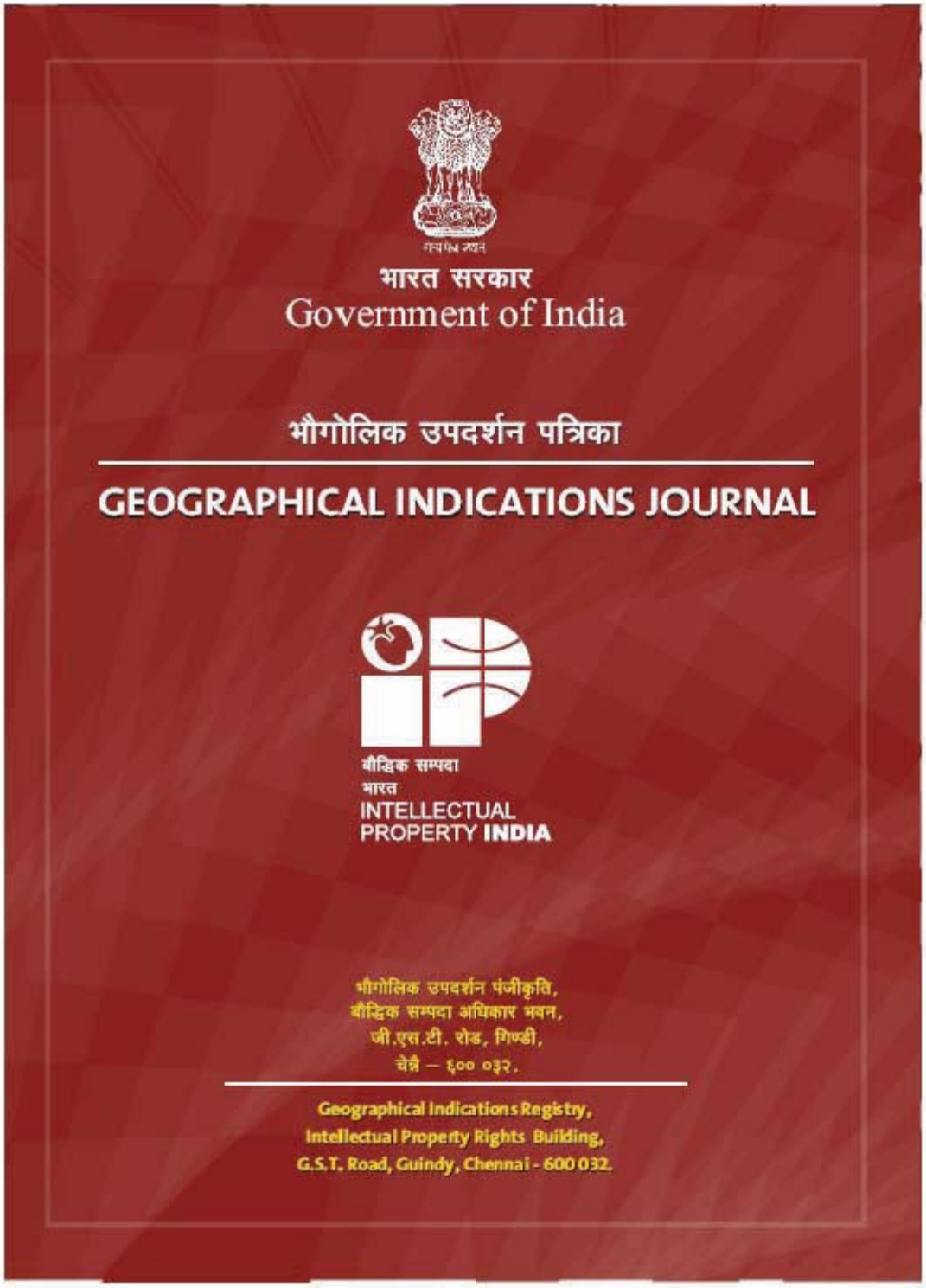
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जी.एस.टी. रोड, गिण्डी,
चेन्नै – ६०० ०३२.
Geographical Indications Registry,
Intellectual Property Rights Building,
G.S.T. Road, Guindy, Chennai - 600 032.

GOVERNMENT OF INDIA
GEOGRAPHICAL INDICATIONS
JOURNAL NO. 100

AUGUST 30, 2017 / BHADRAPADA 8, SAKA 1939

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OFFICIAL NOTICES

Sub: Notice is given under Rule 41(1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002.

1. As per the requirement of Rule 41(1) it is informed that the issue of Journal 100 of the Geographical Indications Journal dated 30th August, 2017 / Bhadrapada 8th, Saka 1939 has been made available to the public from 30th August, 2017.

NEW G.I APPLICATION DETAILS

App.No.	Geographical Indications	Class	Goods
566	Wooden Mask of Kushmani	20	Handi Crafts
567	Madurkathi	20,27	Handi Crafts
568	Darjeeling White	30	Agricultural
569	Darjeeling Green	30	Agricultural
570	Otho Dongo	19	Manufactured
571	Jaipuri Razai	24	Textiles
572	Komal Chaul of Assam	30	Agricultural
573	Lucknow Bone Carving	20	Handi Crafts
574	Thaikkal Rattan Furniture	20	Handi Crafts
575	Kalpetta Bamboo Craft	20	Handi Crafts
576	Kannur Baby Wraps	24	Textiles
577	Grana Padano	29	Manufactured
578	Lucknow Chikan Craft (Logo)	24	Handi Crafts
579	Krishnagar Sarpuria	30	Food Stuff
580	Krishnagar Sarbhaja	30	Food Stuff
581	Punjab Seed Potato	31	Agricultural
582	Tawlhlohpuan	24 & 25	Textiles
583	Mizo Puanchei	24 & 25	Textiles
584	Silao Khaja	30	Food Stuff
585	Pethapur Printing Blocks	16	Handicraft

PUBLIC NOTICE

No.GIR/CG/JNL/2010 Dated 26th February, 2010

WHEREAS Rule 38(2) of Geographical Indications of Goods (Registration and Protection) Rules, 2002 provides as follows:

"The Registrar may after notification in the Journal put the published Geographical Indications Journal on the internet, website or any other electronic media."

Now therefore, with effect from 1st April, 2010, The Geographical Indications Journal will be Published and hosted in the IPO official website www.ipindia.nic.in free of charge. Accordingly, sale of Hard Copy and CD-ROM of GI Journal will be discontinued with effect from 1st April, 2010.

Registrar of Geographical Indications

Advertised under Rule 41 (1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002 in the Geographical Indications Journal No. 100 dated 30th August 2017

G.I. APPLICATION NUMBER – 534

Application Date: 16-10-2015

Application is made by Lamphun Provincial Administration, 125 moo 15, Tambon Pasak, Muang District, Lamphun, Thailand for Registration in Part A of the Register of **Lamphun Brocade Thai Silk** under Application No. 534 in respect of Woven Silk Fabric falling in Class – 24 & 25 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

A) Name of the Applicant : Lamphun Provincial Administration

B) Address : Lamphun Provincial Administration
125 moo 15, Tambon Pasak, Muang District, Lamphun, Thailand.

Address of Service in India:
RNA, IP Attorneys (aka Ranjan Narula Associates)
401-402, 4th Floor, Suncity Success Tower,
Sector – 65, Golf Course Extension Road
Gurgaon – 122005, National Capital Region (Haryana), India

C) Types of Goods : **Class 24 & 25** – Woven Silk Fabric

D) Specification:

Lamphun Brocade Thai Silk refers to silk fabric woven in bas relief motifs created by using the heddle to lift and depress selected warp threads to obtain a motif. Twisted silk threads are used as warp and weft and supplementary silk threads are inserted to constitute designs. The intricate weaving technique for Lamphun Brocade Silk is a craft heritage that has been handed down through the generations.

E) Name of the Geographical Indication:

LAMPHUN BROCADE THAI SILK

F) Description of the Goods:

(i) Textile Types:

- Dress Cloth at least 40 inches in width. The overall length is 4 – 5 meters and the relief motif is 1.80 – 2.20 meters long.
- *Pha Sin* Cloth at least 40 inches in width. The relief motif is woven throughout the overall length of at least 1.80 meters.
- Shirt Cloth at least 40 inches in width. The relief motif is woven throughout the overall length of the textile.
- *Sabai* Cloth 10 – 12 inches wide and 2.00 – 2.20 inches long.
- Shawl at least 21 inches wide and 1.80 – 2.20 meters long.

(ii) Physical Characteristics:

- Lamphun Brocade Thai Silk is woven in lifted motifs using twisted strands of silver and golden threads.
- Thrown silk consisting of 3-4 strands of twisted thread (21 Dinier) is used as warp.
- Thrown silk consisting of 6 strands of twisted thread (28 Dinier) is used as weft.

G) Geographical area of Production and Map as shown in page no: 15

The production area for Lamphun Brocade Thai Silk is within the province of Lamphun.

Direction	Latitude	Longitude
North	18° 42’ 31”	99° 10’ 10”
South	17° 25’ 14”	98° 41’ 37”
West	18° 19’ 22”	98° 40’ 51”
East	18° 42’ 31”	99° 19’ 31”

Originally, thick fabrics are common in Lamphun due to its height and cold weather. The brocade weaving technique increases the thickness of the fabrics and thus the warmth. Nowadays, Lamphun Brocade Thai silks are commercially available for the visitors but the thickness varies according to the weathers of different areas. The weather in winter is very cold but since the province is located far from the sea, the dry season lasts long and the weather is very hot during summer. There are 3 seasons: summer during March to April, rainy season during May to October and winter during November to February. The dry weather lasts through winter and summer, for total period of approximately 6 months. For the other 6 months, the weather is not as dry because of the rain, less hot than summer and less cold than winter. The temperature between the two seasons is not extreme.

H) Proof of Origin (Historical records):

Lamphun or "Hariphunchai" was one of the ancient cities of Lanna kingdom, Thailand. It was highly prosperous in terms of economy, politics, administration and culture and has been regarded as a model to many cities until now.

Queen Chama Devi monument which is located at Nong Dork market in Lamphun was built by the people of Lamphun as a spiritual anchor and a reminder of the prosperous city of Hariphunchai. Among the northern provinces, Lamphun possesses the highest

number of ethnic groups e.g. Annamese, Yonok, Shan, B'ghwe Karen, Tai Khun, Tai Lü, Hong, Mon.

Queen Chama Devi, along with the people from Lavo Kingdom, moved to the area and built a city. Flourished with religion, civilization and culture, the city became known as the golden city of Lanna. However, it was later taken over by Chiang Mai, then invaded and ruled by Myanmar. During the time, most cities suffering the invasion were deserted as people moved out along with their family to find safer places. Around 1805, After Lord Kawila, the ruler of Chiagmai triumphed over the Burmese invaders, he moved, together with approximately 1,500 people from Chiang Mai and Lampang, to Lamphun and ordered the migration of Tai Lue People from Muang Yong and Xishuangbanna into Lamphun as well. Lord Kumfan a.k.a. Lord Burirat was then nominated as the ruler of Lamphun. Wieng Yong established on the bank of the Kuang River, east of Lamphun became Baan Wieng Yong and Baan Tong subdistricts nowadays. Back when Lord Kawila gathered people from Wieng Young, he ordered some of his people to settle down in the area currently known as Pa Sang and Baan Hong districts, demanding that those who resolved to stay shave their head to express their will but not those who resolved to leave for Lamphun. The nobles shaved their heads to show that they would never abandon their birthplace while the peasants took their chances on the new land. Since most people resolving to stay were the nobles and the competent ones, Lord Kawila ordered them to leave for Lamphun while the peasants had to stay. Upon the migration, the nobles brought with them skills and knowledge such as pottery, wood carving, lacquer ware work, especially, the method of weaving unique to them. In this kind of weaving, silk threads were used instead of cotton which was common among more modest people. Later, Princess Dara Rasmi, Royal Consort to King Rama V, revived the silk brocade and applied the knowledge she learned in Bangkok to the original weaving method. The weaving know-how was then handed down to Princess Suan Boon and Princess Lamchiek who were wife and daughter of Prince Chakrkam Kachrnsak. Later on the weaving of silk brocade became more common and was centered around the Wieng Yong subdistrict as well as adjacent areas housing the communities of the past yong nobles. The Lamphun Brocade is thus an elitist cultural heritage handed down through the generation Lamphun Brocade Thai Silk is produced within the province of Lamphun. The production process must be controlled and monitored through the registration of producers and the use of accompanying documents making the product traceable to its origin.

Lamphun is a province in northern Thailand. There are 3 seasons: the hot season, the rainy season and the cold season. The province is located far from the sea and an important agricultural product is the longan. At present, sericulture is performed around the area of the Li River. The surface soil is sandy loam and the layer underneath consists of clay loam mixed with pebbles or stones. The topography consists of rolling hills and mountain slopes. The overall gradient is approximately 3- 25%. The area is fairly abundant.

During the time of Queen Chama Devi, Lamphun or Hariphunchai was known as the Golden Land of Lanna. However, the birth of the Lamphun brocade took place in the era when various ethinic groups of people were moved to the area by its ruler. Around 1811, Phaya Kavila, ruler of Chiang Mai, ordered the migration of Tai

Lue people from Muang Yong in Xishuangbanna into Lamphun. Among those were some noble men. Lamphun was, at that time, an almost deserted town and the newcomers dispersed throughout the area, establishing Wieng Yong on the bank of the

Kuang River east of Lamphun as the residence of their nobles. The nobles brought with them various branches of knowledge, one of which was the method of weaving unique to them. In this kind of weaving, silk threads are used instead of cotton which was common among lower classes of people. After a hundred years, Princess Dara Rasmi, Royal Consort to King Rama V, revived the silk brocade and applied knowledge learnt from the Royal Court in Bangkok to the original weaving method, creating silk brocade with designs of intricate beauty. The weaving know-how was then handed down to Princess Suan Boon and Princess Lamchiek who were the wife and daughter of Prince Chakrkam Kachornsak, the last ruler of Lamphun. Later on, the weaving of silk brocade became more common and was centered around Tambon Wieng Yong as well as adjacent areas housing the communities of past Yong nobles. The Lamphun Brocade is thus an elitist cultural heritage handed down through the generations.

I) Method of Production:

Silk Threads

When silk threads are produced in the geographical indication area
The growing, maintenance and harvesting of mulberry must be performed in accordance to academic principles.

Sericulture

- Mulberry leaves are fed to the silkworms.
- Silk variety: Thai, hybrid Thai or foreign hybrid varieties suited to the area.
- The silk is cultured according to proper sericulture methods which are suitable for the area.
- Ripe adult silkworms are collected in a suitable environment.
- No less than 4-5 days after the silkworms have spun a cocoon for Thai silk and no less than 5 -7 days for hybrid silk, the cocoons are spread out in a shallow basket to prevent any moisture or heat.

Spinning

While weft spinning is performed manually or on a spinning machine of no more than 5 horsepower, warp threads are machine spun only. The number of cocoons used depends on the thread size required.

When silk threads are bought from outside the geographical indication area
Standard warp and weft threads are selected.

The silk thread used must be obtained from improved Thai silkworm varieties cultured and produced in the North and Northeast of Thailand.

Silk Fabric

Instrument Preparation:

- Weaving Loom Hard wood is used for the loom structure on which the shuttle is manually inserted (the weaving is then clapped back on the loom). The loom must be sturdy. On the left and right sides of the loom, the distance from the head beam

to the reed must be the same as the distance from the reed to the tail beam. All weaving components such as the heddle beam and cloth beam must be put into place.

- Heddles Install the heddles onto the loom to allow for the weaving of intersecting threads. Pass the warp threads through two heddles to alternately lift the threads.
- Motif Heddles these are the devices that create motifs on the fabric. At least 15 motif heddles are fixed onto the warp threads. How each thread is inserted depends on the design of the motif.

Silk Thread Preparation

Weft Preparation. Weft silk thread is wound around a bobbin. The process begins with winding the thread into spools and regulating its size. Silk threads are prepared according to the width and length required. The number of warp threads will be used in a calculation for how much thread is needed but calculation may also be based on the reed used: 48-50 spaces per inch.

Warp Preparation. Warp silk thread is spun into small spools, regulating its size to a desired thickness. Then, a spool is placed in the manual shuttle so that the thread may be inserted to create a woven fabric.

Weaving

Pass the warp threads around the warp rod and pass each threadthrough each heddle and comb. Wrap all the warp threads around the opposite clothbeam. Adjust the tension to a suitable tightness. Then, begin weaving by depressing(stepping on) the treadle to separatethe first set of warp and create a shaft into which the weft shuttle is inserted. In likemanner, raise the second heddle, bring back the shuttle and repeat throughout the entirelength of the fabric.Clap the reed when the weft shuttle is brought back to knock weftthreads together into a tightly woven fabric.Alternate plain weaving with motifs, which are created by raisingthe heddle to bring up selected warp and inserting a rod to hold up the threads. Asupplementary weft is then inserted into the resultant shaft to create a motif before therod is removed and the reed is then clapped back. To complete a designed motif, theprocess must be repeated, raising each heddle from first to last then the steps must berepeated once again in reverse order, from the last heddle to the first.Woven fabric is then wound around the cloth beam, more warp isreleased to allow for further weaving and the tension is then adjusted. Motifs will appear on the inside of the fabric.

J) Uniqueness:

Lamphun Brocade Thai Silk (Pa Mai Yoke Dork Lamphun) refers to silk fabric woven in bas relief motifs. The term "Yoke" refers to the weaving process where the silk threads are "lifted" while the others set of warp is "depressed" between which the weft shuttle is inserted. Supplementary silk threads are inserted to make designs. Nowadays, silver and golden threads are also used as supplementary weft to create even more appealing designs.

The designs of Lamphun Bromcade Thai Silk are more delicate than silk fabrics from other regions which have a more rigid-looking designs. In the northern weaving process, one of the heddles is known as the "suspended heddle" which does not allow changing the pattern in the course of the production process. In case of change of pattern, the

entire suspended heddle shall be removed and the warp threads must be re-arranged. A motif made using the suspended heddle can consist of at least 15 motif heddles. In the North-east, the heddle which is used is the connected heddle which allows motifs' modification. A motif made using this type of heddle can consist in more than 100 motif heddles. However, the drawback of the connected heddle is that removing only one motif heddle will destroy the entire pattern and in such case, the heddle will have to be re-arranged.

The main components of Lamphun Brocade Thai Silk are silk, silver and golden threads. The thrown silks 3-4 (21 denier) of 330 TPM is used as warp threads. The thrown silks 6 (28 denier) of 150 TPM is used as weft threads. the gold silks is used as warp threads of the defined size.

Weaving instruments:

Motif Heddles: they are the devices that create motifs on the fabric. At least 15 motif heddles are fixed onto the warp threads. How each thread is inserted depends on the design of the motif. The weaver must insert the threads to at least 15 motif heddles. As to the Lamphun style motif heddles, one of the heddles is the suspended heddle which does not allow changing the pattern during the prduction process. In case of change of pattern, the entire suspended heddle needs to be removed and the warp threads have to be re-arranged. In other regions, the connected heddles are used. This type of heddle allows motifs' modification. A motif made using this type of heddle can consist of up to more than 100 motif heddles. However, the drawback of the connected heddle is that removing only one motif heddle will destroy the entire pattern. It also requires assisstance from other persons in changing one heddle to another while the Lamphun style heddle is more convenient as it only requires one person to carry out the weaving process.

Reed: Lamphun Brocade Thai Silk is woven using the traditional loom. The reed used consists of the reed part and to arms mounted on the loom structure. This type of reed gives a high quality textile with a smooth, even surface.

Heddle supporting beam: invented to facilitate the lifting of a large number of motif heddles and to keep the heddles from entanglement which could break the warps.

Weaving process: The designs of Laphun Bromcade Thai Silk are more delicate than those of other regions which have a more rigid appearance. In the northern weaving process, suspended heddles are used. The plain section may be woven alternately with the motif section having supplementary weft threads. The supplementary weft threads may be of various colours including which would give the designs appealing colours and could include golden and silver threads as supplementary weft thread.

Designs: The traditional designs of choice are inspired by the decorative stuccowork at Chama Devi temple. Some animal-inspired designs can be seen from Queen Chama Devi image's clothes. Upon a visit of her father in Lamphum, the Queen brought with her, from the central region, the Thep Panom design and applied it with the common designs which later became the signature design of Lamphun textile.

Thickness of the silk

Thrown silk consisting of 6 strands of twisted thread (27/29 Dinier) of 150 TPM (Turns Per Meter) is used as weft and special weft.

Thrown silk consisting of 3 or 4 strands of twisted thread (20/22 Dinier) of 330-350 TPM (Turns Per Meter) is used as warp.

In addition, the silver and golden threads are round standardized threads in good quality, speckless and unflakable.

Count of the yarns

Textile Types: Dress Cloth - at least 40 inches in width. The overall length is 4 – 5 meters and the relief motif is 1.80 – 2.20 meters long.
Pha Sin Cloth - at least 40 inches in width. The relief motif is woven throughout the overall length of at least 1.80 meters.
Shirt Cloth - at least 40 inches in width. The relief motif is woven throughout the overall length of the textile.
Sabai Cloth - 10 – 12 inches wide and 2.00 – 2.20 inches long.
Shawl - at least 21 inches wide and 1.80 – 2.20 meters long.

Warp thread of 1 Kilogram at 25 meters in length, weft thread of 4 Kilograms at 100 meters in length and a spool of silver/golden thread could be wove into 4 pieces of Lamphun Brocade Thai Silk, at the size of 40 inches in width and 4 meters in length (each).

Dyes being used

Chemical, environmentally friendly, dyes are used. The source of dyes are selected and standardized with ISO (International Organization for Standardization). The dyes are lasting and not discolored.

The motifs/patterns

Lifestyles of Lamphun locals are bound with regions, the inspiration of patterns are from those decorated in sanctuary and flowers found formerly at pagodas or shrines in Lamphun province. Such patterns are woven to be lifted. Such weaving technique is used in Lamphun province only.

K) Inspection Body:

The following geographical indication logo below must appear on the label of Lamphun Brocade Thai Silk. The label must also contain the Thai geographical indication registration number Sor.Chor. 50100021 and the following product details: name of the product i.e. Lamphun Brocade Thai Silk, silk yarn type, size of fabric, type of dye used, fabric care instruction and producer's information.

There shall be the establishment of a monitoring and control system throughout the production process, at the producers' level and at the provincial level.

There shall be a registration of producers and sellers wishing to use the Lamphun Brocade Thai Silk geographical indication.

The registered members shall comply with the Operating Manual for Lamphun Brocade Thai Silk geographical indication.

Map indicating geographical origin of
Lamphun Brocade Thai Silk

The Map of Lamphun

The area for the production of **Lamphun Brocade Thai Silk** in Lamphun Province in the north of Thailand.

Advertised under Rule 41 (1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002 in the Geographical Indications Journal No. 100 dated 30th August, 2017

G.I. APPLICATION NUMBER – 543

Application Date: 18-01-2016

Application is made by M/s. Nilambur Teak Heritage Society, Post Box No. 18, VIP Colony, Veliyamthode, Post: Chandakkunnu, District: Malappuram - 679329, Kerala, India for the registration in Part - A of the register of **Nilambur Teak** under Application No. 543 in respect of Teak falling in Class 31 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

A) Name of the Applicant : M/s. Nilambur Teak Heritage Society

B) Address : M/s. Nilambur Teak Heritage Society
Post Box No. 18, VIP Colony, Veliyamthode, Post: Chandakkunnu, District: Malappuram - 679329, Kerala, India

Facilitated by:
Kerala Agricultural University,
KAU P.O., Thrissur, Kerala – 680656

C) Types of Goods : **Class 31 -** Teak

D) Specification:

Teak (*Tectona grandis* Linn.f.) is the most important hard wood species of the world. Teak wood is highly priced by the wood industry due to its superior mechanical and physical properties, as well as its pleasing aesthetic appearance. It occurs naturally in India, Myanmar, Thailand and Laos. Natural teak forests are estimated to cover 29.035 million ha in India. Nilambur in Malappuram district of Kerala is the source of quality teak in Kerala and hence is often christened as 'Mecca of Teak'. Nilambur forms the eastern sector of Malappuram district in Kerala state and includes the ranges and spurs of Western Ghats. Nilambur teak wood is obtained from the forest areas, teak plantations, homesteads in Nilambur Taluk and Edavanna panchayat of Ernad Taluk of Malappuram district, Kerala, India. The undulating mid-lands on the West, Nilgiris in the East, Silent Valley National Park of Palakkad District on the South and Wayanad forests on the North, border the Nilambur Taluk. Teak is the major plantation species in Nilambur. Among the timbers of India, teak has the realm of supreme quality and in olden days and historically, Nilambur was the major source of quality teak known as "Malabar teak" in trade as Nilambur was a part of then Malabar district. Currently, the forests and plantations in Nilambur are the major source of quality teak in India. Additionally, the homesteads and farmlands in Nilambur also supply substantial quantity of quality teakwood particularly to the domestic local market. Total teak forest area in Nilambur South and Nilambur North is approximately 8760.37 ha representing 10% of all teak

plantations in Kerala. Plenty of standing stock of quality teak can be seen in the home gardens in Nilambur. It is estimated that home gardens contribute 33% of the total teak wood supply in Kerala.

Nilambur teak has acquired worldwide reputation due to its specific qualities. It is considered as a very valuable wood due to its ability to withstand fluctuating climatic conditions characteristic of the humid tropics. It is very stable, which means that it does not warp when subject to variations in humidity and temperature. The superiority of teak for ship building and structural purpose are due to the large size, tree form, color and workability. It is a privileged wood withstanding termite and fungal attack. The heartwood of teak is extremely resistant to attack of insects and fungi. The superiority of teak from Nilambur and surrounding regions for shipbuilding and structural purpose are due to the large size and form of the tree, the color and workability of the wood and its ability to withstand termite attack. It is proved that tectoquinone (2-methyl anthraquinone) which is characteristically present in Nilambur teak (heartwood) is a repellent to the dry wood termite, and it ranged between 0.23% and 0.34%. The resistance to fungal decay is mainly due to naphthoquinone (0.62%-1.26%) and its derivatives present in teak wood. The durability of teak is the result of synergetic effect of total extractive compounds (12.44%-15.98%) especially the polyphenolic compounds mainly tectoquinone and naphthoquinone. The hydrophobicity, antioxidant properties and oily nature of teak wood were mainly due to Caoutchouc compound. These unique qualities of Nilambur teak were the major factors that helped it to gain the worldwide attention in the ship and yacht building dockyards. Nilambur teak has other unique qualities such as world renowned golden yellow colour and attractive figure. More over teak grows fast in Nilambur and yields large diameter logs.The major physical properties of Nilambur teak wood are as follows:

Gross physical, mechanical and working properties of Nilambur teak.

Sl. No.	**Wood Properties**	**Description**
	Physical	
1.	*Colour*	Heartwood golden brown or dark brown occasionally with black streaks with a waxy feel, lustrous, sapwood pale yellow or grey, well defined.
2.	*Odour*	Distinct aromatic odour with the smell of leather
3.	*Weight*	Moderately heavy (Air-dry specific gravity 0.55-0.70 with average value of 0.65)
4.	*Grain*	Straight, sometimes wavy
5.	*Texture*	Coarse
	Mechanical	
1.	***Strength***	Strong
	Static Bending	
	Modulus of Rupture (MOR) N/mm^2	106
	Modulus of Elasticity (MOE) N/mm^2	10000

	Compression parallel to grain	
	Maximum Crushing Stress (MCS) N/mm^2	60.4
2.	***Drying and shrinkage***	Dries well but rather slowly with little or no degrade; Shrinkage- radial (2.3%), tangential (4.8%), volumetric (7.1%). High resistance to water absorption.
	Other properties	
3.	*Durability*	Very durable; highly resistant to termite damage.
4.	*Treatability*	Extremely resistant
5.	*Working properties*	Easily worked with both hand and machine tools. Planning easy; Boring- easy; Turning- rather easy; Nailing- good but pre-boring necessary; Finish-good

The wood of Nilambur teak is strong and moderately heavy with an attractive figure and dark golden yellow heart wood turning to brown, dark brown and finally almost black with age. It is dimensionally very stable and is highly resistant to termite damage and other fungal pathogens. The wood has oily feel, strongly and characteristically scented when fresh without characteristic taste. It is easily worked with both hand and machine tools. Planning of this wood is easy because of which it is called as 'Carpenter's delight'. It can be worked by hand to a good smooth surface, and can be brought to a fine wax polished finish with little filling. Specific gravity, which is a very important physical property of wood, influences all the other properties such as anatomical, mechanical and other properties and therefore has an important role in deciding the utilization value of a timber. Higher the values better will be the timber quality, particularly the strength. Specific gravity values of the Nilambur teak, under all the three conditions (green, air dry and oven dry) are generally high compared to other locations. As specific gravity is correlated with strength properties of wood, Nilambur teak is superior. In another study analysis of the data on wood specific gravity and rate of growth of teak from two seed origins showed that locality had a highly significant effect, while the variation due to seed origin was not significant.

Coefficient of anisotropy is the ratio between tangential shrinkage and radial shrinkage and it is a measure of dimensional stability of timbers which influences the ability of timbers to resist climatic variations. Lower the ratios, more dimensionally stable the wood is. The percentage wood shrinkage in radial as well as tangential direction at three conditions like green to air dry, air dry to oven dry and green to oven dry, is less for Nilambur teak, indicating its stability. The co-efficient of anisotropy is found to be less i.e., 1.55 for Nilambur teak which indicates better stability and hence, improved timber quality. The heartwood proportion, which is the naturally durable part of the timber for which teak was well known, is an important factor determining wood quality. As heartwood to sapwood ratio is high in Nilambur teak, the percentage of volume of heartwood obtained from an individual tree would be higher for Nilambur teak.

The above wood properties which has direct correlation with the utilization aspects of timber shows that Nilambur teak has most properties found in superior class timbers suitable for most end uses like cabinet making, interior and exterior joinery, flooring and fine furniture, carving, panelling, turnery, sliced for decorative and face veneers. It is highly durable, resistant to termite and fungal damage. It is easily workable with both hand and machine, with easily boring and turning. It dries slowly with little or no degrades. It is highly resistant to water absorption.

Wood (physical and anatomical) properties specific to Nilambur Teak.

Sl. No.	Wood Properties	Values - Range
1.	Specific gravity (G)	0.70-1.42
2.	Specific gravity (AD)	0.60-0.79
3.	Specific gravity (OD)	0.58-0.77
4.	Radial shrinkage (G to AD)	0.39-1.75
5.	Radial shrinkage (AD to OD)	1.04-2.85
6.	Radial shrinkage (G to OD)	2.29-4.33
7.	Tangential shrinkage (G to AD)	0.54-3.96
8.	Tangential shrinkage (AD to OD)	0.89-3.18
9.	Tangential shrinkage (G to OD)	3.70-5.47
10.	Moisture content (G)	20.95-91.00
11.	Heartwood (%)	70.5
12.	Extractive content (%)	6.58-19.00
13.	Heartwood colour	Golden brown
14.	Munsel System (1976)	
	Hue	7.5
	Value	5
	Chroma	4
15.	Colour description 7.5YR/5/4	Brown
16.	Vessel diameter (µm)	210-290
17.	Vessel area (µm)	39850-92583
18.	Vessel frequency (mm-2)	2-6
19.	Ray height (µm)	368.8-671.3
20.	Ray width (µm)	28.8-78.8
21.	Ray frequency (mm-1)	2-6

G – Green; AD – Air Dry; OD – Oven Dry

The above table shows the properties that are specific to Nilambur teak. Of significance are the colour, extractive content and shrinkage percentage of the heart wood of Nilambur teak. Nilambur teak has a hue of 7.5, Value of 5, and Chroma of 4. The occurrence of high extractive content in Nilambur teak is the major reason for its unique golden brown colour and durability. The heartwood (%) of Nilambur teak is 70.5. The specific gravity (Green) ranged between 0.70-1.42, specific gravity (Air Dry) ranged between 0.60-0.79 and specific gravity (Oven Dry) ranged between 0.58-0.77 (Table 5). The higher specific

gravity of Nilambur teak might be attributed to the presence of high percentage of mature wood which is characterized by lower percentage of parenchymatous tissues and lower vessel diameter.

Specific qualities:

Teak varies greatly from locality to locality in timber characteristics such as colour, grain, texture and figure. The heartwood of teak is extremely resistant to attack of insects and fungi. The superiority of teak from Nilambur and surrounding regions for ship building and structural purpose are due to the large size and form of the tree, the color and workability of the wood and its ability to withstand weathering. Nilambur teak has unique qualities such as world renowned golden yellow color and attractive figure. It is famous for its elegance, class, grandeur, durability, antiquity, grace and strength. The durability of teak is the result of synergetic effect of total extractive compounds (12.44%-15.98%) especially the polyphenolic compounds mainly tectoquinone and naphthoquinone. It is proved that tectoquinone (2-methyl anthraquinone) which is characteristically present in Nilambur teak (heartwood) is a repellent to the dry wood termite, and it ranged between 0.23% and 0.34%. The resistance to fungal decay is mainly due to naphthoquinone (0.62%-1.26%) and its derivatives present in teak wood. The hydrophobicity, antioxidant properties and oily nature of teak wood were mainly due to Caoutchouc compound. This unique quality of Nilambur teak is the major factor that helped to gain the worldwide attention for it in the ship and yacht building. The total extractive content increases as the trees become older and there by the durability. Teak grows fast in Nilambur and yields large diameter logs. The wood has straight grain with golden yellowish brown colour, often with darker chocolate-brown streaks.

E) Name of the Geographical Indication:

NILAMBUR TEAK

F) Description of the Goods:

Nilambur teak is the teak wood obtained from the forest areas, plantations and homesteads in Nilambur Taluk and the nearby panchayat of Edavanna in Ernad Taluk in Malappuram district in Kerala, India. Furniture and other teak wood products, including ships and sea vessels are manufactured from Nilambur teak wood. Teak tree is a large deciduous one with rounded crown. Branches are quadrangular, channeled with a large

quadrangular pitch. Leaves opposite, large, broadly elliptical or ovate usually 1' to 2' long but often larger in coppice shoots and young plants, rough above, stalletely grey tomentose beneath, with minute glandular dots which are red in young leaves, afterwards turning black. Heart wood is dark golden yellow sometimes with dark streaks, turning brown with age, oily with a characteristic color, and leathery smell, extremely durable and does not warp or split.

Nilambur forests and teak plantations along with the homesteads in Nilambur are the major source of quality teak wood in India. It is the most important timber tree of India and known worldwide for its unique quality for shipbuilding and yacht manufacture. In olden days sail boats and small ships (Dhow or 'Uru' as it is called locally) were made, entirely out of teak wood from Nilambur, at Beypore in Calicut district and the yacht industry in Europe and Arabian countries still prefers the beautifully figured and very durable teak wood from Nilambur. Most of the well-known palaces and other historical monuments in Kerala have immense wood work of teak from Nilambur. The Kerala Legislative Assembly hall and the building contain considerable quantities of wooden furniture's home decorations and fixtures out of Nilambur teak. It is also used extensively for general carpentry work including furniture and fixtures for construction work, bridges, building, wharfs, piles, cabinetwork, railway carriages, carvings, ordnance work, wheel spokes, etc. Nilambur teak is famous for its elegance, class, grandeur, durability, antiquity, grace and strength.

Nilambur teak has acquired worldwide reputation due to its specific qualities. It is considered as a very valuable wood due to its ability to withstand fluctuating climatic conditions characteristic of the humid tropics. It is very stable, which means that it does not warp when subject to variations in humidity and temperature. The superiority of teak for ship building and structural purpose are due to the large size, tree form, color and workability. It is a privileged wood withstanding termite and fungal attack. The heartwood of teak is extremely resistant to attack of insects and fungi. The superiority of teak from Nilambur and surrounding regions for shipbuilding and structural purpose are due to the large size and form of the tree, the color and workability of the wood and its ability to withstand termite attack. It is proved that tectoquinone (2-methyl anthraquinone) which is characteristically present in Nilambur teak (heartwood) is a repellent to the dry wood termite, and it ranged between 0.23% and 0.34%. The resistance to fungal decay is mainly due to naphthoquinone (0.62%-1.26%) and its derivatives present in teak wood. The durability of teak is the result of synergetic effect of total extractive compounds (12.44%-15.98%) especially the polyphenolic compounds mainly tectoquinone and naphthoquinone. The hydrophobicity, antioxidant properties and oily nature of teak wood were mainly due to Caoutchouc compound. These unique qualities of Nilambur teak were the major factors that helped it to gain the worldwide attention in the ship and yacht building dockyards. Nilambur teak has other unique qualities such as world renowned golden yellow color and attractive figure. More over teak grows fast in Nilambur and yields large diameter logs. The major physical properties of Nilambur teak wood is provided below:

Gross physical, mechanical and working properties of Nilambur teak.

Sl. No.	Wood Properties	Description
	Physical	
1.	Colour	Heartwood golden brown or dark brown occasionally with black streaks with a waxy feel, lustrous, sapwood pale yellow or grey, well defined.
2.	Odour	Distinct aromatic odour with the smell of leather
3.	Weight	Moderately heavy (Air-dry specific gravity 0.55-0.70 with average value of 0.65)
4.	Grain	Straight, sometimes wavy
5.	Texture	Coarse
	Mechanical	
1.	Strength	Strong
	Static Bending	
	Modulus of Rupture (MOR) N/mm^2	106
	Modulus of Elasticity (MOE) N/mm^2	10000
	Compression parallel to grain	
	Maximum Crushing Stress (MCS) N/mm^2	60.4
2.	Drying and shrinkage	Dries well but rather slowly with little or no degrade; Shrinkage- radial (2.3%), tangential (4.8%), volumetric (7.1%). High resistance to water absorption.
	Other properties	
3.	Durability	Very durable; highly resistant to termite damage.
4.	Treatability	Extremely resistant
5.	Working properties	Easily worked with both hand and machine tools. Planning easy; Boring- easy; Turning- rather easy; Nailing- good but pre-boring necessary; Finish-good

The wood of Nilambur teak is strong and moderately heavy with an attractive figure and dark golden yellow heart wood turning to brown, dark brown and finally almost black with age. It is dimensionally very stable and is highly resistant to termite damage and other fungal pathogens. The wood has oily feel, strongly and characteristically scented when fresh without characteristic taste. It is easily worked with both hand and machine tools. Planning of this wood is easy because of which it is called as ‘Carpenter’s delight'. It can be worked by hand to a good smooth surface, and can be brought to a fine wax polished finish with little filling. Specific gravity, which is a very important physical property of wood, influences all the other properties such as anatomical, mechanical and other properties and therefore has an important role in deciding the utilization value of a timber. Higher the values better will be the timber quality, particularly the strength. Specific gravity values of the Nilambur teak, under all the three conditions (green, air dry

and oven dry) are generally high compared to other locations. As specific gravity is correlated with strength properties of wood, Nilambur teak is superior. In another study analysis of the data on wood specific gravity and rate of growth of teak from two seed origins showed that locality had a highly significant effect, while the variation due to seed origin was not significant.

Coefficient of anisotropy is the ratio between tangential shrinkage and radial shrinkage and it is a measure of dimensional stability of timbers which influences the ability of timbers to resist climatic variations. Lower the ratios, more dimensionally stable the wood is. The percentage wood shrinkage in radial as well as tangential direction at three conditions like green to air dry, air dry to oven dry and green to oven dry, is less for Nilambur teak, indicating its stability. The co-efficient of anisotropy is found to be less i.e., 1.55 for Nilambur teak which indicates better stability and hence, improved timber quality. The heartwood proportion, which is the naturally durable part of the timber for which teak was well known, is an important factor determining wood quality. As heartwood to sapwood ratio is high in Nilambur teak, the percentage of volume of heartwood obtained from an individual tree would be higher for Nilambur teak.

G) Geographical area of Production and Map as shown in page no: 38

Nilambur teak is the teak wood obtained from the forest areas, plantation and homesteads in Nilambur Taluk and Edavanna panchayat in Ernad Taluk of Malappuram district, Kerala. Teak is the major plantation species in Nilambur. Total teak forest area (in Nilambur South and Nilambur North) is approximately 8760.370 ha. Plenty of standing stock of quality teak is available in the home gardens in Nilambur.

Topography:

The Nilambur region extends from 76^{o} 5’ 40.4” to 76^{o}33’ 15.4” E longitude, 11^{o}4’13.9” to 11^{o}31’ 40.5” N latitude respectively. Topographically, Nilambur area can be divided into plains, valleys and Ghats. The upper Ghats are covered by evergreen forests with very little biotic interference. The slopes are very steep and are traversed by a large number of streams and rivulets. Rivers, especially Chaliyar, help in the transportation of teak wood from forests to port at Calicut and timber market at Kallayi. The plains are occupied by plantations and farm lands. The elevation is mostly 100 m, with a few hillocks rising up to 300 m.

Ecology and soil:

The Nilambur region is traversed by a major river, the Chaliyar, which flows westward and drains into the Arabian Sea at Beypore. The major tributaries are Chaliyarpuzha, Karimpuzha and Punnapuzha. The rich alluvial deposit in the river banks of Chaliyar enhance the soil fertility and thus enhance the quality of Nilambur teak. The well-drained alluvial soils on river beds provide the ideal site for regeneration of teak. Clay is formed in low-lying areas as a result of sedimentation. The soil is shallow and thin along the ridges and steeper slopes whereas it is deep and fine in plains and gentle slopes. Local belief is that the unique golden brown color of Nilambur teak is due to the presence of

gold ore in the soils of Nilambur. The Nilambur valley was once famous for artisanal gold mining.

Naturally teak attains best potential in moist deciduous forests. It is found generally in mixture in association with *Terminaliatomentosa, T. bellarica, T. paniculata, Dalbergialatifolia, Lagerstroemia lanceolatal, Pterocarpusmarsupium, Grewiatiliaefolia, Schleicheraoleosa, Anogeissuslatifolia, Adina cordifolia, Mitragynaparvifloora, Stereospermumchelenoides, Gmelinaarborea* and *Xyliaxylocarpa* (in lateritic soils). Lowest storey usually has been found consisting of *Cassia fistula*, Bauhinia, Emblica, *Bambusa bambos* while *Helicterisisora, Glycosmispentaphyla* and *Lantana camara* dominate the under storey. The latter species are often regarded as site indicators for teak. Nilambur valley with its unique topography consisting of alluvial delta contributed by Chaliyar River and its tributaries acts as excellent moist deciduous habitat for teak and the above species.

Teak can grow on a variety of soils. The quality of its growth, however, depends on the depth, structure, porosity, drainage and moisture holding capacity of the soil. The soils in Nilambur area have well developed profiles due to intensive leaching. Appreciable amount of gravel are found in the soil mass indicating good internal drainage. Accumulation of humus in the top soil gives it deep reddish brown to dark brown colour, which changes to red in the sub-soil due to de-hydration of sesquicentennial deviation from the surface horizon. The surface soil has a structure which favours root development.

Soils of Nilambur plantations are loamy and medium acidic in all site quality classes. The soil is medium in texture, moderately deep and non-calcareous in nature and acidic in reaction. They are rich in nitrogen and contain moderate quantities of potassium and phosphorous.

Physico-chemical attributes of soils at Nilambur

Division	Site quality class	Sand (%)	Silt (%)	Clay (%)	BD* (g cm-3)	PD* (g cm-3)	WHC * (cm)	pH	OC (%)	N	P	K	Ca	Mg	$CaCO_3$
										kg ha-1					
Nilambur (North)	I	73	14	13	1.12	2. 25	38.44	5.9	0.76	45	8	53	38	22	0.008
	II	73	13	14	1.13	2.27	39.04	5.9	0.72	47	9	55	41	24	0.008
	III	74	14	12	1.16	2.3	38.33	5.9	0.74	42	9	53	38	22	0.008
Nilambur (South)	I	74	14	12	1.14	2.29	39.28	5.9	0.77	44	9	57	43	33	0.009
	II	74	12	14	1.13	2.31	39.56	6	0.78	46	10	57	44	34	0.009
	III	74	12	14	1.15	2.23	39.4	5.9	0.78	47	12	61	45	33	0.01

*BD – Bulk density, PD- Particle density, WHC – water holding capacity

Griffith and Gupta (1948) investigated laterization of teak soils and concluded that the molecular ratio of silica to sesqui oxides (oxides of Fe and Al) provides an indication of the suitability of soil for teak unless some factor such as a laterite under shallow soil, excessive boulders or high water table (3-4 feet in winter) intervenes.

The following factors are generally considered responsible for the high quality of teak in Nilambur valley:

- High $Si0_2/R_20_3$ ratio in the soil. (Less than 1.33- pure laterite; between 1.33 and 2.00- lateritic soil; more than 2.0- non laterite)
- Deep alluvial soil
- High content of bases, especially Ca and Mg in the soil.
- Good moisture availability due to appropriate water table.
- Good sand and loam texture and consequent good soil drainage.

In the more or less pure teak areas, two extremes of growth are observed, the best in the deep alluvial soil with perfect drainage, and the worst in the lateritic soil and under swampy conditions. A gradation in growth is found between these two extremes. The best growth is limited to more or less long, narrow strips along the river banks or to small patches followed by deep disintegrated gneiss soils.

It is observed that where the soil depth is at its optimum teak retains its foliage for a longer period even during summer. This may be due to the fact that the roots can go much deeper and get moisture from lower levels also. In the case of alluvial soils of depth greater than the optimum, the roots fails to reach the main water level which is still deeper and thus the tree has to be content with moisture available from the upper layers. This retards the growth.

Mere proximity to river do not account for best growth. The height of the bank and river bed also plays a part in the good growth of teak. When the actual bank of the river bed is comparatively low, from the top of which the ground slopes directly up to the main level of the alluvial land, the area supports the very best growth. Commonly it is seen that in alluvial sands, the actual river bank is somewhat higher than the adjacent land. If there is sufficient surface drainage the very best growth can be seen on the river bank. It may be because of the washing down and deposition of organic compounds formed on the higher lying banks to the lower ground thereby increasing the fertility of lower lands. Apart from the river banks, homesteads in the Nilambur premises acts as potential source of quality teak. In particular the homesteads in villages in the Nilambur valley bordering the Western Ghats such as Karulai, Kalikavu, Chaliyar, Pookkottumpadam, has high quality teak trees mostly coppiced from the old natural teak trees.

A study on the productivity of Teak plantations in Konni, Kozhikode, Nilambur and Wayanad Forest Divisions showed that Nilambur Division had the highest productivity among the four Divisions.

Climate:

The temperature of the area is very much influenced by rainfall and it varies between 21°C to 38°C. The heavy rainfall and bright sunshine lead to a humid and warm climate, excellent for luxuriant plant growth including teak. Frost is generally absent. In the plains and foothills, humidity varies from 30% to 90% reaching saturation point during monsoons. Mist is frequent in higher elevation, with dew during December to February.

Both Southwest and Northeast monsoon bring rains. Southwest monsoon is often torrential and incessant. From May to October, the area receives Southwest monsoon with bulk of the rain during June-July. Showers are also received from Northeast monsoon during October-November. The area also receives pre-monsoon showers during April-May.

Rainfall data (mm) at Nilambur during last 10 years.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2004	0	0	0	119.80	408.4	634	281.6	374.4	140	264.4	71	0
2005	7.4	0	0	115.2	25.6	698.4	662.7	213.2	299.8	334.8	155.4	7.8
2006	0	0	68.6	8.8	453.7	689.8	620.8	390.8	700.6	251.8	142	0
2007	0	0	0	25.8	167	615.1	1319	455.2	498.4	305.6	78	0
2008	0	34.4	175	30.8	108.8	641.1	279.7	177.8	293.8	421.7	13.2	0
2009	0	0	48	80	103.4	332.3	965.6	219.6	240.3	290.4	227.4	2.8
2010	4.2	0	11.6	58.8	69.6	466	483.4	237.4	182.1	425.2	232.2	46.8
2011	0	11.8	2.4	122	51.6	809.2	457.4	410.6	371.6	157.8	137.8	0
2012	0	0	0	115.2	8.8	269.2	331.7	343.2	144.1	110.6	40.4	16.2
2013	0	5.0	13	3.6	59.2	848.4	753.7	337.5	331.4	155.8	75	40
Average	1.16	5.12	31.86	68.00	145.61	600.00	615.56	315.97	320.2	271.81	117.24	11.36

H) Proof of Origin (Historical records):

History:

Nilambur teak has a long history and it began with Zamorin of Calicut who gifted the teak forests of Nilambur to local property owners of Nilambur. With the arrival of the British in the west coast and subsequent colonization and industrialization, Nilambur in Malabar Coast became the major source of teak wood required for the construction of navy and mercantile vessels of Britain. After identifying the forests and the teak in India, Britain was interested in administering forests in India especially in Malabar region. British domination gifted a new era to the history of teak forests of Malabar and this made India to integrate with international trade network even when it was administered by the West.

The wood resources from Kerala were a major attraction for the British colonial forces, primarily on account of their superior qualities and vast export potential. Kozhikode (formerly Calicut), the most important city of Malabar, enjoyed a prominent place in the international wood trade in the subcontinent. The British administered and managed the Indian forests predominantly for the requirements of the military particularly its navy. British used teak as an admirable substitute for the oak that they were using in navy and mercantile marines. In 1796, Mr. Machnochie of the medical services established a timber syndicate in Malabar with a perpetual aim of steady supply of first class timber, mainly teak, for the British Navy. The village Kallai in Kozhikode along the bank of Kallai river was once the ‘hub of timber market’ in south Asia which dictated the international timber prices for several decades. The first organized wood processing (saw milling) unit in Kerala was set up at Kallai in 1893 by A. Brown. The primary reason for

the glorious legacy of Kozhikode (Kallai) was attributed to the luxuriant supply of quality teak from Nilambur. The demand for specific wood products such as long teakwood planks for the manufacture and repair of large country boats (used in royal navy) was a major international wood trade sector. International wood trade was mainly focused on quality saw logs for ship building and furniture making. The Nilambur region is traversed by a major river, the Chaliyar, which flows westward and drains into the Arabian Sea at Beypore, near to Calicut. The Chaliyar River and its tributaries played a prominent role in spreading the glory of Nilambur teak by providing cheaper mode of transporting Nilambur teak through rafts. Lengthy teak wood planks of size 35' to 40' were easily transported from the Nilambur forests in huge rafts through the Chaliyar River. Also, the major source of wood for railway sleeper making in southern India was delivered through Kallai.

Different agencies opened outlets for the supply of teak to the Britain Navy and they plundered the natural forest resources of India including teak from Nilambur. The teak forests of Malabar were highly affected by this supply. The massive destruction of Nilambur forests led to the evolution of the concept of conservation of teak forests in the Malabar region. An order was issued in 1792 by the Bengal Bombay Joint Commission, prohibiting the felling of teak below 21 inches of girth in Malabar forests.

Mr. Sheffield, who came to India, as the Principal Collector of Malabar in 1828 was highly disturbed at the wanton destruction of teak forests in Nilambur and brought it to the attention of the then government and suggested a total ban on felling of teak trees. However, the proposal did not materialize. Having realized the value of teak and to have a steady supply of good quality teak for British, Mr. H. V. Conolly, the then Collector of Malabar, in 1842 initiated action to plant teak in Nilambur area that resulted in the world famous teak plantations of Nilambur. Planting of teak as plantation at Nilambur was the earliest stone in the foundation of systematic forest management in India. On the basis of a letter from Conolly in 1842, in the forest lying to the west of Nilambur, 30000 teak seeds were sown and 10000 seedlings picked out from the natural forest were planted out. In 1844, Sri. Chathu Menon was appointed as Sub- Conservator and under the orders of Conolly, Sri. Chathu Menon, after a hard and pioneering struggle, raised the first 1500 acres of the Nilambur plantation in 1846 on the northern bank of Chaliyar River**.** A part of this plantation is still maintained at Nilambur as "Connolly's Plot". This is one of the oldest surviving man made teak plantation of the world and even now has some of the trees planted by above two pioneers. Between 1844 and 1862, about 1512.71 acres of land were raised with teak. The Connolly's plot was declared as permanent preservation plot in 1943.This is one of the most famous forestry plots in the world where foresters from all over the world have come and continue to come to pay homage to H.V.Conolly and Chathu Menon. The Conolly's plot occupies an area of 2.31 hectares. Nilambur teak acquired worldwide reputation due to its superior qualities. Sail boats and small ships (Dhow or 'Uru' as it is called locally) made out of teak wood from Nilambur were built at Beypore in Calicut district and the yacht industry still prefers the beautifully figured and very durable teak wood from Nilambur. Even now 'Uru' making is a promising industry in Beypore and Chaliyam in Calicut. Most of the well-known palaces and other historical monuments in Kerala have immense wood work of teak from Nilambur. The

Kerala Legislative Assembly hall and the building contain considerable quantities of wooden furniture's and fixtures out of Nilambur teak. It is reported that the 108 year old British Brand - Rolls Royce is sourcing teak wood from Malabar for its Ghost series. The report also told that the response to the Malabar wood interiors in the Rolls-Royce Ghost model has been very good both in India and internationally

Numerous articles and journals had reported the history of Nilambur teak. One of the earliest known mentions of the Indian teak is that the boats which carried the soldiers of the army of Alexander the Great, back to Greece from India were made of Malabar teak

Following are the details related to proof of origin of Nilambur teak extracted from different books.

1. "Malabar Manual" by William Logan, a British Officer of the Madras Civil **Service** under British Government mentioned about the establishment of government teak plantations at the Nilambur region. Memorandum on the Conolly teak plantations at Nilambur, the then Malabar district, included ''the Nilambur teak plantations was suggested in 1840 by Mr. Conolly, Collector of Malabar who described the objective as to replace those forests which have vanished from private carelessness and rapacity- a work too new, too extensive and too barren of early return to be ever taken up by the native proprietor". It also included the different experiments done to germinate and establish Teak plantations at Nilambur Valley.
2. A book titled '*Indian forestry through the ages'* also describes the history of Nilambur teak as in 1840, Conolly, the Collector of Malabar initiated the world's first teak plantations at Nilambur which led to regular plantations of this valuable timber. Lushington prepared the first working plan for the Nilambur forests in 1895. The technique for teak planting was perfected at Arienkavu near Kollam, Kerala in 1891. In 1922, the system of taungya for raising plantations was introduced in Kerala."
3. A book titled '*Cultural Heritage of Kerala'* by A. Sreedhara Menon, mentioned about the efforts of British to improve teak plantations in Kerala especially at Nilambur. He mentioned that the forest in erstwhile south Malabar owed their commercial importance and financial success entirely due to these plantations. He also mentioned about the planting of teak seedlings in 1842 on deep alluvial soil of Nilambur and thus starting world's oldest teak plantations at Nilambur.
4. Buckingham palace was originally built in 1705 for the Duke of Buckingham. It is told that Nilambur teak was largely used in the construction of Buckingham palace.
5. RMS Titanic was one of the largest and luxurious passenger liners and was considered as unsinkable. In April 10, 1912 the RMS Titanic embarked on its maiden voyage sailing from Southampton England to New York City. The mast and major decoration of the ship were believed to be constructed using Nilambur teak.
6. The Kabba building located in Mecca, Saudi Arabia, is the holiest shrine of Islam. It has been reconstructed several times. Nilambur teak is believed to be used in the renovation of Kabba building.

I) Method of Production:

By using improved seeds and quality planting stock, growth of teak plantations can be increased up to 25 per cent. Improved seeds can be obtained from Seed Production Areas and Seed Orchards, and also by adopting seed handling techniques. Seeds for the production of planting stock are collected from phenotypically superior 25 to 35-year-old trees/plantations during the peak maturity period, i.e., during January - March. Fruits are usually collected from the ground. Grounds beneath the trees are kept clean before seed collection. For ease of collection, a cover, like tarpaulin, can be spread out on the ground. Daily collections are suggested. Shaking the branches manually using a pole fitted with hook facilitates fall of mature fruits on to the clean ground or on the tarpaulin. Generally, seed production in intensively managed Seed Production Areas /Seed Orchard is about 200-300 kg $ha^{-1}year^{-1}$. The seeds are pre-treated before sowing-

Pre-treatment of seeds

1) Scorching in a light fire of leaves and grasses
2) Boiling water treatment, i.e., putting seeds in boiling water and allowing it to cool
3) Immersion in cold water for a number of days
4) Alternate soaking and drying
5) Burying the seed for about a year near and hill so that white ants destroy part of the testa
6) Placing seeds in a paste of cow dung and water
7) Weathering, i.e., exposing to sun and rain in the open for a few weeks or months
8) Acid treatment

In humid conditions of Kerala the most effective method of pre-treatment is found to be alternate wetting and drying of seeds. This simple technique involves immersion of gunny bag filled seeds in water during the night times and spreading in sun during day time. This process is to be continued for 7 days. This assures almost 70-80% seed germination. Generally, the pre- treated seeds will have about 25-45% germination. Germination commences from six days after sowing and culminates by 45 days.

Nursery techniques

Commonest type is temporary dry nursery with watering facilities. Best situation is near plantation site. The nursery site for teak seedling production should be well drained and free from weeds. Watering is necessary only in very dry zones or in cases of exceptional droughts. Lateral shade avoided, soil well dug up and mixed with ashes resulting from slash burning. In moist localities beds are to be raised to avoid water logging. Seeds in the bed are covered with ½ to 1" layer of earth. Mulching is useful, in drier parts. Young seedlings require protection from sun. Seeds are sown between February and June.

The recommended standard size of nursery bed is 12 m x 1.2 m x 0.3 m. About 3-5 kg of seeds can be sown in a bed. The beds are also mulched with green leaves to reduce evaporation losses. The bed is then dusted with carbaryl 10 per cent to prevent insect attack. Germination commences within 6-15 days after sowing. Periodical weeding, fertilizer applications, watering and pest management can potentially improve the health

of seedlings. Damping-off and collar-rot are the important diseases of seedlings in the teak nursery. Timely application of systemic fungicide can control such diseases. The planting stocks must be ready for main field planting immediately after the onset of monsoon during June-July.

Three types of planting materials are commonly used in teak planting.

1. Stump
2. Seedling
3. Root trainer seedling

1. Stump planting: Transportation and the planting cost are minimum for stump planting compared to seedling planting. One year old seedlings of 1-2 cm (thumb thickness) at the thickest portion below the collar are uprooted from mother beds and used for making stumps. Stumps with 15-20 cm of root and 2-3 cm of stem prepared with sharp knife are commonly used for planting. The food material stored in the stump is utilized directly by the sprouting shoots and boosts their initial growth until the establishment of root system. Stump planting must be done immediately after the onset of rains, in order to avail full benefits of them.

2. Seedling: Teak seedlings can be produced in shorter duration by using polythene bags or root trainers. Three to four month old teak seedlings are transformed from the germination beds into polythene bags (30cm x 20 cm) in the month of March/April. The planted seedlings grow by absorbing nutrients from soil through the existing root system. Seedlings can be planted at any time if irrigation facilities are available.

3. Root trainer seedlings: Three-month-old root trainer seedlings are also used for planting. A mixture of well rotten FYM with coir pith/saw dust can be used as potting mixture.

Field planting

Depending on the area available teak can be grown in blocks, in linear strips or staggered planting. Suggested spacing for block planting is 2x2m or 2.5x2.5m. Prior to planting the site should be prepared with adequate soil and water conservation measures, terracing is suggested in sloppy areas. After staking and alignment, one year old stumps are planted in crowbar holes. Adequate precautions are to be taken to avoid water stagnation at the planting hole. Preferred time of planting is just after the pre monsoon showers. Teak is highly amenable to suppression by weeds. Hence, three weddings' are invariably required during the first planting season followed by two weddings' in the second year and one in the third year. Fertilizer additions are not recommended during the first year. However, application of well rotten FYM or cow dung @ 3 kg per plant is suggested during 2^{nd} and 3^{rd} year. After the third year when the seedlings get fully established, cover crops such as pureria or calapagonium may be grown with dual purpose of weed suppression and soil enrichment. The trees need to be thinned out for the proper growth of the remaining trees. The recommended thinning cycle is 5, 10,20,30,40 years.

Marketing

Natural teak forests occur in only four countries in the world; India, Lao PDR, Myanmar and Thailand. Sites suitable for vigorous teak growth are confined to tropical zones around the equator below1000 meter altitude, with annual rain fall in excess of 1500 mm, and fertile, deep and well-drained soils. In the 19th century, India was the world's leading teak producer. Under the British colonial government, large quantities of teak were exported to Europe, mainly for ship building and luxury furniture. Asia holds more than 90% of the world's teak resources and India alone manages 38% of the world's planted teak forests. Production of high quality teak wood in relatively long rotations of 50-70 years has been the traditional practice ever since the first world's teak plantation was established in Nilambur, Kerala in 1840s. Due to dwindling supply of teak from natural forests, teak logs from shorter rotations of 20-30 years appeared promising and are being practiced for veneer and saw log production for relatively quick returns.

Price and quality

As general rule it can be established that teak prices are very closely related to wood quality. Quality in teak is determined by dimension, bole shape (roundness and straightness), heartwood/sapwood ratio, and regularity of annual rings, number of knots, colour, texture and the soundness of the butt log. Teak from natural forests in general possesses many of these features to some extent and is sold at comparatively high prices. Forest department has a long tradition of producing and marketing timber. Timber depot is one of the marketing options for teak wood maintained by forest department. In an auction conducted on February 3, 2005, at the Timber Sales Division in Palakkad Circle, one log of Nilambur teak fetched Rs. 2,33,539 i.e. Rs. 90,100 per cubic meter.

Criteria for major classification of teak wood in India

Straightness and soundness		Girth		Length	
Grade	**Criteria**	**Girth class**	**Middle girth (cm)***	**Length class**	**Length(m)**
A	Logs straight and sound without any	Export	185 and above	SL(Short Length)	Above 1 & below 2.5
B	Fairly straight and sound logs	I	150-184	ML(Medium Length)	2.5 -7.3
C	Defective and crooked logs	II	100-149	LL(Long &Lengthy)	Above 7.3
D	Highly defective and crooked logs	III	75-99	-	-

Prices of Teak logs of major quality classes auctioned at the Timber depots of Kerala Forest and Wildlife Department, Government of Kerala in 2013.

Date of Auction: March 6 & 25, 2013, Timber Depot: Nedumgayam

Girth class	Straightness and soundness	Length	Quantity sold (m^3)	Average Price/m^3	
				INR	US$*
II	B	LL	0.223	85099	1564.17
III	B	LL	32.948	71188	1308.48
III	C	LL	11.973	56848	1044.90
IV	B	LL	15.224	50952	936.53
IV	C	LL	13.065	43129	792.74

Source wise supply of teak wood in Kerala 2000-01

Sources of supply	Volume(m^3round wood)	Total (%)
Home gardens	31,437	32.6
Forests	50,265	52.5
Import	14,592	15.2
Total supply of teak wood	96,294	100.0

Source wise demand of teak wood in Kerala during 2000-01

Sources of demand	Volume(m^3round wood)	Total (%)
Household	73,855	76
Industries	6,481	6.7
Service	2,033	2.1
Export	13,925	14.5
Total supplyof teak wood	96,294	100

J) Uniqueness:

Teak is considered as one of the royal wood obtained from the tree *Tectona grandis*. Nilambur teak is the teak wood obtained from the teak plantations forest areas and homesteads in Nilambur Taluk and Edavanna panchayat of Ernad Taluk of Malappuram district, Kerala, India. Teak is a large deciduous tree with rounded crown. Heart wood is dark golden yellow in colour sometimes with dark streaks, turning brown with age, oily with a characteristic color, extremely durable and does not warp or split. Nilambur Teak is considered a very valuable wood due to its ability to withstand inclement weather. It is very stable, which means that it does not warp when subjected to variations in humidity and temperature. Nilambur teak being a moderately fast-growing tree species, in the initial years attains about 50 m height. The superiority of teak from Nilambur and surrounding regions for ship building and structural purpose are due to the large size and form of the tree, the color and workability of the wood and its ability to withstand weathering. This unique quality of Nilambur teak is the major factor that helped to gain the worldwide attention for it in the ship and yacht building. Nilambur teak has unique qualities such as world renowned golden yellow color and attractive figure. It is famous

for its elegance, class, grandeur, durability, antiquity, grace and strength. Teak grows fast in Nilambur and yields large diameter logs. The wood has straight grain with golden yellowish brown colour, often with darker chocolate-brown streaks.It is the most important timber tree of India and unique for shipbuilding. Nilambur teak is famous for its elegance, class, grandeur, durability, antiquity, grace and strength. The durability of teak is the result of synergetic effect of total extractive compounds (12.44%-15.98%) especially the polyphenolic compounds mainly tectoquinone and naphthoquinone. The hydrophobicity, antioxidant properties and oily nature of teak wood were mainly due to Caoutchouc compound. It even prevents any metal used in it from rusting. It is proved that tectoquinone (2-methyl anthraquinone) which is characteristically present in Nilambur teak (heartwood) is a repellent to the dry wood termite, and it ranged between 0.23% and 0.34%. The resistance to fungal decay is mainly due to naphthoquinone (0.62%-1.26%) and its derivatives present in teak wood. The world renowned golden yellow colour of Nilambur teak is due to the presence of high percentage of extractive content in wood. In a comparative study it was revealed that extractive content (%) was more in Nilambur teak compared to extractive content in teak from many other locations. The total extractive content in teak increases as the trees become older and there by the durability

The superiority of teak for ship building and structural purpose are due to the large size, tree form, color and workability. Teak is a privileged wood withstanding termite attack. Unique wood properties of Nilambur teak is provided in below tables:

Unique wood properties of Nilambur teak wood.

Sl. No.	Wood Properties	Values - Range
1.	Specific gravity (G)	0.70-1.42
2.	Specific gravity (AD)	0.60-0.79
3.	Specific gravity (OD)	0.58-0.77
4.	Radial shrinkage (G to AD)	0.39-1.75
5.	Radial shrinkage (AD to OD)	1.04-2.85
6.	Radial shrinkage (G to OD)	2.29-4.33
7.	Tangential shrinkage (G to AD)	0.54-3.96
8.	Tangential shrinkage (AD to OD)	0.89-3.18
9.	Tangential shrinkage (G to OD)	3.70-5.47
10.	Moisture content (G)	20.95-91.00
11.	Heartwood (%)	70.5
12.	Extractive content (%)	6.58-19.00
13.	Heartwood colour	Golden Brown
14.	A. Munsel System - Hue	7.5
	Value	5
	Chroma	4
15.	Colour description 7.5YR/5/4	Brown
16.	Vessel diameter (μm)	210-290

17.	Vessel area (µm)	39850-92583
18.	Vessel frequency (mm-2)	2-6
19.	Ray height (µm)	368.8-671.3
20.	Ray width (µm)	28.8-78.8
21.	Ray frequency (mm-1)	2-6

Nilambur teak wood has oily feel, strongly and characteristically scented when fresh without characteristic taste. It is easily worked with both hand and machine tools. It is called as 'Carpenter's delight'. It can be worked by hand to a good smooth surface, and can be brought to a fine wax polished finish with little filling.

Average wood specific gravity (green, air dry and oven dry) of Nilambur teak in comparison with teak from other localities.

Location	Specific Gravity (Green)	Specific Gravity (Air Dry)	Specific Gravity (Oven Dry)
Nilambur	0.92	0.73	0.68
Ranni	0.77	0.71	0.65
Konni	0.80	0.64	0.58
Malayattoor	0.86	0.76	0.67
Vadavar	1.17	0.81	0.71
Myanmar	0.86	0.71	0.63
Thailand	0.87	0.72	0.66
Ghana	0.64	0.60	0.55
Cameroon	0.80	0.68	0.62
Trinidad	0.92	0.69	0.60

Specific gravity, which is a very important physical property of wood, influences all the other properties such as anatomical, mechanical and other properties and therefore has an important role in deciding the utilization value of a timber. Higher the values better will be the timber quality, particularly the strength. The above table shows that specific gravity values of the Nilambur teak, under all the three conditions (green, air dry and oven dry) are generally high compared to other locations. As specific gravity is correlated with strength properties of wood, Nilambur teak is superior taking into account the above important property.

Variation in Tangential shrinkage of teak from different localities

Location	Radial Shrinkage			Tangential Shrinkage		
	Green to air dryness	Air dry to oven dryness	Green to oven dryness	Green to air dryness	Air dry to oven dryness	Green to oven dryness
Nilambur	1.05	1.95	3.04	2.43	2.05	4.60
Ranni	0.88	1.84	2.74	2.56	2.59	5.29
Konni	0.75	1.44	2.21	2.08	2.49	4.66

Malayattoor	0.74	1.34	2.09	1.89	2.22	4.19
Vadavar	1.23	1.51	2.77	2.65[a]	2.17	4.95
Camaroon	1.08	1.29	2.39	2.19	2.59	4.89
Ghana	1.03	1.47	2.53	2.25	2.78	5.14
Myanmar	0.92	1.07	2.01	2.76	2.54	5.44
Thailand	0.96	1.23	2.22	2.18	2.45	4.73
Trinidad	0.75	1.30	2.06	2.10	2.09	4.28

Coefficient of anisotropy of teak wood from different locations

Sl. No.	Location	Coefficient of anisotropy *
1.	Nilambur	1.55
2.	Konni	2.27
3.	Malayattoor	2.22
4.	Ranni	2.20
5.	Vadavar	1.89
6.	Cameroon	2.42
7.	Ghana	2.37
8.	Myanmar	2.79
9.	Thailand	2.16
10.	Trinidad	2.23

*****Green to oven dry

Coefficient of anisotropy is the ratio between tangential shrinkage and radial shrinkage and it is a measure of dimensional stability of timbers which influences the ability of timbers to resist climatic variations. Lower the ratios, more dimensionally stable the wood is. The percentage wood shrinkage in radial as well as tangential direction at three conditions like green to air dry, air dry to oven dry and green to oven dry, is less for Nilambur teak, indicating its stability. The co-efficient of anisotropy is found to be less i.e., 1.55 for Nilambur teak which indicates better stability and hence, improved timber quality. The heartwood proportion, which is the naturally durable part of the timber for which teak was well known, is an important factor determining wood quality. As heartwood to sapwood ratio is high, the percentage of volume of heartwood obtained from an individual tree would be higher for Nilambur teak.

There is a profound influence of planting locations on wood colour and texture in teak. The Nilambur teak is gold brown in colour whereas teak from Vadavar, Myanmar and Trinidad are yellow to yellowish brown in colour. Scientific studies had shown that the vessel diameter, vessel area, ray height, ray width and ray frequency are low in Nilambur teak compared to the other teak locations. It also has a higher extractive content. Teak from Nilambur exhibited mechanical maturity of the timber at or before the age of 21

years offering scope for utilization of short rotation wood without compromising the quality in terms of timber strength.

Comparison of wood properties of Teak from Nilambur and other locations

Sl. No.	Location	Vessel Diameter (µm)	Vessel Area (logarithmic Transformed± SD)	Vessel Frequency (No./mm²)	Ray Height (µm)	Ray Width (µm)	Ray Frequency (No./mm²)
1.	**Nilambur (Kerala)**	206.02	50746.6	4	542.75	48.83	4
2.	**Ranni (Kerala)**	212.08	49657.3	7	554.42	44.75	9
3.	**Konni (Kerala)**	282.75	88583.4	6	1065.23	96.01	5
4.	**Malayattoor (Kerala)**	222.82	57890.0	9	669.67	52.67	8
5.	**Vadavar (TN)**	223.33	58794.3	8	717.17	64.33	8
6.	**Cameroon**	205.50	44985.7	6	645.58	80.08	7
7.	**Ghana**	230.42	58226.7	7	680.27	65.83	7
8.	**Myanmar**	342.92	117653.6	3	665.17[b c]	47.41	5
9.	**Thailand**	143.67	28504.0	6	668.92	77.75	5
10.	**Trinidad**	258.67	73909.7	7	649.08	52.42	8

Variation in extractive content (%) of teak from different localities.

Location	Extractive content (%)
Nilambur	8.053
Benin	6.607
Ranni	6.205
Cameroon	7.817
Ghana	6.885
Tanzania	7.132
Vadavar	7.472
Myanmar	9.643
Thailand	8.807
Betul	10.437
Konni	11.133

Sudan	5.022
Malayattoor	9.218
Trinidad	10.190

K) Inspection Body:

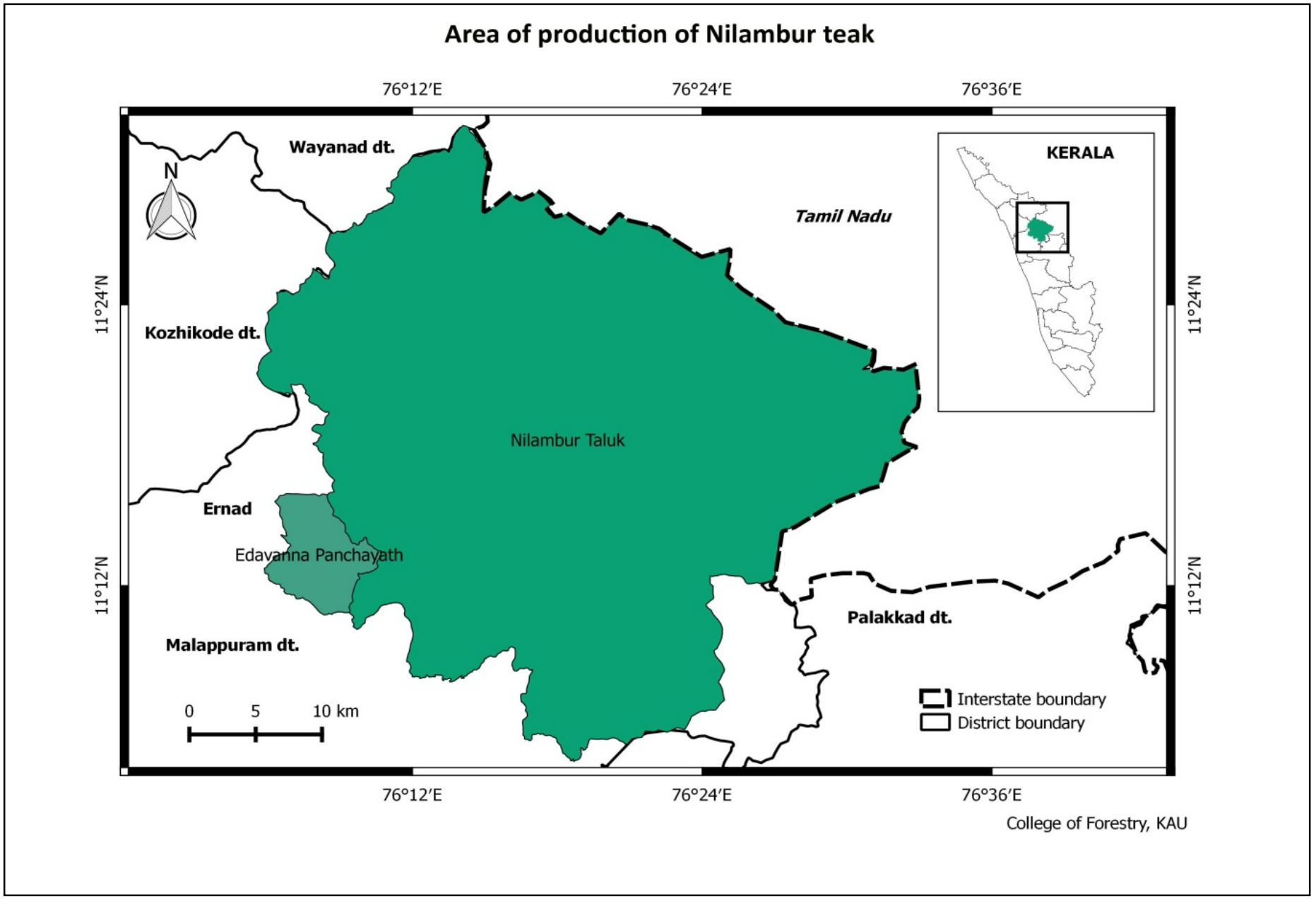
Inspection body will be constituted with the following members

1. President, Nilambur Teak Heritage Society, Nilambur
2. Secretary, Nilambur Teak Heritage Society, Nilambur
3. Director of Research, Kerala Agricultural University, Thrissur
4. Dean, College of Forestry, Kerala Agricultural University, Thrissur
5. Co-ordinator, IPR Cell, Kerala Agricultural University, Thrissur
6. Divisional Forest Officer, Nilambur North Division
7. Divisional Forest Officer, Nilambur South Division
8. Scientist in Charge, KFRI Sub Centre, Nilambur

L) Others:

Nilambur teak has acquired worldwide reputation due to its superior qualities. Sail boats and small ships (Dhow or 'Uru' as it is called locally) made out of teak wood from Nilambur were built at Beypore in Calicut district and the yacht industry still prefers the beautifully figured and very durable teak wood from Nilambur. Even now 'Uru' making is a promising industry in Beypore and Chaliyam in Calicut.

Most of the well-known palaces and other historical monuments in Kerala have immense wood work of teak from Nilambur. The Kerala Legislative Assembly hall and the building contain considerable quantities of wooden furniture's and fixtures out of Nilambur teak. It is reported that the 108 year old British Brand - Rolls Royce is sourcing teak wood from Malabar for its Ghost series.


Area of production of Nilambur teak
76°12′E
76°24′E
76°36′E
11°24′N
11°12′N
Wayanad dt.
N
Tamil Nadu
KERALA
Kozhikode dt.
Nilambur Taluk
Ernad
Edavanna Panchayath
Malappuram dt.
Palakkad dt.
0 5 10 km
Interstate boundary
District boundary
College of Forestry, KAU

General Information

What is a Geographical Indication?

- It is an indication,
- It is used to identify agricultural,natural,or manufactured goods originating in the said area,
- It originates from a definite territory in India,
- It should have a special quality or characteristics unique to the geographical indication.

Examples of possible Geographical Indications in India:

Some of the examples of Geographical Indications in India include Basmati Rice, Darjeeling Tea, Kancheepuram silk saree, Alphonso Mango, Nagpur Orange, Kolhapuri Chappal, Bikaneri Bhujia etc.

What are the benefits of registration of Geographical Indications?

- It confers legal protection to Geographical Indications in India,
- It prevents unauthorized use of a registered Geographical Indication by others.
- It boosts exports of Indian Geographical indications by providing legal Protection.
- It promotes economic Prosperity of Producers.
- It enables seeking legal protection in other WTO member countries.

Who can apply for the registration of a Geographical Indication?

Any association of persons, producers, organization or authority established by or under the law can apply.
The applicant must represent the interest of the producers.
The application should be in writing in the prescribed form.
The application should be addressed to the Registrar of Geographical Indications along with prescribed fee.

Who is the Registered Proprietor of a Geographical Indication?

Any association of persons, producers, organisation or authority established by or under the law can be a registered proprietor. There name should be entered in the Register of Geographical Indications as registered proprietor for the Geographical Indication applied for.

Who is an authorized user?

A producer of goods can apply for registration as an authorized user, with respect to a registered Geographical Indication. He should apply in writing in the prescribed form alongwith prescribed fee.

Who is a producer in relation to a Geographical Indication?

A producer is a person dealing with three categories of goods

- Agricultural Goods including the production, processing, trading or dealing.
- Natural Goods including exploiting, trading or dealing.
- Handicrafts or industrial goods including making, manufacturing, trading or dealing.

Is registration of a Geographical Indication compulsory?

While registration of Geographical indication is not compulsory, it offers better legal protection for action for infringement.

What are the advantages of registering?

- Registration affords better legal protection to facilitate an action for infringement.
- The registered proprietor and authorized users can initiate infringement actions.
- The authorized users can exercise right to use the Geographical indication.

Who can use the registered Geographical Indication?

Only an authorized user has the exclusive rights to use the Geographical indication in relation to goods in respect of which it is registered.

How long is the registration of Geographical Indication valid? Can it be renewed?

The registration of a Geographical Indication is for a period of ten years.
Yes, renewal is possible for further periods of 10 years each.
If a registered Geographical Indications is not renewed, it is liable tobe removed from the register.

When a Registered Geographical Indication is said tobe infringed?

- When unauthorized use indicates or suggests that such goods originate in a geographical area other than the true place of origin of such goods in a manner which misleads the public as to their geographical origins.
- When use of Geographical Indication results in unfair competition including passing off in respect of registered Geographical indication.
- When the use of another Geographical Indication results in a false representation to the public that goods originate in a territory in respect of which a Geographical Indication relates.

Who can initiate an infringement action?

The registered proprietor or authorized users of a registered Geographical indication can initiate an infringement action.

Can a registered Geographical Indication be assigned, transmitted etc?

No, A Geographical Indication is a public property belonging to the producers of the concerned goods. It shall not be the subject matter of assignment, transmission, licensing, pledge, mortgage or such other agreement. However, when an authorized user dies, his right devolves on his successor in title.

Can a registered Geographical Indication or authorized user be removed from the register?

Yes, The Appellate Board or the Registrar of Geographical Indication has the power to remove the Geographical Indication or authorized user from the register. The aggrieved person can file an appeal within three months from the date of communication of the order.

How a Geographical Indication differs from a trade mark?

A trade mark is a sign which is used in the course of trade and it distinguishes good or services of one enterprise from those of other enterprises. Whereas a Geographical Indication is used to identify goods having special Characteristics originating from a definite geographical territory.

THE REGISTRATION PROCESS

In December 1999, Parliament passed the Geographical Indications of Goods (Registration and Protection) Act 1999. This Act seeks to provide for the registration and protection of Geographical Indications relating to goods in India. This Act is administered by the Controller General of Patents, Designs and Trade Marks, who is the Registrar of Geographical Indications. The Geographical Indications Registry is located at Chennai.

The Registrar of Geographical Indication is divided into two parts. Part 'A' consists of particulars relating to registered Geographical indications and Part 'B' consists of particulars of the registered authorized users.
The registration process is similar to both for registration of geographical indication and an authorized user which is illustrated below: