust method for controlling the original source of the wood."

The researchers will develop a species identification and timber-tracking system for important Indonesian timber species from the red and light red meranti group of trees – which make up more than half of the wood trade in the region.

Using DNA-fingerprints, a tree-by-tree approach will control the 'chain of custody' in cooperation with the forestry agency and timber companies in Indonesia. Staff from Indonesian partners will be trained to do the DNA testing.

Other partners in the project are the Centre for Forest Biotechnology and Tree Improvement (CFBTI) in the Indonesian Forest Research and Development Agency, the Institute of Forest Genetics at Thünen Institute in Germany, and the World Resources Institute in the US.

"At the end of the project Indonesia should be able to continue with the species and origin control by themselves," says Professor Lowe.

Provided by University of Adelaide

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