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BOOK OF ABSTRACTS

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Control of declared origin of tropical timber: Application of stable isotopes

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Tropical timber is a highly esteemed raw material. It is estimated that globally 20-40% of all logging is illegal, with probably an even higher percentage in many tropical countries. Therefore, controlling the declared timber provenance is an important action to identify illegally logged wood. We are currently investigating wood from Western (Ivory Coast and Ghana) and Central Africa (Cameroon, Congo and Democratic Republic of Congo). The aim of this project is to establish a database that will host the measured parameters of authentic tropical timber. This shall serve as a reference for provenance control in the future. This project thus aims to help to reduce and combat illegal logging by identifying illegally logged timber. We investigate wood of the tree *Triplochiton scleroxylon*, also called Abachi or Ayous. *Triplochiton scleroxylon* used to be the major timber tree in Western and Central Africa but has been heavily overexploited, therefore it has become rare in the forests. This fact emphasises the need for control of Ayous wood provenance.

The samples were measured for their isotopic ratio of the elements hydrogen, oxygen, carbon, sulphur and nitrogen.

First results show a good discrimination between Ayous samples from Western and Central Africa. Furthermore it is also possible to separate the samples from the Democratic Republic of Congo from these of the other countries investigated. Sulphur, hydrogen and oxygen are the most relevant parameters for discrimination.