



REPORT OF THE MEETING

**ITTO CONSULTATIVE MEETING
ON ASIA-PACIFIC TROPICAL LESSER USED SPECIES TO BE PROMOTED
BY ITTO PROJECT PD 58/97 REV.1 (I): "THE ESTABLISHMENT OF THE
DATABASE OF TROPICAL INDUSTRIAL LESSER-USED WOOD SPECIES"**

Kuala Lumpur, Malaysia, 5 – 6 February 2002

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BY ITTO PROJECT PD 58/97 REV.1 (I) "THE ESTABLISHMENT OF
THE DATABASE OF TROPICAL INDUSTRIAL LESSER-USED WOOD
SPECIES"**

KUALA LUMPUR, MALAYSIA, 5 – 6 FEBRUARY 2002

TECHNICAL SECTION

Participants

Dr. Abdul Rashid Malik (Malaysia)
Dr. K.M. Bhat (India)
Sri Nugroho Marsoem (Indonesia)
Mr. Sairusi Bulai (Fiji)
Mr. Dick McCarthy (PNG)
Mr. Pablito Alcachupas (Philippines)
Mr. Pravit Chittachumnonk (Thailand)
Mr. Jude Tabi (Vanuatu)
Mr. Ling Wang Choon (Malaysia)
Mr. Ho Kam Seng (Malaysia)
Mr. Mohd. Shukari Midon (Malaysia)
Mr. So Lorn (Cambodia)
Dr. Douglas Pattie (ITTO Secretariat)

For the position and contacts, please refer to the list of participants attached in annex 2.

General Aspects

Project PD 58/97 Rev.1 (I) is subcontracted to the Nagoya University Furukawa Museum. The project started in May 1999, with the cooperation of several institutions, among them Nagoya University and the University of Shimane in Japan, CIRAD-Foret in France and the Gadjahmadah University in Indonesia.

An expert panel meeting to assess the progress of the data compilation and the quality of the presentation (GUI), was held 26-28 February 2001 in Kuala Lumpur, Malaysia. The recommendations of this evaluation panel were presented in Forest Industry Committee document CFI/XXVIII/9 and tabled at the Thirtieth Session of the ITTC held in Yaounde, Cameroon in May 2001.

The initial workplan and time schedule for the subcontract was concluded in May 2001, and beginning in June 2001, a six month extension was approved (CFI/XXVIII/9) in order to include additional information and address recommendations based upon results of three regional workshops, as well as, to prepare a CD-ROM Japanese version of the database.

The activities to be carried out in the three consultative meetings in the producing regions of tropical timber are noted in the Terms of Reference for the participants in Annex 1. The African Regional Consultative Meeting took place in Libreville, Gabon, on 9 - 10 August 2001.

Objective of the Project

The aim of this project is to create a comprehensive database of tropical industrial lesser-used timber species, with special emphasis on commercially available alternative species which have a market potential.

Technical Details

For the data collection, the three ITTO Producer Regions were considered: Africa, Latin America and Asia-Pacific.

The information was stored in different tables according to the subject:

- Scientific and trade names
- Synonyms
- Common names
- End uses (e.g., furniture, flooring)
- General information (ecology, characteristics of the tree, geographical distribution)
- Wood properties (grain, texture, color, etc.)
- Technological properties
- Wood drying
- Workability
- Anatomy

In the database, the information on 942 different species (scientific names), 291 from Africa, 270 from Latin America and 381 from Asia-Pacific has been included. While performing a search (query) of the database, the scientific name is the fundamental criteria used for linking and relating all the information in the database.

A total number of 651 trade or commercial names have been considered, 191 from Africa, 209 from tropical America and 251 from South East Asia. Some of the trade names are shared by more than one species.

There are 1,828 synonyms or basionyms recorded, 478 from Africa, 586 from Latin America and 764 from Asia-Pacific.

Additionally, a total of 16,157 common names were included, 5,722 from Africa, 5,379 from Latin America and 5,056 from Asia-Pacific.

Among the tropical timber species selected, 84 families, 26 of them present in the 3 regions considered, are represented. In general, the most abundant

group is the bean family (Leguminosae), followed by the Mahogany group (Meliaceae) and Lauraceae.

In the case of African species as well, the most abundant group is the Leguminosae followed by the Sapotaceae and the Meliaceae. In Latin America also, the Leguminosae is the main group followed by the Lauraceae and Moraceae. In Asia-Pacific the Dipterocarpaceae and the Anacardiaceae followed the Leguminosae group.

For handling the information and for preparing the user interface (GUI), the database software used was Microsoft Access.

Searching for Information

Three search methods are available at this stage, the first two specifically look for information concerning a timber species and the third one performs a search of the terms contained in the database:

- Search by Name: looks for information about a species based on a name (trade name, scientific name, common name or synonym)
- Search by Criteria: allows the user to select certain parameters (end use, physical properties, mechanical properties or workability) based on which a query is carried out, giving as a result a species or a selection of species.
- The User can also select an alternative commercially available species based upon selected wood property parameters. Information provided by the African Consultative Committee Meeting has been input to the database and serves as the only current alternative species.

In both cases, after selecting one species, the user can access detailed information by clicking any of the choices available in the auxiliary menus.

- About Tropical Timbers: includes tropical timber related terms contained in the database.

Collection of Information

For the core database no new data was created, all the information was taken from literature research, ITTO sponsored project reports concerning lesser-used or alternative species and some additional information collected from CIRAD-Foret. The Expert Evaluation Panel, the African Consultative Meeting and now the Asia-Pacific Meeting have been the main sources consulted for the species selection as alternative species.

All the images included were prepared from the Nagoya University Furukawa Museum or from project leader's wood sample collection. Additional samples from Kyoto University, CIRAD Foret and ITTO projects were also incorporated.

For the market information, the ITTO member countries represented at the Regional Consultative meetings have been or will presently be incorporated.

Proceedings of the Asia-Pacific Meeting

5 February 2002

Opening of the meeting.

Facilitator: Dr. Douglas Pattie

Welcome words from Dr. Abdul Malik, Director of FRIM Corporate Affairs Division.

After wishing a welcome to the participants, on behalf of Forest Research Institute of Malaysia (FRIM), he recalled the aim of this meeting in accordance with the terms of reference, elaborated by the Expert Panel meeting held in February 2001 in Kuala Lumpur, attached as annex 1.

Opening presentation from Douglas Pattie, ITTO Projects Manager for Forest Industry.

On behalf of the ITTO Executive Director, he welcomed the participants in this meeting funded by ITTO to which he expressed the sincere gratitude from member countries. He stated that the said meeting was in keeping with the amendment to the project PD 58/97 Rev.1 (I). He expressed the wish that the meeting would contribute to the improvement of the database which will be a tool for the development of new market products and new strategies to enable the promotion of commercially available alternatives species within sustainable forest management policy regimes.

He then made a presentation on the ITTO and provided background to the development of the database. After which, Dr. Pattie discussed the broad characteristics of the database design and demonstrated the search features of the GUI for the database.

Objectives of the meeting.

Dr. Pattie recalled the terms of reference of the meeting, which are in annex 1, to the participants. A general discussion of the database with all the participants followed. It was noted that some participants had not received the CD-ROM, nor the ITTO Annual Review, which had been mailed by express mail from Japan to each of the participants. Additional copies were then distributed.

Presentation, by the representatives of the ITTO member countries, of selected promotion species and additional commercial information to be included in the database.

In conformity with the terms of reference for the participants in the consultative meeting, the presentations of the available alternative species from the representatives of the ITTO member countries which attended the meeting are summarized hereafter. The terms of reference were recalled in that only species that were not in the ITTO Annual Review were to be considered as LUS, and of those species to be promoted, it was further to be divided into those that were already in the ITTO LUS database and those that were not, and should be entered. It was discussed that a weakness of the search strategy was that initially the user had to select a region before being able to search for a species.

INDIA/ Dr. K. M. Bhat

The representative of India reported that India was interested in promoting a total of fourteen commercially available species. Four of the species were already coded in the database and ready to be considered as alternative species. These species were: Siris (*Albizia chinensis*), Kala siris (*Albizia odoratissima*), Kadam (*Anthocephalus chinensis*), Haldu (*Haldina cordirolia*)

Ten species to be promoted were not encoded in the Asia-Pacific regional partition of the database: Maharukh (*Ailanthus triphysa*), Kathal (*Artocarpus heterophyllus*), Aini (*Artocarpus hirsutus*), Rosewood (*Dalbergia latifolia*), Ebony (*Diospyros ebenum*), White cedar (*Dysoxylum malabaricum*), Hopea (*Hopea Parviflora*), Benteak (*Lagerstroemia microcarpa*), Bijasal (*Pterocarpus marsupium*), Irul (*Xylia xylocarpa*)

The representative gave an overview of the forest cover in India, consumption patterns, the demand and supply patterns and noted that LUS play a significant role in village home gardens. He also provided information on the Kerala Forest Research Institute and the Institute's database of 162 Indian species.

Wood samples of the species were provided.

He also noted the Rosewood species and the species *Pterocarpus santalinus* were listed in CITES Appendix II.

INDONESIA / Sri Nugroho Marsoem

The representative reported that Indonesia is interested in promoting 7 species. Of these species four are encoded in the database and are ready to be included as available alternative species. Estimated volume amounts were not provided. These species ready to be promoted are the following: Perupok (*Lophopetalum javanicum*), Karet (*Hevea braziliensis*), Randu/Kapok Randu (*Ceiba pentandra*), Sengon (*Paraserianthes falcataria*)

Three species to be promoted are not in the Asia-Pacific regional partition of the database. They are the following: Akasia (*Acacia aviculiiformis*), Mindi (*Melia azedarach*), Trembesi (*Samanea saman*).

Wood samples of these species were provided by the representative of Indonesia.

Specific information on basic technical aspects (physical and technological properties, end uses, etc.) for the three species not in the database will be forwarded to ITTO.

Some information was provided on sustainable management of forests in Indonesia along with production and harvest volumes.

A list of 13 trade associations and relevant government institutions was provided.

PNG/ Dick McCarthy

The representative reported that PNG is intending to promote 15 species. These species are encoded in the database and are ready to be included as available alternative species. Estimated volume amounts were provided. The species to be promoted are the following: Water Gum (*Syzygium buttnerianum*), PNG Basswood (*Endospermum* spp. incl. *E. medullosum*, *E. Domatiphorum*, *E. Moluccanum*, *E. Myrmecophilum*), Labula (*Anthocephalus chinensis*), Garo Garo (*mastixiodendron*, *M. Pachyclados*, *M. stoddardii*), Light Celtis (*celtis mymanii*, *C. Kajewskii*), Amberoi (*pterocymbium beccarii*), Pink Satinwood (*Buchanania*, *B. arborescens*, *B. heterpphylla*, *B. macrocarpa*, *B. mollis*), Ammora/Pacific Maple (*Aglaia cucullata* syn *Amoora cucullata*), Nut meg (*Myristica* spp incl. *M. buchneriana*), Dysox (*Dysoxylum* spp incl. *D. parasiticum*, *D. Caulostachyum*, *D. gaudichaudianum*, *D. pettigrewianum*), Fig/Ficus (*Ficus* sp.), Garuga (*Garuga floribunda*), Hopea Light (*Hopea forbesii*, *H. papuana*, *H. similes*, *H. celtidiflora*), Antiaris (*Antiaris toxicara*), White Tulip Oak (*Pterygota horsfieldii* syn. *P. forbesi*)

Wood samples of these species were provided by the representative of PNG.

Information on basic technical aspects (physical and technological properties, end uses, etc.) and on commercial aspects was provided for the 15 species. Additional information related to building applications and strength codes was also provided as reference material.

No information was provided on restricted species, national legislation related to exports or log export bans.

Industry association contacts and company information were provided.

VANUATU / Jude Tabi

The representative reported that Vanuatu is intending to promote 4 LUS species. These species are encoded in the database and are ready to be included as available alternative species. Estimated volume amounts were not provided. The species to be promoted are the following: Namalaus

(*Garuga floribunda*), *Natapoa* (*Terminalia catappa*), Raintree (*Samanea saman*), *Nandao* (*Pometia pinnata*).

Wood samples of these species were provided by the representative of Vanuatu.

Specific information on basic technical aspects (physical and technological properties, end uses, etc.) was provided for the 4 species.

Information was provided on restricted species, national legislation related to exports and log export bans.

Contact and forest industry company information was provided.

MALAYSIA/ Ling Wang Choon

The representative reported that Malaysia is intending to promote eight species. Of these species, five are encoded in the database and are ready to be included as available alternative species. Estimated volume amounts were provided. The five species in the database which are ready to be promoted are the following: *Asam* (*Mangifera* spp.), *Kepayang Babi* (*Mezzettia leptopoda*), *Rengas* (*Gluta* spp.), *Sentang* (*Azadiractha excelsa*), and *Benuang* (*Octomeles sumatrana*).

The three LUS species which are to be promoted and are not in the Asia-Pacific partition of the ITTO database are: *Ubah* (*Eugenia* spp.), *Selunsor* (*Tristania* spp.) and *Enkabang* (*Shorea* spp.)

Wood samples of these species were provided by the representative of Malaysia.

Some specific information on basic technical aspects (physical and technological properties, end uses, etc.) and on commercial aspects was provided for four of the eight species.

No information was provided on restricted species, national legislation related to exports or log export bans.

No contact or industrial processor information was provided.

FIJI / Mr. Sairusi Bulai

The representative reported that Fiji is intending to promote 11 species. These species are encoded in the database and are ready to be included as available alternative species. Estimated volume amounts were provided. The species to be promoted are the following: *Sa* (*Parinari insularum*), *Doi* (*Alphitonia zizphoides*), *Kauceuti* (*Bleasdalenvitiensis*), *Koka* (*Bischofia javanica*), *Laubu* (*Garcinia myrtifolia*), *Masiratu* (*Degeneria vitiensis*), *Moivi* (*Cynometra insularis*), *Sarosaro* (*Planchonella vitiensis*), *Sasauira* (*Dysoxylum quercifolium*), *Tivi* (*Terminalia pterocarpa*), *Vutu* (*Barringtonia edulis*).

Wood samples of these species were provided by the representative of Fiji.

Some specific information on basic technical aspects (physical and technological properties, end uses, etc.) and on commercial aspects was provided for the 11 species was also provided. Additional information related to building applications and strength codes was also provided as reference material.

No information was provided on restricted species, national legislation related to exports or log export bans.

No contact or industrial processor information was provided.

THAILAND/ Mr. Pravitt Chittachumnonk

The representative provided information on the situation in Thailand and noted that no species were being exported and that no species were intended to be promoted as Thailand is a net consumer of forest products.

No information was provided on restricted species, national legislation related to exports, log export ban or forest industry company information.

PHILIPPINES/ Pablito Alcachupas

The representative reported that the Philippines is intending to promote 18 species. Six of the LUS species are encoded in the database and are ready to be included as available alternative species. These species are: Malugai (*Pometia pinnata*), Bitag (Callophyllum inophyllum), Banaba (*Lagerstroemia speciosa*), Amugis (*Koordersiodendron pinnatum*), Loktob (*Duabanga moluccana*) and Agoho (*Casuarina equisetifolia*).

The additional twelve species to be promoted and that are not currently in the database include the following: Ulaian (*Lithocarpus ilanosii*), Pahutan (*Mangifera altissima*), Malak-malak (*Palaquium philippense*), Magabuyo (*Celtis luzonica*), Batino (*Alstonia macrophylla*), Balobo (*Diplodiscus paniculatus*), Anang (*Diospyros pyrrhocarpa*), Dangkan (*Callophyllum obliquinervium*), Balete (*Ficus balete*), Lamog (*Planchonia spectabilis*), Bitanghol (*Callophyllum blancoi*) and Kalumpit (*Terminalia microcarpa*).

Some of the technical properties, characteristics and end use parameters of the species have also been provided.

Wood samples of these species and information on their distribution were provided by the representative of Philippines.

A list of trade-related association was provided.

CAMBODIA/ So Lorn

The representative provided information on Cambodia forest cover and industry. Specific information on species that the country is intending to promote will be forwarded to the ITTO Secretariat.

No information was provided on restricted species, national legislation related to exports or log export bans.

Some information on exported products was provided.

A list of concession holders was provided.

Recommendations.

The participants noted several points to consider in the formulation of the database. These are as follows:

1. Micro features of wood anatomy are important for the tropical timber trade especially when working with architects/engineers in promoting wood as building material.
2. It is important to display the tangential and radial sections.
3. It is Important to include comments regarding the sawing behavior of the various species.
4. There is a real need to include treatment type, durability, lyctus susceptibility.
5. There is a need to describe strength groups.
6. ITTO should urge each country to do more work on the availability of species.
7. The CD-ROM version should include a feature to print out each individual species description.
8. The database should allow query/sort by intended use; by strength groups and by color
9. Web page should focus initially on the intended end use (e.g. what timber do I use for a specific task).
10. Query/sort should allow searching by all species within genera.
11. The text sections in the description areas and specific labels need editorial correction.
12. An updated list of active wood scientists and active wood research institutions should be included.
13. An easy search by species input box should be included.

It was also observed that some LUS may have the potential for pulp and paper and related products. It was recommended that the chemical properties be included under the "End-Use and Properties" section, such as "lignin content and alcohol-benzene extractives".

It was observed that the species were identified for current and potential utilization. It was recommended that end-use property requirements be included in the database.

The participants also discussed several project ideas which should be included in any future tropical timber promotion campaigns.

- 1 The networking of wood scientists should be encouraged and promoted along with the critical role that wood science labs play in the research and development of new products.
- 2 More botanical/ wood anatomy cross-referencing down to species level is required. This is important in the development of new plantation species, quality assurance programs for tropical wood product usage, etc.
- 3 There is a need to advance work on wood quality improvement and the impact of silvicultural practices (e.g., wood defect/fast grown woods).
- 4 There is a need to advance wood protection studies (e.g., on types of treatment, types of paints, agents of destruction, i.e. fungi, termites etc.).
- 5 There is a need to review wood use, vis a vis, types of products from many different species.
- 6 There is a need to undertake work on sawing equipment and its impact on wood fiber.
- 7 There is a need to undertake work on wood machining machinery and its impact on wood fibre.
- 8 There is a need to undertake more work on processing /utilisation of small diameter logs.
- 9 There is a need to undertake more work on utilisation of residual wood (e.g., low grade sawn timber, sawdust, dust, thinnings etc).
- 10 There is a need evaluate and refine wood testing methods/access to trade and to reassess continually criteria for end use.
- 11 There is a need to undertake more work on non timber products, i.e. chemical content of wood, other products possible from scientific studies.
- 12 There is a need for an ITTO project to detail all ITTO country building codes, build web site for searching/analyzing building code timber specifications etc. Accompanying this would be a review of building construction methods using timber in ITTO countries
- 13 There is a need to undertake more work on fire performance ratings of wood and align this work to building codes, and to develop the supporting database.
- 14 Regarding fuelwood, there is a need for more development work on calorific value of wood, types of stoves.
- 15 Charcoal needs more development work by species.
- 16 There is a need for more development work in wood scientist research and development training programs including train the trainer programs for industry and government officers, engineers, architects, foresters etc by activities by regions such as:
 - log breakdown
 - sawing techniques by species
 - moulding/processing by species
 - timber grading by species/region etc
 - drying kiln/air drying
 - grading of wood products

- treatment
 - timber transportation
 - use of timber on building sites/furniture etc
 - transportation of timber products
 - protection of timbers and
- 17 need to develop timber design courses promoting use of wood as medium for different uses
- 18 need more work on carbon sequestration from technical/wood technology viewpoint
- 19 need to do more work on promoting attributes of wood
- 20 need to develop timber promotion models for each ITTO country on how to promote /wood etc e.g. formation of timber promotion councils etc

Annex 1

Criteria and Terms of Reference for Participants in the Consultative Meeting for Commercially Available Alternative Species

The participants will discuss and identify commercially available alternative species from their respective countries, that is, lesser-used and lesser-known species in commercial quantities that ITTO member countries are currently promoting or planning to promote. The participants will provide additional country-specific information for incorporation into the database. The participants will include one member from each ITTO producer member country. Each country participant is expected to provide the following for the meeting:

1. A complete list of all the lesser-used (and lesser-known) species which are in commercial quantities and are being promoted or plan to be promoted by member countries. The selected species shall not be currently listed in the ITTO Annual Review.
2. It is expected that the participants will provide up-to-date information on selected species identified in TOR item 1 above, including wood samples which preferably measure at least 1cm x 7cm x15 cm in size.
3. Specific information on commercial availability, technological properties, information on restrictions and country-specific data including information such as specific country restrictions, tariffs, annual allowable cut, etc., shall be collected and provided by the participants at the meeting.
4. The participants should also provide information on trade restrictions such as CITES listings and other country-specific restrictions (e.g., log export bans and possible tariffs or lack of tariffs). The source of this information should be the responsible agencies located in the respective countries.
5. A list of trade-related associations and relevant government institutions and their addresses which are currently facilitating the trade in tropical timber within the specific countries shall also be provided by the participants.

All information provided at the Consultative Meeting should be the most currently available with relevant dates associated with specific data and information.

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