With this new issue, we are contributing to a better understanding of the role of planted teak in the carbon sequestration. A research paper published recently takes us through the years of growth of teak in carbon sequestration at different intervals of thinning until the final harvest at 50 years. This study has been reported from the state of Kerala, India where plantations of different ages are available for thinning operations and final felling after the rotation period of 50-60 years. No such study has taken place elsewhere reporting the carbon allocation in different compartments of teak over a period until final harvest. An abstract of the research paper is reproduced in this issue for our readers. Teak indeed has a role in mitigating global warming effects.

This bulletin is a special issue because as everyone knows, we are organizing the 3rd World Teak Conference in Ecuador during 11-15 May 2015 for which the 2nd announcement is already in circulation and the website is now open for registration and uploading the abstract. The 2nd announcement is included in this newsletter as print version. We encourage you to avail the early bird registration benefits and participate in the conference. For details please log on to the WTC website www.worldteakconference.com. Also included, is the regular news item, ‘price of plantation teak logs imported to India from various sources’.

We invite your continued support and feedback on issues related to teak and contribute articles/news items of interest/research papers etc. of non-technical nature for inclusion in the Bulletin.

With warm regards
P.K. Thulasidas
TEAKNET Coordinator

Carbon Sequestration Potential of Teak (Tectona grandis) Plantations in Kerala

Kerala Forest Research Institute, Peechi, INDIA

Abstract

Teak (Tectona grandis) is the most important forest plantation species and it occupies the major area under forest plantations in Kerala. In addition to its value as an ideal timber, it also plays an important role in storing carbon. The silviculture of teak necessitates felling at regular intervals of 5, 10, 20, 30, 40 and 50 years of age. The present study was carried out to estimate the carbon storage in different compartments of teak in each of these felling periods to arrive at an estimate of its carbon sequestration potential. Carbon content of teak biomass was estimated using CHNS analyser. There was slight variation in carbon content between age groups and considerable difference between various parts of the tree. The wood contained around 46%, bark around 32%, branches around 40% and the roots around 45% of carbon. Regression equations were developed to predict the total tree carbon storage from tree measurements. It was found that around 181 ton carbon per hectare is stored by a teak plantation in Kerala during its life time of 50 years by yielding biomass at different stages of thinning operations and at final felling stage.

This article is available online at http://www.isca.in/rtsr/archive/special_issue2012/30.ISCA-ISC-2012-8EVS-32.pdf
2nd Announcement

STRENGTHENING GLOBAL TEAK RESOURCES AND MARKETS FOR SUSTAINABLE DEVELOPMENT

3rd WORLD TEAK CONFERENCE 2015
May 11 - 15 • Guayaquil - Ecuador

Organised by:
CONTEXT AND RATIONALE

Teak (*Tectona grandis* L.f.) has gained worldwide recognition as the most preferred tropical hardwood reputed for its exceptionally superior physical, mechanical and aesthetic qualities. Although it takes only a small position in the volume of world timber production and trade, teak is one of the tropical hardwoods in high demand for the luxury market and for heavy duty applications. Natural teak forests occur in only four countries in the world: India, Lao PDR, Myanmar and Thailand. With the total log export ban of natural teak from Myanmar, attention is now focussed on the supplies of short-rotation logs from planted teak forests. Since the 1980’s, teak has attracted large-scale investments from the private sector in approx. 70 countries throughout tropical Asia, Africa, Latin America and Oceania. Growing private investment in teak plantations is a clear indication of the perceived potential of the species, although deforestation and unprofessional management have substantially reduced the area of natural stands. The global teak plantations are estimated to cover around 4 million ha, of which Asia holds more than 90%. The global teak exports including shipments of plantation logs and sawn timber from Africa and Latin America are directed towards India which absorbs 70 to 100% of global trade.

Ecuador is an important teak growing country and the largest teak exporting country in Latin America. The government of Ecuador has launched a national support program that provides financial incentives for reforestation with commercial species, among them teak. The goal of this program is to reforest 120,000 ha in 5 years. It is estimated that today, more than 1200 teak plantations cover an area of approx. 46,000 ha in Ecuador. The annual export of round logs and sawn timber to mainly Asian countries amounts to approx. 150,000 m3.

World Teak Conferences have been held so far in Costa Rica (2011) and Thailand (2013). They attracted worldwide attention of plantation managers, growers, investors, scientists and researchers.

The 3rd World Teak Conference with the theme - *Strengthening Global Teak Resources and Markets for Sustainable Development* will address the most crucial issues of the global teak sector, including:

- Evaluation of existing management models and programmes for the sustainable management and genetic conservation of teak resources,
- Analysis of the market structures and value chains of teakwood trading and their impact on the profitability of teak investments,
- Quality concerns of planted teak and its impact on marketability,
- Analysis of the policy framework and related structural obstacles and financing barriers for teak investments,
- Evaluation of private and public investments in the teak sector and its impacts on socio-economic conditions and rural livelihoods,
- Developing strategic, conceptual and operational recommendations in support of the sustainable development of the teak sector.

The conference is targeted to both public and private sectors concerned with teak plantation management, including small holders, traders, processing industries, forest departments, policy makers and scientists. The conference will also be used as an opportunity to convene a Steering Committee Meeting of TEAKNET and to strengthen TEAKNET’s coverage of Latin American and African countries.
OBJECTIVES

The conference with the theme “Strengthening Global Teak Resources and Markets for Sustainable Development” is focusing on economical, social, technical and environmental issues that have an impact on the production, marketing and trade of teakwood. It will facilitate the transfer of knowledge and technology among teak growing countries and strengthen the globalization of TEAKNET.

THE EVENT IS PLANNED TO CENTER AROUND THE FOLLOWING MAJOR THEMES:

Session 1: Economics, investments and trade
Session 2: Genetics, tree improvement, silviculture and wood quality
Session 3: Management models for different value chains, including smallholder forestry
Session 4: Teak plantation management and environmental protection

VENUE AND DATE

The venue of the conference will be at the Hilton Colon in Guayaquil, the largest and most populous city in Ecuador and the country’s main port. The hotel is located at Av. Francisco de Orellana Mz. 111, ca. 10 minutes away from the international airport. Guayaquil features a tropical savanna climate. The climate is hot and humid, with usually cloudy mornings and very agreeable afternoon and evening breezes. Ecuador’s official language is Spanish and the currency is US dollar.

ORGANIZERS

The conference will be organized by Asociación Ecuatoriana de Productores de Teca y Maderas Tropicales (ASOTECA), an association of private companies growing and exporting teak in Ecuador under the auspices of the Food and Agriculture Organization (FAO) of the United Nations, Rome; International Teak Information Network (TEAKNET), India and the Teakwood Working Party-5.06.02 of the International Union of Forest Research Organizations (IUFRO), Austria.

SPONSORSHIP

Type of sponsorship available:

- USD $25,000 (Platinum Sponsors)
- USD $15,000 (Gold Sponsors)
- USD $3,000 (Silver Sponsors)

For more information contact: fassambito@gmxym.com
Or visit our website: www.worldteakconference.com

FINANCIAL SUPPORT FOR PARTICIPATION

Limited funds will be available to support the participation of invited speakers.
IMPORTANT DEADLINES

Invited papers
- Abstract Submission Deadline: 31 December 2014
- Notification of Acceptance: 31 January 2015
- Author Registration Deadline: 15 April 2015

Registration
- Registration opens: 1 September 2014
- End of Early Bird Registration: 31 January 2015
- Registration Deadline: 15 April 2015

CONFERENCE WEB PAGE

All the workshop announcements and information are available on the website: www.worldteakconference.com

OFFICIAL LANGUAGE OF THE WORKSHOP

The official languages of the workshop are English and Spanish. Translation into both languages will be available.

KEYNOTE SPEAKERS

Eminent experts in various fields of Tropical Timber Development and businesses will be invited from around the world to deliver keynote address in the four major theme of the conference.

In addition to keynote speeches, presentations will include country reports, plenary papers, invited status papers and those papers which directly address the theme of the conference with newly emerging issues or research breakthroughs.

SUBMISSION OF ABSTRACT

Abstracts are required to be submitted online only. Please visit our website www.worldteakconference.com to submit your abstract.

Authors will be notified by the scientific committee on whether their submitted paper will be accepted.

Format and characters

The first page should contain the title, the authors, and a footnote giving the authors’ affiliation.
A4 (210 x 297 mm) white bond paper, all margins set to 2.5 cm, font size 12, Times New Roman, no syllabication, no indentation, italics for Latin names, single-spaced lines with one free line between paragraphs.
Abstract papers should take max 300 words only.
Do not use “all caps” in titles or heading.
Headings and subheadings should be flush left in upper and lower case letters.
ORGANISING COMMITTEE

Chairman: Antonio Pino Gómez-Lince, President ASOTECA, President FORESCAN.
Co-chairman: Xavier Elizalde, Executive Director ASOTECA.
Adolfo Rodriguez, Director ASOTECA, President AGRONACUI
Jorge Román, Director ASOTECA, Grupo ENDESA-BOTROSA
Luis Fernando Jara, General Manager, PROFAFOR
Fernando Muirragui, Director ASOTECA, President EPACEM
Teodoro Malo, Vice-President ASOTECA, Teak Grower
Juan Carlos Palacios, Executive Director COMAFORS
Enrique García, Director ASOTECA, General Manager ALLTEAK
Fernando Montenegro, General Manager NEOFORESTS
Diego Maruri, Director Asoteca, AGROTROPICAL Representative
Néstor Medrano, General Manager MENPROE
Bianca Dáger, Corporate Director SAMBITO
Walter Kollert, Planted Forests Officer, FAO, Rome
P. K. Thulasidas, TEAKNET Coordinator, India.

SCIENTIFIC COMMITTEE

Chairman: Lars Graudal, University of Copenhagen, Denmark.
Co-chairman: PK. Thulasidas, TEAKNET, India.

Session I: Economics, investments and trade
Walter Kollert, FAO, Rome
Mammen Chundamannil, Kerala Forest Research Institute, Peechi, India
Dominique Y. Leuba, Novelteak Costa Rica S.A., Costa Rica

Session II: Genetics, tree improvement, silviculture and wood quality
Lars Graudal, University of Copenhagen, Denmark
PK. Thulasidas, TEAKNET, India
Jurgen Stock-Ornarr Carrero, PROTEAK, México

Session III: Management models for different value chains, including smallholder forestry
Henri BAILLERS, ACIAR, Australia
James Rossholm, ICRAF, Indonesia
Edwin Jiménez Ruiz M.Sc., ESPOL, Ecuador

Session IV: Teak plantation management and environmental protection
Markku Kammen, University of Helsinki, Finland
Stephen Midgley, Salwood Asia Pacific Pty Ltd, Australia
Folkert Kottman, PANAMERICAN WOODS, Costa Rica
## Tentative Program Outline

### Monday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1a Economics, Investment, Markets and Trade</th>
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<tbody>
<tr>
<td>8:00 - 9:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 - 10:00</td>
<td>Opening ceremony, Government of Ecuador, ASOTECA, FAO, ITTO, TEAKNET, IUFRO</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>General Keynote</td>
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</tbody>
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### Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 2a Genetics, tree improvement, silviculture, wood quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 - 9:45</td>
<td>Thematic Keynote 2</td>
</tr>
<tr>
<td>9:45 - 10:05</td>
<td>Presentation 8</td>
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<tr>
<td>10:05 - 10:25</td>
<td>Presentation 9</td>
</tr>
<tr>
<td>10:25 - 10:45</td>
<td>Discussion</td>
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</table>

### Wednesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 3a Management models for different value chains, incl. smallholder forestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 - 9:45</td>
<td>Thematic Keynote 4</td>
</tr>
<tr>
<td>9:45 - 10:05</td>
<td>Presentation 10</td>
</tr>
<tr>
<td>10:05 - 10:25</td>
<td>Presentation 11</td>
</tr>
<tr>
<td>10:25 - 10:45</td>
<td>Discussion</td>
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### Thursday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 4a Teak plantation management and environmental protection</th>
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</thead>
<tbody>
<tr>
<td>11:15 - 11:45</td>
<td>Thematic Keynote 4</td>
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<tr>
<td>11:45 - 12:05</td>
<td>Presentation 10</td>
</tr>
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<td>12:05 - 12:25</td>
<td>Presentation 12</td>
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<td>12:25 - 12:45</td>
<td>Discussion</td>
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</table>

### Friday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 4b Teak plantation management and environmental protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15 - 11:45</td>
<td>Thematic Keynote 4</td>
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<tr>
<td>11:45 - 12:05</td>
<td>Presentation 10</td>
</tr>
<tr>
<td>12:05 - 12:25</td>
<td>Presentation 20</td>
</tr>
<tr>
<td>12:25 - 12:45</td>
<td>Discussion</td>
</tr>
</tbody>
</table>

### Field Trip

- **10:45 - 11:15 Morning Break**
- **11:45 - 1:00 Lunch**
- **15:00 - 15:30 Afternoon Break**
- **17:00 Cocktail**
REGISTRATION INSTRUCTIONS

REGISTRATION FORM

Online registration facility is available at the Conference Website www.worldteakconference.com

For any clarification you can contact the Conference Secretariat at fassambito@gmym.com

REGISTRATION FEE

Please note the early registration fee deadline. Take advantage of the savings by filling your registration before 31 January 2015.

The registration fee includes:

- Welcome cocktail
- Lunches and Refreshments during program breaks
- Conference material: Final program, abstract book and name badge that grants admission to all events
<table>
<thead>
<tr>
<th>Delegate Type</th>
<th>Early Bird 31 January 2015</th>
<th>1 February 2015 to 15 March 2015</th>
<th>16 March 2015 to 15 April 2015</th>
</tr>
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<tr>
<td>International Participants</td>
<td>US$ 450</td>
<td>US$ 500</td>
<td>US$ 600</td>
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<tr>
<td>Field trip</td>
<td>US$ 85</td>
<td>US$ 85</td>
<td>US$ 85</td>
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<tr>
<td><strong>Total Payment</strong></td>
<td><strong>US$ 535</strong></td>
<td><strong>US$ 585</strong></td>
<td><strong>US$ 685</strong></td>
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<tr>
<td>Accompanying persons to field trip</td>
<td>US$ 85</td>
<td>US$ 85</td>
<td>US$ 85</td>
</tr>
</tbody>
</table>

**Field trip**

The one day field trip on May 15 will be an opportunity to demonstrate what was discussed during the 3 day conference. It will be at planted teak forests and teakwood sawmills in the coastal region of Ecuador. More information will be provided at the website, www.worldteakconference.com.

**Social events guest tickets**

Welcome cocktail is included in the registration fee. This will be on May 12th evening at the Isabela foyer lounge, Hotel Hilton Colon Guayaquil.

**Payment**

All payments must be made in US dollars online. Online registration provides payment by Visa/MasterCard. For more information please visit the website: www.worldteakconference.com.

**Confirmation**

After the payment is received a confirmation letter will be sent. Please bring the confirmation letter with you to assist us with your registration onsite.

Important note for international wire transfers: Once the deposit or wire transfer has been made, you must send by e-mail the deposit receipt or a document certifying that the transaction has been made. And at the time of the event, this document (hard copy) must be presented at the information Desk.

For local participants, in case you are in the city, you must come to our sale points and submit the hard copy of the deposit receipt so as to issue and deliver the corresponding invoice.

**Cancellation**

The organizing committee of the World Teak Conference 2015 will not refund any amount of money to those participants who will not be able to participate in any of the activities they may have signed up for under any grounds, whether on health grounds, logistics or any other reason. However, any registered person who is unable to attend can transfer their tickets to someone else, except for the EXPO stand, provided that they have notified it in no less than 48 hours prior to the event.
Accommodation

Different hotels in Guayaquil provide a wide choice of accommodation ranging from luxury suites to economy class double/single rooms. Advance booking is generally necessary. However, the participants are responsible to make their own hotel reservation and settle their hotel bills before departure.

For more details regarding your accommodation, please check the website in Conference Information under Travel and accommodation where you will see a link to a presentation with the contact of the Hilton Colon Hotel and nearby hotels with their individual prices.

Passport / Visa

Overseas participants may contact the nearest Ecuador High Commission/Embassy/Consulate or their travel agent to find out visa requirements for entry into Ecuador.

After the payment of the registration fee for the conference, you can request online an invitation letter from the organizers for applying visa

For more details about visa information go to:

Health insurance

All participants should meet their own insurance for medical care and hospital treatment. Please check vaccination requirements from your travel agent.

Banks/Currency/Credit cards

**FOREIGN TRANSFERS**

BANK NAME: BANCO BOLIVARIANO C.A.
BRANCH: GUAYAQUIL
ACCOUNT NUMBER: 0005230213
BANK ADDRESS: JUNIN 200 Y PANAMA
BENEFICIARY: SOLUCIONES AMBIENTALES SAMBITO S.A.
SWIFT CODE: BBODEC100
Foreign currency and travellers checks can be changed at all commercial banks during banking hours in Guayaquil. The banks open Monday-Friday 08:30-15:30 hrs. The Ecuador monetary unit is USD, 1 Euro = 1.36 USD (approx.). Visa and MasterCard and Diners international are accepted at most of the banks, hotels and super markets.

OTHER FACILITIES

The following services will be available for the participants at the venue during the Conference.

Information desk:
A meeting point for delegates for personal messages/ correspondence during the workshop.

Business center:
A facilities like E-mail, Fax, Telephone, Computers and Xerox copiers are available at Business center. Some services are subject to be charged.

Internet cafe:
Computers with internet are available at the Sal y Pimienta coffee shop at the hotel

3rd WORLD TEAK CONFERENCE 2015
May 11 - 15 • Guayaquil - Ecuador

For further information:
Conference Secretariat, World Teak Conference
Av. De las Américas 406 Centro de Convenciones Simón Bolívar of 19
Guayaquil, Ecuador.
Email: fassambito@gymc.com / jdsambito@gymc.com
http://www.worldteakconference.com
Prices of Plantation Teak Imported to India

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Logs US$ per cu.m C&amp;F</th>
<th>Sawn wood / Squares US$ per cu.m C&amp;F</th>
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<tr>
<td>Belize</td>
<td>350-400</td>
<td></td>
</tr>
<tr>
<td>Benin</td>
<td>320-680</td>
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</tr>
<tr>
<td>Brazil</td>
<td>390-750</td>
<td></td>
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<tr>
<td>Cameroon</td>
<td>390-510</td>
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<tr>
<td>Colombia</td>
<td>320-650</td>
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<tr>
<td>Congo</td>
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<td>Costa Rica</td>
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<td>Ghana</td>
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<td>Guatemala</td>
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<td>Guyana</td>
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<td>PNG</td>
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<td>Thailand</td>
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<td>Togo</td>
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<tr>
<td>Trinidad and Tobago</td>
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<tr>
<td>Uganda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benin sawn</td>
<td>400-800</td>
<td></td>
</tr>
<tr>
<td>Tanzania sawn</td>
<td>350-885</td>
<td></td>
</tr>
<tr>
<td>Brazil squares</td>
<td>360-680</td>
<td></td>
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<tr>
<td>Ecuador squares</td>
<td>300-540</td>
<td></td>
</tr>
<tr>
<td>Nigeria squares</td>
<td>340-450</td>
<td></td>
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</table>

Variations are based on quality, lengths of logs and the average girth.

*Courtesy: ITTO TTM Report 18(19): 1-15 October 2014*

Editorial Committee

Dr. P.K. Thulasidas
Dr. Mammen Chundamannil
Dr. E. M. Muralidharan and
Dr. S. Sandeep

Teaknet Bulletin is a quarterly electronic newsletter of TEAKNET brought out through its website. It is intended for circulation among the members of TEAKNET and other stakeholders of global teak sector. The views expressed in the newsletter are those of the authors and do not necessarily reflect the views of the organization. The readers are welcome to express their opinions or pass on information of value to teak growers, traders, researchers or others concerned with teak. However, TEAKNET reserves the right to choose the contributions for publishing and also to make necessary editorial modifications in the articles in consultation with the authors.

Address all communications to:

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Email: coordinator@teaknet.org