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She has completed her graduation in Agriculture from University of Agriculture sciences Dharwad. She is currently undergoing A.C.F. Training at CASFOS, Coimbatore.

Her hobbies include playing tennis, reading books, cooking, poetry writing.

She is passionate to work for conservation and management of wildlife, biological and ecological resources. She also wants to work which will help in implementing strategies to mitigate and adapt to climate change's effect on forests.



TIMBER DEPOT MANAGEMENT

SINDHU M



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**CENTRAL ACADEMY FOR STATE FOREST SERVICE
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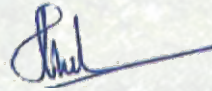
FOREWORD

It is with the great pleasure that I introduce this booklet on “Timber Depot Management in Karnataka” authored by Ms. Sindhu M. This is a comprehensive guide serving as a resource for the forest officials engaged in timber depot management in the forest divisions of Karnataka.

Timber depot management has been a vital economic activity in Karnataka and it is contributing significantly to the department and state revenue. However, despite its importance, the depot management has lot of steps from marking the dead and fallen tree to the auction and final transport of the timber from the depot. This document is prepared based on detailed analysis of the depot management in the state of Karnataka during the field training she underwent in the state.

I commend Ms. Sindhu M. for her dedication and commitment towards bringing up this reference guide. I am confident that this document will serve as a guiding tool for the new comers in timber depot management.

Best wishes,



V. Thirunavukarasu, IFS

APCCF& Principal
CASFOS Coimbatore

PREFACE

As a trainee forest officer, it has been both enlightening and concerning to delve into the intricacies of timber depot management in the lush forests of Karnataka. This book 'Timber depot management' is a culmination of my observations, experiences and learning during my on-the-job training in Karnataka state.

The timber depots play a vital role in the forest revenue generation process. Through this book, my aim is to shed light on the existing procedure and offer insights into potential avenues for the better management aspects further.

It is my sincere hope that this work serves as a reference guide for my colleagues within the forest department of Karnataka, particularly those who will work in timber extraction divisions.

The data and photos presented within these pages are not mere theoretical constructs but are witnessed by me during my On-the-Job Training. Every information stem from my direct observation and learning experiences gained during my time in the Forests of Canara circle which is a part of Western ghats.

It is my fervent belief that by providing the procedure of timber depot management in this book, it will serve as a guide for the sustainable management of the forest produce and contribute towards the greater good of our forests.

Sindhu M.

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ACKNOWLEDGEMENT

With great regards, I would like to express my gratitude to our Principal CASFOS Coimbatore, Shri V. Thirunavakarasu, IFS for providing the necessary platform to come up with this publication.

I extend my sincere thanks to our previous Course Director Dr. K Anand, IFS and our Present Course Director Shri Anisha Kalkoor, IFS for their guidance, persistent encouragement and valuable inputs throughout the completion of this work.

My sincere gratitude to the esteemed faculty members Dr. V. S. Senthil Kumar, IFS, Dr. C. Vidyasagar, IFS, Dr. Ramkrishnan R., Scientist C, for their technical guidance and the mentorship they have provided.

Special thanks to Shri. Vasanth Reddy, IFS, CF, Canara Circle, Shri Harsha Bhanu, IFS, DCF, Yellapura Forest Division for offering the opportunity and necessary resources for the learning. I would like to extend my gratitude to all the ACFs, FROs, Foresters, Guards, Watchers and all the office staff of Yellapura Forest Division, Canara Circle for their cooperation and assistance throughout this journey.

Last but not the least, I would like to express my thanks to God, my Parents, Friends and Family members for their continuous moral support and guidance.

Sindhu M.

WHAT ARE TIMBER DEPOTS?

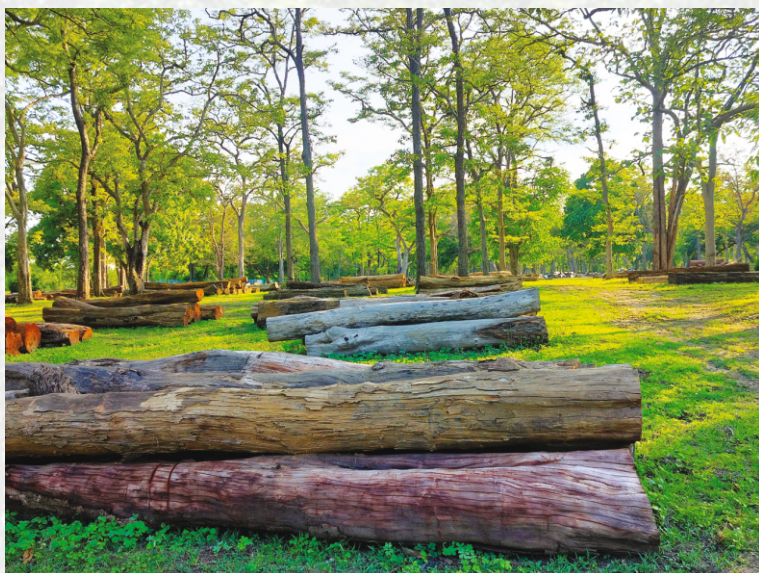
Timber depot is a place where timber, poles, firewood are stored which are extracted from regular departmental harvesting, thinning and seized material of offence cases, these are sold in an auction process.

The timber species which are grown in the forest or in private land are marked and harvested and transported to the depots with the permission of forest officers and in depots these are measured, classified and kept in stocks. They are sold in an auction and after the payment, timbers are transported from the depots.

Timber depot management is one of the major works in Karnataka Forest department. Karnataka is having all kinds of forests and major part of the Western ghats is in Karnataka. Major Govt. timber depots of the state are found in Canara Circle. The timber extraction works are carried out in improvement working circle. It is recommended in this Working Circle to salvage the dead and fallen material.

Main objectives for the constitution of the improvement working circle are:

- ▲ To increase the productivity of natural forests.
- ▲ To have collection (time schedule as well as area) of dead and fallen trees to meet the people's demand.
- ▲ to ensure sustainable supply of timber and firewood to cater the basic needs of the local people.
- ▲ to supply the timber to the extent available to the market through depots.





After marking of dead and fallen trees in the jungle logging works will be done every year from October to March. Then the logged timber and firewood is transported to depots. In depots this timber, firewood, poles are measured and classified into different classes. Then they are dragged into separate stacks based on the quality class. During the e auction individual stacks are bid by the bidders and sale will take place, after the payment of full bid amount, the timber is permitted to transport from the depot.

Harvesting of mature plantations and salvaging of only dead and fallen trees from forest areas are taken up departmentally or by the Karnataka State Forest Industries Corporation (KSFIC), which is a government undertaking.

Major Teak timber depots in Karnataka are: Dandeli, Kiruvatti and Mundgod.

- * The Govt. timber depot Kiruvatti is one of the old depots in the state, which was started in 1964 and having area of 130 ha.

The extracted and offence material from Yellapura, Idagundi, Kiruvatti range forest areas brought to the depot. the depot is having Teak, Rosewood, Honne, Kalam, Heddi, Kindal, Acacia, Matti, Jamba, Daman, Neral, Karimuttal timbers, firewoods, billets and Teak poles sections.

- * The Govt. timber depot Mundgod is started in 1944 and having an area of 80 ha. The extracted and offence material from Mundgod, Katur, Manchikere range forest areas brought to the depot. the depot is having Teak, Rosewood, Honne, Kalam, Heddi, Kindal, Acacia, Matti, Jamba, Daman timbers, firewood, billets and Teak poles sections.
- * Dandeli Timber Depot: Dandeli, situated alongside the Western Ghats, is a small town in the Uttara Kannada district, Karnataka. Given its proximity to the Western

Ghats, Dandeli has always fostered industries that depended on forest resources, be it timber, iron ore or paper. The Government Timber Depot & Saw Mills, run by the Karnataka Forest Department, is one such industry that is functional even to this day. This depot is famous Majorly for teak timber.





The poles are carved out of different species of trees Inside Kiruvatti timber depot office.

WHAT ARE ALL THE STEPS FROM HARVESTING TO MARKETING OF A TIMBER?

1. Marking and enumeration of dead and fallen trees

- ▲ Enumeration list for the dead and fallen trees should be prepared well in advance which should be checked by an officer not less than the rank of an Assistant Conservator of Forests of concerned jurisdiction. The Block and Compartment wise area marked for a particular year has to be specifically adhered to and should not be changed in any circumstances.
- ▲ The operation should be carried out in such a way as to have least disturbance on existing regeneration.
- ▲ Wherever slope exceeds 50%, salvage operation should not be taken up.
- ▲ No dead and fallen trees should be removed up to 20meter on either side of river.
- ▲ No new roads to be formed, the existing ones to be used.

Marking Method: in the forest dead and fallen trees are identified and the species name is noted down. And the diameter is measured by using the tape at D.B.H. and height is measured using pole method and volume of logs is calculated using quarter girth formula and fire wood volume is also calculated. The bark is chopped off to write the tree number using paint and above that a thick line is drawn using coal tar. The boundary trees are marked for the identification of the compartment. The list of marked trees is recorded in FAC-21 register according to Karnataka Forest account code.



2. Logging works/ Harvesting methods

- ▲ Extraction of timber and firewood from the assigned compartment for particular
- ▲ year will be carried out by KSFC or through department.
- ▲ Compartment falling within the VFC area and included in the micro plan, the profit from extraction of such compartment has to be shared as per Guidelines issued by the Govt.in G.O. no. FEE 50 FAP 2000 dated: 19.06.2002.

Method: the marked trees were harvested by using machine saws, trees are cut at the base by leaving around 60cm length of the stump to mark the year of logging, compartment number, stump number, logs number.

The logs were made based on the direction of the forester and recorded in cross-cut register.

The number of logs from the tree and their length, diameter is measured, volume and total firewood volume is calculated and recorded in separate registers.

3. Transportation

The logged timber and firewood are transported after the permission of Deputy conservator of forest. According to karnataka forest account code, form number 25 is issued for logs and form number 26 is issued for firewood transportation by the forester. The material transported along with transit passes in duplicate, issued by kamagari foresters. After dumping the material in the depot immediately the material is verified as per transit passes as per jungle log numbers, stump number, length and girth measurement and the volume contents of each log as mentioned in the transit pass and number of logs are recorded.







4. Depot Measurement and classification

The material dumped in the depot, are classified and graded as per the grading rules by the depot staff. On the basis of these measurements' depot receipt in FAC-27 is issued, in which the details of each log as per the jungle measurement (as recorded in transit pass) and depot measurement (as recorded in depot register) are maintained. Every month progress report of all the measured materials will be prepared compartment and class wise in timber return. (FAC-33).

5. Stacking and Dragging

The graded timber is dragged and stacked class wise in the depot. When the stacking has been completed, each log has been given separate depot number and the depot number have been chiselled on them and register called “Measurement register” is maintained, in this depot number and measurement of logs are recorded.

GOVERNMENT OF KARNATAKA

No. FEE 78 FDP 2016

Karnataka Government Secretariat,
Multistoried Buildings,
Bangalore, Dated: 02.05.2017.

NOTIFICATION

In exercise of the powers conferred by the proviso to Article 309 of the Constitution of India, the Government of Karnataka hereby make the following rules, further to amend the Karnataka Forest Code, 1976, namely :-

1. Title and Commencement : - This may be called as Karnataka Forest Code (Amendment) 2017.
2. This shall come into force at once.
3. Amendment to Appendix XXV in Schedule B and C.

The Schedules B and C occurring in Appendix XXV (Under rule 67) of the Karnataka Forest Code, 1976, shall be as under-

SCHEDULE : B Depot classification of timber, firewood, billets and pulpwood.

Sl. No	Wood Kind	Quality class (Grading)	Length class (Scaling)	Girth class (mid-girth; under bark) (Scaling)
1	Timber	A Class (Almost cylindrical, minimal sapwood and no/few ignorable timber defects. Recovery estimated above 80%.)	I Class over 5 meters	(a) Class over 200 cms.
		B Class (Logs have minor defects, Recovery estimated 60 to 80 %)	II Class above 4 mtrs to upto 5 mtrs.	(b) Class over 150 cms and upto 200 cms.
		C Class (Logs have quite a few defects, Recovery estimated 40 to 60%)	III Class above 3 mtrs to upto 4 mtrs.	(c) Class Over 100 cms and upto 150 cms.
			IV Class above 2 mtrs to upto 3 mtrs.	(d) Class 100 cms and below down to 60 cms for all species.
		D Class (Logs have significant defects, Recovery estimated to be 20% to 40%).	V Class: 2 mtrs and below down to 1.20 mtrs. for all species.	

Recd
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2	Billets	Billets of hardwood/ Reserved kind/Junglewood/Plantation/ Exotic species timbers of value.	Class above 60 cms. upto 1.2 mtrs, for Teak, Rosewood (<i>Dalbergia latifolia</i>), Kalam (<i>Mitragyna parviflora</i>), Heddi (<i>Adina cordifolia</i>), Karimuttal (<i>Ougenia dalbergioides</i>) and other reserved kind/ junglewood / plantation/ exotic species timbers of value.	30 cms and above but less than 80 cms.
3	Poles and Posts	Teak	I Class over 6 mtrs.	(a) Class over 40 cms. upto 65 cms.
			II Class over 4 mtrs, upto 6 mtrs.	(b) Class over 20 cms. upto 40 cms.
			III Class over 2 mtrs, upto 4 mtrs.	
		All other Hardwood/ Reserved kind/Junglewood species including Plantation/Exotic species of value.	I Class over 6 mtrs.	(A) Over 70 cms. upto 90 cms.
Over 4 mtrs, and upto 6 mtrs. Over 2 mtrs, and upto 4 mtrs.	(B) Over 45 cms upto 70 cms.			
4	Fire wood	Wood material not qualifying as Timber/ Billet/ Pole having underbark mid girth 30 cms. and below. There should be no gap in the firewood stacks. The size of stack should be 1metre (height) x 1 metre (width) x 5 metres (length).		
5	Pulp wood	Upto 45 cms midgirth under bark and length up to 1 mtr.		





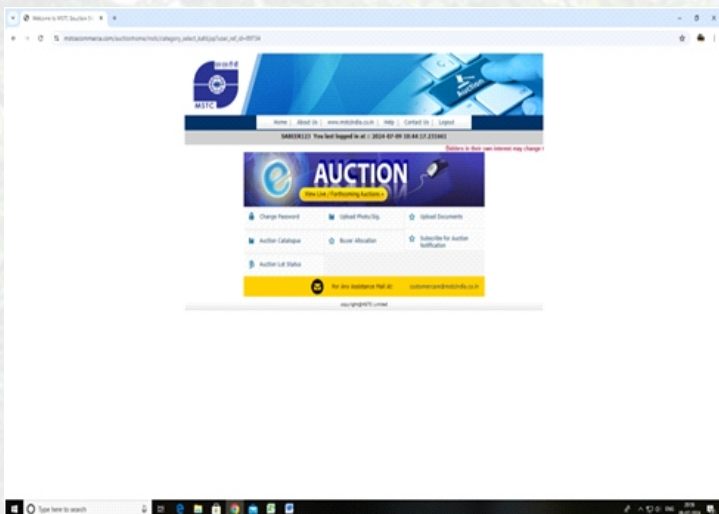


The class wise divided and measured timbers and poles will be stacked. All the stacks are sequentially given stack numbers. During the auction the lot numbers are given for already stacked timbers, poles and firewood and after each detail of lots i.e., lot number and volume of logs are uploaded in E-Timber website.

6. E-Auction

E- auction is introduced first time in depot during December – 2017. And which is conducting by MSTC (Metal Scrap Trade Corporation), The auction of timber, firewood, poles are done through e Timber website. The auction dates are notified by PCCF office Bengaluru and the sale is conducted in online. There will be 4 sessions of 45 minutes per day and each session consists of 150 lots. During the auction the uploaded details of the lots will be showing according to that the bidders will bid for different lots of their choice, the highest bidder will get the lots.





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CHALLENGES IN MAINTENANCE OF THE DEPOT

- ▲ Theft of fire wood and timber- For the protection purpose around 7 km tranche has been dug surrounding to this depot and 16 no. of CCTV cameras in Kiruvatti depot and compound wall along with 30 CCTV cameras in Mundgod depot are installed in various locations of the depot to monitor the depot activities.
- ▲ Fire protection measures: the leaf litter will be cleared in the month of Jan- Feb and fire lines will be created.
- ▲ Insect and pest attack: twice in a year hand weeding will be done by employing the labourers in the month of September and December.
- ▲ Maintenance of depot roads for the easy movement of vehicles during loading and unloading of timber.



References

Karnataka Forest Department Official Website

Karnataka Forest Code 1976

Karnataka Forest Account Code

E-Timber Website

MSTC website

Karnataka Govt. notification No.- FEE 78 FDP 2016