



Teak Mekong Newsletter

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TEAK Mekong Newsletter support and facilitates teak networking in the Mekong sub-region through ITTO member countries and partners, and support sharing lessons of the project results through short news release, occasional papers, project related teak-based research and development information. The bi-monthly newsletter is released online through TEAKNET webpage www.teaknet.org and co-hosted by Kasetsart University, Thailand.

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Visit to TEAK FARM in Cambodia

on 31 August 2022



The ITTO teak project team had a rare opportunity to visit an intensively managed commercial teak plantation of 300 hectares in a remote village away from the capital city of Phnom Penh in Cambodia on 31st August 2022. Visit to the Teak Farm was organised by Mr. Chheang Dany, Deputy Director General of the Forestry Administration, Kingdom of Cambodia as project partner of ITTO executed teak project in Mekong sub-region.

The private owned TEAK FARM (300 ha) aged 3.5 years is managed by the Israel

holding company adopting the best precision agricultural practices to boost enhanced growth of teak at the shortest possible time, aiming final harvest at 6 years of accelerated growth. This intensively managed commercial teak plantation (4 x 4 M espacement) uses the hybrid technology of fertilisation and irrigation called 'Fetigation' in which the nutritional requirement of each individual tree is being assessed as well as its water use efficiency and provide a balanced fertiliser and irrigation throughout the year.



Clonal teak of 3.5 years in 4 x 4 M espacement

The tree growth is continuously being monitored by using the dendrometer measurement for incremental growth.



Change in dimension of tree trunk monitored through dendrometer

Previously, this remote corner of the village was surrounded by the scrub jungle on the upper crest. The best teak clones of 11 or 12 in numbers are obtained from a Sabah based Malaysian Tissue Culture company (YSG Bioscapes Sdn. Bhd) in which the superior quality planting material whose genetic origin is known is imported and planted first in an experimental plot and by seeing the performance, the best 5 or 6 clones were selected for massive planting in the area. Teak is very sensitive to moisture for its optimum growth and this village received ample rains during 5 months of the year and for the rest 6-7 months are dry with no rains at all. Teak being a deciduous species, shed its leaves during summer to minimize physiological requirement of water until the onset of rainfall during spring season.

The tree grows here does not undergo any hibernation or say, does not allow to sleep (cambial dormancy) during dry months for want of water. The company uses the latest irrigation and fertiliser application in a balanced manner taking into consideration the individual growth parameters assessed, monitored and provide micronutrients for its effective growth. For every 3 months, pruning is done to remove the lower branches and epicormic shoots to obtain clear bole without defects. No thinning is envisaged before total harvesting at 6 years. i.e., all the 620 trees will be harvested together! The company claims 17-18 m³/ha/yr MAI or even more is anticipated. The wood quality was tested in the best laboratory in Israel and found to be optimum according to the CEO, but did not disclosed the results. The percentage heartwood obtainable for the 6 year - old teak at the time of harvesting is yet to be known as it has been scientifically proven that heartwood formation in teak start at the age of 4 years. The financial burden and investment in commercial plantation is very huge and to make it as a profitable venture, the tree cannot be retained for a longer period of 15 or 18 years and is not sustainable for investor's point of view, according to the CEO, Mr. Guy Yogev.



Mr. Guy Yogev, CEO on his Farm Teak



Mr. Chheang Dany, DDG, Forestry Administration, Cambodia



Tree planting in Teak Farm by Dr. Tetra, ITTO



Source of water for irrigation in the Teak Farm



Mixing assembly for micronutrients for controlled 'fertilization'



Dr. Chanhsamone, DDG, NAFRI, Laos and Dr. Hwan-ok MA, ITTO in Teak Farm

The markets for such small dimensional teak and quality products made out of it depends on the efficient processing technologies and aesthetic appearance and acceptance by end-users.

While at the same time, the village community living in the area is provided with regular income by getting their involvement in the teak management and convinced them of its multifaceted climate mitigation and carbon sequestration potential of teak plants as the tree

is green and grow throughout the year, no leaf shedding started until now. The small rivulet originating from the upper reaches of the hill is become dry during summer months. The company does not allow the villagers to cut down the trees for making charcoal and firewood. Instead, providing them regular income with alternate fuel for their daily needs and allowing the surrounding village forest to regenerate naturally so that after few years, it is anticipated that the rivulet become perennial. The company has plans to extend the teak cultivation to more areas in the village.



A mosaic view of the young teak plantation



The project team pointing to a bright future of Teak Farm

4th Meeting of ITTO Teak Project Steering Committee

BMEL- ITTO Project

“Enhancing Conservation and Sustainable Management of Teak Forests and Legal and Sustainable Wood Supply Chains in the Greater Mekong Sub-Region” (PP-A/54-331)

13:30-16:30 hrs, Thursday, 1 September 2022

Rama Garden Hotel, Bangkok, Thailand



Participants of the 4th PSC meeting at Rama Garden Hotel, Bangkok

The ITTO Teak project review and 4th PSC meeting was convened physically after the Lao meeting held in February 2020. Due to global COVID- 19 pandemic and subsequent travel restrictions imposed by many countries, there was some lag in the field oriented physical activities of the project. However, 10 monthly Webinars were conducted with the talk by eminent personalities covering the important topics of ITTO teak project during this period and

the 3rd PSC meeting was also held online last year in September 2021. Prior to the 4th PSC meeting, all the ITTO teak project team members had a short field visit to a commercial teak plantation - ‘Teak Farm’ in Cambodia during 31st August to 1st September 2022 for which a brief report is presented in this newsletter separately. The program schedule of the 4th PSC meeting is shown below.

Programme Schedule

Item	Subject
	PRE-PSC Study Visit
30 Aug	All delegates leave for Cambodia
31 Aug	Visit Teak Farm
1 Sept	All delegates leave for Bangkok, Thailand
	PSC Meeting 13:30 – 16:30 Thursday, 1 September 2022 at Rama Garden Hotel, Bangkok
Item 1	Opening of the Meeting <ul style="list-style-type: none"> • Opening remarks by Chairperson of PSC, Mr. Sapol Boonsermsuk, representing Director General - RFD • Welcome remarks by Mr. Stephan Wagner, German Federal Ministry of Food and Agriculture (BMEL) • Welcome remarks by Dr. Hwan-ok MA, ITTO, Japan
Item 2	Self-introduction by the participants and Group Photo
Item 3	Review of the successful completion of the project <ol style="list-style-type: none"> I. The project’s technical reports, the completion report and the financial report: (Dr. Hwan-ok Ma, ITTO) II. Review of the implementation of the Teak Project: (Prof. Yongyut Trisurat, Regional Project Leader) III. Report by each country: Cambodia, Lao PDR, Myanmar, Thailand and Vietnam (5 min/ each country) IV. Introduction on the Regional Workshop: Prof. Yongyut Trisurat and the Project’s contributions to the 4th World Teak Conference (WTC) by Dr. PK Thulasidas and Dr. Tetra Yanuariadi, ITTO V. Introduction to the Teak Book: Prof. Yongyut Trisurat & Dr. Promode Kant
	Coffee/Tea break
Item 4	Review of the preparation of the Financial Report as of 30 September 2022
	The preparation of the financial report as of 30 September 2022 will be presented by Prof. Yongyut and be discussed by the members of PSC
Item 5	Recommendations
	Project Steering Committee will: <ul style="list-style-type: none"> • Review, evaluation, approve and adopt reports presented at the PSC meeting • Provide recommendations to contribute to the successful completion of the project and its sustainability The chairperson may summarize the main recommendations made during the meeting
Item 6	Other Business <ul style="list-style-type: none"> • Schedule for the Regional Workshop • Schedule for the 4th WTC
Item 7	Closing of the Meeting

The teak management project is being executed by ITTO in collaboration with the 5 participating countries of the Mekong sub-region namely, Cambodia, Lao PDR, Myanmar, Thailand and Vietnam and coordinated by Kasetsart University, Thailand. The project is being funded by the Federal Republic of Germany through the Federal Ministry of Food and Agriculture. The ITTO teak project was officially started off in March 2019 and it completed 3 years and 6 months, officially closes on 30 September 2022 with the submission of project report and audited financial report to the funding agency BMEL, Germany.

The 4th PSC meeting convened in Bangkok at Rama Garden Hotel chaired by Mr. Sapol Boonsermsuk, Thailand's National Leader on behalf of the Director-General of the Royal Forest Department (RFD), Thailand reviewed the overall progress achieved by the project. Mr. Stephen Wagner, BMEL representative from Germany together with the executing agency, ITTO; the national coordinators of the participating countries, and the Vice President of Kasetsart University attended the meeting. He appreciated that all the project staff worked very hard over the last 3 years during the uncertainty situation of COVID-19 and happy to note that all the national coordinators are present in the final PSC meeting. The Project Steering Committee discussed the results and recommendations, the financial report and approved the completion report presented.

Opening Remarks:

Mr. Stephan Wagner, the representative of the German Federal Ministry of Food and Agriculture (BMEL) well appreciated the arrangement of the 4th PSC meeting, the dedicated project team members and participating countries to work hard for achieving the project results and delivering the output within the project period. He congratulated Prof. Yongyut Trisurat for the excellent coordination of various activities envisaged in the project achieved one by one without any hitch and tackled every problem faced by the participating countries and it was very hard to implement trans-country projects of this kind to implement on the ground and get results. It is hoped that ITTO by linking the project activities and lessons-learned with those of the global teak network, can promote capacity building and knowledge transfer even way beyond the project itself.

Dr. Hwan-ok Ma, ITTO Senior Projects Manager, briefly presented the project achievements and highlighted the major finding of the results despite the initial set-back of COVID-19 pandemic. Lessons and the achievements of this project will contribute to establishing legal and sustainable supply chains of teak resource management and achieve many Sustainable Development Goals (SDGs). He hoped that all outputs would be effectively shared and discussed at the Regional Workshop and the 4th World Teak Conference in Ghana.



Welcome remarks: (L to R) Dr. Hwan-ok MA, ITTO;
Mr. Stephan Wagner, BMEL

Project review and completion report

Following the self introduction of participants and group photo, review of the project activities and achievements of the respective 5 participating countries including the financial report was presented. Dr. Hwan-ok Ma reviewed the overall progress of the project objectives, outputs and the goals achieved. Dr. Hwan-ok Ma notified all National Leaders and the Regional Project Leader (Prof. Yongyut Trisurat) that the official termination of the project on 30 September 2022.



Project review in progress



Dr. Tran Lam Dong, VAFS, Vietnam



Mr. Sapol Boonsermsuk, National Coordinator, Royal Forest Dept, Thailand



Mr. Chheang Dany, Deputy Director General, Forestry Administration, Cambodia



Mr. Vongvilay Vongkhamsoo, NAFRI, Lao PDR



Dr. Zar Chi Hlaing and Dr. Moe Zaw, FRI, Yezin, Myanmar

Prof. Yongyut Trisurat, Regional Project Leader, Kasetsart University, presented the consolidated progress report of the three project outputs, its implementation and achievements in the five participating countries. The project activities, field training programs, workshops conducted, and related events, policy briefs etc were disseminated and circulated through the bimonthly online Mekong newsletter produced by TEAKNET and posted in their website for easy download and made available in the ITTO, Kasetsart University websites and project FB page of the respective organisations. So far 19 Mekong newsletters has been published, Besides, there are 4 Technical Reports pertaining to management of natural forests, production of good quality planting materials, field training in silvicultural practices, minimizing harvesting loss, transportation and efficient processing of teak round wood.

The projects results were also widely publicised by participating in the FAO’s World Forestry Congress held in Seoul during May 2022 and will be shared among the delegates and participants of 4th World Teak Conference in Ghana.

Dr. Thulasidas (Consultant #9) gave a briefing on the 4th World Teak Conference (WTC), which will take place in Accra, Ghana during 5-8 September 2022. A special ITTO Teak Mekong Session of 2 hrs duration is being planned during the WTC in which the edited Teak book on *‘Teak in Mekong for a Sustainable Future’* will be released on the occasion and the project results shared among the participants converging in Ghana from across different parts of the world.



Dr. Hwan-ok MA, ITTO, Japan



Dr. Thulasidas (Cosultant #9) on 4th WTC updates



Dr. Suwan Tangmitcharom, RFD, Thailand



Intervention by Dr. Tetra from ITTO on the final recommendations of the project

The Project Steering Committee approved the progress report presented by Prof. Yongyut Trisurat with recommendations. The final outcome of the project results published in the form of Teak book entitled 'Teak for Mekong for a Sustainable Future' was distributed in the meeting and a copy was handed over to Mr. Stephen Wagner, BMEL. The teak book comprises 6 sections covering 27 chapters and soft copy is also available for download from the website of Teaknet, ITTO and FB page of project. Mr. Stephen Wagner in his concluding remarks was very impressive of the remarkable achievements of ITTO Teak Mekong project and informed that he will be very happy to recommend to the government of Germany for the possible 2nd Phase of the project.

Prof. Yongyut Trisurat announced the arrangements made for the *One-day Regional Workshop on Sustainable Value-added Teak products for Green Economy : Lessons from the BMEL - ITTO Teak Project in Mekong* as part of the PSC meeting on 2nd September 2022. The PSC meeting adjourned by 16.30 hrs with a vote of thanks to the Chairperson and all participants for various productive discussions towards the effective implementation of the project in the GMS region and successful completion of the project.



Prof. Yongyut Trisurat, Regional Project Leader, Kasetsart University

(Photo credit: Prof. Yongyut Trisurat & Dr. Thulasidas)



2nd Regional Workshop on

Sustainable Value-Added Teak Products for Green Economy: Lessons from the BMEL-ITTO Teak Project in Mekong

09:00 – 16:30 h

2 September 2022, Rama Garden Hotel, Bangkok, Thailand



The project implementing team with five participating country coordinators

Alongside field visit to Teak Farm in Cambodia and the 4th PSC meeting from 30 August to 1st September, the BMEL-ITTO Teak project organized a one-day Regional Workshop on *“Sustainable Value-added Teak Products for Green Economy: Lessons from BMEL-Teak Mekong Project”* at Rama Garden Hotel on 2nd September 2022, Bangkok in conjunction with the 3rd FORTROP¹ International Conference to celebrate the 85th anniversary of the Faculty of Forestry, Kasetsart University, Thailand. In spite of many efforts to promote sustainable management of teak forests in the

region, there has been an increasing need for the sustainable production of quality value-added teak products to contribute to the development of green economy for a sustainable future. The BMEL-ITTO Teak Mekong project partners has worked together to enhance natural teak forest management, production and marketing through the establishment of legal and sustainable wood supply chains, as well as to improve local economy and local communities’ livelihood in the Mekong sub-region.

The ambitious ITTO Teak project is highly relevant to the aim of the Bio-Circular-Green (BCG) Economic model that has been conceived by Thai Government and also conforms to the UN Sustainable Development Goals (SDGs), in particular SDG12 (Responsible Consumption and Production), SDG13 (Climate Change), and SDG 15 (Life on Land). The BCG Model aims to transform the country towards a value-based and innovation-driven green economy through capitalizing the country's strengths in biological diversity and cultural richness and employing technology and innovation. In this respect, the sustainable production of valued-added teak products through legal and sustainable supply chains can play an important role in the development of green economy in the Mekong region.

The specific objectives of the workshop were:

- ⇒ to increase the role of teak forests and products in the development of green economy in the Mekong region, taking into account the experiences and lessons learned from the implementation of the BMEL-ITTO Teak project.
- ⇒ to identify recommendations for the sustainable production and consumption of teak products in the framework of the Bio-circular Green Economic Model.

The four technical sessions covered altogether 12 oral presentations by the project members and invited scientists and policy makers.

Programme Schedule

08:00-09:00 **Registration**

Opening Ceremony

09:00-09:10 Introduction to the Regional Workshop
Prof. Dr. Yongyut Trisurat, Regional Project Coordinator, Kasetsart University, Bangkok

09:10-09:25 **Welcome Remarks**
Dr. Hwan-ok MA, ITTO, Japan
Mr. Stephan Wagner, German Federal Ministry of Food and Agriculture (BMEL)
Mr. Surachai Achalaboon, Director-General of Royal Forest Department

09:25-09:30 **Opening Remarks**
Dr. Chongrak Wachrinrat, President of Kasetsart University, Bangkok

Keynote Presentations: Policy Drivers

Moderator: Prof. Yongyut Trisurat, Kasetsart University

09:30-10:00 Economic Forest Plantation Master plan to Drive Thailand BCG Model
Wanchai Jariyasethachok, DDG of the Royal Forest Department, Thailand

10:00-10:30 Green Economy with Plantations, especially with Teak for FLR
Illias Animon, Forestry Officer, FAO Regional Office for Asia and the Pacific, Bangkok

10:30-10:45 *Coffee Break*

10:45-11:15 Sustainable Teak Management for Mekong Sub-region - Teak Mekong Project Overview and Achievements
Yongyut Trisurat, Regional Project Coordinator, Kasetsart University, Bangkok

Role of Private Sectors and Smallholders

Moderator: Asst. Prof. Dr. Kobsak Wanthongchai, Dean of the Faculty of Forestry, Kasetsart University

- 11:05-11:30 FIO's Teak Plantation and Trading
Mr. Narongchai Chonlapap, Sub-Divisional Manager, Forest Industry Organization, Thailand
- 11:30-11:55 Past, Present and Future of Private Teak Industry in Thailand
Dr. Paiboolya Gavinlertvatana, President, Thai Orchids Lab Estates Company Ltd., Bangkok
- 11:55-12:20 Transforming Wood-based Industry to BCG Economy
Phichit Somboon, Faculty of Forestry, Kasetsart University, Bangkok
- 12:20-13:30 *Lunch break*

Teak Genetic Resource Improvement

Moderator: Dr. Tran Lam Dong, Director of Silviculture Research Institute, Vietnamese Academy of Forestry Sciences, Hanoi, Vietnam

- 13:30-13:50 Teak Genetic Improvement and Plantation in Indonesia
Anto Rimbawanto, Centre for Forest Biotechnology and Tree Improvement, Yogyakarta, Indonesia
- 13:50-14:10 Teak Genetic Conservation and Improvement in Thailand
Suwan Tangmitcharoen, Senior Expert of the Royal Forest Department
- 14:10-14:30 Efforts of Teak Genetic Conservation and Improvement and Value Chain in Laos
Vongvilay Vongkhamsoo, Forestry Research Centre, NAFRI, Laos
- 14:30-15:00 Myanmar Efforts in Teak Genetic Conservation and Improvement and Myanmar Timber Legality and Assurance System (MTLAS)
Zar Chi Hlaing, Aung Zaw Moe and Thant Shin, Forest Research Institute, Yezin, Myanmar

Teak Value Chains and Trading

Moderator: Dr. Tetra Yanuariadi, Projects Manager, ITTO

- 15:00-15:20 Development of Teak Plantation and Value Chains to Support Vietnam Forest Industry
Tran Lam Dong, Dang Thinh Trieu and Nguyen Van Bich, Silviculture Research Institute, Vietnamese Academy of Forestry Sciences, Hanoi, Vietnam
- 15:20-15:40 Cambodia's Teak Plantation and its Implications on Trade Access
Chheang Dany¹, Kim Sobor², Lim Sopheap², Say Sinly², Eugene Kraamwinke³
¹ Forestry Administration, Cambodia,
² Department of Forest Plantation and Private Forest Development, Forestry Administration,
³ Grandis Timber, Cambodia
- 15:40-16:00 Wooden Furniture Design: Value-Added Products
Doonyapol Srیشان, Adjunct Professor at Faculty of Architecture, KMITL
- 16:00-16:30 **Wrap-up and Closing Remarks**

Opening ceremony

Prof. Yongyut Trisurat gave a brief introduction about the topic selected for the Regional Workshop, the BCG economic model conceived by Thai Government which is in line with ITTO Teak project target achievements made. In the welcome remarks that followed, on behalf of the Director General of the Royal Forest Department, Mr. Wanchai Jariyasetthachok, DDG, Royal Forest Department, Thailand, hoped that the workshop outputs will increase the role of teak forests and products in the development of green economy in the Mekong region, empower local communities and smallholders in the sustainable management teak forest plantations throughout the legal supply chains. Mr. Stephen Wagner from BMEL, Germany reiterated that the experiences and lessons learned from the implementation of the BMEL-ITTO Teak project in the five participating countries not only contribute greatly to national economy development in the framework of the Bio-circular Green Economic Model, but also has empowered local communities and smallholders in teak forest plantation management and promoted public-private partnerships for legal and sustainable teak supply chains.



Welcome remarks by BMEL, ITTO, RFD and Kasetsart University

Dr. Ladawan Puangchit, Vice- President of Academic Affairs, Kasetsart University in her opening remarks, acknowledge the BMEL and ITTO for selecting her university to get engaged in the project, coordinating and communicating with the five participating countries and other partners in the region. The project activities are highly relevant to the university's missions to contribute to the conservation and sustainable management of natural resources, in particular teak forests. In addition, it fits well within the national strategy on the Bio-circular Green Economic Model.

Keynote presentations

The paper by Mr. Boonsuthe Jeranvongpanich of Royal Forest Department highlighted an overview of forest resources of Thailand, the economic forest policy initiatives and Forest certification in Thailand, Forest management plan, government support for certified teak for smallholders and farmers plantation based on C & I approach and finally, implementation and support BCG model for socio-economic development.



Mr. Boonsuthe Jeranvongpanich, RFD, Thailand



His talk concluded with the following key messages for the long-term policy support for BCG model in Thailand.



Dr. Illias Animon, Forestry Officer from the FAO Regional Office for Asia and the Pacific (FAO_RAP) talked in length about *Green Economy with Plantations, especially with Teak for Forest Landscape Restoration*. He said, forests are at the heart of low-carbon forest economies and forest products play a key role in mitigation and adaptation. Demand for wood products; increase further in line with green economy.



Wood supply in the green economy

- ✓ The average forest area per capita in the region; one third of global
- ✓ 500 million hectares of deforested and heavily degraded lands in Asia and Oceania (Minnemeyer, et al., 2011)
- ✓ The future supply from restored and planted forests

<https://www.fao.org/3/i5857e/i5857e.pdf>

Supporting small and medium enterprises

- In Java a large number of farm families grow teak
- 80% of the wood demand from small and medium-sized furniture companies met by wood production by smallholders
- Many farmers invest in teak for long-term savings (Finlayson, 2017)

In Asia- pacific region, the future supply of wood will be from restored and planted forests. Dr. Animon elaborated the opportunities in the teak sector gaining importance in the context of the following reasons.

Promoting teak for restoration

- Improve policy support and incentives; action plans
- Enhance market access (e-markets), information (e.g. price) and quality standards
- Improve access to good planting material, knowledge, innovations and technologies
- Promote better management practices (biodiversity & climate-smart oriented)
- Communicate success stories to inspire further action

- Enhance capacity of smallholders to access financing
- Enhance collaboration and networking among investors, producers, processors and traders and learning from each other (e.g. through TEAKNET)
- Research - policy- practice - continuum
- Molding teakpreneurs with required skills, especially on value addition among the youth to contribute towards a green economy

He called upon the international community to promote teak to advance a green economy.

Prof. Yongyut Trisurat presented the salient achievements of the BMEL-ITTO Teak project implemented in 5 partici-



ating countries of Mekong sub-region. The way forward for future of natural and planted teak genetic resource conservation and management are summarized in the following slides.

Way Forward

Natural Teak Forests

- Relatively secured by ban on harvesting in natural forests and mainly exist in PAs (Thailand)
- Outside PAs are vulnerable to illegal logging and unsustainable management
- Climate change** remain medium- and long-term threats to natural stands





Teak Plantations - require

- well-defined silvicultural practices to achieve desired production goals
- Site selection, use of genetically improved stocks
- Pest and disease and fire prevention measures
- Provide incentive for long-rotation plantation
- Post harvest – financial mgt.

Conservation of Teak Genetic Resources and Tree Improvement

- Investigate the genetic variations in the planted and natural populations
- Continuing breeding of selected clones to improve timber quality & pest and disease resistance



Community-based Smallholders Teak Mgt.

- Capacity building on production of good quality seedlings & silviculture
- Intercropping with other species in agroforestry systems provide short-term benefits
- Added-value of small sized thinned teak (furniture design) to earn interim income
- Supportive tenure policies eliminating excessive regulatory burden
- Provide incentive programs, enhance their access to finance and long-term investments,
- improve networking (co-op), and strengthen market support for effective value chains dev.

Summary

BCG Model (agriculture sector)	BMEL-ITTO Teak in Mekong
Resource- and land-use efficiency	PAs, seed orchard and plus tree collection
R&D and technologies	Genetic improvement (good seedlings)
Smart farming/innovation	Site selection and intensive irrigation (shorten rotation)
Product diversification	Short-(intercrop), medium- (thinning) and long-term benefits (final cut) - silviculture
Traceability, food and product safety	Legal supply chains and certification (nat/int)
Waste reduction	C&I, SFM (circular wood-based ind.)
High-value and premium-quality products	Added-value of small sized thinned teak (furniture design)

Mr. Narongchai Chonlapap, Sub-Divisional Manager of Forest Industry Organization, Thailand gave brief background of FIO's plantations, its logging and trading activity. He informed that teak plantation comprised of 78,325 ha of different age classes, mostly distributed in north and north-eastern province, of which about half of it is FSC certified plantations.




PRESENTATION ITTO TEAK PROJECT

Forest Industry Organization

FIO'S TEAK PLANTATION AND TRADING

BY MR. NARONGCHAI CHONLAPAP
CARBON CREDIT SUB-DIVISION MANAGER
SEPTEMBER 2nd, 2022
e-mail : chonlapap_n@hotmail.com

FIO'S TEAK PLANTATION AND TRADING



FIO Teak

Total Area: 78,325 ha

Overall, 118 Forest Plantation

- North 65,981 ha
- Northeast 2,343 ha
- Central 9,604 ha
- South 397 ha

Certificates FSC of FIO Teak

Region	FSC Area (Ha)
Upper Northern	26,215
Lower Northern	5,740
Central	8,803
North Eastern	1,669
Southern	452
Sum	42,879

Total Teak of FIO
78,325 ha
FSC 42,879 ha

He further elaborated the performance outcome of the processed teak logs into lumber and furniture during the period 2020-2022 as shown in the slide. Major quantity of processed logs were traded in the domestic market and a minor quantity gone into the export market, mostly to China.

FIO'S TEAK PLANTATION AND TRADING

Performance Outcome 2020 - 2022



Year	Teak log (m ³)	Teak lumber / processed/others (ft ³)	Furniture (ft ³)
2020	44,809	93,723	40,957
2021	49,706	116,920	39,224
2022	56,156	169,058	126,560

International Market

Year	Country	Volume (m ³)
2021	China	106
Jan- Aug 2022	China	393
2023	China India Cambodia Japan	



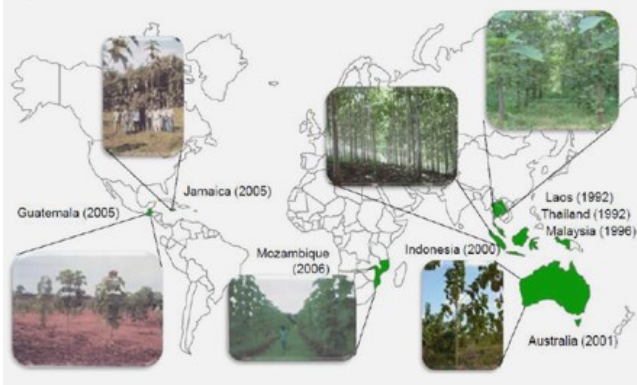
Dr. Paiboolya Gavinlertvatana, President, Thai Orchids Lab Estates Company Ltd., on commercial teak plantation development in Thailand presented the advantageous of Tissue culture teak which yielded over 200% than seed origin teak if the genetically superior mother teak plus trees were used for the purpose. The company has deployed tissue culture teak in many countries across S-E Asia, Latin America and Africa are yielding good results.

6. Why tissue culture teak

Improvement of Teak plantation:

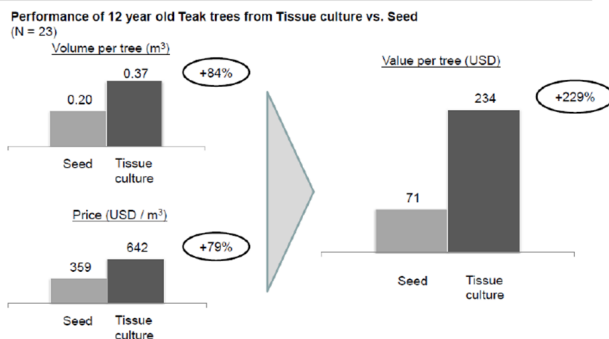
- Seeds – Improved seeds → Higher yields of Timber
- Cloning materials → the highest genetic-base yields of Timber
 - Uniformed stands
 - True-to-type
 - Good Quality Timber
 - Rejuvenation
 - Tolerances

We have in-field results around the world...



Flat-sawn board from 16 year old Tissue cultured teak (Note the uniform wood colour)

Tissue culture increases value by over 200%



Mr. Doonyapol Srichan, Adjunct Professor at Faculty of Architecture, KMITL gave an impressive presentation on 'Wooden Furniture Design: Value-Added Products' giving examples of various ergonomic simple designs which increases the value of the wood products which are acceptable in the domestic and international markets. Teak timber from short rotations can be made use of for such designs.



Mr. Doonyapol Srichan, KMITL on wood designs

Besides the keynote presentations, all the country partners presented the outcome and achievements of teak project in their country perspectives for contributing to the sustainable green economy. In the concluding ceremony, the keynote presenters were rewarded with a copy of the Teak Book.



Mr. Stephen Wagner, BMEL gave away rewards to the keynote speakers

The fruitful deliberations and key messages of Regional workshop will be shared among the participants of the 4th World Teak Conference in Ghana during 5-8 September in Accra in Ghana in which 17 delegates of ITTO project team

will be attending the conference. The closing remark was delivered by Dr. Hwan-ok Ma, ITTO, Japan and vote of thanks by Prof. Yongyut Trisurat.

Photo Gallery



The project implementing team partners line up during the opening ceremony



DDG, Royal Forest Department to Media



View of the audience



From exhibition stand: Furniture products from teakwood



Hardened Tissue culture teak for field planting





Ghana hosted 4th World Teak Conference 2022

Global Teak Market: Challenges and Opportunities for Emerging Markets and Developing Economies

5-8 September, Hotel Kempenski Gold Coast, Accra, Ghana

Report by P. K. Thulasidas



The 4th World Teak Conference with the theme *“Global Teak Market; Challenges and Opportunities for Emerging Markets and Developing Economies”* was successfully organized at Hotel Kempenski Gold Coast city, Accra, Ghana from 5-8 September 2022 for the first time in an African nation. The Conference was jointly organized by the Forestry Commission of Ghana, International Teak Information Network (TEAKNET), International Tropical Timber Organization (ITTO), Japan, the Teakwood Working Party of the International Union of Forest Research Organizations (IUFRO D5.06.02) with the technical support of the Food and Agriculture Organization of the United Nations (FAO), Rome.

The main topics deliberated in WTC 2022 include value addition and livelihood enhancement of smallholder teak plantations, promoting responsible teak trade and marketing, tree improvements, management and community forestry and family farming. It facilitated the transfer of knowledge and technology among teak growing countries. The Conference comprised of 5 thematic plenary sessions and offered three Field Excursions to the Kakum National Park canopy walk at Cape Coast, Shai Hills Resource Reserve and Boat cruise, visit to the Form Ghana Teak Plantation in Akumadan Ashanti region, Kumasi.

The main sponsors of the conference include Aron Global, SRS Group, Mere Plantations, Renas Prestige, Form Ghana, ETL, Kilombero Valley, TRC Brazil, the Liaison Group for mining in forest reserves and MIRC and their exhibition stands displaying products and services related to the global teak market, suppliers of seeds and inputs, logistics, transportation, developers, manufacturers and marketing experts. Around 273 registered delegates from 28 countries of 5 continents attended the conference to share knowledge and experience and to exchange ideas on the multiple economic, social and environmental benefits that teak resources can provide. The participants represented government institutions, the private sector, universities, research institutes, and forestry student communities, international and non-governmental organizations. Previous editions of World Teak Conferences were held in Costa Rica 2011, Thailand 2013 and Ecuador 2015.

Opening Ceremony

The Minister of Lands and Natural Resources, Mr. Samuel Abu Jinapor, MP speaking at the Opening Ceremony commended the organisers for selecting Ghana as a host for the conference at a time the world was recovering from the global COVID-19 pandemic. This, he said, would afford the governments and the private sector to work together to conserve natural resources and protect global ecosystems to support health and well-being platforms that gives opportunity to foster partnerships for the sustainable development and utilization of one of the most important tree species in the world.



Mr. Samuel Abu Jinapor, Minister of Lands and Natural Resources at the Opening Ceremony

Giving a brief historical antecedent of teak to Ghana, the Minister disclosed that the timber species was introduced around 1905, with seeds sourced mainly from India and Burma, now Myanmar. The minister stated that about 5.2

million teak trees were distributed at this year's trees planting exercise, the Green Ghana Initiative on estimated 200,000 hectares of land owned by both the government and private sector. The tropical timber constituted approximately 70 percent of forest plantations in the country. He noted that under the distinguished leadership of President Akufo-Addo, Ghana has prioritized forest landscape restoration, and especially commercial forest plantations, anchored around teak and other timber species. He asserted that currently, teak is the most exported timber species from Ghana, both in terms of volume and value. "Last year, for instance, teak constituted fifty-four (54%) by volume, and forty-five percent (45%) by value, of all the forty two (42) timber species and wood products exported from the country".

The Vice President, Dr. Mahmudu Bawumia, in a speech read out on his behalf by the Minister of Information, Mr. Kojo Opong Nkrumah, who declared the Conference Open said, even though Ghana was a leading producer of teak on the African continent it would focus on building a stronger teak market capable of creating jobs to promote the socio-economic development of the member countries. He indicated that the country Ghana is the destination choice for investors looking to explore and do business on the teak market.



Mr. Kojo Opong Nkrumah, Minister for Information, Ghana



A view of the attendees during the opening session



Traditional Ghanaian cultural interlude during the Opening Ceremony

Welcome remarks

On behalf of the Steering Committee of TEAKNET, Dr. Walter Kollert congratulated the Forestry Commission of Ghana and the Council for Scientific and Industrial Research (CSIR) for their support and efforts to make this event happen for the first time in an African nation after some considerable setbacks due to the global COVID-19 pandemic. He further gave a brief about TEAKNET which has more than 200 members from 50 countries in its rolls and is committed to work for the sustainable development of the world teak community and to facilitate continued interaction between the teak stakeholders. Dr. Kollert released the Policy Brief of the 5 thematic papers in two bilingual languages (English and French) on this occasion. It is available in the website of [TEAKNET](#). The organisers look forward the fruitful deliberations and outcome of the conference which will be communicated to the national governments and policy makers for the sustenance of the global teak sector.



Welcome remarks by Dr. Walter Kollert, Member, Steering Committee of TEAKNET

The CEO of Forestry Commission of Ghana and the Chair of LOC, Mr. John Allotey who delivered the Welcome Address said Ghana is privileged to host the 4th World Teak

Conference in Accra. He said the conference revolves around the production of teak, and the presence of key stakeholders from Academia, Researchers, Policy Makers, Exporters and Marketers is a testament of the great value and importance of teak.



Welcome address by CEO of Forestry Commission and LOC Chair, Mr. John Allotey

Dr. John Parrotta, President of the International Union of Forest Research Organizations, (IUFRO) in his virtual recorded statement gave an overview of IUFRO and its linkage with Teak through its dedicated Teakwood Working Party under the Research Division 5 (Forest Products), adding that IUFRO is proud as a partner and financier of the 4th World Teak Conference.



Virtual recorded address by IUFRO President, Dr. John Parrotta

He is hopeful that the conference will afford participants the opportunity to connect, share ideas and contribute to the growing conversation on the opportunities and challenges of teak on the global market.

Dr. Yurdi Yasmi, Deputy Regional Representative of FAO Office for Africa in his welcome remarks lauded the organisers, Forestry Commission, Teaknet and LOC members of WTC in organising the conference in Africa. He said, by strengthening existing networks and forging new partnerships among the international teak community, this conference will foster innovative ideas for the conservation and sustainable management of natural and planted teak forests..



Dr. Yurdi Yasmi, Deputy Regional Representative of FAO Office for Africa

Dr. Hwan-ok MA, Senior Project Manager who spoke on behalf of ITTO, Japan, informed that ITTO is the sole inter-governmental organisation that focused entirely on tropical forest resources and the ITTO members cover over 80% of global tropical forests and account for 90% of trade in tropical forest products! With these strong mandates, ITTO joins hands with its member countries, international organizations and other stakeholders to promote sustainable forest management thereby increasing trade volumes and value of legally and sustainably harvested timber and timber products.



Dr. Hwan-ok MA, ITTO- Japan

General Thematic Address

The opening ceremony and welcome remarks were followed by the general Thematic Address delivered by Mr. Rahul Ahuja, the CEO and Founder of Aron Global. He gave a three phased presentation on the theme of the conference, naming his organisation as an exclusive Indian sales partner and the world's largest teak trader in partnership with TRC Brazil.



Thematic address by Mr. Rahul Ahuja, Aron Global

His presentation encompassed the teak market landscape which he said has a global plantation teak market of 1.4 million geometric CBM per year, while disclosing that India is the dominant market for teak in the world with 94% production capacity, and the other 6% coming from Vietnam and China.

Thematic Sessions

The scientific programme has been organized in 5 thematic sessions that include oral presentations and posters encompassing all aspects of teak management, genetics, marketing and trade, community farming and forest landscape restoration as detailed below.

Session I : Smallholder teak plantation, value addition and livelihood enhancement of rural communities

Session II : Cost-benefit analysis on teak investments and promoting responsible trade and markets of teakwood

Session III : Tree improvement, genetics, silculture and stand management

Session IV : Management models for community forestry and Family farming

Session V : Environmental protection, biodiversity conservation and Forest Landscape Restoration

ITTO Teak Session: *Sustainable Teak Management in Mekong Sub-region*

IFSA Session: *Young Champions of Sustainable and Legal Supply Chains for Forest Resources; Focus on Timber/Teak Resources*

FORNESSA Session: *Building Productive and Resilient Forest Landscapes in Africa*

Thematic side events had been organized by the International Tropical Timber Organization (ITTO), the International Forestry Students' Association (IFSA) and the Forestry Research Network of Sub-Saharan Africa (FORNESSA) that is managed from Ghana. In addition, the private sector had the great opportunity to meet in Business to Business (B2B) sessions in all the 3 days of the conference. The Conference had organized a number of exhibition stands displaying products and services related to the global teak market. A total of 16 Oral presentations and equal number of Posters were presented. There was one General Keynote at the beginning each session by prominent speakers followed by Oral presentations and three Panel discussions on important topics during the 3 days.



Keynote in Session V : Dr. Markku Kanninen, University of Helsinki, Finland



Tieme Wanders, Form International, Netherlands during Panel discussion



IFSA Session

Interactive Session in progress

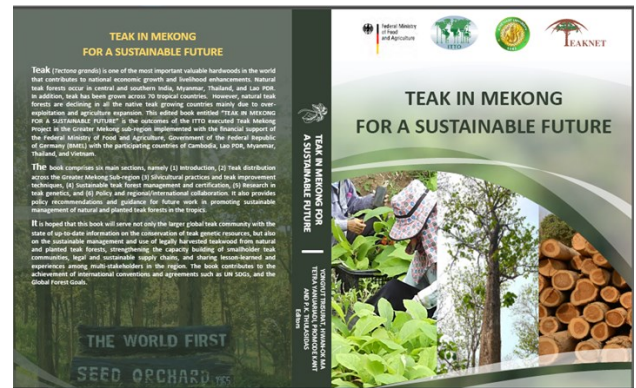


Mr. Hugh Brown, FC Ghana during Panel discussion



The Ushers, supporting team to the Technical Sessions

The new ITTO publication on *“Teak in Mekong for a Sustainable Future”* was released on the occasion by handing over a copy of the book by Dr. Hwan-ok Ma to Mr. John Allotey, CEO of Forestry Commission in the presence of Prof. Victor Agyeman, Chairman of the World Teak Conference 2022. The Teak book presents best practices for planting, managing, harvesting and processing teak in the Mekong Sub-region and demonstrating legality and sustainability along supply chains. An outcome of an ITTO Teak project in Mekong sub-region, the book will be an essential reading for policy makers and practitioners involved in teak supply chains.



Launch of the Teak Book

The ITTO special session on Teak on 5th Sept evening was moderated by Dr. Tetra Yanuariadi, Project Manager, ITTO. Due to time constraints, two papers only was presented. Prof. Yongyut Trisurat on *‘Sustainable Teak Management for Mekong Sub-region- Project Overview and Lessons Learned’* and by paper Dr. Zar Chi Hlaing on *‘Myanmar Efforts in Teak Genetic Conservation and Improvement and Myanmar Timber Legality and Assurance System (MTLAS)’*. Both the speakers shared the achievements of the teak project implemented in the Mekong region for the sustainable management of teak resources and teakwood supply chains and trade.



From (L to R): Dr. Tetra Yanuariadi, ITTO; Prof. Yongyut Trisurat, Kasetart University; Dr. Zar Chi Hlaing, FRI, Myanmar



The ITTO Teak project team during the Teak Session

Closing Ceremony

The Closing ceremony on 7th evening was marked with the gracious presence of the Deputy Minister for Lands and Natural Resources, Hon. Benito Owusu-Bio said, Ghana is proud to have successfully hosted the 4th World Teak Conference as the First African country to have ever done so in the history of the teak conferences. On behalf of TEAKNET Steering Committee, Dr. Walter Kollert announced the next World Teak Conference to be held in India in 2025. Prof. Victor Agyeman, Chairman of 4th WTC handed over the baton to Dr. Syam Viswanath, Director of Kerala Forest Research Institute, the host institution of TEAKNET.



In the closing remarks, the Conference Chair, Prof. Victor Agyeman provided a broad overview and summary report based on the 3-day deliberations on the various topics discussed on the successful organization of the 4th World Teak Conference hosted in Accra. Sponsors of the 4th Teak Conference received various categories of awards ranging from bronze, silver, gold, platinum and diamond packages. Some took home plaques with certificates and other plaques with African artifacts beautifully embroidered with Ghanaian emblems. The conference was attended over by more than 273 delegates from 28 countries in 5 continents.



SRS group receiving mementos from Hon. Dy. Minister



ITTO delegates with the Hon. Deputy Minister for Lands and Natural Resources and Chairman of the Conference during the closing ceremony

All the keynote speakers, session chairs and ITTO delegates at the event were also recognized and rewarded for their participation and contribution to the overall success of the event. The conference also agreed to present a copy of the summary communique to the government of Ghana through the Ministry of Lands and Natural Resources.

The salient highlights of the summary communiqué issued for action were:

- * Make available superior planting material to private companies and local communities to improve the planted teak forests.
- * Facilitate capacity building for local community and field workers, particularly in teak management techniques and intercropping of teak with profitable agricultural crops.
- * Establish confidence in teak investments with small holders and farmers through the provision of realistic cost-benefit analyses, market price information and enabling government policies.
- * Encourage smallholder growers to apply better silvicultural techniques, to use intercropping systems in order to bridge the initial years without earnings from forestry, to organize group marketing and to make better use of marketing data and information.
- * Investigate the opportunities of linking teak plantations with carbon credit markets.

- * Commit more resources to research and development to advance the sustainable management of planted teak forests and investigate in particular the quality of teak wood.

The delegates enjoyed the Farewell Dinner at Labadi Beach Hotel in the evening.



Field Excursion

On 8th September 2022, the participants joined for Field Excursions/Tours to three locations; namely, the Kakum National Park and rainforest canopy walk and Cape Coast castle, the Shai Hills Resources Reserve & Boat cruise and to the FORM Ghana Plantation at Kumasi that offered a better understanding of Ghana's natural environment and its commercial teak sector flourishing in the country.



In FORM Ghana plantation at Kumasi



Delegates at Cape Coast castle



In Kakum National Park canopy walk



In Shai Hill Resource Reserve

The PDF of presentations of the conference has been posted in the TEAKNET webpage www.teaknet.org under Alerts & News.

(Photo courtesy: Ms. Clara Allotey, LOC Secretariat, FC Ghana)

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ITTO Teak Mekong Newsletter is a bi-monthly electronic newsletter of the Project Team which is intended for circulation among the 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 concerned with teak. However, we reserves the information on the project and publishing through this newsletter for our esteemed readers.

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