International Activities on Timber Analysis

- **Update on GTTN and ITTO Projects**
- **DNA testing of oak and implications for compliance/enforcement/due diligence**

Shelley Gardner, USDA Forest Service, International Programs

Thorsten Hinrichs, German Ministry of Food and Agriculture

Caitlin Clarke, Double Helix Tracking Technologies


GTN
GLOBAL TIMBER TRACKING NETWORK
"To facilitate and promote the *integrated use* of technologies in timber tracking to combat illegal logging ."
www.globaltimbertrackingnetwork.org

GTTN's Structure and Organization

Established at inception workshop of the German supported project "Identification of Timber Species and Origin" in April 2012

- Secretariat
- Steering Committee
- Working Groups
  - Genetic Working Group
  - Isotope Working Group
  - Wood Anatomy Working Group
  - Policy and Advocacy Group Working Group
- Membership: online registration

Steering Committee:
International and Multi-Stakeholders

Approach

- Database
- Network
- Standards

Improve ease of enforcement and compliance, Support industry to secure supply chains, Support forest certification and sustainable forest management

Database of priority timber species

- Identification of species and geographic origin
- Public interface for indirect users
  - Query based
- Private interface for direct users
  - Can provide lab services for indirect users

Functional network of experts and institutes

Workshops

Region	Where	Collaboration	Date
Inception workshop	Kuala Lumpur, Malaysia	FRIM	24-25 April 2012
Americas	Brasilia, Brazil	Embrapa, LAFORGEN	26-27 March 2013
Asia, Pacific & Oceania	Beijing, China	CAF, APAFRI	11-12 July 2013

International Standards and Guidelines

- Sampling & sample handling
- DNA isolation from wood
- Analytical methods
- Data validation – ring and blind test protocol

GTTN website

- Depository for publications, news and events

- GTTN database
  - Collaboration with existing databases
  - Data sharing
  - Expansion and maintenance

www.globaltimbertrackingnetwork.org

- PUBLIC
  - Home
  - General Information
  - Getting started...
- CLIENT
  - Create new Claim Species
  - List all Claims
  - Help for Clients
- LABORATORY
  - Data Management
  - Laboratory Profile
  - Help for Certified Laboratories

Species Identification

Show Claim Species

Version_date : 11/28/2014

Claimant Name : Tree Informatics

Description : verify origin...

Taxon Name : Shorea spp., subg. Rubroshorea

Verify Origin

Validation approaches for species identification:

Wood Anatomy

Laboratories with Wood Anatomy Expertise:

Name	*Country*	
Johann Heinrich von Thunen-Institut	Germany	
Forest Products Laboratory	United States of America	
Chinese Academy of Forestry	China	

DNA Barcoding

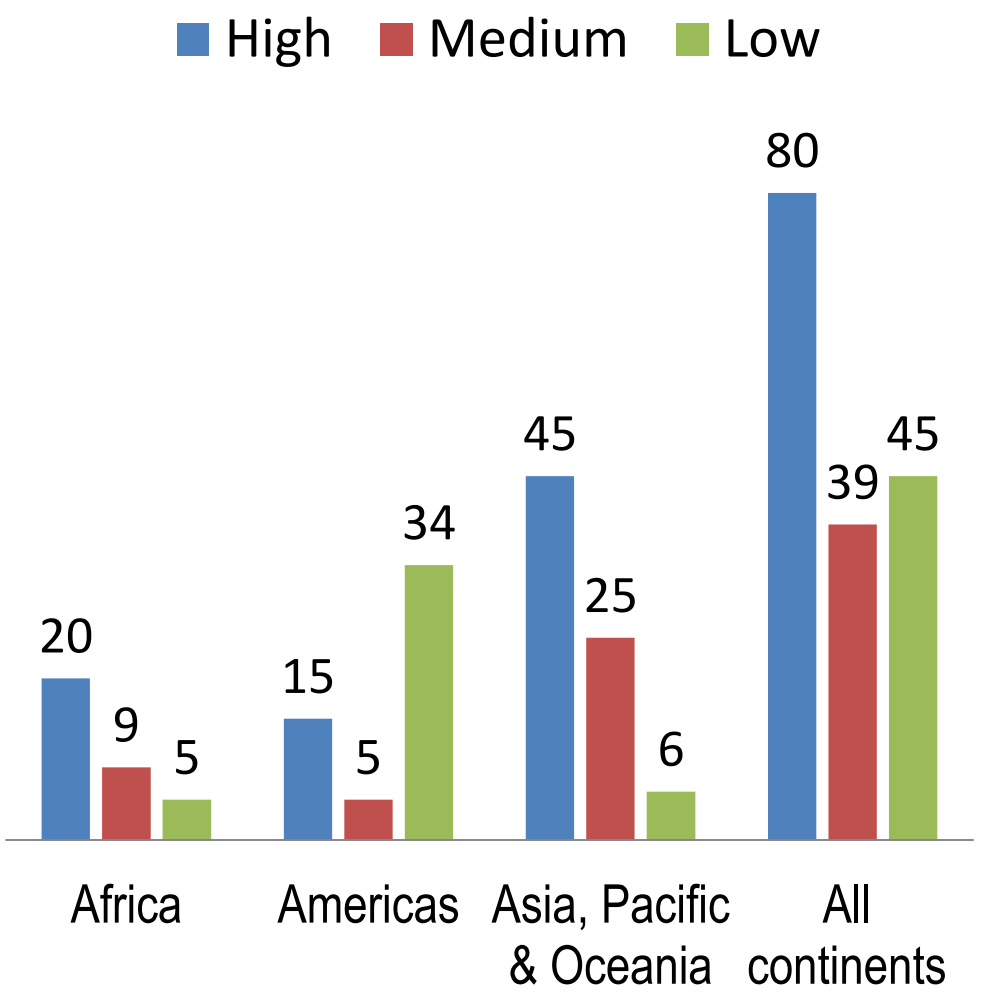
Laboratories with DNA Barcoding Expertise

Name	*Country*	
EMBRAPA	Brazil	
Forest Research Institute Malaysia	Malaysia	
University of Adelaide	Australia	
Johann Heinrich von Thunen-Institut	Germany	

List of priority species – Regional workshops

Different criteria:

- Species known to be illegally harvested and traded,
- Species having management problems (logging intensity, regeneration),
- Conservation status (CITES, IUCN, regional and national listing),
- Existence of useful data,
- Distribution and the geographic representation.



Update priority tree species list 21st of November 2014

The Thünen Centre of Competence on the Origin of Timber / Leuschnerstraße 91
21031 Hamburg / Germany
Contact: Bernd Degen
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Species information							State development of control tools (involved institution)		
No.	High priority	Botanical species name	common (trade) name	Code according EN 13556	CITES Appendix	Natural distribution area	Progress with genetic tools for species identification	Progress with genetic tools to control the country of origin	Progress with isotope tools to control country of origin
1		*Afzelia africana*	Afzelia/Doussie	AFXX		Africa	7, 8		
2	important	*Afzelia bipindensis*	Afzelia/Doussie	AFXX		Africa	7, 8		
3		*Apuleia leiocarpa*	Garapa grapiá	AFXX		South-America			
4	important	*Aucoumea klaineana*	Okoumé/Gabun	AUKL		Africa	7, 8	8	
5		*Bagassa guianensis*	Tatajuba	BGGN		South-America			
6		*Baillonella toxisperma*	Moabi	BLTX		Africa	7, 8		
7		*Bowdichia nitida*	Sucupira	BOXX		South-America			
8		*Bulnesia sarmientoi*	Palo santo	n.a.	II (Tropical South America)	South-America			
9		*Caesalpinia echinata*	Brazilwood	CSEC	II (Brazil)	South-America			
10		*Calophyllum spp.*	Bintangor	CLXX		Asia			
11		*Canarium spp.*	Kedondong	CNXX		Asia			
12	important	*Carapa guianensis*	Andiroba	CRGN		South-America	7, 8	6, 8	
13		*Caryocar costaricense*	Piquie	CQXX	II	South-America			
14	important	*Cedrela fissilis*	American cedar	CEXX	III (Colombia, Guatemala, Peru)	Central-America	2, 8	2, 8	
15	important	*Cedrela odorata*	American cedar	CEXX	III (Colombia, Guatemala Peru)	Central-America	2, 8	2, 8	
16		*Ceiba pentandra*	Ceiba, fromager	CBPN		Africa			
17	important	*Cylicodiscus gabunensis*	Okan	CKGB		Africa	7, 8	8	
18		*Dalbergia latifolia*	Indian rosewood	DLLT		Asia			
19		*Dalbergia nigra*	Brazilian rosewood	DLNG	I	South-America			
20	important	*Dalbergia spp.*	Madagascar rosewood	DLXX	II (Madagascar)	Africa (Madagascar)	13	13	3
21		*Dalbergia stevensonii*	Honduras rosewood	DLST	II (Guatemala)	Central-America			
22	important	*Diospyros spp.*	Ebony	DSXX	II (Madagascar)	Africa (Madagascar)			3
23		*Dipterocarpus spp.*	Keruing	DPXX		Asia			
24		*Dipteryx odorata*	Cumarú	DXOD		South-America		8	
25		*Dryobalanops spp.*	Kapur	DRXX		Asia			
26		*Endospermum moluccanum*	Sesendok	EDXX		Asia			
27	important	*Entandrophragma angolense*	Gedu nohor	ENAN		Africa	7, 8		
28	important	*Entandrophragma cylindricum*	Sapele	ENCY		Africa	7, 8	8	3
29	important	*Entandrophragma utile*	Utile/Sipo	ENUT		Africa	7, 8	8	
30		*Eusideroxylon zwageri*	Bilian	n.a.		Asia			
31		*Fitzroya cupressoides*	Alerce	FICP	I	South-America	7, 8		
32	important	*Gonystylus spp.*	Ramin	GYBN	II	Asia	7, 8		
33		*Guaiacum officinale*	Lignum vitae	GCXX	II	Central-America	7, 8		
34		*Guaiacum sanctum*	Lignum vitae	GCXX	II	Central-America	7, 8		
35		*Guibourtia spp.*	Bubinga	GUXX		Africa			
36		*Hymenaea courbaril*	Courbaril	HYCB		South-America		8	
37		*Hymenolobium elatum*	Angelim pedra	HMXX		South-America			
38	important	*Intsia spp.*	Merbau	INXX		Asia	8	4, 8, 10	
39		*Jacaranda copaia (Aubl.) D. Don*	Pará-pará	n.a.		South-America		8	
40	important	*Khaya anthotheca*	Acajou/khaya	KHXX		Africa	8	8	
41	important	*Khaya ivorensis*	African mahogany	KHXX		Africa	8	8	
42	important	*Larix gmelinii*	Sibirian larch	LAGM		Asia	8	8	6
43	important	*Larix olgensis*	Sibirian larch	LAGM		Asia	8	8	6
44		*Lophira alata*	Ekki/Bongossi/ Azobé	LOAL		Africa	8, 11	8	

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Legend
Commercial timbers regular traded
CITES protected traded timbers
CITES protected traded timbers, highest protection level (appendix I)

Legend
Initial work done / or initial data published
Work in progress, tool available in the next 1 to 3 years
Work completed or at least 80% done, tool ready for practical applications

Involved Institution	
No.	Name
1	Agrolsolab GmbH, Jülich Germany
2	CEH, Edinburgh, UK
3	FERA, York, UK
4	FRIM, Kuala Lumpur, Malaysia
5	INRA Bordeaux, France + INRA French Guiana
6	Josephinum Research, Wieselburg, Austria
7	PGD GmbH, Grosshansdorf Germany
8	Thünen-Institute, Grosshansdorf, Germany
9	Universität Göttingen, Germany
10	University Adelaide, Adelaide, Australia
11	University Brussels, Belgium
12	US Forest Service, USDA, Corvallis, USA
13	ETH, Zürich, Switzerland

Current Status and Way Forward

- Achieved: establishment of network, list of priority species, database prototype, first international standards, and sound proposal for a permanent GTTN structure.
- Mobilizing momentum in donor community for supporting permanent structure now after having finalized pilot phase

a

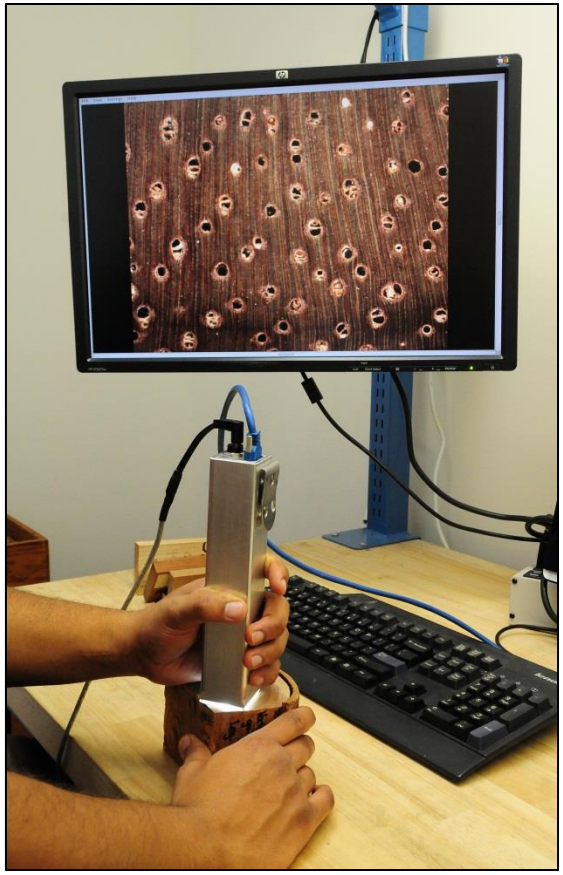
- Global Alliance: outreach EU, US, Australia, Norway, and open for others
  - Launch at World Forestry Congress 2015

Priority Species Projects

- ITTO Africa Project
  - Iroko, Sapelli, Ayou, other
  - Congo Basin (7 countries)
  - Technology Transfer
- Larch and Mongolian Oak in Russia
- ITTO Indonesia Project
  - Red Meranti Group
- Large Scale Project
  - 14 species, Africa and Latin America

United States Department of Agriculture

XyloTron Field-deployable Automated Wood Identification



John Hermanson[1], Alex Wiedenhoeft[1], Shelley Gardner[2]

[1]USDA Forest Service Forest Products Laboratory

[2]USDA Forest Service International Programs

Forest Service

- Dr. Gerald Koch, Thünen-Institut für Holzforschung, Hamburg, **Germany**
- Dr. Peter Gasson, Royal Botanic Gardens Kew, London, National Measurement Office (NMO) **England**
- Dr. Yafang Yin, Chinese Academy of Forestry, Beijing, **China**
- Dr. Hisashi Abe, Forestry and Forest Products Research Institute, Tsukuba, **Japan**
- Dr. Sandra Florsheim, Seção de Anatomia de Madeira, Instituto Florestal, São Paulo, **Brazil**
- Dr. Flavio Ruffinatto, Turin, **Italy**

GTTN-related International Activities

- ICCWC - International Consortium on Combatting Wildlife Crime (CITES, INTERPOL, UNODC, World Bank, WCO)
  - ICCWC Expert Group Meeting on Timber Analysis
  - INTERPOL Environmental Security Sub-directorate
    - Project LEAF
    - ECEC – Environmental Compliance and Enforcement Committee
    - Wildlife Crime Working Group
    - Forest Crime Working Group

- Development of a timber identification directory for CITES-listed species – EC and TRAFFIC

- EUTR-Lacey Act-Australian Illegal Logging Prohibition Act Exchange

February 2013

INTERPOL

ENVIRONMENTAL CRIME PROGRAMME

PROJECT LEAF

Law **E**nforcement **A**ssistance for **F**orests

An INTERPOL/UNEP climate initiative consortium against illegal logging and related crimes

Illegal logging and the international trade in illegally harvested timber is a serious, international organized crime responsible for habitat destruction, species extinction and climate change. National legislation in many countries and numerous international mechanisms, such as the European Union Action Plan named FLEGT and REDD+, the United Nations Collaborative Programme, are diligently working to ensure forest sustainability and manage carbon emissions.

The trade in illegally harvested timber is highly lucrative and comparable to the production value of illegal drugs. Environmental criminals are often also involved in acts of corruption, smuggling and violence, with their activities leading to loss of tax revenue, political upheaval and post-conflict instability. Without strong, coordinated law enforcement, criminals will exploit these invaluable natural resources.

Objectives

- **Form National Environmental Security Task Forces (NESTs)** to ensure institutionalized cooperation between national agencies, INTERPOL National Central Bureaus (NCBs) and international partners;
- **Conduct operations** to suppress environmental crimes, disrupt trafficking routes and ensure the enforcement of international and national legislations on sustainable forestry; and
- **Expand the project through awareness raising,** with the aim of making a real contribution to global emissions goals, the protection of biodiversity and the prevention of environmental destruction.

Activities

- **Criminal intelligence exchange and analysis** to identify criminal networks, their reach and their modus operandi;
- **Training and capacity building** to strengthen the response of law enforcement agencies;
- **Regionally targeted operations** specifically tailored for the Amazon Basin, Congo Basin and Southeast Asia region; and
- **Development of a fully-fledged and sustainable programme** on forest law enforcement, through effective guidelines, structures and best practice development.

ENVIRONMENTAL CRIME

Environmental crime
Projects
Operations
Task forces
Ecomessage
Environmental Compliance and Enforcement Committee
Events

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Environmental Compliance and Enforcement Committee

Formed in 1992, the Environmental Crime Committee assisted INTERPOL in identifying emerging patterns and trends in the field of environmental crime enforcement.

The Committee acted as a forum in which law enforcement officials could meet face to face in order to discuss new strategies and practices, share experience and expertise, and build the bridges of international cooperation that are vital in the fight against international environmental crime.

During the INTERPOL/UNEP International Chiefs of Environmental Compliance and Enforcement Summit in March 2012, the decision was made to restructure the Environmental Crime Committee. This initiative, known as the Environmental Compliance and Enforcement Committee (ECEC), brings together executive leaders and decision makers from all 190 INTERPOL member countries to provide strategic advice on relevant issues and to harness global support.

The 1st Environmental Compliance and Enforcement Committee (ECEC) Meeting and Events were held from 4 to 8 November 2013 in Nairobi, Kenya.

To support the Committee in its function, three working groups lead projects in specific areas:

1. **Wildlife Crime Working Group**
2. Pollution Crime Working Group
3. Fisheries Crime Working Group

Photos : 6

SEE ALSO

Message from the Chair
- July 2014
- November 2014

International Consortium on Combating Wildlife Crime

Partnerships

Resources

Wildlife Crime Working Group

The INTERPOL Wildlife Crime Working Group initiates and leads a number of projects to combat the poaching, trafficking, or possession of legally protected flora and fauna.

Far-reaching damage

Wildlife crime, such as poaching, the traffic in illegal ivory or illegal logging, can lead to the extinction of a species, the loss of biodiversity, and serious damage to the ecosystems that support our very existence. The problems are not limited to individual nations as plants and animals are trafficked across borders, and the overall effects of wildlife crime contribute to global warming and climate change.

Taking action

Clearly, in today's global economy there is a need for an international strategy to deal with wildlife crime. The INTERPOL Wildlife Crime Working Group brings together specialized criminal investigators from around the world to work on project-based activities on an international level.

We encourage participation from environmental experts across the world in order to maximize the global impact of current projects and to devise new initiatives.

Members of the Board

Chairperson – Sheldon Jordan
Director General for the Wildlife Enforcement Directorate, Enforcement Branch
Environment Canada

Executive Board Members

Members of the Advisory Board

Participation in the Committee is open to law enforcement officers, officials and experts from all of INTERPOL's 190 member countries.

Nine members of the Advisory board provide their leadership and organizational skills to the Committee.

The Committee members are elected during the International Conference on Environmental Crime (held every two years), from among the Committee's delegates, and each serve a term of two years, once renewable.

Members of the Advisory Board

Chairperson – David Jordan
Director of Operations
Environment Agency, U.K.

Vice-Chairperson – Bruno Manin
Chef d'office, Office central de lutte contre les atteintes à l'environnement et à la sante publique
Gendarmerie Nationale, France