

Chemical fingerprint helps combat timber fraud

Research in the Timtrace project shows that researchers can determine the origin of tropical hardwood down to a radius of 100 kilometres with 94 per cent certainty. That can help in the fight against the illegal timber trade.

Timtrace is a collaborative venture between Wageningen, other European universities and science institutions in Cameroon, Congo, Gabon and Indonesia, with funding from the Dutch Research Council. The researchers studied wood samples from nearly one thousand trees in Central Africa and Borneo. They analysed chemical elements such as magnesium and calcium and discovered there was considerable variation in the composition of three important wood types: Red Meranti, used a lot for window frames, and the African woods Azobé and Tali, used in the construction of waterworks.

They then used machine learning to find a relationship between the wood composition and the geographical origin. The chemical composition, combined with genetic differences, reveals the place of origin of felled trees. The research results could help in the fight against illegal timber trading and efforts to protect tropical forests. New EU rules require timber traders to give proof of the origin of their products. 'Independent methods for verifying the origin will be hugely important in enforcing this legislation,' says PhD candidate Laura Boeschoten. Info: pieter.zuidema@wur.nl

