



Identification of Timber Species and Origins First Steering Committee Meeting Report

26 April 2012, Kepong, Malaysia

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Federal Ministry
of Food, Agriculture
and Consumer Protection



Bioversity International is a world leading research-for-development non-profit organization, working towards a world in which smallholder farmers and rural communities in developing countries are thriving and sustainable. Bioversity's purpose is to investigate the use and conservation of agricultural and forest biodiversity in order to achieve better nutrition, improve livelihoods and enhance agricultural and forest sustainability. Bioversity International works with a global range of partners to maximize impact, to develop capacity and to ensure that all stakeholders have an effective voice.

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The project "Identification of Timber Species and Origins" is a part of the CGIAR Research Program No. 6 (CRP6): Forests, Trees and Agroforestry: Livelihoods, Landscapes and Governance. This program has the clear objective of enhancing the management and use of forests, agroforestry and tree genetic resources across the landscape from forests to farms.

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Cover photo

Freshly felled iroko tree in a forest concession near Kumasi, Ghana - Ekúé MRM

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This report is the result of the first steering committee meeting of the project “Identification of Timber Species and Origins” coordinated by Bioversity International from its regional office in Serdang, Malaysia. We gratefully acknowledge the financial support of the Federal Republic of Germany to the project.

The steering committee extends its gratitude to Bioversity-Malaysia and FRIM staff (in particular Choo Kwong Yan), for technical, administrative and logistics supports.

INTRODUCTION

The first Steering Committee (SC) meeting of the project “Identification of Timber Species and Origins” was held on 26 April 2012. The list of participants who attended the meeting is attached as Annex I.

OPENING REMARKS, CHECK IN, TERMS OF REFERENCE OF THE STEERING COMMITTEE AND REVIEW OF THE MEETING AGENDA

Judy Loo, Senior Scientist at Bioversity welcomed members of the SC and called upon them to participate actively to the meeting. She asked participants to introduce themselves. After that, she reviewed the terms of references of the Steering Committee (Annex I) and the meeting agenda. Participants were asked to give their thoughts on the proposed agenda. We suggested moving the standards to the top of the agenda (Annex II) and it was approved unanimously.

PRESENTATION OF THE PROJECT WORK PLAN AND CHALLENGES

Marius Ekué, scientific coordinator of the project, presented the three year detailed work plan of the project and some of the project’s challenges. The overall objective of the project is to facilitate the practical application of timber tracking tools using genetic and stable isotope fingerprints for a number of priority timber species. The three year project, financed by the German Federal Ministry of Food, Agriculture and Consumer Protection, has three specific objectives. Activities related to the first specific objective (coordination and networking among institutes using DNA and stable isotopes tools) are the organization of workshops, the dissemination of information and a collaborative research project. The second specific objective related to the development of internationally accepted standards for DNA and stable isotope fingerprinting will involve activities related to the elaboration of various standards (sampling protocol, sample handling, storage of tissue & DNA, laboratory protocols, analytical methods, organization of ring & blind tests and the eventual development of an accreditation system). The third specific objective is related to the reference database and will require the elaboration of the list of priority species and the development of an online database for selected species.

Apart of the technical difficulties related to the elaboration of such database, Marius mentioned also some challenges in involving stakeholders (from both producer and consumer countries, users, timber industry, service providers, etc.); the involvement of experts and institutes in the network (access to existing data, sampling, collaboration to develop analytical tools etc.), and the transfer of technologies to producing countries.

AGENDA ITEM 2.0: SELECTION OF THE CHAIR AND VICE CHAIR

Shelley Gardner and **Manfred Groening** were nominated by Bioversity to lead the SC as Chair and Vice-Chair respectively. There were no other nominations or objections from members and both nominations were approved by acclamation.

Therefore, Shelley Gardner shall serve as Chair and Manfred Groening as the Vice-Chair of the SC for the duration of the project.

DISCUSSION ON SPECIFIC ISSUES

Shelley Gardner took over as Chair for the rest of the meeting. Table 1 summarized the consensus reached by the SC on what should be done, how it should be done, when and by whom. More details are given below in agenda items 3.1 to 3.6.

Table 1: Decisions of the steering committee meeting discussions on specific activities, timeline and responsibilities

N°	Outputs/standard	Recommendations/Assignment	Timeframe	Person in charge	Contribution	
					SC member	Reviewer
1	Sampling standard (sampling design, sampling size, samples)	Use ITTO project in Africa and existing protocols as a basis /Literature review and synthesis	4 weeks	Marius	-	GWG
2	Sample handling standard	Review of existing protocols and methods	4 weeks	Marius	-	SC
		DNA			Andrew & Bernd	GWG
		Stable isotopes			Markus, Manfred	IWG
3	Storage strategy for tissue and DNA	Use of existing resources, infrastructure -- make a recommendation, political considerations	-	Marius	-	SC
		Phase 1: Review of existing materials	4 weeks		Bernd & Markus	GWG & IWG
		Phase 2: Synthesis	6 months		Bernd & Markus	GWG & IWG
4	Blind test protocol	Develop the protocol	4 weeks	Johannes	Marius	GWG & IWG
5	Laboratory standards	Parallels with ITTO project in Africa DNA --Recommended protocols for extraction, Genotyping Isotopes – Recommended protocols for each stable isotopes	-	Marius	-	SC
		Phase I: pull together existing standards, references	4 weeks		Markus	GWG & IWG
		Phase II: synthesis and recommendations	12 months		Bernd & Markus	
6	Analytical methods	Review methods separately (DNA and stable isotopes) and then bring them together	-	-	-	SC

N°	Outputs/standard	Recommendations/Assignment	Timeframe	Person in charge	Contribution	
					SC member	Reviewer
		Phase 1: separate review (DNA and stable isotopes)	12 months	Marius, Bernd Markus	Andrew Manfred	GWG IWG
		Phase 2: synthesis (coordination working group/workshop)	TBD	-	-	SC
		7 List of priority species	Species identification focus & Geographic origin focus / Draft	6 months	Marius	Milton, Lee
8 Database	Database longevity, cost structure after the project / Consultations with partners	3 months	Judy	-	SC	
	Data sharing agreement / Draft	3 months	Judy	-	SC	
	Database and analytical tools meeting in Rome	June 2012	Bioversity programmer, Bernd, stable isotope expert, Marius, Judy	-	GWG & IWG	
	Planning/strategizing for development of analytical tools	12-24 months	Bernd, Andy, Manfred, Bioversity programmer, Marius	Markus	GWG & IWG	
	Options for linking to external databases / Contact with IBOL and TreeBOL	3 months	Andrew	Bernd	GWG	
9 Global network	Reach out to scientific community and users; Communication strategy (newsletters, PowerPoint, list serves, press release, video,	No timeline	Marius	SC	-	
10 Accreditation	Repertory of existing labs and capabilities and basic criteria	12 months	Marius	GWG & IWG	-	
11 Fundraising	Proposal for blind tests	12 months	Marius & Judy	AWG, GWG, IWG, PWG	-	
	Proposal for additional database development, and maintenance and capacity building and technology transfers to timber producing countries	24 months				

GWG: Genetics Working Group; IWG: stable Isotopes Working Group; PWG: Policy Working Group; AWG: Advocacy Working Group; SC: Steering Committee; TBD: To be determined; ITTO: International Tropical Timber Organization.

AGENDA ITEM 3.1: STANDARDS

SAMPLING PROTOCOLS

They were much discussion of the sampling and its potential implications for the quality of the database. There are many published studies on various timber species, but the sampling design used for some might not qualify them as source of data for the GTTN database. Decision of what should be accepted will be made on case-by-case basis. The different levels of samples mentioned were:

The authentic samples (from unlogged trees in the forest): Some have argued that only data extracted from such samples should be included in the database.

Reference or proxy samples (from trusted sources): samples from sawmills or log yards

Test samples: samples submitted to the database

Vouchers specimens necessary for species identification

The sampling design, the number of samples, field data to be collected (coordinates, DBH, photo), and material to be sampled (wood probes, leaves) should be elaborated based on the Germany/ITTO project in Africa and other existing protocols.

SAMPLE HANDLING STANDARD

Sample handling standards for DNA and stable isotopes should be drafted using existing protocols and practices.

SAMPLE STORAGE STANDARD

Existing knowledge and centre (DNA repository centre: Global Genome Biodiversity Network, EU DNA storage centre) for efficient storage; mechanism for maintenance and security would be helpful in drafting a standard. Some political considerations, with respect to ownership of genetic material will have to be taken into account for the repository centre.

BLIND TEST PROTOCOL

Blinds tests are essential to check the reliability of the database before releasing it for users. The sampling design is different from the one used to collect materials analyzed to build the database. Samples can include a combination of authentic samples and processed wood from trusted sources. Voucher specimens taken from populations might be needed.

LABORATORY STANDARDS

Protocols and guidelines for DNA extraction from wood and wood products, genotyping for different markers and stable isotope fingerprinting should be part of the standards.

ANALYTICAL METHODS

An initial review of methods will be conducted separately for DNA and stable isotopes. A coordination working group / workshop will work later to synthesize the methods. Statistical confidence levels should be considered.

AGENDA ITEM 3.2: PRIORITY SPECIES

The first step will be finalizing criteria to prioritize species, then a preliminary list will be established with the aid of a scoring process. The resulting list will be further refined through consultations with relevant stakeholders (forest research institutions, universities, forest services) and finalized at the regional meetings. Some considerations/criteria (complementary criteria to those suggested at the inception workshop) are:

- Review of existing lists of species including
 - FSC list of traded species
 - CITES species
 - Precious woods list
- Volume, value and trade intensity of individual species
- Existing lists of priority species

Additional criteria for species identification are:

- Bar-coded species (standard and local barcodes)
- Species difficult to be identify by wood anatomy.

AGENDA ITEM 3.3: DATABASE

Objectives

The database is a nonprofit tool to help control illegal logging. The objectives will depend on the needs of users. We identified two categories of users: the direct users (accredited labs) and the indirect users (custom services, certification bodies, services providers, timber traders, governments' agencies, NGOs, academics and research institutes).

Data sharing

- **Data sharing agreement** is essential to address all concerns mentioned in the inception workshop (IW) report. It should be available on the project website and can be an incentive for data providers.
- **Incentives to share information:** in addition to what is mentioned in the IW report, the logos of all contributing partners should be displayed on the project website. Raw data will not be publically available but maybe be necessary for the participating/accredited labs.
- **Database use / accessibility:** database should be protected by password.

Design/structure

- Data should be screened before entering the database by member of the technical working groups.
- Develop a list of parameters, objectives, etc. in order to consult with database architects / programmers: elements from existing databases can be helpful
- Security and storage should comply with ISO27001
- Explore options for linking to external databases (e.g. Barcode of life database for species identification): look carefully at the legal agreement and some potential programming complications

Database longevity

Ideally, the use of the database should be free. However we need to find a way to ensure its further development and long term maintenance. Bioversity will make further consultations on that.

AGENDA ITEM 3.4: GLOBAL NETWORK

The network can be developed in two phases with the involvement of different stakeholders.

- Phase 1: The goal is to facilitate access to data and contribution from the scientific communities. Scientists (using DNA and stable isotopes) should be approached by various means:

- Use of relevant listserv for connecting via email, sharing information (e.g. IUFRO, Evoltree, IAWA, etc.), website
- Invitation to regional workshops
- Phase 2: The goal is the involvement of general stakeholders and indirect users of the database

There is a need to develop a **communications strategy** integrating some of the following points:

- Meeting attendances,
- Standard PowerPoint presentation of the project,
- Project Brochure,
- Publications and other relevant information.

AGENDA ITEM 3.5: ACCREDITATION SYSTEMS FOR PRIVATE AND PUBLIC LABS

The accreditation system will be determined later based on the standards. There is also a possibility to develop more formal accreditation in the future.

AGENDA ITEM 3.6: FUNDRAISING

There is a need to raise more funds to cover the cost of blind tests (concept note already available), for additional database development (adding new species) and maintenance (longevity of the database).

Further collaborative proposals must be developed seeking support from various agencies (e.g. EU, WWF or ITTO).

WRAP-UP AND WAY FORWARD

Judy Loo thanked all participants on behalf of Bioversity and the organizing committee. She also thanked FRIM for hosting the event. She noted that we had a very productive meeting and that the recommendations will be taken into account by the project coordination. Finally she wished a safe return home to all participants.

CLOSING BY CHAIR

Shelley Gardner thanked all members of the SC for the confidence, the fruitful discussions and FRIM for hosting the event. She urged everyone to keep its commitments and to continue supporting the project. She then declared the First Steering Committee Meeting of the project adjourned.

VISIT FRIM BIOTECHNOLOGY DIVISION

Lee Soon Leong offered a guided tour of FRIM Biotechnology laboratory. He showed the equipment and explained some of the past and current researches activities especially related to DNA barcoding and the use molecular markers for Malaysian timber tracking purposes.

Annex I: Terms of reference of the Steering Committee for the Project Identification of Timber Species and Origins

Composition and Role of the Steering Committee

The Steering Committee is a small international body consisting of invited members (Table 1) from different stakeholder groups and/or expertise, which would guarantee a needed plurality of views, thematically and geographically. All members serve in their personal, not institutional, capacities.

Table 1: Members of the Steering Committee

Name	Institution	Role
Shelley Gardner	United States Department of Agriculture (USDA), USA	Chair
Manfred Groening	International Atomic Energy Agency (IAEA)	Vice-Chair
Matthias Schwoerer or Thorsten Hinrichs	Federal Ministry of Food, Agriculture and Consumer Protection (BMELV), Germany	Member
Andrew Lowe	University of Adelaide, Australia	
Bernd Degen	Johann Heinrich von Thünen-Institut (vTI), Germany	
Johannes Zahnen	World Wildlife Fund (WWF)	
Markus Boner	TÜV Rheinland, Agroisolab, Germany	
Lee Soon Leong	Forest Research Institute Malaysia (FRIM), Malaysia	
Vincent van den Berk or Aimi Lee	European Union Forest Law Enforcement, Governance and Trade (EU FLEGT) Facility	
Phil Guillery	Forest Stewardship Council (FSC)	
Gerhard Breulmann	International Tropical Timber Organization (ITTO)	
Sarah Price	Programme for the Endorsement of Forest Certification (PEFC)	
Milton Kanashiro	Brazilian Agricultural Research Corporation (EMBRAPA), Brazil	
Yin Yafang	Chinese Academy of Forestry (CAF), China	
Judy Loo	Bioversity International	
Marius R.M. Ekué		

Responsibilities

The Steering Committee is responsible for advising the Project Management on the overall prioritization and activities to deliver on its objectives. The Steering Committee works to support and facilitate the activities of the Project Management, providing overall guidance and advice on strategic direction.

Specifically, the Steering Committee members undertake to:

- Provide advice on establishing the list of priority timber species to begin building the database,
- Facilitate contact and access to existing data relevant for the project,
- Provide advice on the structure of the database and the accessibility criteria,

- Review and advise on the standard guidelines (sampling design, sampling size, genotyping methods, stable isotopes techniques, data analysis),
- Review and advise on the accreditation system for labs working in the area,
- Fulfill other functions as emerging needs are identified.

Decision making

The Steering Committee will make decisions on the basis of (non-voting) consensus. The Steering Committee will be co-chaired by two members, who agree to serve as presiding chairs.

Schedule

The Steering Committee will meet once a year through the life of the project and may have informal meetings if necessary possibly by Skype or conference call. In addition members may be asked to review documents and provide advice at other times.

Secretariat and reporting

The project coordinator will provide secretariat services for the Steering Committee by organizing meetings, producing documentation and meeting minutes, managing correspondence, information dissemination and related tasks.

Decisions and major points of discussion of Steering Committee meetings will be posted on the project web page, in the interest of transparency.

Annex II: Agenda

1. Check in, launch and introduction
 - 1.1. Opening Remarks, check in and review of the agenda (Judy Loo)
 - 1.2. Presentation of the project work plan and challenges (Marius Ekué)
 - 1.3. General discussion (Judy Loo)
2. Selection of the Chair and Vice Chair
3. Discussions on specific issues (Shelley Gardner)
 - 3.1. Standards
 - 3.2. Priority species
 - 3.3. Database
 - 3.4. Global network
 - 3.5. Accreditation systems for private and public labs
 - 3.6. Fundraising
4. Wrap-up and way-forward (Judy Loo)
5. Closing remarks (Shelley Gardner)
6. Visit FRIM Biotechnology Division (Lee Soon Leong)

Annex III: Attendance at the First Steering Committee Meeting

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Participants at the First Steering Committee Meeting (Photos - Choo Kwong Yan)

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