AiA Art News-service

Genetic properties help identify illegally traded tropical hardwood

Published on
March 1, 2018

Around 30-90 percent of all tropical hardwood is logged illegally. Checks on the origin of wood, however thorough, are not particularly effective because documentation may be fraudulent. Researchers in Wageningen have now developed a method for identifying illegal timber.

Genetic markers can deliver reliable, accurate information on the origin of the African wood species *Tali*, according to a study that has just been published in the scientific journal *Biological Conservation*. This method is so accurate that even timber from two concessions just 14 km apart can be differentiated. This is essential, as concessions where logging is permitted are often in close proximity to those where it is not. “The fact that we can accurately differentiate the origin of timber down to a 14 km radius is new,” says lead author Mart Vlam of the Forest Ecology and Forest Management Research Group at Wageningen University. “Previous studies only managed to do that on a much coarser scale.”

For the purposes of the study, several hundred timber samples were collected in five concessions in Cameroon and Congo-Brazzaville in collaboration with two logging companies. We used these samples to create a reference-database. Vlam: “ Next we ran a ‘blind test’ on some of the samples, as follows. I had 12 pieces of timber of which I knew the origin but the genetic specialists at Wageningen Environmental Research didn’t. I gave them the samples and asked them to identify which concessions they came from. They got it right 92% of the time – that’s a great score.”

This study demonstrates that genetic analysis has great potential for use in forensic testing of tropical hardwood. “But a lot needs to be done before these tests can be used as evidence in court,” says lead researcher Pieter Zuidema. “We need to collect timber samples from a much larger area and our analyses and labs will have to meet strict criteria. We can’t do that on our own, so we are collaborating in a worldwide network of researchers, labs and authorities.”