



Practical applications of DNA technology along the timber supply chain

Protecting and promoting responsible
supply chains

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Why is a commercial approach necessary?

Industry demands...

- Simplicity
- Low cost
- Effective
- Adds value
- Full service

Progress

- Disbelief
- Proof of concept
- Early supporters and adopters
- Proof of value

Upstream examples



Indonesia DNA tracking system (*intsia* spp.), 2009

Congo Basin project (*diospyros crassiflora*), current



Packaging the science

- Statistical process control
- Paired sample testing
- DNA fingerprinting



Packaging the science

Rate of log substitution			Chance of detection	
Rate (%)	logs per year	logs per month	per month	per year
13.40	1,274	106.0	99%	100%
8.94	850	71.0	95%	100%
6.94	660	55.0	90%	100%
4.24	403	34.0	75%	100%
2.14	203	17.0	50%	100%
0.90	85	7.1	25%	97%
0.33	31	2.6	10%	72%
0.16	15	1.3	5%	46%
0.03	3	0.3	1%	11%

Based on:

- annual harvest of 9,500 trees per year
- Monthly testing
- USD 1.50 / cbm

Upstream examples



A successful brand taking steps to protect itself.

Pilot implementation in Indonesia.

Downstream examples



Oak (*Quercus* spp.) product testing in the US and EU, current

Species verification

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