CITES Working Group on Timber Identification, Comments by Canada, March 2024

Canada, in general, agrees with the comments provided to date by working group members (UK, MX, ZA, US and the WRI).

Specific to comments provided by the US, we agree the Terms of Reference (ToR) for the working group are part of a suite of interrelated Decisions (19.145 to 19.148) on identification of timber and other wood products, and should be considered in unison in addressing the tasks assigned to the working group.

We agree also that the list of tasks in Decision 19.147 is extensive and that an approach of establishing subgroups to focus on particular aspects of the ToR decision will streamline the WG's discussions.

Canada recalls North American Regional comments made at PC26 (PC26 Doc. 19 Identification Materials) and supports the approach outlined at that time:

i) Two sets of tools are needed: molecular and forensic identification methods are important once shipments have been held or seized, and tools to assist frontline CITES enforcement officials to determine whether to clear or hold shipments.

ii) Parties have at times put forward genus-level listings as a mechanism to deal with look-alike issues, due to the inability to distinguish between them at the species level. We urge priority efforts by this working group to address this issue.

iii) When assessing gaps in identification materials, the WG should take into account those taxa that have been included in the Appendices at higher taxon levels solely due to look-alike issues, as well as the need for frontline and forensic identification tools.

Canada agrees with the reference made by the US to additional previous CITES work that could provide WG members with background information and assist in addressing the tasks outlined in Decision 19.147. We suggest that PC24 Doc. 15.1 , *Report of the Intersessional working group on Timber Identification*, also be considered as a useful resource.

Canada supports the suggestion of Mexico that the WG consider the North American Commission for Environmental Cooperation project (*Strengthening the Implementation and Effective Enforcement of CITES for Timber in North America*) that focused *inter alia* on approaches to the US, MX and CA sharing timber samples to support wood identification and legal trade. We support the suggestion that where possible, "*vouchered reference samples for trees*" would be the gold standard and the desired specific sample type to be considered.

Re. the International Tropical Timber Organization (ITTO) comments with respect to ToR, para e)

e) Develop standardized information templates and other tools that could be used by Parties to facilitate sharing information on the content and status of wood sample collections, and exchange with research institutions, law enforcement agencies, and other authorities

Canada agrees with the ITTO observation that as many tropical forest countries are parties to CITES, it should possible to develop standardized information templates for information sharing to be coordinated by country focal points, management and scientific authorities.

We also agree that the ongoing APEC- EGILAT project spearheaded by Indonesia and aimed at creating a network among APEC members and their respective xylaria provides a model that could facilitate standardization of wood collection and ID methodologies, and enhance ease of information sharing.

Finally, Canada agrees with the comment made by the World Resources Institute (WRI) that discussions around effective implementation of Decision 19.147 should consider the role of scientific tools (and methods) that can verify location of harvest and enable traceability. Such consideration could include, in addition to the examples cited by WRI, range-wide characterization of species genomics and technologies such as block chain.

MEXICO

Que los miembros proporcionen aportaciones por escrito para la implementación de los párrafos a) a h) de la Decisión 19.147 a más tardar el 16 de febrero de 2024

a) Desarrollar un plan para priorizar las especies arbóreas incluidas en los Apéndices de la CITES a fin de centrar los esfuerzos mundiales en el desarrollo y el intercambio de bases de datos y herramientas de referencia para la identificación, incluidas las campañas de muestreo de muestras de referencia validadas;

Es necesario solicitar a las partes en cuyo territorio se encuentre distribuida alguna de las especies arbóreas listadas en los apéndices de CITES que aporten gratuitamente información científica de investigaciones desarrolladas en su territorio, que sea factible de ser acopiada por la CITES e incluida en su página oficial, de tal forma que pueda ser consultada por las autoridades encargadas de la aplicación de la ley y permita incrementar la asertividad en la identificación de las especies incluidas en alguno de los apéndices la Convención.

Por otra parte, existen grandes colecciones de muestras de maderas (Xilotecas) en diferentes partes del mundo que aportan información validada por especialistas y que actualmente siguen siendo incrementadas, como ejemplo, existen actualmente acciones de cooperación con el Servicio Forestal de los Estados Unidos (USFS) para muestreos de maderas tropicales en México para crear una base de datos que, a su vez, será utilizada para alimentar la base de datos necesaria para realizar identificación de maderas por medio del análisis directo en tiempo real (DART) de espectrometría de masas (TOFMS).

También, la Comisión para la Cooperación Ambiental de América del Norte (CCA), en el marco del proyecto "Fortalecimiento de la instrumentación y aplicación efectiva de la CITES respecto de especies maderables en América del Norte", realizó actividades de capacitación para inspectores sobre herramientas de identificación y evaluación de riesgos para detectar envíos irregulares de productos madereros de especies reguladas por la CITES, y vinculó a expertos en la materia (pertenecientes a diferentes laboratorios de los tres países) para el intercambio de conocimientos y de muestras de maderas listadas en el Apéndice II de la CITES que son de interés para la región.

En el marco de la CITES, se podría promover la creación de alianzas con laboratorios para desarrollar una base de datos global, que permita ser el principio para generar una estrategia que priorice la identificación y el adecuado manejo las especies CITES en el comercio internacional de maderas.

b) Dar prioridad al desarrollo de materiales de identificación para las especies de Dalbergia, teniendo en cuenta los progresos realizados que se detallan en el documento PC25 Doc. 34 y el documento CoP19 Doc. 84.1, y prestando atención a los materiales de identificación para el personal de primera línea a fin de ayudar a diferenciar las especies semejantes que pueden no ser motivo de preocupación en cuanto a la conservación, como *Dalbergia sissoo*;

En lo que respecta a la identificación de las especies arbóreas incluidas en la CITES, existe la necesidad de elaborar guías de campo para la identificación de estos productos, que son comercializados frecuentemente dentro del comercio y el tráfico ilegal internacional, sería ideal que estas guías fueran elaboradas también en formato electrónico, de tal manera que puedan ser consultadas en cualquier teléfono, tableta, lector electrónico o dispositivo electrónico, que funcione como archivo (PDF por ejemplo), y pueda ser consultado aún en lugares donde no exista señal de internet, principalmente por las autoridades encargadas de la aplicación de la ley, contando con los datos taxonómicos, así como datos y claves de identificación morfológica de madera de especies arbóreas incluidas en la CITES que sean objeto de comercio.

También es necesario contar con un directorio de expertos que puedan brindar el apoyo necesario cuando existan dudas por parte de las autoridades en la identificación, en caso de aseguramientos de especies arbóreas incluidas en la CITES que pretendan ser movilizadas internacionalmente de manera ilegal.

Al revisar el depósito digital sobre Recursos y herramientas para la identificación de la madera, encontramos que cuenta con gran cantidad de información para los encargados de verificar las especies a movilizar, lo cual es de suma utilidad; además que las partes también pueden cargar recursos para que aparezcan en la página de esta herramienta.

c) Elaborar una lista de las técnicas y herramientas disponibles, y evaluar sus normas y su utilidad para la identificación específica de especies y la aplicación de la ley para las especies arbóreas incluidas en los Apéndices de la CITES y sus especies semejantes;

1. Identificación morfológica por características macroscópicas (ANATOMÍA Xylorix, Xilotron)
2. Estructura anatómica y claves de identificación (DENDRO-CRONOLOGÍA)
3. Estudio genómico de las especies y taxones por medio de la secuenciación de ADN
4. Análisis de imagen anatómica en laboratorio
5. Análisis directo en tiempo real espectrómetro de masas de tiempo de vuelo (DART-TOFMS)
6. Análisis por Isotopos.

Identificación morfológica por características macroscópicas

Es un método útil para determinar género y es útil y preciso para determinar especie; es económico ya que generalmente lo aplica el inspector que verifica el embarque; la verificación se realiza con las trozas o troncos completos; puede tardar mucho tiempo para realizar la identificación del género dependiendo de la experiencia del inspector; puede o no ser posible determinar la procedencia de la muestra dependiendo de donde se realice la verificación; es necesaria la capacitación continua del personal de inspección y, para aumentar la asertividad, es necesario contar con equipo de campo como el Xilotron y Xylorix Macroscopic Wood Identification

System, y capacitar al personal en su uso; es de uso común en campo y disponible para inspectores y comercializadores.

Estructura anatómica y claves de identificación (DENDRO-CRONOLOGÍA)

Es un método útil para determinar género y potencialmente útil para determinar especie; el análisis es moderadamente caro; requiere muestras muy grandes y completas de la troza o tronco; tarda mucho tiempo en procesarse y determinar la especie; no es posible determinar la procedencia de la muestra; se requiere de la participación de académicos o investigadores con amplia experiencia; es de uso común y accesible en la academia e investigación.

Estudio genómico de las especies y taxones por medio de la secuenciación de ADN

Es un excelente método para determinar la especie; el análisis es muy caro; requiere muestras no muy grandes; tarda mucho tiempo en determinar la especie; puede ser útil para determinar la procedencia de la muestra; se requiere de la participación de académicos o investigadores con amplia experiencia; es de uso casi exclusivamente para la academia e investigación.

Análisis de imagen anatómica con aplicaciones.

Es un excelente método para determinar la especie; el análisis es relativamente económico; requiere muestras no muy grandes; es relativamente rápido para determinar la especie; puede ser útil para determinar la procedencia de la muestra; se requiere de capacitación, pero es accesible mediante la utilización de aplicaciones para teléfonos, tabletas y computadoras por lo que resulta muy económico.

Análisis directo en tiempo real espectrómetro de masas de tiempo de vuelo (DART-TOFMS)

Es un excelente método para determinar especie; el análisis es económico; requiere de muestras muy pequeñas; extremadamente rápido en determinar la especie; puede ser útil para determinar la procedencia de la muestra; se requiere de la participación de personal especializado para realizar el análisis; es de uso poco común debido al costo del equipo; depende de ser alimentado con una base de datos que permita al equipo realizar la comparación de las muestras; es de uso casi exclusivo para la academia, investigación y del gobierno.

Recientemente México, en el marco de la cooperación técnica que tiene con el Servicio Forestal de los Estados Unidos (USFS), recibió en donación un equipo DART-TOFMS, herramienta que permitirá contribuir al combate de la tala ilegal y su comercio al poder identificar especies de madera.

d) Determinar las carencias de las fuentes de conocimiento actuales para la identificación de la madera en la CITES, así como sobre su disponibilidad y utilidad, y considerar los retos que se plantean y los recursos necesarios para que estas herramientas estén más ampliamente disponibles para las Partes en la CITES;

Actualmente, las fuentes de conocimiento actuales para la identificación de especies maderables CITES no son muy grandes, aunque debe de existir una gran cantidad de información dispersa en

institutos de investigación, universidades y dependencias gubernamentales en varios países del mundo, pero hace falta que dicha información sea concentrada por la CITES a través del comité de flora, y se actualice e integre esta información de manera continua, y se determine si este material cumple con la calidad necesaria para ser utilizada.

Por lo que respecta a la disponibilidad de esta información, se sugiere que cada una de las Partes se comprometa a aportar la información cada que ésta sea publicada; lo anterior, a través de convenios con institutos de investigación, universidades, dependencias gubernamentales, etc., en su territorio, para ser evaluada y validada y, posteriormente, para ser integrada en la página oficial de la CITES en el depósito digital sobre "Recursos y herramientas para la identificación de la madera"; lo anterior disminuye los recursos económicos para que éstas herramientas estén ampliamente disponibles para las Partes en la CITES y mediante documentos electrónicos de fácil acceso.

e) Elaborar plantillas normalizadas de información y otras herramientas que puedan ser utilizadas por las Partes para facilitar el intercambio de información sobre el contenido y estado de las colecciones de muestras de madera y el intercambio con instituciones de investigación, organismos de observancia y otras autoridades;

No hay comentarios en este punto.

f) Determinar los métodos para estimular el intercambio mundial, regional y nacional de las mejores prácticas en tecnologías de identificación de la madera entre las Partes, inclusive las enseñanzas extraídas en cuanto a la forma en que las Partes han fomentado su capacidad y experiencia para la identificación de la madera;

Es necesario compartir la información sobre los decomisos realizados por alguna de las Partes con los Estados de origen, proporcionando información, por ejemplo, sobre el modus operandi y la documentación adjunta y, en su caso, los datos de los infractores implicados, el destinatario, remitente, cantidad, especie decomisada, etc., así como cualquier otra información que pueda ayudar a iniciar investigaciones en los países de origen, de tránsito y de destino, y desarrollar perfiles de riesgo, identificando rutas, buques y entidades implicadas que pudieran ser de alto riesgo para el tráfico de especies, dado que actualmente existen datos estadísticos del tráfico internacional de maderas e incluso publicaciones; sin embargo, rara vez se notifica de manera inmediata y usando los medios oficiales a la Parte de la cual es originario el cargamento decomisado.

Una vez realizado este intercambio de información, será más fácil intercambiar información sobre mejores prácticas. Por lo que respecta al intercambio de tecnologías, es necesario que existan acercamientos y convenios de colaboración entre las partes por regiones, de tal manera que el intercambio de tecnologías, conocimientos, experiencias e información actualizada pueda ser aportada por las partes integrantes de las distintas regiones a las plataformas ya establecidas dentro del sitio oficial de la CITES, en este caso dentro del sitio de Recursos y herramientas para la identificación de la madera; esto tendrá como consecuencia facilitar el intercambio de material de referencia (muestras de madera, bases de datos) con instituciones reconocidas para apoyar el

desarrollo de técnicas de análisis forense y bases de datos de referencia en diferentes países, permitiendo un mejor combate del comercio ilegal de especies arbóreas incluidas en la CITES

g) Examinar la utilidad y practicidad del depósito digital, y formular recomendaciones sobre su desarrollo a fin de aportar información para la aplicación de la Decisión 19.145;

El depósito digital reúne, preserva y da acceso a las Partes, y difunde toda la información necesaria para el funcionamiento de la CITES.

h) Considerar los resultados pertinentes de la reunión en línea del Grupo de Tareas sobre comercio ilegal de especímenes de especies arbóreas incluidas en los Apéndices de la CITES, que figuran en el anexo de la adición del documento SC74 Doc. 33.2;

Se toma nota de los resultados y se consideran para las reuniones en línea del grupo, por programar.

Feedback from South Africa, as a member of the PC26-PC27 intersessional working group on timber identification, on the implementation of paragraphs a) to h) of Decision 19.147

a) **Develop a plan** to prioritize the CITES-listed tree species to focus global efforts on developing and sharing identification reference databases and tools, including sampling campaigns for vouchered reference samples;

South Africa has an existing small reference collection of voucher samples for timber species from across the world and we are happy to contribute to global reference databases that can assist Parties with wood identification where necessary and applicable. An update of the reference samples that are available in South African collections can be provided, at least for the CITES listed African timber species. Whilst the reference collection is slowly developing, a challenge for South Africa is in managing and growing the collection in the long term due to very limited capacity. There is currently only one expert in the entire country working (voluntarily) on this exercise and around 10% of the collections are without any provenance data.

Suggestions on prioritisation of species:

- focus at developing tools for identification at a genus level to provide at least an initial capability for law enforcement and border officials to correctly identify listed timber to genera level, and

- focus on where there are gaps in existing identification reference databases.

b) **Prioritize the development of identification material for *Dalbergia* species**, taking into consideration progress made in document PC25 Doc. 34 and document CoP19 Doc. 84.1, and giving attention to frontline identification materials to assist differentiating look-alike species that may not be of conservation concern, such as *Dalbergia sissoo*;

South Africa is interested in participating in the development of identification materials for South African/southern African species in the *Dalbergia* genus.

c) **Develop a list of available techniques and tools**, **and evaluate** their standards and usefulness to species-specific identification and enforcement for CITES-listed tree species and their look-alikes;

The following are some suggestions from South Africa that can be expanded upon:

Techniques and Tools	Pros	Cons
Traditional wood identification methods (based on visual macroscopic and microscopic wood anatomy)	- Most common methods currently employed; - Able to identify timber to genus level.	- Traditional process but requiring particular expertise; - Wood pieces need to be of a particular size and condition and added to the collection as standard size woodblocks (polished and square edges).
DART-TOFMS using mass spectrometry	- Can deliver fast results and is promising for successful timber identification (from small samples, requires only a sliver);	- Expensive machine/laboratory required; - Involves extensive training and full-time lab technicians.

	- Could also be used to identify other bits of confiscated or questionable material.	
DNA Barcoding	- Perhaps one of the most precise/powerful methods of identification to at least species level.	- Techniques not yet well developed for timber (particularly old or degraded pieces); - Potentially costly in terms of budget and capacity/skills.
Xylorix	- Inexpensive, portable device (Cellphone and attached lens); - Could be very effective for enforcement purposes, especially if comprehensive electronic timber databases exist.	- Provides automatic recognition of patterns trained on databases that must be continuously developed; - Requires training to ensure that samples are correctly prepared.
Xylotron	- Computer with dedicated light and UV based camera method with good results based on AI; - Open-source application with limited resources required.	- Provides automatic recognition of patterns trained on databases that must be continuously developed; - Requires training to ensure that samples are correctly prepared.

d) **Determine gaps in current knowledge sources for CITES timber identification**, on their availability and usefulness, and consider challenges and resourcing required to make these tools more widely available to CITES Parties;

As mentioned previously, South Africa has a developing reference sample collection of timber from around the world, but these have been built from very limited resources and there is a severe lack of expertise in the country. A collection from the former SAFRI (SA Forestry Research Institute) has now been incorporated in SANBI (South African National Biodiversity Institute). Additionally, the excellent Stephany Dyer Collection (SD) is now independently curated by Dr Robert Archer at SANBI. This is likely to be a problem in many countries in Africa. Around 10% of reference material housed at the South African National Biodiversity Institute are without collection data/provenance data. As the conservation and sustainable use of timber species becomes increasingly important globally, significantly more resources are required to aid in the identification of traded specimens, and this will require supporting existing experts with resources to build reference databases (both hard and electronic) as well as investing in youth capacity development to ensure generational continuity.

As technology continues to advance, it would perhaps be more worthwhile to focus on gaps in promising technologies and tools that could improve both the accuracy and speed of timber identification. Technologies such as DNA barcoding and computer-assisted tools (such as the Xylotron) should be prioritised for development, and collaboration between Parties and experts would amplify the usefulness of these (perhaps more practical) tools, which would be widely distributed and applied. Investment increasing the species coverage in the electronic databases could involve training people in Party countries on uploading reference sample images for species that they work on, and this will increase the reference database globally in both comprehensiveness and utility. Other tools such as mass spectrometry may be more resource intensive and less practical at this time.

e) **Develop standardized information templates and other tools** that could be used by Parties to facilitate sharing information on the content and status of wood sample collections, and exchange with research institutions, law enforcement agencies, and other authorities;

Perhaps a table like the one below (which South Africa will be using to capture data on the state of the country's reference collection of CITES timber species) could provide some ideas for standardised data capture in the space:

Species	**Appendix**	**Annotation**	**General Distribution**	**Reference material available in collection (yes or no)**	**Condition of material (good or poor)**	**Institution housing the reference material (incl. country name) and contact details**
Afzelia quanzensis	II (2023)	#17	Sub-Saharan Africa	Yes	good	PRE; SD (South Africa; Robert Archer)
Dalbergia armata (Scrambler or small tree)	II (2017)	#15	Sub-Saharan Africa	No		
Dalbergia melanoxylon	II (2017)	#15	Sub-Saharan Africa	Yes	good	PRE; SD
Dalbergia multijuga	II (2017)	#15	Sub-Saharan Africa	No		
Dalbergia nitidula	II (2017)	#15	Sub-Saharan Africa	No		
Dalbergia obovata	II (2017)	#15	Sub-Saharan Africa	No		
Pterocarpus angolensis	II (2023)	#17	Sub-Saharan Africa	Yes	good	PRE; SD
Pterocarpus lucens	II (2023)	#17	Sub-Saharan Africa	Yes	limited	PRE
Pterocarpus rotundifolius	II (2023)	#17	Sub-Saharan Africa	Yes	good	PRE; SD

f) **Determine methods to stimulate global, regional and national exchange** of best practices in wood identification technologies between Parties, including lessons learned on how Parties have built their timber identification capacity and expertise;

One suggestion would be to identify wood experts from across the globe and convene an in-person workshop where these matters can be fully discussed, and knowledge/ideas/recommendations documented in a synthesis report that can be distributed to all Parties. It would be important to include in the workshop young professionals as a means of developing the next generation of wood experts. Identifying experts could be done through CITES Parties as well as through existing international wood identification/expert groups e.g. the International Association of Wood Anatomists (IAWA).

g) **Review the utility and practicality of the online repository and make recommendations** on its development to inform implementation of Decision 19.145;

The repository presents a very impressive collection of resources related to timber, however, owing to the significant amount of information, it risks being quite daunting for users, particularly for enforcement officials who may not understand how to navigate all these resources. The division of the resources by different categories does assist but perhaps additional filters (based on applicability for implementing the CITES regulations) will further improve the repository's utility. Comprehensive but a very mixed box that will take time to navigate.

h) **Consider the relevant outcomes of the online Task Force meeting on illegal trade in specimens of CITES-listed tree species** presented in the Annex to the Addendum to document SC74 Doc. 33.2

Upon reviewing the outcomes document of the task force meeting it is clear that in order to tackle the illegal trade in specimens of CITES-listed tree species, substantial resources are required. This must be considered when requesting Parties to fully implement the measures and activities of relevance to them.

Whilst South Africa is a range state to several (not many) African CITES-listed species, utilisation of these species in the country is limited, based more on local consumption, according to enforcement officials. The country may, however, have a role to play in importing listed timber species for construction and manufacturing purposes (limited), as well as in facilitating international trade, via transit through South African ports (more likely). Section 3 of the document may thus have relevance to South Africa, and we have taken note of the recommendations made in this regard.

South Africa, through the South African National Biodiversity Institute (SANBI), is open to testing timber identification technologies and contributing information to their development. South Africa also has world-class forensic laboratories and could explore the development of forensic analysis techniques, such as DNA barcoding, and reference databases for timber species to allow for quick in-country or regional level analysis where resources are available.

Submitted by the United Kingdom of Great Britain and Northern Ireland, 16th February 2024.
Contact: CITES@kew.org

CITES Timber ID Working Group

Decisions 19.145 to 19.148

Task A - Members to provide written inputs for the implementation of paragraphs a) to h) of Decision 19.147

UK Written Response – 16.02.2024

Submitted by the United Kingdom of Great Britain and Northern Ireland, 16th February 2024.
Contact: CITES@kew.org

Task A - Members to provide written inputs for the implementation of paragraphs a) to h) of Decision 19.147 by 16 February 2024:

Decision 19.147 **-** The Plants Committee shall, in collaboration with relevant stakeholders and building on information on existing initiatives, and progress to date:

a) develop a plan to prioritize the CITES-listed tree species to focus global efforts on developing and sharing identification reference databases and tools, including sampling campaigns for vouchered reference samples;

- The objectives of 19.147 a) are all necessary requirements, but must fit within a broader implementation plan for the use of these identification tools, as well as the development of the tools themselves, which is currently lacking. This will require coupling the current and future capabilities of identification tools with the practicalities of applying them within different contexts and settings. For example, sustaining mass spectrometry facilities is beyond the current capacity of many national institutions, and there remains a strong global reluctance and practical barriers to exporting samples for law enforcement. We must therefore consider implementation alongside development of tools and have the right people around the table at every stage (e.g. customs, local laboratories), to ensure that solutions are able to have a practical impact and resources are not wasted.
- Building on the lists of priority species that have been developed, if we also identify priority countries/trade routes, we would be better able to develop bespoke tools and solutions for specific local challenges. Any implementation plan should therefore incorporate sub-plans working at a local level, which also consider due diligence approaches by the timber industry, rather than just monitoring, control and enforcement, where resources will always be limiting.
- Working at local/area level may also help CITES objectives to be integrated within broader grant funded projects that often work to protect areas, and not just individual species, and may incorporate other types of measures, such as support for alternative livelihoods. It may also aid the collection of reference samples - for example, highlighting concentrations of CITES species to guide the development of projects in those countries, and enable collecting trips to target those species with greater efficiency.
- It might also be useful for CITES to consider its role within the broader regulatory landscape, and the potential synergies that may exist with other timber management initiatives (e.g. the EU Deforestation Regulation, FRC regulations, Broader Market Recognition Coalition, FLEGT Licensing, Voluntary Certification Schemes, Timber Procurement Policies and Voluntary Partnership Agreements). In some cases, priorities and resource requirements may overlap, and it may be useful to consider how CITES can help direct where resource is needed and help identify valuable areas of research.
- In developing an implementation plan, other key issues to address include:
    - **Standardising the production of reference materials and data in different regions.**
    - **Establishing whether the proliferation of a method requires sharing of samples among labs, or simply digital reference data** (DNA seems to have an advantage here).
    - **Encouraging countries to contribute while navigating national natural resource protection regulations** (also noting the need to adhere to Nagoya ABS requirements). This affects both physical and digital reference material.
    - **The need for training and expertise to be developed alongside the development of tools.** For example, to ensure testing turnaround times requires a well-established set up with guaranteed provision of expertise and equipment, maintained for the long term. These are, however, difficult skills to cultivate.
    - **Ensuring a strong and effective collaborative approach at international and national levels** (for instance, cooperation between timber regulatory bodies, forest commissions and enforcement agencies). This might be aided by identifying regional priorities, and looking within existing reference collections to see how different facilities and reference databases can help to support one another. While a level of 'method competition' between different scientific disciplines can help drive the development of better tests, it also confuses and confounds capacity building. An implementation plan therefore needs to include a clear plan for the development of

global capacity among large donors and international scientists pursuing a mixed method approach, to avoid duplication and confusion, and to ensure the right tests are delivered to the right places.

- It may also be worth considering whether timber traceability will require greater global prioritisation in future, and how CITES can play a role in steering and supporting this.

b) **prioritize the development of identification material for *Dalbergia* species**, taking into consideration progress made in document PC25 Doc. 34 and document CoP19 Doc. 84.1, and giving attention to frontline identification materials to assist differentiating look-alike species that may not be of conservation concern, such as *Dalbergia sissoo*;

- As India has a number of rosewoods in trade, *Dalbergia sissoo* could be a suitable candidate for inclusion in studies to evaluate the capability of tools that enable the ready differentiation of timber products in trade. It may therefore be useful to develop a sampling plan to obtain reference samples from different populations of *Dalbergia sissoo* within India and other range states where it is produced, although it would be important to consider how this aligns with other regional priorities for the collection of vouchered reference material.
- Consideration should also be given to the potential drawbacks of removing individual species from a genus level listing, when more testing of products may then be required, in order to spot check or ensure that the exemption is not being mis-used. This may then lead to greater costs and delays than currently occur, although improvements in turnaround time and reduced costs for timber identification in future, may help alleviate this.
- McClure et al (2015) provides useful insights into the testing and differentiation of some *Dalbergia* species using a mass spectrometry technique.

c) **develop a list of available techniques and tools**, **and evaluate** their standards and usefulness to species-specific identification and enforcement for CITES-listed tree species and their look-alikes;

- While the development of such a list would create a valuable resource, capturing and presenting this information in fine detail and representing the latest developments poses significant challenges. Drawing on lessons from the fauna side of IWT forensics, these include:
    - There are too many caveats/variables concerning availability of tests: sample type, testing location, specific investigative question (open ID, closed ID, exclusion), cost, level of confidence in result, taxonomic resolution.
    - The list requires constant updating and is therefore a near full time resource which requires funding.
    - At present, there is still much debate over what techniques are actually considered suitable for application, particularly to support prosecutions (forensics), and there may be scientific disagreement over what should be included within the details presented.
- A high level description of what might be possible may therefore be something more realistic to aim for. Such a list could then provide useful information to CITES practitioners re. the expected capability, limitations and availability of the current suite of tools, although even at this level of detail, this would require maintenance and regular updating.
- To provide advice to Parties and practitioners, the approach adopted by the fauna forensic world may be useful here. Rather than creating a list, the Society for Wildlife Forensic Science (SWFC) has been designated as an official forensic advisor to ICCWC, which means that enquiries over the availability of tests for a specific issue can be passed through CITES -> ICCWC -> SWFS for a considered opinion. Such an approach might also be possible for timber, either through SWFS, or IAWA, or GTTN etc.
- A list or database could also record where tests have been forensically validated, recognising that process can be the most important aspect of a legal case, and the validation of techniques is required before they can be properly deployed (see note in section d). The forensic lab directory on the CITES website which lists internationally recognised labs and currently includes two timber specialists (in Malaysia and China) plus the USFWS lab in Ashland, could be expanded to include more timber labs.
- While species-specific determination remains an important goal of many techniques, it is also important to acknowledge that techniques operating at different taxonomic levels can all play a role within systems of timber identification. For instance:
    - CITES genus listings have the advantage that species-specific identification is not needed for prosecutions (where the first question is whether the species is CITES listed or not, noting that phytosanitary breaches often add to the case). However, if individual

species are listed but identification is only to genus level, it may be difficult for authorities to seize the shipment or take the case forward.
    - While it's not as precise beyond genus level, anatomy is still a good bedrock for timber identification that requires less expensive laboratory equipment, and skills in this area must not be allowed to dwindle.
    - To achieve a more precise answer, more than one technique may be required, and it would be useful to consider and test ways in which different types of test can be combined in practical settings.
- In developing a list of techniques, it is important to highlight that species identity is not the only consideration, with the ability to determine provenance/geographic origin also extremely important –for instance where only populations of a certain region are protected or CITES listed (e.g. *Cedrela*) and/or where plantation grown timber needs to be identified (e.g. *Aquilaria* spp.), and to support Appendix III listings.
- To help develop tools and an understanding of their capabilities, standardised forensic tests could be devised. These include Collaborative Exercise (CE) tests to check both the robustness of a method and the ability of a lab to run it, and Proficiency Tests (PT) for forensic practitioners. Here, it may be useful to cross-reference the work of SWFS re. the potential development of a PT test for timber identification.
- As AI is likely to play an increasingly important role in timber identification, it is also important to develop an understanding of considerations that are specific to its use – e.g. understanding how algorithms work and results are arrived at, and considering whether there is a need for a human to also validate certain results.

d) **determine gaps in current knowledge sources for CITES timber identification**, on their availability and usefulness, and consider challenges and resourcing required to make these tools more widely available to CITES Parties;

- A major gap at present is the availability of reference material to support the use of the tools which have been developed. Reference libraries based on the collection of physical specimens is essential for a technique to be credible. As highlighted by Low et al (2022), significant gaps exist within reference libraries for certain techniques, and conducting a similar review specifically for CITES listed species may be a useful exercise to undertake. Once gaps have been identified, the most efficient route to filling them can be determined – for instance, which initiatives are already planning to collect or work on CITES species, and whether bespoke collection trips are required.
- When considering priority species, it might also be useful to consider species that are common in trade, but are not yet CITES listed, where improved regulation could help avoid a CITES listing in future. Intelligence on predicting where illegal logging will occur might also help to prioritise areas in urgent need of reference material collection.
- Reference libraries must be robust and the databases must be clean – i.e. no duplicates or errors, with access back to physical specimen essential in order to check errors or uncertainties, and to accommodate updates if the information on a species later changes.
- When planning to fill gaps in reference collections, it is important to recognise that the quality of reference material is crucial. The challenges of collecting voucher specimens from the field include difficulties in species identification when the tree is not in flower/fruit, for which field identification guides (potentially incorporating the use of AI) need to be developed. If flower/fruiting condition is required, the timing of collecting trips is crucial, and working with local foresters may enable repeat visits to a plot to be conducted more easily. At the sampling location, standard procedures for taking samples and specialist equipment (e.g. climbing equipment to sample from different parts of the tree) are required. Considerable funding and continuity are therefore needed to help build reference libraries, along with planning in order to collect as efficiently as possible. Once on site, however, adding more species to the sampling objectives is relatively easy, with preparation and funding for the trip itself more the limiting factor. Collections from plantations are also cheaper and easier, while the wider use of RSI's could help with the transfer of sampled materials to a laboratory in another country.
- Low et al (2022) highlight a current lack of forensic validation for timber identification techniques, describing this as a major barrier to uptake by law enforcement agencies and recommending the publication of developmental validation studies to help address this shortfall. Low et al also highlight that there is no agreement on how a forensic validation study should be designed and conducted, especially for origin assignment, which could be addressed through an expert workshop – either CITES or UNODC convened.

- Compiling examples of cases where legal thresholds or precedents have been achieved may also be useful to document, if it is possible to collate and make this information publicly available.
- Other technical gaps include:
    - Training for staff in the use of techniques and in the correct conduct of legal investigations is required – for instance, how to take representative samples from an item and keep account of sample movements, access and handling. Here, identifying ways to provide training in best practice and possible links with other forensic science guidelines could be identified.
    - For many techniques, particular technical challenges exist (for instance, developing techniques to extract higher quality DNA from heartwood is among the priorities for DNA based tools). Identifying and highlighting these challenges may help to direct funding and coordinate research.
    - Investigating the effects of adulterants and glues added to timber-based products is an important consideration for the application of timber identification tools to certain taxa. This includes Agarwood producing species (adulterants) and plywoods (glues, and their potential effect on both the sample and the wood itself).
- Other gaps may be considered more geographic – for instance:
    - It would be useful to know which are the priority timbers for import and export from each region/CITES Party. This could then enable the correct suite of tools and reference materials to be made available for use in that region sooner.
    - The vast majority of countries affected by the illegal timber trade do not have access to (or qualified scientists to use) the wealth of existing knowledge in this area. Rather than focusing exclusively on developing and progressing the science, we need to also focus on helping all Parties catch up to a common baseline level of knowledge, otherwise implementation will be very geographically limited.
- As considerable resources will be required to address these gaps, it may be useful to assess - and highlight - the impact that enhanced systems of timber identification could have on reducing the threat of illegal logging. Considering the role of timber trafficking as a gateway to other forms of organised crime and how timber governance aligns with other global priorities may also be useful in this respect.

e) **develop standardized information templates and other tools** that could be used by Parties to facilitate sharing information on the content and status of wood sample collections, and exchange with research institutions, law enforcement agencies, and other authorities;

- Collaboration on this issue is vitally important to achieve the global coverage of techniques and expertise that is required.
- Collaboration between reference libraries would be aided by improved means of enabling the rapid exchange of materials and data between organisations. This may be difficult to fully standardise, and depends on barriers to data sharing being overcome, although guidelines and recommendations could perhaps be developed.
- Clarity over the CITES exemptions that exist to enable to transfer of samples between international facilities would be useful, which may also be aided by wider uptake of the RSI scheme.

f) **determine methods to stimulate global, regional and national exchange** of best practices in wood identification technologies between Parties, including lessons learned on how Parties have built their timber identification capacity and expertise;

- As noted in section c), establishing links between Parties and accredited forensic organisations would enable queries from Parties to be answered and practitioners to be directed towards the correct facilities and tools to apply.
- Less formal networks can also provide useful support. For instance, networks such as the African Wildlife Forensic Network (AWFN) operate a whatsapp group for lab practitioners across Africa through which questions are asked, and similar communications exist among scientists in SE Asia. These tend to work from the ground up, and once people know and trust each other they will ask each other questions informally.
- Regional fora such as the Experts Group on Illegal Logging and Associated Trade (EGILAT) have also been formed, and it may be worth considering how CITES can liaise more closely with these groups.

- Greater sharing of new/prototype techniques (for instance hand-held/phone adapter type devices) for testing in practical settings would be welcomed by border enforcement teams. These test phases could have immediate practical value for enforcement teams and would generate useful feedback for the developers.
- Could the gathering of reference material form part of an implementation "support package" following a timber listing decision? As a first step, a meeting could be convened between range States affected by the listing and experts, to discuss how existing tools and reference libraries could help to support the listing, and to identify gaps in the data or collections that may need to be addressed. However, this type of engagement would be dependant on scientists first agreeing on what type of testing is appropriate in a given context.
- Support for training in timber examination processes would enable best practice to be shared, and could aid the wider uptake of both front line and laboratory testing tools.

g) **review the utility and practicality of the online repository and make recommendations** on its development to inform implementation of Decision 19.145;

- The feedback received from practitioners is that this resource is not in regular use but could potentially be useful. At the moment, however, it's not very clear for which stakeholders the repository is for.
- It may be useful to consider how this and other non-CITES online resources (such as the GTTN website, and GBIF) complement each other, and whether stronger links between these could be formed?
- The repository could also provide contact information and act as a conduit for passing queries from Parties to forensic advisors, similar to the system used in IWT forensics for fauna noted above.

h) **consider the relevant outcomes of the online Task Force meeting on illegal trade in specimens of CITES-listed tree species** presented in the Annex to the Addendum to document SC74 Doc. 33.2; and

- No additional feedback on this at present.

References:

Low, M. C., Schmitz, N., Boeschoten, L. E., Cabezas, J. A., Cramm, M., Haag, V., Koch, G., Meyer-Sand, B. R. V., Paredes-Villanueva, K., Price, E., Thornhill, A. H., Brusselen, J. V., Zuidema, P. A., Deklerck, V., Dormontt, E. E., Shapcott, A., & Lowe, A. J. (2022). *Tracing the world's timber: The status of scientific verification technologies for species and origin identification. Iawa Journal, 44(1), 63-84. Advance online publication. https://doi.org/10.1163/22941932-bja10097*

McClure et al (2015) *Metabolic chemotypes of CITES protected Dalbergia timbers from Africa, Madagascar, and Asia - Rapid Commun. Mass Spectrom. 2015, 29, 783–788*.

Forensic Lab Directory -
https://cites.org/sites/default/files/EST/CITES_Directory_of_forensic_labs_rev_2023.pdf

Maria Isabel Camarena Osorno

From: De Angelis, Patricia <patricia_deangelis@fws.gov>
Sent: 08 March 2024 23:16
To: Jubinville,Lise (ECCC); CHONG_Kwek_Yan@nparks.gov.sg; César Augusto Beltetón Chacón [GMAIL]; Boles,Ruben (ECCC); mikhailnelson@yahoo.fr; lagardeprunus@gmail.com; gmbocky@gmail.com; ngomin.anicet@yahoo.fr; Dubois,Jean-François (il, lui | he, him) (ECCC); Farr, Ken; fcarvajal@minrel.gob.cl; 2538824602@qq.com; jenny_yy_lau@afcd.gov.hk; citesyuan@126.com; raphael_barbiche@yahoo.fr; coordination@citesrdc.org; nina-claudia.miron@ec.europa.eu; barbara.soto-largo-merono@ec.europa.eu; silke.lichtenberg@bfn.de; Daniel Wolf [BFN]; mario.sterz@bfn.de; david.harter@bfn.de; aamao@bsi.gov.in; igfwl-mef@nic.in [NIC]; sofia.nurul@mission-indonesia.org; esfandri.nurbi@mission-indonesia.org; desysatyac@gmail.com; wt.wardani@gmail.com; pete.lowry@mobot.org; atrindra.env1@gmail.com; sylvie.andriambololonera@mobot.mg; ramananantoandro@gmail.com; Rinah Razafindrabe [YAHOO]; robsomanitrandrasana@gmail.com; arovonjy.ramarosandratana@univ-antananarivo.mg; harisoa.ravaomanalina@univ-antananarivo.mg; nick@sarawakforestry.com; sunita@mtib.gov.my; farrah.ashray@nrecc.gov.my; josephtraore83@gmail.com; kone_fa@yahoo.fr; ac-cites@conabio.gob.mx; Hesiquio Benítez Díaz [CONABIO GOB]; ehjung@korea.kr; kim_jonghwan@korea.kr; Republic of Korea - Mr. Tae-Kwon Noh [KOREA]; kuznetsova.ta@rpn.gov.ru; Ilia Demidov [MAIL]; t.variawa@sanbi.org.za; nmasingi@dffe.gov.za; okumalo@environment.gov.za; m.pfab@sanbi.org.za; matthias.loertscher@blv.admin.ch; nicola.schoenenberger@ville-ge.ch; bruno.mainini@blv.admin.ch; Sahakian, Daniel A; john.veremis@aphis.usda.gov; St John, Anne; Gnam, Rosemarie; Leuteritz, Thomas; d.whitehead@kew.org; cites@kew.org; maxime.lebail@profepa.gob.mx; francisco.navarrete@profepa.gob.mx; pedro.romo@profepa.gob.mx; johnson@itto.int; ishii@itto.int; rweich@tradelink-group.com; forestbased@gmail.com; ashley@iwpawood.org; teyeliz@gmail.com; david.newton@traffic.org; rachele.stoppoloni@traffic.org; yulia.stange@wri.org; cbarber@wri.org; achambaudet@wwf.eu; shaleyla.kelez@wwfperu.org; cocriodain@wwfint.org; haisha@wwf.org.pk
Cc: Maria Isabel Camarena Osorno
Subject: Re: [EXTERNAL] RE: Intersessional working group on timber identification

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Lise and fellow WG members,

With apologies for the lateness of this reply, I would first like to thank the Chair for compiling information and the WG members who have commented so far. On behalf of the United States, we offer the following suggestions to assist the WG in fulfilling its mandate. Our feedback is grouped as overall or general comments on the process and followed by observations specific to each task.

General comments:

The list of tasks in Decision 19.147 is long and we strongly suggest identifying a stepwise or reasonable grouping or narrowing of these tasks or toward a phased approach. The WG Chair may wish to make initial

suggestions, the prioritization of which could be informed by the WG. The WG could form smaller subgroups to focus on particular aspects of the decision and provide recommendations that could be shared back with the broader group for review and input. The WG members should inform and help to refine this plan.

We note that Decision 19.147 is part of a *suite* of interrelated Decisions 19.145 to 19.148 on *Identification of timber and other wood products* of which either complements or informs our WG efforts. This suite of decisions should not be taken in isolation nor are they necessarily numerical or linear. It would be helpful for the WG to review the suite of decisions for awareness and to become aware of their interrelatedness and to inform the overall process.

This decision builds on previous CITES work that should provide WG members with background information and assist in addressing the tasks in the decision. Some key documents are noted below and perhaps the WG Chair may wish review this information prior to the meeting to make some initial determinations on where the group should take them into account (i.e., whether as background or to assist implementation of specific paragraphs).

- The CITES Timber ID WG Report in Document PC25 Doc. 19 Addendum
- Responses to Notification No. 2023/051 on *Identification materials: Decisions 19.144, 19.146, 19.194, and 19.203* (dated 20 April 2023)
- Background documents related to specific elements of this decision, such as the *Dalbergia* checklist and the CoP19 *Dalbergia sissoo* spp. proposal, along with the relevant summary records for the discussion of these agenda items.
- Other valid Decisions on CITES-listed trees that highlight the need for or involve development of ID material, such as Decisions 19.239 & 19.240 on *Agarwood-producing taxa (Aquilaria spp. and Gyrinops spp.)*, to help inform the prioritization of other ID material needs and to avoid duplication of effort
- Documents related to the African and Neotropical Working Groups.
- General familiarity with Resolution Conf 19.4 on *Materials for the identification of specimens of CITES-listed species*; in particular the Annex summarizes the types of information needed for effective CITES identification materials

Could we ask the assistance of the Secretariat to compile links to key background discussion documents / reports / outputs of the Timber ID working group that have been provided to PCs, SCs, and CoPs? Are the CITES Forum pages still in use, or another web platform available for use by the WG so our members could easily refer to this information and other generated as we undertake our mandate?

Recall that the CITES ID material serves two fundamental purposes for CITES implementation:

1. To allow frontline inspectors to determine whether shipments contain CITES-listed specimens and that such shipments are accompanied by the proper CITES documentation;
2. To support further analysis for definitive identifications on difficult-to-identify taxa or specimens or needed for legal or prosecutorial purposes.

We suggest that, where possible, the WG should focus on those *frontline* identification materials and tools as a top priority to ensure that timber shipments accompanied by CITES documents can be expeditiously inspected and cleared, where appropriate, and enable enforcement officers to identify un-permitted trade in CITES-listed timber species to support appropriate enforcement action.

Finally, we observe that the working group mandate is to focus on the issues of identification material or tools for CITES-listed trees and wood products, and that the WG does not have the authority to expand its scope beyond the Decision of the CoP. While traceability, sustainable use, and illegal trade are important aspects in the big picture of CITES implementation, this WG is charged with addressing shortfalls in CITES' capacity to identify CITES-listed tree species in trade. We consider that some of the suggestions made by the United Kingdom (UK) and World Resources Institute (WRI), for example, would be outside the scope of our mandate.

Regarding the specific tasks in Decision 19.147:

1. We see two parts to this task: To prioritize ID needs for CITES-listed tree species in general and to address the shortage of vouchered tree reference samples.

To assist with prioritization and avoid duplication of effort, the WG should take into consideration the work already identified or being conducted as part of Decisions aimed at other tree species and the work of African and Neotropical Working Groups. Dec. 19.147 paragraphs b) and aspects of paragraph e) would also inform this task.

As part of the prioritization process, the WG should assess whether diagnostic keys or taxon-specific CITES ID materials already exist and, where lacking, to consider ways to streamline ID needs based on trade (in a format similar to that shared by South Africa (ZA*)). As noted previously and in alignment with other WG member comments, the US agrees that an expeditious and practical first step would be to develop a plan to prioritize taxa relative to range countries and trading patterns; it is possible that this may be most practical on regional levels. We fully agree that the ID needs will also depend on how the species is annotated, so that the focus for one species or group of taxa may differ than that other another. The WG may also wish to review particularly the CITES Timber ID WG Report in Document PC25 Doc. 19 Addendum, paragraphs 12, 16, 17, and particularly, paragraph 23.

(*we notice that the spreadsheet refers to South Africa as SA, but we use the ISO abbreviation 'ZA' in our comments, since SA could be confused with 'Scientific Authority')

To address the known shortage of vouchered reference samples: These materials are needed for macroscopic and microscopic uses, each of which require different types of sampling or sampling methods. We suggest the WG (or a subset of the WG) review information gathered on this topic thus far and identify discrete steps to address the shortfalls, to include proposing mechanisms to assist in obtaining vouchered reference samples and developing or conducting outreach to increase Party understanding and participation. The WG should consider mechanisms to make best use of these available resources across Parties.

We take note of Mexico's comments regarding the Commission for Environmental Cooperation (CEC) project and recall that among the goals of the project was the possible sharing of timber samples among three countries (United States (US), Mexico (MX), and Canada (CA)) to support wood identification. An update on the CEC project, specifically whether and how the sharing of timber samples occurred, may be of interest to this working group.

Related to this task, the term "reference material" is vague. Out of context, it could be construed as literature, for instance, and that is not the focus of the sampling campaign. More precise wording, such as "vouchered reference samples for trees", "woody materials", "wood samples" or "tissue samples", as appropriate, will assist in a shared understanding and will also facilitate translation to other CITES working languages.

2. This paragraph has two foci: Developing ID material for *Dalbergia* broadly, and giving special attention to identification of look-alike species that may not be of conservation concern.

Regarding Dalbergia ID material: Recall that draft identification material for certain *Dalbergia* species was developed as a result of work conducted by the Nomenclature Working Group. That work should be considered, and evaluated or improved, as part of implementing paragraph b) of Dec. 19.147.

Regarding differentiating look-alike species that may not be of conservation concern: This item could benefit from a smaller (subgroup) group discussion to suggest options and propose means to explore those options for consideration by the wider group. Key would be to address the lack of reliable, field-ready tools that would provide frontline inspection officials a rapid and economical way to identify certain timber species that are lower conservation concern. As part of this task, the WG should explore and memorialize a shared understanding of the current impediments and concerns as they relate to CITES implementation and look-alike species of higher taxon listings. However, we do not believe it would be the remit of this working group to determine whether amendments to Appendices would be warranted.

3. Thanks to MX and ZA for developing an initial list of available tools. In keeping with the United Kingdom's (UK) comments, we agree that an intensive analysis or attempts to maintain updated information may not be the goal or the best use of the WG time. But we would find it valuable to consider MX and ZA and to obtain other WG member views on how useful these tools are from a *CITES* perspective, in terms of practicality, cost, whether frontline or forensic, etc. While we view the *development* of tools (beyond CITES ID-sheets) is outside the purview of the working group, a simple high-level list of tools and their practical use in the CITES arena would be helpful for a shared understanding of the WG and to make progress under other parts of Decision 18.147, such as paragraph a) which asks us to "focus global efforts on developing and sharing identification reference databases and tools" that could facilitate for CITES-listed tree species.

4. Here again, we point to and suggest the WG review and build on the analysis made by the Timber ID WG in the previous intersession.

We appreciate the input from UK, MX, ZA, and WRI regarding recent developments or improvements to timber ID material and tools. We also agree that training is key to proper identification, and the WG should consider and include the specific suggestions or resources provided in the current round of input and previously as of part of prior Timber ID WG efforts.

5. Again, the UK and ZA provide good insights to this item. In particular, we appreciate the summary and find the format used to show the availability of materials for ZA-native trees to be very helpful ("SA Table 2"). This format could be helpful to further evaluate gaps in ID material for other recently listed tree species. We would like to understand what ZA means by the term "reference collection" – are these herbarium specimens, living specimens, wood specimens for macroscopic comparison, etc.?

6. In implementing this paragraph, the WG should recall and consider the UNODC guidelines as well as additional considerable information generated as part of the CITES Task Force on illegal trade in specimens of CITES- listed tree species (the latter of which is referred to in paragraph h)).

7. We appreciate ZA's comments on this paragraph and also recall that Notif. No. 2023/051 sought input on the repository. A summary of those responses and inputs or improvements made thus far would be helpful for this WG to consider when implementing this paragraph. Namely, is the repository helpful to Parties and available in a manner that is useful for implementation? In considering the utility of the repository, the WG might also look at whether the additional resources provided in response to Notif. No. 2023/051 been added to the repository? Should they be and by what process? What about information provided as part of Regional Reports and other processes under CITES – has that been added?

8. Particularly relevant to implementation of Dec. 19.147 is the training to assist frontline officers in identifying fraudulent timber specimens. It would be helpful for the group to review that

report more closely to identify additional elements that could assist or inform capacity building for Parties to identify CITES-listed trees and wood products in trade.

In closing, this focused effort is vital to support implementation for CITES-listed tree species, particularly in light of the number of trees that were included in the CITES Appendices at the last CoP. It will be difficult to give due consideration to all 8 elements of this Decision at the same time, while considering the relevant information generated to date. Whether we create subgroups or take them in some particular order or both, we support the need for specific discussions and analysis of particular elements in this decision in a well-considered manner.

Thank you for the opportunity to provide input.

Regards,
Patricia

Patricia S. De Angelis, Ph.D.
Botanist, US Fish & Wildlife Service-Division of Scientific Authority
Chair, Plant Conservation Alliance-Federal Committee
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
703-358-1708 x 1753
703-358-2276 (FAX)
I respectfully acknowledge that I live and work on the traditional territory and homelands of the Piscataway Indian Nation.

From: Jubinville,Lise (ECCC) <Lise.Jubinville@ec.gc.ca>
Sent: Sunday, March 3, 2024 2:52 PM
To: CHONG_Kwek_Yan@nparks.gov.sg <CHONG_Kwek_Yan@nparks.gov.sg>; cesarbelte@gmail.com <cesarbelte@gmail.com>; Boles,Ruben (ECCC) <Ruben.Boles@ec.gc.ca>; mikhailnelson@yahoo.fr <mikhailnelson@yahoo.fr>; lagardeprunus@gmail.com <lagardeprunus@gmail.com>; gmbocky@gmail.com <gmbocky@gmail.com>; ngomin.anicet@yahoo.fr <ngomin.anicet@yahoo.fr>; Dubois,Jean-François (il, lui | he, him) (ECCC) <Jean-Francois.Dubois@ec.gc.ca>; Farr, Ken <ken.farr@NRCan-RNCan.gc.ca>; fcarvajal@minrel.gob.cl <fcarvajal@minrel.gob.cl>; 2538824602@qq.com <2538824602@qq.com>; jenny_yy_lau@afcd.gov.hk <jenny_yy_lau@afcd.gov.hk>; citesyuan@126.com <citesyuan@126.com>; raphael_barbiche@yahoo.fr <raphael_barbiche@yahoo.fr>; coordination@citesrdc.org <coordination@citesrdc.org>; nina-claudia.miron@ec.europa.eu <nina-claudia.miron@ec.europa.eu>; barbara.soto-largo-merono@ec.europa.eu <barbara.soto-largo-merono@ec.europa.eu>; silke.lichtenberg@bfn.de <silke.lichtenberg@bfn.de>; daniel.wolf@bfn.de <daniel.wolf@bfn.de>; mario.sterz@bfn.de <mario.sterz@bfn.de>; david.harter@bfn.de <david.harter@bfn.de>; aamao@bsi.gov.in <aamao@bsi.gov.in>; igfwl-mef@nic.in <igfwl-mef@nic.in>; sofia.nurul@mission-indonesia.org <sofia.nurul@mission-indonesia.org>; esfandri.nurbi@mission-indonesia.org <esfandri.nurbi@mission-indonesia.org>; desysatyac@gmail.com <desysatyac@gmail.com>; wt.wardani@gmail.com <wt.wardani@gmail.com>; pete.lowry@mobot.org <pete.lowry@mobot.org>; atrindra.env1@gmail.com <atrindra.env1@gmail.com>; sylvie.andriambololonera@mobot.mg <sylvie.andriambololonera@mobot.mg>; ramananantoandro@gmail.com <ramananantoandro@gmail.com>; rarinah@yahoo.fr <rarinah@yahoo.fr>; robsomanitrandrasana@gmail.com <robsomanitrandrasana@gmail.com>; arovonjy.ramarosandratana@univ-antananarivo.mg <arovonjy.ramarosandratana@univ-antananarivo.mg>; harisoa.ravaomanalina@univ-antananarivo.mg <harisoa.ravaomanalina@univ-antananarivo.mg>; nick@sarawakforestry.com <nick@sarawakforestry.com>; sunita@mtib.gov.my <sunita@mtib.gov.my>; farrah.ashray@nrecc.gov.my <farrah.ashray@nrecc.gov.my>; josephtraore83@gmail.com <josephtraore83@gmail.com>; kone_fa@yahoo.fr <kone_fa@yahoo.fr>; ac-cites@conabio.gob.mx <ac-cites@conabio.gob.mx>; hbenitez@conabio.gob.mx <hbenitez@conabio.gob.mx>; ehjung@korea.kr <ehjung@korea.kr>; kim_jonghwan@korea.kr <kim_jonghwan@korea.kr>; taekom@korea.kr <taekom@korea.kr>; kuznetsova.ta@rpn.gov.ru <kuznetsova.ta@rpn.gov.ru>; idemidow@mail.ru <idemidow@mail.ru>; t.variawa@sanbi.org.za <t.variawa@sanbi.org.za>; nmasingi@dffe.gov.za <nmasingi@dffe.gov.za>; okumalo@environment.gov.za <okumalo@environment.gov.za>; m.pfab@sanbi.org.za <m.pfab@sanbi.org.za>; matthias.loertscher@blv.admin.ch <matthias.loertscher@blv.admin.ch>;

nicola.schoenenberger@ville-ge.ch <nicola.schoenenberger@ville-ge.ch>; bruno.mainini@blv.admin.ch <bruno.mainini@blv.admin.ch>; Sahakian, Daniel A <daniel_sahakian@fws.gov>; john.veremis@aphis.usda.gov <john.veremis@aphis.usda.gov>; St John, Anne <anne_stjohn@fws.gov>; Gnam, Rosemarie <rosemarie_gnam@fws.gov>; De Angelis, Patricia <patricia_deangelis@fws.gov>; Leuteritz, Thomas <thomas_leuteritz@fws.gov>; d.whitehead@kew.org <d.whitehead@kew.org>; cites@kew.org <cites@kew.org>; maxime.lebail@profepa.gob.mx <maxime.lebail@profepa.gob.mx>; francisco.navarrete@profepa.gob.mx <francisco.navarrete@profepa.gob.mx>; pedro.romo@profepa.gob.mx <pedro.romo@profepa.gob.mx>; johnson@itto.int <johnson@itto.int>; ishii@itto.int <ishii@itto.int>; rweich@tradelink-group.com <rweich@tradelink-group.com>; forestbased@gmail.com <forestbased@gmail.com>; ashley@iwpawood.org <ashley@iwpawood.org>; teyeliz@gmail.com <teyeliz@gmail.com>; david.newton@traffic.org <david.newton@traffic.org>; rachele.stoppoloni@traffic.org <rachele.stoppoloni@traffic.org>; yulia.stange@wri.org <yulia.stange@wri.org>; cbarber@wri.org <cbarber@wri.org>; achambaudet@wwf.eu <achambaudet@wwf.eu>; shaleyla.kelez@wwfperu.org <shaleyla.kelez@wwfperu.org>; cocriodain@wwfint.org <cocriodain@wwfint.org>; haisha@wwf.org.pk <haisha@wwf.org.pk>
Cc: isabel.camarena@un.org <isabel.camarena@un.org>
Subject: [EXTERNAL] RE: Intersessional working group on timber identification

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good morning everyone,

I have received emails indicating that some feedback will be forthcoming but will be delayed. In the meantime, I have put all feedback to the questions into a spreadsheet. I will add to the spreadsheet, as I received more input.

Attached to this email are the spreadsheet and all the documents I have received so far, for your convenience. I look forward to hearing from any other WG member wishing to contribute. I will be synthesizing the information afterwards.

Best regards,

Lise Jubinville

Gestionnaire, Exécution du programme de permis CITES
Gestion de la faune et affaires réglementaires / Service canadien de la faune
lise.jubinville@ec.gc.ca / Tel 819 921 9610

Manager, CITES Permit Program Delivery
Wildlife Management and Regulatory Affairs / Canadian Wildlife Service
lise.jubinville@ec.gc.ca / Tél 819 921 9610

From: Jubinville,Lise (ECCC)
Sent: Monday, February 26, 2024 12:46 PM
To: CHONG_Kwek_Yan@nparks.gov.sg; cesarbelte@gmail.com; Boles,Ruben (ECCC) <Ruben.Boles@ec.gc.ca>; mikhailnelson@yahoo.fr; lagardeprunus@gmail.com; gmbocky@gmail.com; ngomin.anicet@yahoo.fr; Dubois,Jean-François (il, lui | he, him) (ECCC) <Jean-Francois.Dubois@ec.gc.ca>; ken.farr@nrcan-rncan.gc.ca; fcarvajal@minrel.gob.cl; 2538824602@qq.com; jenny_yy_lau@afcd.gov.hk; citesyuan@126.com;

raphael_barbiche@yahoo.fr; coordination@citesrdc.org; nina-claudia.miron@ec.europa.eu; barbara.soto-largo-merono@ec.europa.eu; silke.lichtenberg@bfn.de; daniel.wolf@bfn.de; mario.sterz@bfn.de; david.harter@bfn.de; aamao@bsi.gov.in; igfwl-mef@nic.in; sofia.nurul@mission-indonesia.org; esfandri.nurbi@mission-indonesia.org; desysatyac@gmail.com; wt.wardani@gmail.com; pete.lowry@mobot.org; atrindra.env1@gmail.com; sylvie.andriambololonera@mobot.mg; ramananantoandro@gmail.com; rarinah@yahoo.fr; robsomanitrandrasana@gmail.com; arovonjy.ramarosandratana@univ-antananarivo.mg; harisoa.ravaomanalina@univ-antananarivo.mg; nick@sarawakforestry.com; sunita@mtib.gov.my; farrah.ashray@nrecc.gov.my; josephtraore83@gmail.com; kone_fa@yahoo.fr; ac-cites@conabio.gob.mx; hbenitez@conabio.gob.mx; ehjung@korea.kr; kim_jonghwan@korea.kr; taekom@korea.kr; kuznetsova.ta@rpn.gov.ru; idemidow@mail.ru; t.variawa@sanbi.org.za; nmasingi@dffe.gov.za; okumalo@environment.gov.za; m.pfab@sanbi.org.za; matthias.loertscher@blv.admin.ch; nicola.schoenenberger@ville-ge.ch; bruno.mainini@blv.admin.ch; daniel_sahakian@fws.gov; john.veremis@aphis.usda.gov; anne_stjohn@fws.gov; rosemarie_gnam@fws.gov; patricia_deangelis@fws.gov; thomas_leuteritz@fws.gov; d.whitehead@kew.org; cites@kew.org; maxime.lebail@profepa.gob.mx; francisco.navarrete@profepa.gob.mx; pedro.romo@profepa.gob.mx; johnson@itto.int; ishii@itto.int; rweich@tradelink-group.com; forestbased@gmail.com; ashley@iwpawood.org; teyeliz@gmail.com; david.newton@traffic.org; rachele.stoppoloni@traffic.org; yulia.stange@wri.org; cbarber@wri.org; achambaudet@wwf.eu; shaleyla.kelez@wwfperu.org; cocriodain@wwfint.org; haisha@wwf.org.pk
Cc: isabel.camarena@un.org
Subject: RE: Intersessional working group on timber identification

Dear members of the working group,

I appreciate the responses which I have received so far from our colleagues in the UK, Mexico, and South Africa. However, it seems like a very small subset considering the number of participants identified (19 parties, 8 IGOs/NGOs). As a reminder, the question I sent earlier (note: the text of the Decision is at the very bottom of this email):

> *I welcome any views in written for the implementation of our mandate, specifying wherever possible to which **paragraphs a) to h) of Decision 19.147** your contributions refer to.*

I do not want to delay too much more but ask for your attention to the questions and responses by the end of this week, to allow me & the Secretariat time to review and prepare for a WG meeting in March.

Best regards,
Lise Jubinville

Gestionnaire, Exécution du programme de permis CITES
CITES Canada - Organe de gestion
Gestion de la faune et affaires réglementaires / Service canadien de la faune
Environnement et Changements climatiques Canada / Gouvernement du Canada
lise.jubinville@ec.gc.ca / Tel 819 921 9610

Manager, CITES Permit Program Delivery
CITES Canada - Management Authority
Wildlife Management and Regulatory Affairs / Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
lise.jubinville@ec.gc.ca / Tél 819 921 9610

From: Jubinville,Lise (ECCC)
Sent: Thursday, November 30, 2023 4:34 PM
To: CHONG_Kwek_Yan@nparks.gov.sg; cesarbelte@gmail.com; Boles,Ruben (ECCC) <Ruben.Boles@ec.gc.ca>; mikhailnelson@yahoo.fr; lagardeprunus@gmail.com; gmbocky@gmail.com; ngomin.anicet@yahoo.fr; Dubois,Jean-François (il, lui | he, him) (ECCC) <Jean-Francois.Dubois@ec.gc.ca>; ken.farr@nrcan-rncan.gc.ca; fcarvajal@minrel.gob.cl; 2538824602@qq.com; jenny_yy_lau@afcd.gov.hk; citesyuan@126.com; raphael_barbiche@yahoo.fr; coordination@citesrdc.org; nina-claudia.miron@ec.europa.eu; barbara.soto-largo-merono@ec.europa.eu; silke.lichtenberg@bfn.de; daniel.wolf@bfn.de; mario.sterz@bfn.de; david.harter@bfn.de; aamao@bsi.gov.in; igfwl-mef@nic.in; sofia.nurul@mission-indonesia.org; esfandri.nurbi@mission-indonesia.org; desysatyac@gmail.com; wt.wardani@gmail.com; pete.lowry@mobot.org; atrindra.env1@gmail.com; sylvie.andriambololonera@mobot.mg; ramananantoandro@gmail.com; rarinah@yahoo.fr; robsomanitrandrasana@gmail.com; arovonjy.ramarosandratana@univ-antananarivo.mg; harisoa.ravaomanalina@univ-antananarivo.mg; nick@sarawakforestry.com; sunita@mtib.gov.my; farrah.ashray@nrecc.gov.my; josephtraore83@gmail.com; kone_fa@yahoo.fr; ac-cites@conabio.gob.mx; hbenitez@conabio.gob.mx; ehjung@korea.kr; kim_jonghwan@korea.kr; taekom@korea.kr; kuznetsova.ta@rpn.gov.ru; idemidow@mail.ru; t.variawa@sanbi.org.za; nmasingi@dffe.gov.za; okumalo@environment.gov.za; m.pfab@sanbi.org.za; matthias.loertscher@blv.admin.ch; nicola.schoenenberger@ville-ge.ch; bruno.mainini@blv.admin.ch; j.grey@kew.org; e.williams@kew.org; l.bullough@kew.org; daniel_sahakian@fws.gov; john.veremis@aphis.usda.gov; anne_stjohn@fws.gov; rosemarie_gnam@fws.gov; patricia_ford@fws.gov; johnson@itto.int; ishii@itto.int; rweich@tradelink-group.com; forestbased@gmail.com; ashley@iwpawood.org; teyeliz@gmail.com; david.newton@traffic.org; rachele.stoppoloni@traffic.org; yulia.stange@wri.org; cbarber@wri.org; achambaudet@wwf.eu; shaleyla.kelez@wwfperu.org; cocriodain@wwfint.org; haisha@wwf.org.pk
Cc: isabel.camarena@un.org
Subject: Intersessional working group on timber identification

Dear members of the PC26-PC27 intersessional working group on timber identification,

As Chair of this intersessional working group, I am pleased to formally welcome you to the group.

By way of reminder, our mandate as agreed by the Plants Committee at PC26 is to discuss and agree on a way forward for the implementation of paragraphs a) to h) of Decision 19.147, including consideration of Annex 2 to document PC26 Doc. 20 and report back to the Plants Committee.

The membership of our group, as decided by PC26 is as follows:

Chair: Canada;
Members: alternate representative for Asia (Mr. Chong), representative for Central and South America and the Caribbean (Mr. Belteton Chacon), representative for North America (Mr. Boles);
Parties: Cameroon, Canada, Chile, China, Democratic Republic of the Congo, European Union, Germany, India, Indonesia, Madagascar, Malaysia, Mali, Mexico, Republic of Korea, Russian Federation, South Africa, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America;
IGOs and NGOs: International Tropical Timber Organization, Association Technique Internationale des Bois Tropicaux, ForestBased Solutions, International Wood Products Association, Species Survival Network, TRAFFIC, World Resources Institute, World Wide Fund for Nature.

To facilitate our discussions, as a first step I welcome any views in written for the implementation of our mandate, specifying wherever possible to which **paragraphs a) to h) of Decision 19.147** your contributions refer to.

For ease of reference, you will find the full text of Decision 19.147 below my sign-off of the message. Likewise, document PC26 Doc. 20 (and its Annex 2) is available here in English, French and Spanish, which will come in handy when implementing our mandate.
With this, I suggest the following action points:

a) Members to provide inputs in written for the implementation of paragraphs a) to h) of Decision 19.147 by **16 February 2024**;
b) Following this date, myself as Chair of this working group, in collaboration with the Secretariat, will collate the inputs received, and will propose an online meeting to discuss following steps. The meeting will be tentatively held **mid-to-late March 2024**.

Looking forward to your inputs, and with kind regards

Lise Jubinville
CITES Canada - Management Authority
Wildlife Management and Regulatory Affairs / Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada

Directed to the Plants Committee, in collaboration with relevant stakeholders

19.147 The Plants Committee shall, in collaboration with relevant stakeholders and building on information on existing initiatives, and progress to date:

a) **develop a plan** to prioritize the CITES-listed tree species to focus global efforts on developing and sharing identification reference databases and tools, including sampling campaigns for vouchered reference samples;

b) **prioritize the development of identification material for *Dalbergia* species**, taking into consideration progress made in document PC25 Doc. 34 and document CoP19 Doc. 84.1, and giving attention to frontline identification materials to assist differentiating look-alike species that may not be of conservation concern, such as *Dalbergia sissoo*;

c) **develop a list of available techniques and tools**, **and evaluate** their standards and usefulness to species-specific identification and enforcement for CITES-listed tree species and their look-alikes;

d) **determine gaps in current knowledge sources for CITES timber identification**, on their availability and usefulness, and consider challenges and resourcing required to make these tools more widely available to CITES Parties;

e) **develop standardized information templates and other tools** that could be used by Parties to facilitate sharing information on the content and status of wood sample collections, and exchange with research institutions, law enforcement agencies, and other authorities;

f) **determine methods to stimulate global, regional and national exchange** of best practices in wood identification technologies between Parties, including lessons learned on how Parties have built their timber identification capacity and expertise;

g) **review the utility and practicality of the online repository and make recommendations** on its development to inform implementation of Decision 19.145;

h) **consider the relevant outcomes of the online Task Force meeting on illegal trade in specimens of CITES-listed tree species** presented in the Annex to the Addendum to document SC74 Doc. 33.2; and

i) update the Standing Committee, as appropriate, on progress made, and report its findings and recommendations for consideration by the Conference of the Parties at its 20th meeting.

INTERNATIONAL TROPICAL TIMBER ORGANIZITION (ITTO)

ITTO INPUTS FOR CONSIDERATION BY CITES TIMBER ID WORKING GROUP

CITES TIMBER IDENTIFICATION WORKING GROUP – DECISION 19.147 (T*he Plants Committee shall, in collaboration with relevant and building on information on existing initiatives and progress to date para a-h*).

For consideration by the Working Group, ITTO submits its written comments on para a-h as follows:

a) Develop a plan to prioritize the CITES-listed tree species to focus global efforts on developing and sharing identification reference databases and tools, including sampling campaigns for vouchered reference samples;

ITTO has a long-lasting collaboration with member countries and CITES Secretariat since the 1990s in CITES works, participating in timber working groups in developing capacity building project works that includes support in developing non-detriment findings (NDF) of tropical tree species, developing protocols for wood identification, timber traceability among others.

With this experience in mind with ITTO covering about 80% of global forests and accounting for 90% of trade in tropical forest products, ITTO remains the singular organization with global outreach to spearhead any campaign at developing and sharing identification reference material with relevant stakeholders to implement projects on the ground.

Through project financing by individual donors on one side to ITTO Work Program (now Biennial Work Program-BWP) and through ITTO-CITES collaboration on the other, ITTO has implemented over eighty projects related to CITES listed species across from Africa, Asia- Pacific and the Latin America and the Caribbean region in the various categories as follows:

- Non-detriment Findings (NDF) – 50 projects
- Timber Species Identification – 12 projects
- Trade and Industry Market Transparency – 9 projects
- Enforcement Compliance – 7 Projects

The ITTO-CITES Program in conjunction with the other donor funding under CITES provides specific assistance to countries throughout the tropics to design forest management plans, forest inventories, provide guidelines and case studies for making “Non Detriment Findings” (NDFs) for CITES listed tree species, and to develop and disseminate tools for timber identification with the overall objective to ensure that international trade in CITES-listed timber species is consistent with their sustainable management and conservation.

Despite all this, more needs to be done given the over 400 listed tree species listed in CITES Appendices to develop a comprehensive implementation plan and identification database. That notwithstanding, ITTO field works exemplify the need for further funding and collaboration to continue to work on CITES listed species across all tropical timber producing regions where trade routes are well documented.

b) *Prioritize the development of identification material for Dalbergia species, taking into consideration progress made in document PC25 Doc. 34 and document CoP19 Doc. 84.1, and giving attention to frontline identification materials to assist differentiating look-alike species that may not be of conservation concern, such as Dalbergia sissoo;*

Listing of all ***Dalbergia*** and Diospyros spp. populations from Madagascar and African countries on Appendix II help countries with these species to better control the trade of wood products derived from these precious timbers on the international market, and it is an important step towards a sustainable use of these species. To better enforce CITES regulations, especially ***Dalbergia*** reliable and fast identification techniques for logs and wood products are needed. DNA based sampling technology has proven to be reliable to the point of telling apart look-alike species. This in combination with carbon isotopes is well documented to have the capabilities of differentiating species of the same genus.

It is worth noting that, through ITTO-CITES species program, lot of works including genetic studies have already been conducted using DNA technology in ***Dalbergia*** in Madagascar and some member countries in Latin America. CITES project funding can continue to expand to other countries which can then form the basis for developing identification materials across regions.

Currently an automated mobile app technology (Xylotron and Xylorix) is being developed based on anatomical features conducted by the Ghana Forestry Commission with support from the US Forest Service for **Dalbergia,** Mahogany, Afzelia and Khaya species the last three of which are recently listed CITES Appendix II species during CoP 19. These will complement the DNA based studies already conducted for Khaya spp across its range in West Africa and Central Africa***.***

One thing of note based on projects implemented by ITTO is that CITES species listing can and should be done in most cases at the individual species level instead of listing the entire genera. Based on experience we think there is the need for more scientific/botanical studies prior to such listings being approved to be certain what exactly should be included in a given genera (and thus subject to CITES controls) and what should not.

c) *Develop a list of available techniques and tools, and evaluate their standards and usefulness to species-specific identification and enforcement for CITES-listed tree species and their look-alikes;*

We at ITTO think that it's a laudable idea to compile the list of techniques used for timber species identification based on works done by ITTO with CITES collaboration and some with other donor funding. For ITTO perspectives these are tools employed for general species identification and some with potentials for species specific within a genus and with the potentials to pinpoint to geographic locations such as those studies using DNA/stable isotopes genetic markers.

Currently the World Forest ID has collected samples of various species of timber where genetic data has been analyzed for accurate identification and their respective provenances. In addition, World Forest ID also receives data that has been certified by local authorities and verified by the World Forest ID to be kept in their database. These not only comprise the genetic analyses studies but those that have been conducted using anatomical features of timber species as well.

There are indeed different technologies employed but the ease of use as in technology transfer from more resource endowed western labs to tropical countries is crucial for such data repository to succeed. This calls for more collaborations with donor agencies to allocate more funds to organizations such as ITTO with the resources to implement projects in countries with CITES listed species.

d) *Determine gaps in current knowledge sources for CITES timber identification, on their availability and usefulness, and consider challenges and resourcing required to make these tools more widely available to CITES Parties;*

A reasonable amount of work has been done as stated in a). Most works (Genetic and Anatomical studies) have been at country level and a few regional levels due to CITES listed species geographic range and funding available for sample collection at regional level for region wise studies. Most management authorities do not understand the scientific basis of the studies which is mainly limited to scientific authorities creating enormous gaps in how this info can be used aside aiding in species management and for determination of NDF. Sourcing further funding to rope in law enforcement and industry in the countries where these studies have been conducted will serve to build capacity of all involved in CITES listed species management and trade. In addition, studies should not only be limited to data analysis in western labs but the need to establish labs at least at regional levels with personnel trained in-country to handle such data and transmit same to a central repository in this case World Forest ID or new centers that have the capabilities for data hosting and data for referencing.

Given the number of species listed in CITES Appendices vis-à-vis studies conducted for tree species identification and geo-referencing, one can say that more resources will be needed for more studies to be conducted to generate tools for species identification alongside documenting robust conservation prescriptions for listed species for its long-term sustainability.

e) *Develop standardized information templates and other tools that could be used by Parties to facilitate sharing information on the content and status of wood sample collections, and exchange with research institutions, law enforcement agencies, and other authorities*

As countries in the tropics are parties to CITES, it is possible to develop standardized information templates for information sharing by countries to be coordinated by country focal points, management and scientific authorities. This will also involve working collaboratively with centralized data hosting entities for easy referencing and data sharing.

ITTO has recently started a project on establishment of a scientific reference database for geographic origin determination of Ipê and Cumaru in Peru. The data generated by the project will be uploaded into the World Forest ID's database for worldwide referencing.

For parties' information sharing to be successful there will be the need for capacity building of personnel involved in CITES species management and trade across countries of Parties involved in species exploitation and trade.

It's also worth noting some organizations and regional groups have made the attempt to facilitate information sharing and other exchanges among parties where CITES Secretariat and other collaborating agencies can build upon. For instance, the Asia-Pacific Economic Cooperation Expert Group on Illegal Logging and Associated Trade that (APEC – EGILAT) recently had an entire technology workshop on timber identification tools (the different approaches, limitations, opportunities and challenges of each tool and what can or cannot hold up under prosecution cases). The experiences

and results from these kinds of workshops can be useful to help design a template for information sharing.

Also, still ongoing is an APEC- EGILAT project spearheaded by Indonesia to create a network amongst the APEC members and the respective xylaria(s) in their countries to facilitate standardization of wood collection and ID methodologies and enhance ease of information sharing.

f) Determine methods to stimulate global, regional and national exchange of best practices in wood identification technologies between Parties, including lessons learned on how Parties have built their timber identification capacity and expertise

ITTO already has a repository of experts who have worked on CITES listed species across the globe. Information available through these works / studies can be packaged and shared at the national and regional levels through regional workshops. In addition, ITTO Secretariat can work with focal points to assist in bringing together stakeholders at the national and regional levels for purposes of sharing experiences and technology transfers among members who are parties to CITES. *Also refer to last paragraph in (e).*

World Forest ID input for WRI in the context of the CITES intersessional working group on timber identification

The World Resources Institute (WRI), as a member of the CITES intersessional working group on timber identification, is providing written inputs with regards to the implementation of paragraphs a) to h) of Decision 19.147.

As a general point, we note that paragraphs a) to h) of Decision 19.147 focus almost exclusively on species identification implementation issues. We urge that working group discussions around effective implementation of Decision 19.147 also consider the role of scientific tools to verify location of harvest.

As of 2024, there are over 400 timber-producing tree species listed in the CITES Appendices. While many listings are species specific, several recent decisions have reflected location-based genera listings, such as the CoP19 adoption of the African populations of *Pterocarpus* and *Afzelia* in Appendix II and in the context of multi-country supply chains. Location-based listings create an additional enforcement challenge requiring tools that can verify both species and location claims for many CITES listed timber species.

A number of chemical techniques to determine location of harvest are available, most notably Stable Isotope Ratio Analysis (SIRA) and trace element analysis (TEA). (In-)validating the declared location of plants and trees is possible due to the variability in their chemical and genetic features, which change across landscapes, influenced by climatic and environmental variation.

Mainstream use of these techniques requires comparison of chemical values extracted from a traded timber product, against extensive verified reference samples from the natural range. There remain significant gaps in the availability of high caliber reference material with geolocation coordinates.

World Forest ID was specifically established to fill this gap with funding from the governments of the United Kingdom, Australia, and the United States, and to enable more comprehensive testing for identification of timber and other wood products. World Forest ID emerged out of an international group of organizations, each recognizing the need for open-source reference data and global consensus building on scientific protocols and bringing their expertise in forestry, traceability, and biological sciences together. These included the Forest Stewardship Council (FSC), Royal Botanic Gardens, Kew, U.S Forest Service International Programs, and WRI.

World Forest ID has trained collectors on five continents to take physical samples of timber-producing tree species since 2019. As of 2024, World Forest ID has collected over 10,000 samples of timber and 'forest risk' agricultural commodities. This covers 345 species collected in 80 expeditions, across 49 countries.

World Forest ID started collecting endangered and highly traded timber species to support implementation of regulations designed to tackle nature crime. As of February 2024, World Forest ID has collected close to 1,000 samples of CITES listed timber species. This includes over 700 reference samples of timber species currently listed on Appendix II and 19 of timber species listed on Appendix III. World Forest ID has collected 250 samples of timber species in the genera *Dipteryx, Handroanthus* and *Tabebuia*, with additional collections planned in the next twelve months to support implementation and enforcement of the listings when they come into force in November 2024.

World Forest ID's physical sample collections of CITES listed timber species cover at least 14 countries with the largest collections for *Cedrela* and *Handroanthus* spp. across Brazil, *Pterocarpus* spp. from Cameroon, Democratic Republic of the Congo, the Republic of the Congo and Gabon and *Dipteryx* spp. from Peru. In all instances, the samples have been collected with associated geolocation coordinates to support Parties to scrutinize location-based harvest claims.

World Forest ID is now prioritizing collections of CITES listed timber species, to complete the full range of all species already partially collected in the World Forest ID data platform. This includes gathering additional samples of *Afzelia* and *Pterocarpus* spp. across the full range so that enforcement agents can distinguish between listed and unlisted specimens of the same genus. Additional collections will focus on *Dipteryx, Handroanthus, Khaya* and *Tabebuia* spp.