

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Twenty-fourth meeting of the Plants Committee
Geneva (Switzerland), 20, 21 and 23-26 July 2018

Interpretation and implementation matters

Trade controls and traceability

REPORT OF THE INTERSESSIONAL WORKING GROUP

1. This document has been submitted by the representative for Central and South America and the Caribbean (Ms. Rauber Coradin) and Canada, Co-Chairs of the Timber Identification Working Group.*
2. At the 17th meeting of the Conference of the Parties (Johannesburg, 2016), the Secretariat submitted document CoP17 Doc. 48.1 Timber Identification, prepared by the United Nations Office on Drugs and Crime (UNODC), within the framework of the International Consortium on Combating Wildlife Crime (ICCCWC). The document was prepared with the expressed intent of strengthening the development and use of tools and technologies to address illicit trafficking of timber.
3. CoP17 Doc. 48.1 proposed draft Decisions to address and prioritize problems associated with illegal trade in timber of CITES-listed tree species, directed to CITES Parties, the Plants Committee, and the CITES Secretariat, aimed at promoting research on identification of CITES-listed tree species in trade, the identification of methodologies that are legally defensible (i.e. forensic) and facilitation of reference sample sharing between relevant institutions. Decision 17.167, directed to the Plants Committee, proposes specific actions regarding assurance of standard nomenclature for CITES tree species in trade, and (*inter alia*) determination of the location, availability of wood reference samples and collections, and of best practices for strengthening identification.
4. At the 23rd meeting of the Plants Committee (Geneva, 2017) the Chair of the Plants Committee submitted document PC23 Doc. 18.1, and recommended that the Committee begin the mandate directed to it under Decision 17.167, including development of a work plan for tasks to be fulfilled intersessionally and identification of experts and institutions relevant to the mandate. An in-session working group met initially during PC23, and recommended (PC23 Com. 7 (Rev. by Sec.)) that the working group continue intersessionally to address the elements of Decision 17.167.
5. The composition of the intersessional working group, comprising Parties and non-Party observers is as follows:

Co-Chairs: Representative for Central and South America and the Caribbean (Ms. Rauber Coradin) and Canada (Mr. Farr);

* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

PC Members: Chair of the PC Committee (Ms. Sinclair) Representatives of Africa (Mr. Mahamane, Ms. Koumba Pambo), Alternate Representative of Europe (Ms. Moser);

Parties: Austria, Canada, China, Czech Republic, Estonia, European Union, Germany, Italy, Japan, Kuwait, Madagascar, Malaysia, Malta, Republic of Korea, South Africa, Switzerland, Thailand, United Kingdom of Great Britain and Northern Ireland and United States of America; and

IGOS and NGOs: UNEP-WCMC, Chambre Syndicale de la Façure Instrumentale (CSFI), Forest Based Solutions LLC, International Wood Products Association, Taylor Guitars, TRAFFIC, and the World Resources Institute.

6. To ensure access to best available information sources and to individuals, institutions and networks with relevant timber identification experience, the working group requested the engagement of expert observers (whose cooperation and technical input to the working group's discussions is greatly appreciated) from the following Agencies and organizations:

Global Timber Tracking Network (GTTN), International Association of Wood Anatomists (IAWA), International Tropical Timber Organization (ITTO), Thünen Centre of Competence on the Origin of Timber, Hamburg, (Germany), European Forest Institute (EFI), United Nations Office on Drugs and Crime (UNODC), Global Programme for Combating Wildlife and Forest Crime.

Working Group Mandate

7. Parties and observers began consultations by email on the elements of the mandate identified in Decision 17.167, which are:

Concerning standard nomenclature:

- a) prioritize taxa for the adoption of new or updated standard nomenclature references, in particular where nomenclature poses a barrier to identification of CITES-listed trees in trade;
- b) identify the research needs and resource requirements for the production of standard nomenclature references for priority taxa;

Concerning wood and other material as reference samples for identification purposes, in collaboration with relevant stakeholders and building on information on existing initiatives previously made available to Parties:

- a) determine, for all CITES-listed tree species, the locations and availability of existing reference samples or collections, and identify priorities in addressing gaps;
- b) encourage interested Parties to identify, collect and curate reference samples, and facilitate exchange to make them available, as appropriate, to research institutions, law enforcement agencies, and other authorities concerned;
- c) identify and compile information on best practices for the collection and curation of reference samples, identifying gaps where they exist; and
- d) consider how best to assist and strengthen capacities for forensic work on identification of CITES-listed tree species in trade.

Working Group Discussions

8. Concerning standard nomenclature:

The working group consulted the CITES Specialist on Botanical Nomenclature (Mr. McGough) with regard to CITES taxa most immediately requiring adoption of new or updated standard nomenclature references, where nomenclature poses a barrier to identification of CITES-listed trees in trade. The genera *Dalbergia* and *Diospyros*, and in particular, species from Madagascar, were identified as the highest-priority taxa. The determination was supported by the working group member from Madagascar (Ms. Harisoa Ravaomanalina). Research needs and resource requirements for the production of standard nomenclature references for the priority taxa were identified as (*inter alia*) update of the current taxonomic treatments of

the genera and development of checklists and of practical, user-friendly identification tools that can be employed when flowers or fruits are lacking.

9. Concerning wood and other material as reference samples for identification purposes:

- a) With regard to determining the locations and availability of existing reference samples or collections for all CITES-listed tree species, the working group identifies increased collaboration between CITES and the organizations and institutes identified in paragraph 6 of the present document as the most efficient means by which the Plants Committee may address this element of the mandate, as these organizations are involved in the organization and promulgation of information on wood collections, including on the global distribution and status of xylaria, databases and organizations having wood identification expertise.
- b) With regard to encouraging Parties to identify, collect, curate and facilitate exchange of wood reference samples with research institutions, law enforcement agencies, and other authorities concerned, increased awareness by Parties of the fundamental role played by wood reference samples in all aspects of timber identification, the development of advanced analytical techniques and the implementation of CITES for timber species is a first means to address this element of the mandate.
- c) With regard to identifying and compiling information on best practices for the collection and curation of reference samples and identification of gaps, Parties may also refer to existing expert guidance including (*inter alia*) relevant CITES documents submitted at the 21st and 22nd meetings of the Plants Committee, and the UNODC publication Best Practice Guide for Forensic Timber Identification (2016). to identify emerging best practices and procedures.
- d) With regard to the best means to assist and strengthen capacities for identification of CITES-listed tree species in trade, the working group agrees that increased focus on effective methods for training enforcement and customs officials, including wood anatomy identification training, distance education approaches, and wood sample image capture linked to anatomical identification by off-site experts would rapidly increase front-line capacity for wood identification. The CITESwoodID identification tool developed by Germany is confirmed to be useful and easily employed for macroscopic wood identification. Further development of a web-based format is welcomed. Additional capacity is required to convert initial presumptive wood identification performed by enforcement officers into robust forensic identification to generate evidence for criminal prosecutions. This can be achieved through the development of quality assured laboratory timber identification services. Enhancing awareness among Parties of the fundamental role of xylaria and herbaria as repositories of expertise and valuable reference materials to support implementation of CITES and to verify legal trade in timber products is also an effective means to assist and strengthen capacities for forensic work, if linked to increased capacity and financial support.
- e) The working group endorses continued consultation of the CITES Secretariat with the UNODC, the International Consortium on Combating Wildlife Crime and with other relevant stakeholders (as directed in Decision CoP17 17.169), as an efficient means to identify emerging challenges and practices.

Conclusions of the Working Group

10. The working group reached the following conclusions regarding the elements of its mandate addressing standard nomenclature:

- a) With regard to prioritized taxa for the adoption of new or updated standard nomenclature references, in particular where nomenclature poses a barrier to identification of CITES-listed trees in trade:
 - i) The genera *Dalbergia* and *Diospyros*, in particular those species from Madagascar, should be considered by the CITES Plants Committee as priority taxa for adoption of new or updated standard nomenclature references. Nomenclature for these genera poses a barrier to identification of CITES-listed trees in trade.
- b) With regard to identification of research needs and resource requirements for the production of standard nomenclature references for the identified priority taxa:
 - i) The current treatment of the taxonomy of the genera *Dalbergia* and *Diospyros*, in particular for species from Madagascar, is inadequate and available taxonomic treatments require refinement;

- ii) Little reliable information is available on the species of *Dalbergia* and *Diospyros* exploited in Madagascar (a short list of references is included in Annex 1 of the present document) and the species are traded under local or commercial names, potentially condemning many rare or threatened species to extinction before identification;
 - iii) Two ITTO-CITES research projects aimed at establishment of partial precious wood reference collections encompassing around 250 samples representing approximately 20 endemic *Dalbergia*, 20 *Diospyros* and 8 look-alike species established at the University of Antananarivo Madagascar, required investment of approximately USD \$250,000;
 - iv) The report of the specialist on botanical nomenclature submitted to the present meeting provides additional information regarding the research and resource requirements associated with preparation of a full genus checklist for the genus *Dalbergia*.
11. The working group reached the following conclusions regarding the elements of its mandate addressing wood and other material as reference samples for identification purposes:
- a) With regard to determination, for all CITES-listed tree species, the locations and availability of existing reference samples or collections, and identify priorities in addressing gaps:
 - i) Parties should reference existing references, digitized maps and databases containing detailed information on the global distribution and status of xylaria held by organizations having wood identification expertise, including (*inter alia*) the Global Timber Tracking Network, International Association of Wood Anatomists, and International Tropical Timber Organization;
 - ii) The Plants Committee and Parties should continue and increase collaboration with these organizations, to develop shared priorities for timber identification, including on priority species, on existing and emerging techniques and on guidelines, and on collection of wood samples applicable to a variety of timber tracking tools, including DNA analysis, chemical analysis and imaging, Near Infrared Spectrometry (NIRS), Directed Analysis in Real Time mass spectrometry (DART), and macro- and microscopic identification of wood and fibre samples;
 - iii) Parties having established wood sample collections should consider developing standardized information templates to facilitate sharing of information on available reference samples and data, including on sample status, location, available anatomical macro- and micro-structure wood images, and on DNA barcode, near-infrared spectroscopy and stable isotope data;
 - b) With regard to encouraging interested Parties to identify, collect and curate reference samples and facilitate exchange to make them available, as appropriate, to research institutions, law enforcement agencies, and other authorities concerned:
 - i) Parties should be encouraged to create, maintain, expand, share and exchange collections of verified wood samples and, to the extent possible without detriment to such collections, make these available for timber identification and for development of analytical methodologies and identification protocols for CITES-listed and look-alike tree species;
 - ii) Parties should recognize and acknowledge that the availability of such samples is fundamental to application and future development of analytical methodologies;
 - iii) Parties should, to facilitate exchange of samples for purposes of wood identification, encourage use of the provisions for exchange between scientists or scientific institutions, including those outlined in Article VII, paragraph 6 of the text of the Convention (Exemptions and Other Special Provisions Relating to Trade), in Resolution Conf. 11.15 (Rev. CoP12) Non-commercial loan, donation or exchange of museum and herbarium specimens, and in Article 8 (a) of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity;
 - iv) Parties should consider designating and pro-actively investing in national xylaria and herbaria that could serve as focal points for wood sample collections and associated databases, thereby facilitating long-term curation of reference samples, increasing sample access for accredited forensic laboratories and supporting inter-laboratory identification and verification of wood samples;

- v) Parties considering new listings of timber species should, if available, provide information on the location, status and quantity of relevant wood samples, in order to facilitate identification and verification of CITES-listed species in international trade;
 - vi) Parties should engage in regional cooperation to identify impediments and facilitate free exchange of wood samples and associated database information;
 - vii) Parties and organizations that conduct legal and sustainable forest management plans, inventories, harvesting operations and third-party certification should adopt protocols for collecting wood samples and herbarium vouchers during these operations, to increase the availability of wood samples collected from commercially-sized trees, as these correspond to the form in which most timber species are traded;
 - viii) CITES importing Parties should be encouraged to provide support to range Parties, to facilitate acquisition of wood samples necessary for identification of CITES timber species in international trade.
- c) With regard to identification and compilation of information on best practices for the collection and curation of reference samples, identifying gaps where they exist, that:
- i) Parties may refer to existing guidance and recommendations, including those contained in Reference PC21 Doc. 15, *Development of a Timber identification Directory for CITES-Listed species*, Document PC22 Doc. 14.2, *Development of Timber Identification Guidance Annex 1: Forensic science recommendations for improved timber identification*, in the UNODC publication *Best Practice Guide for Forensic Timber Identification* (2016), and the *GTTN Standards and Guidelines* (2014);
 - ii) Parties should undertake, where opportunity exists, the collection of vouchered wood samples from look-alike and from non-CITES listed species, so as to develop scientifically-verified reference materials in advance of future CITES listings, and to facilitate training in the separation of CITES from non-CITES listed woods.
- d) With regard to how best to assist and strengthen capacities for forensic work on identification of CITES-listed tree species in trade, that:
- i) The Secretariat and Parties should work to enhance awareness of the role that xylaria and herbaria play in forensic wood identification, in the implementation of CITES, in enforcement of legal trade in timber products, and as valuable repositories of expertise and reference materials to support forensic identification;
 - ii) Parties should develop and update timber identification manuals and electronic identification keys on an ongoing basis, so as to include all tree species listed on the CITES appendices;
 - iii) Parties should be encouraged to convene regional workshops to share best practices and innovation in wood identification technologies and techniques for local timber species;
 - iv) Parties, when developing wood identification programs and applications, should consult and include enforcement and customs officials, and consider specific operational needs and training for front-line operations;
 - v) Parties should develop wood anatomy identification training programs for enforcement and customs officials that recognize the duration, periodic reinforcement and observational capacity needed for successful acquisition and retention of expertise in wood identification techniques;
 - vi) Parties should consider incorporating educational approaches, such as those adopted by Brazil, to train front-line law enforcement personnel in wood anatomy identification and electronic transmission of macroscopic wood anatomy images for rapid identification in remotely located laboratories;
 - vii) Parties should support enforcement and customs officials by focusing timber identification capacity on timber species known to be common in trade, and by consulting wood importers, suppliers and

manufacturers, who are the entities most likely to have detailed knowledge about the species present in timber imports;

- viii) Parties having expertise in timber identification methodologies should offer training to others, especially to Parties within Regions;
- ix) Parties should be encouraged to develop regional databases and identification tools (for example, the identification key developed by Colombia and Brazil) including for timber species that are common to Parties within Regions.
- x) Parties should be encouraged to identify and facilitate access to forensic laboratory services for the identification of timber and wood products, either in-country or through international service provision, enabling the results of testing to be accepted as evidence in legal proceedings.

Recommendations

12. The Plants Committee is invited to consider the following recommendations:

- a) That the working group mandate be re-established at CoP18, in accordance with the revised elements of Decision 17.167 in Annex 2 of this document, and that the Plants Committee ask the Secretariat to submit the revised version to CoP18, proposing that it be adopted by the Parties.
- b) That to maintain collaborative relationships already established with expert individuals and organizations, the timber identification working group continue working up to CoP18, on an *ad hoc* basis;
- c) Recalling the proposal made by the Secretariat in Document PC23 Doc. 28, *Possible amendments to Resolution Conf. 10.13 (Rev. CoP15) on Implementation of the Convention for timber species*, at paragraph 5, subparagraph h), that the Plants Committee consider the inclusion of a section on identification and forensics for tree species in Resolution Conf. 10.13 (Rev. CoP15) in accordance with the draft text contained in Annex 3 of this document.
- d) That the Plants Committee also refer to Recommendation 1.1 of document PC23 Com. 10 (*Report of the Working Group on Rosewood Timber Species: Implementation Of Decision 17.234*), (regarding paragraph 9.1 of document PC23 Doc. 22.1) on the identification of rosewood species, which invites Parties to facilitate access to all the tools, methodologies, and materials developed related to the identification of timber species of rosewoods, and to take into account the examples and initiatives developed by Parties and the wider CITES community.

REFERENCE LIST: *DALBERGIA* AND *DIOSPYROS* FROM MADAGASCAR

Bosser, J. & R. Rabevohitra. 1996. Taxa et noms nouveaux dans le genre *Dalbergia* (Papilionaceae) à Madagascar et aux Comores. *Bull. Mus. Natl. Hist. Nat., B, Adansonia*, sér. 4, 18: 171-212.

Bosser, J. & R. Rabevohitra. 2005. Espèces nouvelles dans le genre *Dalbergia* (Fabaceae, Papilionoideae) à Madagascar. *Adansonia*, sér. 3, 27(2): 209–216.

Du Puy, D. J., J. N. Labat, R. Rabevohitra, J. F. Villiers, J. Bosser & J. Moat. 2002. *The Leguminosae of Madagascar*. Royal Botanic Gardens, Kew, London, 737 pp.

Madagascar Catalogue. 2018. Catalogue of the plants of Madagascar. Missouri Botanical Garden, St. Louis & Antananarivo [<http://www.tropicos.org/project/mada>].

Mas, C., P. P. Lowry II and G. E. Schatz. Révision taxonomique des *Diospyros* L. (Ebenaceae) de la région Malgache. II. Le groupe *Gracilipes*. *Boissiera* (in review).

Perrier de la Bâthie, H. 1952a. Révision des Ebénacées de Madagascar et des Comores. *Mém. Inst. Sci. Madag.*, sér. B, *Biol. Vég.* 4: 93–154.

Perrier de la Bâthie, H. 1952b. Ebénacées. *Flore de Madagascar et des Comores* 165: 1–129.

Schatz, G. E. and P. P. Lowry II. 2011. Nomenclatural notes on Malagasy *Diospyros* L. (Ebenaceae). *Adansonia*, sér. 3, 33: 271–281.

Schatz, G. E., P. P. Lowry II, C. Mas and M. W. Callmender. 2013. Further nomenclatural notes on Malagasy *Diospyros* L. (Ebenaceae): Goudot types in the Geneva herbarium. *Candollea* 68: 307–309

Schatz, G. E. and P. P. Lowry II. Taxonomic Studies of *Diospyros* L. (Ebenaceae) from the Malagasy Region. III. New Species from the Island of Nosy Mangabe in the Bay of Antongil. *Novon* (in review).

Decision 17.167 (Rev. CoP18)

Directed to the Plants Committee

With respect to CITES-listed tree species, the Plants Committee shall, at its ~~23rd~~ 25th and ~~24th~~ 26th meetings:

Concerning standard nomenclature:

- a) prioritize taxa for the adoption of new or updated standard nomenclature references, in particular where nomenclature poses a barrier to identification of CITES-listed trees in trade;
- b) identify the research needs and resource requirements for the production of standard nomenclature references for priority taxa;

Concerning wood and other material as reference samples for identification purposes, in collaboration with relevant stakeholders and building on information on existing initiatives previously made available to Parties:

- a) determine, for all CITES-listed tree species, the locations and availability of existing reference samples or collections, and identify priorities in addressing gaps;
- b) encourage interested Parties to identify, collect and curate reference samples, and facilitate exchange to make them available, as appropriate, to research institutions, law enforcement agencies, and other authorities concerned;
- c) identify and compile information on best practices for the collection and curation of reference samples, identifying gaps where they exist; and
- d) consider how best to assist and strengthen capacities for forensic work on identification of CITES-listed tree species in trade.

**Resolution 10.13 (Rev. CoP15),
Implementation of the Convention for Timber Species**

Revise Paragraph 1 RECOMMENDS by the addition of the following subtitle and subparagraphs to follow current subparagraph k) titled "Regarding the establishment of export quotas for timber species":

Regarding identification and forensics for tree species

- l) Parties acknowledge the fundamental importance of timber identification and continued development of advanced analytical wood identification techniques and operational tools to the successful implementation of CITES for timber species;
- m) Parties create and maintain wood sample collections and facilitate exchange of wood samples and associated database information, including guidelines for the collection of wood samples, and make these available to support timber identification and development of analytical methodologies and identification protocols for CITES-listed and look-alike tree species; and
- n) Parties work to develop shared priorities for timber identification, including priority species, and on developing identification techniques, including DNA analysis, chemical analysis and imaging, Near Infrared Spectrometry (NIRS), Directed Analysis in Real Time mass spectrometry (DART), and macro- and microscopic identification of wood and fibre samples.