FOREST SURVEY OF INDIA
DEHRADUN

THE MANUAL OF INSTRUCTIONS FOR FIELD INVENTORY 2002

Approved by Director, F.S.I. vide No. 27-106/2002, dated the 13th September, 2002.

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For official use only

Forest Survey of India
Dehradun

The Manual of Instructions for Field Inventory

CHAPTER I

1.1 INTRODUCTION:

After the formation of the Forest Survey of India on 1st June, 1981 various experts and workers in the fields of forestry, industry and statistics have discussed and finalised different aspects of the Forest Survey of India and have evolved means and methods of working, data collection and interpretation of the results. The field inventory is one of the major aspects of Forest Survey of India as it is the basic information that alone becomes the foundation of further investigations such as consumption studies, industrial investigations, logging studies, vegetational mapping etc.

1.2 The present manual of instructions is therefore written for the guidance of those concerned with field inventory i.e. the field staff like, JTAs, STAs, Draftsmen, Supervisory staff and data processing officers at the headquarters. The manual takes into account almost all aspects involved in the inventory right from the stage of plotting on map to the stage of final despatch of data to the Zonal Head Quarters for data entry.

1.3 OBJECTIVE OF THE FIELD INVENTORY:

The main objectives of the field inventory is to collect qualitative and quantitative information about the forest resources within precision limits in preparing reports on potentiality and other forest based investigations in order to serve data needs of development planning.

1.4 EXECUTIVE ARRANGEMENT FOR CONDUCTING FIELD INVENTORY :

Usually in every unit of field inventory or a zone the personnel engaged in the field work are as follows:

Sl. No.	Designation	No.	Nature of duties
1.	Group Officer or Dy.Director	1	Over all supervision and organisation of field work. Supply of copies of manual to parties and explaining it to them, supply of stores to

			staff, planning of base camps & field camps, control over field accounts, checking and compilation of data and forwarding data to Data Entry Section.
2.	Asstt. Group Officer or Asstt. Director/STA	1	Assist Dy.Director in execution of field work
3.	STAs/JTAs each assisted by Dy.Ranger - 1 Fieldman - 2 Khalasi - 1 Labourers - 1 including one for water supply (as decided by the RD)	1	1) Random checking of field work 2) Management of base camp, wherever applicable 3) Checking of field forms 4) Assisting Dy.Director & Asstt. Director in Field work
4.	Crew leaders (JTA/Dy. Ranger/ Fieldman each assisted by Skilled person - 2 Unskilled person - 3	10	1) Study of manual 2) Collection of data from sample plots for field inventory as per the instructions contained in the field manual 3) Maintenance of account and cash book of field work 4) Checking and supply of data for submission to the Zonal Headquarters. 5) Safe custody of maps / photographs and equipment
5.	Sr./Jr. Draftsman	1	Plotting sample plots and supply of maps to field parties

1.4.1 The allotment of jeeps, drivers, tents field kit, consumable stores, medicines, blank forms, field instructions etc. be decided by the Dy.Director depending upon the availability of staff. The assignment of duties to various ranks is also left at the discretion of the Group Officers particularly because the entire work is a team work and defining duties of the staff would not be possible. The members of the crew have to be assigned works by the Crew Leaders considering their experience, knowledge and capacity to work. These assignments may vary from time to time.

1.4.2 GENERAL INSTRUCTIONS TO THE CREW LEADERS:

The Group Officer will distribute the work of inventory to the crews. The Crew Leaders should select their camping sites in such a manner that maximum number of sample plots can be covered from a camp in the minimum traverse of distance. They should see that the day to day programme is so chalked out that they are not required to make wasteful journeys and will submit their programme to the camp officer/base camp incharge. The Crew Leaders should see that they and their party are fully equipped with stores, camp and survey equipment, ration, medicines etc. before commencement of the field work. They should also see that adequate field forms are carried in field, each member has understood the field manual that is the work to be done and all doubts regarding field work are fully cleared from their mind. The Crew Leaders should see that they carry minimum required equipment and kit with them in field as well as in camps so that there is no problem of transport of voluminous luggage.

As a general routine Crew Leaders should keep good liasion with the local staff of the State Departments and see that the tent camps are properly, neatly and systematically arranged and the staff maintains decorum and proper discipline in the camps. The restricted maps and photographs and confidential documents in the camp should on no account be passed or shown to any other outsider. Such documents should be kept in personal custody of Crew Leader. Loss or damage to any such map or photograph alongwith the place of loss should be reported immediately to the Regional Director of the Zone.

1.5 HOW THE AREA TO BE SURVEYED IS DECIDED:

The area to be surveyed will be decided by the Headquarter, Dehradun.

1.6 MAPS TO BE USED DURING SURVEY:

Only the latest published maps on 1:50,000 scale will be used, however if the maps are not available on this scale the alternative maps like grey prints, or bromide prints or even 1″ = 1 mile scale maps can be used during survey. A precaution has to be taken that no area is left unsurveyed for the non-availability of maps. The maps can be temporarily borrowed if possible from the Local Forest Departments also if they are not available with any other source.

1.7 PRECISION AND ACCURACY OF SURVEY:

The results of the survey would be at the precision level of $\pm$ 10% at 95% probability level. This accuracy will however be obtained for the entire physiographic zone and not by its smaller units (having less than 100 sq.km forest area) like districts, divisions, ranges etc. The % accuracy in smaller units may vary to any extent. The overall intensity of the survey comes to nearly 0.01%.

1.8 SURVEY DESIGN:

Divide each 1:50,000 scale Survey of India toposheet into 36 grids of 2 ½′ x 2 ½′, each will further be divided into 4 sub-grids of 1 ¼′ x 1 ¼′ forming the basic sampling units. Two of these sub grids will be randomly selected and corresponding sub grids in all the 2 ½′ x 2 ½′ grids will be selected to form the sample. The intersection of diagonals of such subgrid will be marked as centre of plot on the map. At the centre of selected sub grid a plot of 0.1 ha area will be laid out in each such grid and data will be collected from the plots falling in forest area only.

1.9 WHAT IS THE FOREST AREA FOR THE PURPOSE OF MARKING PLOTS ON THE MAP:

The following areas shall be treated as forest areas:

1) All those areas shown in green wash on the map.

2) All such areas in which words such as thick jungle, thick forest, dense jungle, open forest with bamboos etc. are printed.

3) All those areas indicated by dotted line or spotted line or a pillar line as 'forest' areas.

4) Apart from above categories any other area reported to be a forest area by the local Divisional Forest Officers. Usually all forest areas have appeared on the maps published by the Survey of India but some times the details of newly acquired area do not appear on printed maps which can be obtained from local D.F.Os. In such cases the centre of the sample plot will be marked at interval os 2½′ either on LAT or LONG with respect of the centre of the plot in green wash area which has already been selected. (Note - The lands recognised and marked as scrubs of any type outside above 4 categories will be ignored).

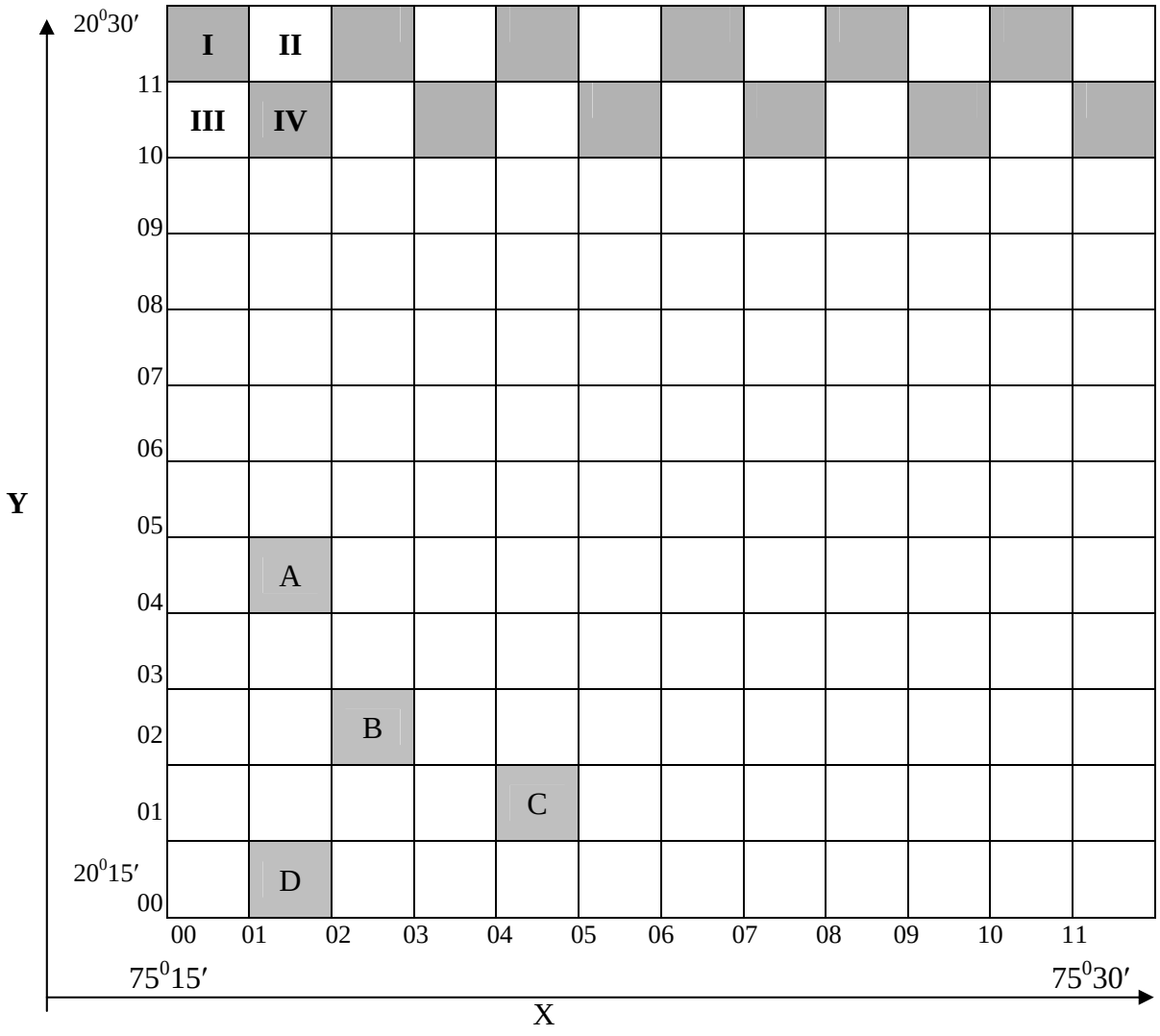
1.10 FIELD WORK TO BE CARRIED OUT PER DAY

Each crew should complete inventory of one plot of 0.1 ha. on an average of two working days. Presuming the availability of minimum 20 working days in a month the monthly output should be above 10 plots per crew. Considering availability of 9 months of fair weather season in a year the annual inventory work by a crew should be atleast 10 x 9 i.e. 90 plots which are nearly equal to 900 sq.km. of forest area. The annual turn over of the Zone will proportionately be expected on the basis of number of parties engaged on inventory work during different months of the year. The above limits are the lower limits of work considering terrain conditions etc. However, efforts should be made to improve the output of work

1.11 LAYOUT OF GRIDS ON THE TOPOSHEET

The Crew Leaders shall be provided a list of plots to be tackled by them during the current season alongwith a set of 1:50,000 scale maps duly marked with plot centres in various grids. The grids on a toposheet shall be read by a four digit code with reference to their divisions along X & Y axis in the following manner.

The south western corner of each toposheet will be numbered as point 0000. The first two digits will stand for division number along X axis i.e. horizontal axis while second two digits will stand for division number along Y axis i.e. vertical axis. Likewise there shall be divisions from 00 to 11 on X axis and 00 to 11 on Y axis thus making 144 grids on every toposheet. See diagram below.



The grids marked as A B C D above will be read as 0104, 0202, 0401 and 0100 respectively. Thus all 144 grids shall be identified by 4 digit code numbers ranging from 0000 to 1111.

After deciding the plot number and grid number to be surveyed the Crew Leaders should find a nearest convenient route so that they can reach the plot with minimum traverse by jeep or foot. After reaching at a nearby location of the plot the next job would be to search a reference point, which can be read on the map as well as can be located on the ground. In case the aerial photographs are available they should be used as they help in locating reference point quickly.

The reference point selected on a map should be such that it is not a temporary structure which may disappear within a year or two. Usually the following features are reliable in adopting as reference points.

1. Bench mark
2. Triangulation points
3. Village trijunction points
4. Old bridges and culverts
5. Old temples, mosques and churches
6. Crossing of rail track with roads, rivers, streams
7. Junction of rivers or streams and roads
8. Junction of streams
9. Junction of roads
10. Prominent bends in roads, rivers, streams
11. Old ponds and wells
12. Springs
13. Prominent topographical features in hilly area such as spurs, knots etc.
14. Mile stones or kilometer stones
15. Boundary pillars (of International, State, District and forest).

As far as possible small nallas less than 6 metre width and Kchha roads or foot paths should not be selected for reference point. The Crew Leaders may select any of the above features, which is most prominent on the map.

The location of reference point and its correct description in the form is very important so that the very same point can be reached by Check Crew or any other party verifying or measuring the plot in future.

1.12 MARKING OF REFERENCE POINT

Having surveyed to the field reference point, following details will be recorded in red paint/or red jet pen depending upon availability on a prominent tree or a structure facing the reference point by making a blaze of 15 cm x 15 cm at breast height. In making the blaze the bark would be completely removed.

1. Grid Code
2. Mapsheet Number
3. Bearing from reference point to the plot centre (see note below on Bearing)

4. Distance of plot centre from reference point in Kilometers (see note below on distance)
5. Initials of Crew Leader (e.g. V.K.T. will stand for V.K. Tiwari etc.)
6. Date of survey
7. Distance and bearing from two nearly prominent trees or structures to the reference point.

In addition to these the following recordings will be made on the back side of the plot approach form (which will be explained in the next chapter).

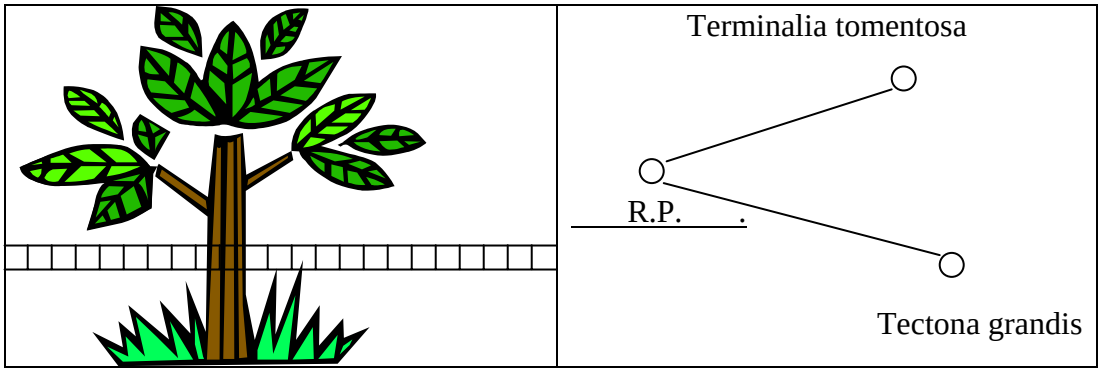
A) A free hand diagram of nearly 10 cm x 10 cm size showing the reference point and its surrounding prominent features. This is specially useful for locating the junctions of small nallas, roads etc. which are adopted as reference points by the Crew Leaders.

B) A rough diagram of nearly 10 cm x 10 cm showing distance and bearing from two nearby prominent trees or structures to the reference point.

The names of the trees be given preferably on the diagram.

For example

A B



1.13 NOTE ON BEARING

The bearing is an angle by any direction/line with the north direction at a particular place. The bearing of the line joining any two points or in this case reference point to plot centre would be calculated as follows:

1. Spread the toposheet on levelled ground surface.

2. Put the Silva Compass on it.

3. Adjust the north-south direction of the toposheet i.e. any printed longitude line exactly with the north-south of the needle of Silva Compass. This process when finalised will indicate that the map is correctly oriented.

4. Magnetic variation given in top right margin of the toposheet must be accounted for while orienting the map. The magnetic variation has to be either added or substracted to the campass bearing as the case may be. If the magnetic variation is in the North-West of True North, this should be added and in case it is in the North-East of True North then to be substracted from the compass bearing. The magnetic variation to be accounted for to the nearest degree e.g. if the deviation is by $3/4^0$ or more that same has to be taken as 1^0 for addition or substraction and if it is $1/4^0$ or less, may be ignored.

5. Ensure the reference point and the plot centre correctly on the map.

6. Without disturbing the map, place the silva Compass in such a manner that its longer axis or any printed longitudinal line on it connects both the points i.e. reference point and the plot centre. The mirror of the compass should be towards the plot centre.

7. With a steady hand, rotate the dial of the compass in such a manner that the North mark on the rim of the compass and North of the needle coincide exactly.

8. Now take out a compass and read the bearing against the index pointer of the compass.

9. Silva Compasses are manufactured in degrees as well as in grades. A precaution has to be taken to see that grades are not confused with degrees and vice versa. Similarly since the Silva Compass is a magnetic instrument all iron and magnetic articles should be kept sufficiently away from the compass so as to avoid effect of such articles on the magnetic needle and ultimately on the bearings of the plot centre.

10. While proceeding towards the plot centre or any other object at known bearing the job has to be done by a team of three persons one holds the Silva Compass and other two carry ranging roads. The person holding a Silva compass adjusts the exact bearing on the rim of the compass, then by holding compasss in a levelled manner in one palm and stretching the hand straight in front of his eyes, settles the needle steady North-South and sights the trees or objects which exactly coincide with the thread line of the viewing slit of the compass, centre of the needle and notch at the top of the mirror. The other two persons act as Rangers who proceed ahead along bearing line with ranging rods and stand with vertical ranging rods in their hands at the places directed by the person holding Silva Compass. Usually the small distances are traversed say 50 to 100 metres at a time so that the possibility of error is minimised. The person holding Silva compass frequently directs other persons holding ranging rods to stand at a sufficient

distance along the bearing line. After fixing the persons holding ranging rods on two spots on a bearing line, the person holding Silva compass proceeds to the spot of the first person holding ranging rod and views again further ranging the second person holding ranging rod and directing the person shifted from first spot to occupy further position on the bearing line as viewed from Silva compass and decided by him. Likewise the process goes on till a desired distance is covered upto the plot centre.

1.14 NOTE ON DISTANCE

All distances on the map are horizontal distances. As such the distance in field has to be measured in terms of horizontal distance. An instrument named as Bluemleiss Hypsometer or any other hypsometer can be used for knowing the degree of slope between two points. A person at the first point on line views the person at the same height at the other end of the line through the hypsometer and reads the angle of elevation or depression. A ready reckoner for reading horizontal distances of certain common slope distances against specific degrees of slope has been provided in the end of the manual (see Annexure I). A corresponding horizontal distance against a definite slope distance and slope degrees may be read from the table so that a desired horizontal distance can be reached although the coverage of slope distance will be more. The difference in slope distance and horizontal distance is more in hilly areas than that in plain areas. (Note - The slope correction be made after every chain/rope and not at the end).

1.15 RANGING TOWARDS PLOT CENTRE

After setting the compass on desired bearing and after ranging and measuring desired horizontal distance the team shall reach the plot centre. For the ease in further checking the trees along the bearing line be given small blazes at breast height.

1.16 LAYOUT OF THE PLOT IN THE FIELD

The plot centre reached after covering desired distance and bearing from the reference point represents the centre of the plot of 0.1 ha. i.e. the point of inter section of two diagonals i.e. NE to SW and NW to SE of the plot. The length of each diagonal measures 44.72 m. After reaching the plot centre put a stout peg of 10 cm dia. x 1.5 m. in height, blaze it at the top and fix it firmly on the ground facing the blazed surface towards the direction from which you have approached the sample point. Write the sample point reference number and the date on the blazed surface. Select two nearby prominent trees preferable at right angles from the peg for permanent referencing of the sample point. On each reference tree blaze at the breast height facing the peg and write the following references.

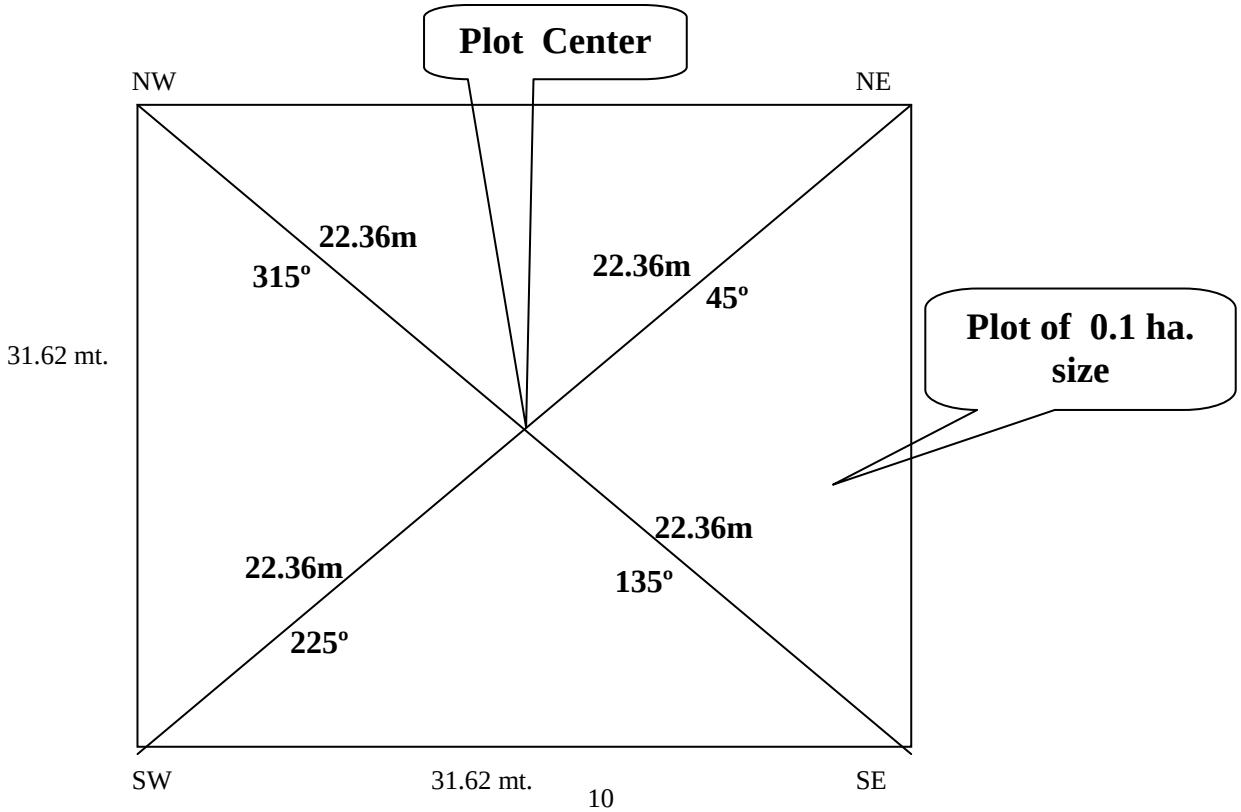
1. Grid code
2. Mapsheet number
3. Initials of Crew Leader with date
4. Distance and bearing from two nearby prominent trees or structures to the plot centre (These details should also be recorded on plot approach form which is enclosed later).

After fixing the plot centre fix the NE at 45^0, SE at 135^0, SW at 225^0, NW at 315^0 corners of the plot by measuring 22.36 m. horizontal distance i.e. half of the diagonal by Steel tape in all four directions. These four corners should be marked by thin poles or bamboos of 5 cm dia. amd 1.5 metre in height. If possible ranging rods also can be used as corner posts. A red colour cloth may be tied at the top end of these corner posts for getting clear visibility from different spots in the plot.

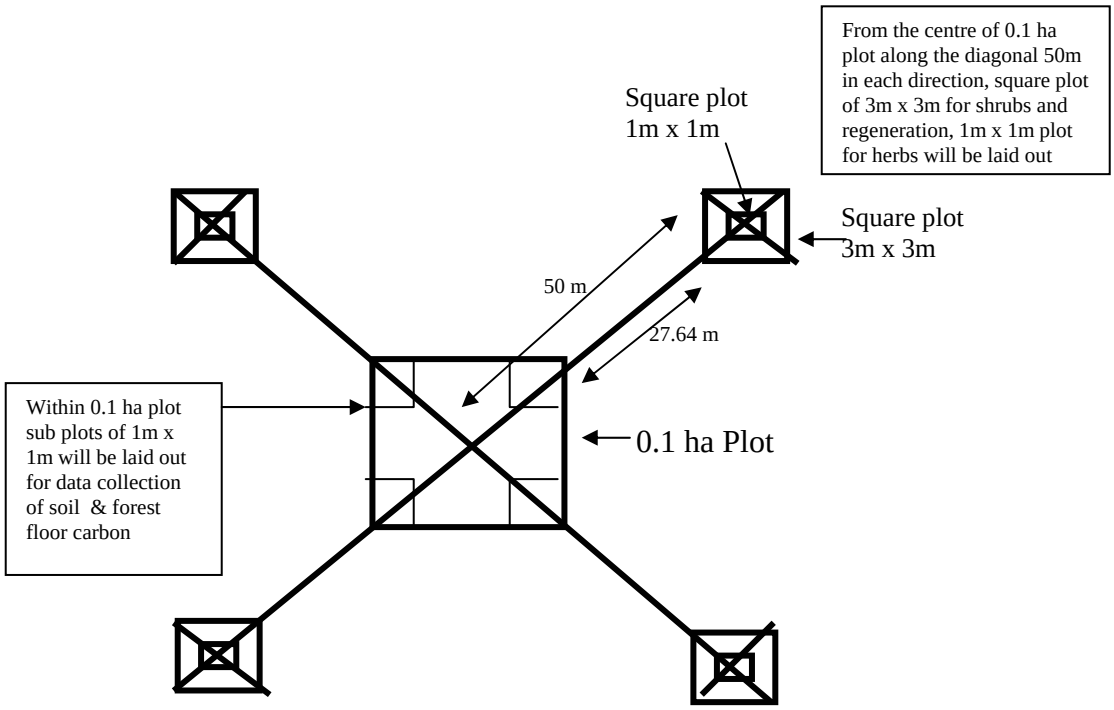
Check the dimensions of the plot i.e. all sides should measure 31.62 metres horizontal distance.

Within this 0.1 ha plot, sub plots of 1m x 1m will be laid out at each corner for collecting data on soil, forest floor (humus and litter carbon). To lay out this sub plot mark 1.42 m along the diagonal towards the plot centre of 0.1 ha plot, then mark 1 m on both the sides and join.

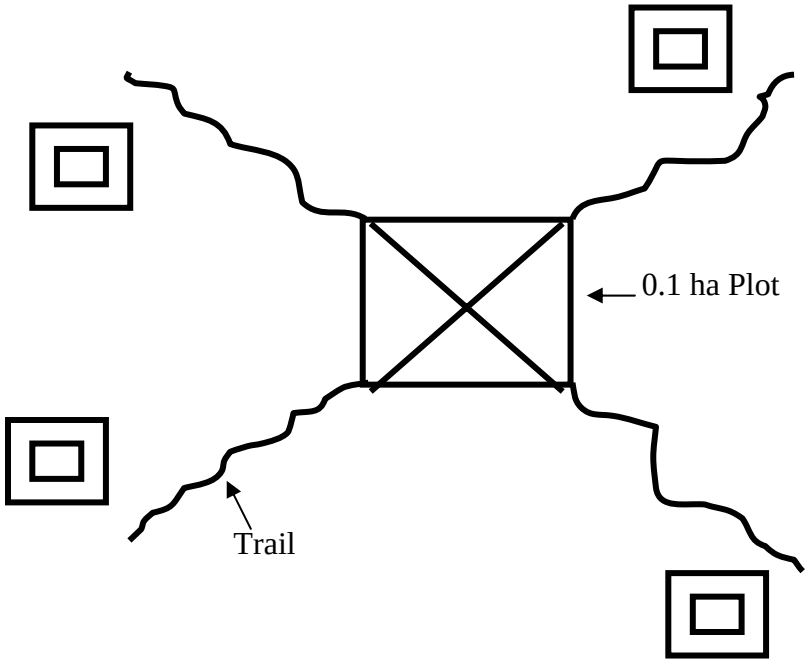
The data regarding herbs and shrubs (including regeneration) is to be collected from four square plots of 1m x 1m and 3m x 3m respectively. These plots will be laid out 50 meters from the centre of 0.1 ha plot in all four directions along diagonals in non-hilly area and along trails in hilly areas. In case of hilly areas the plot will be taken randomly 2-10 meters away either side of the trail as shown in the diagram. Now to lay out 1m x 1m square plots for herbs whose centres are marked at 50 meters from the centre of 0.1 ha plot, mark four points at the distance of 0.71 meter along diagonal in both sides and at right angles. Join all the four points. Similarly, for shrubs and regeneration square plots of 3m x 3m will be laid out at the same centre by marking and joining four points at 2.12 meters distance along diagonal and at right angles.



Non-Hilly Area



Hilly Area



1.17 DATA COLLECTION

After demarcating the plot and after satisfying that it is correctly oriented the Crew Leader shall collect the data. He shall be personally responsible for data to be collected. He shall assign duties to other crew members. The duties to the members of the team are not specified they are to be decided by the Crew Leader considering the efficiency of every member of the team.

The following precautions should be taken while collecting data.

1. The data should be collected accurately with the help of the members of Crew and should be recorded neatly in as good hand writing as possible in the proper field forms by the crew leader himself, in the field.

2. The code numbers should be neatly and correctly recorded in legible manner.

3. Over writing of codes should be avoided. Wherever any mistake is committed in writing the first entry should be cancelled and a corrected entry should be written duly attesed by Crew Leaders.

   The digits should be written as under
   1, 2, 3, 4, 5, 6, 7, 8, 9, 0

4. Filling of Forms in Hindi, Urdu or regional languages should not be adopted without approval from the Head of the Office.

5. The data will be collected and recorded in the following field forms. The Crew Leaders should see that adequate number of blank forms are carried in the field.

   Form codes are as under

Field Form No.	Item	Form Code
1.	Plot Approach Form	00
2.	Plot Description Form	01
3.	Plot Enumeration Form	02
4.	Sample Tree Form	03
5.	Bamboo Clump Analysis Form	04
6.	Bamboo Enumeration and Analysis Form (non-clump forming)	05
7.	Bamboo Weight Form	06
8.	Herbs, Shrubs and Regeneration Form	07
9.	Soil and Forest Floor Carbon Form and Soil and Forest Floor Sample Card	08
10.	Special study for volume utility classes.	09

6. Detailed instructions for filling up of these forms are given in the following chapter.

7. If complete data of a plot does not get accommodated in one sheet a second sheet as a continuation sheet would be used and the additional sheet would be carefully tagged with the main form after filling all columns and clearly writing words ‘continuation sheet’ on the second and onwards pages.

8. Before leaving the plot see that no instruments or stores are forgotten.

9. See that the plot is left as clean as it was before entering it.

10. See that all members who have assisted in recording the information sign and write their names on the form.

11. Please see that all information is recorded/written and measured in field itself and nothing is taken to camp for compliance. Once a plot is left it should be presumed that all jobs of recording, filling forms, muster rolls etc. are completed in all respects.

12. Random check for few sample points in each district should be carried out by the higher authorities.

CHAPTER 2

INSTRUCTIONS TO FILL UP VARIOUS FIELD FORMS

2.1 PLOT APPROACH FORM (FIELD FORM NO.1)

This form will give details, such as mode of travel upto the reference point and conspicuous features observed during the journey by vehicles as well as on foot. The bearing from the reference point and the distance from the reference point to the nearest plot centre will be recorded in degrees and in metres respectively. This form will also indicate the time of starting from camp and arrival at the reference point, time of arrival at the plot(s), time of leaving the plot(s) and time of returning to camp. all the timings will be written as 07.30 hrs. (4.30 P.M. will be written as 16.30 hrs).

The Crew Leader must fill up the proper identificaiton of the plot (like State, Division etc.) by correct codes from the manual against each item. All the timings shall be coded in four digits as explained above. The distances shall be coded in metres as specified against the item. Descriptive information is to be given in the space provided for the item. Extra sheets may be used (wherever the space given is not sufficient) with proper identification on the sheet.

The different work done by the individual members of Crew should also be indicated against the items in the Plot Approach Form.

The Plot Approach Forms are to be kept in the Zonal Office only as a record and will be used as and when required.

While filling this form the Crew Leaders should bear in mind that all information in this form is recorded in such a manner that it will help in relocating the plot during checking and reinventory.

They should see that two diagrams A & B as laid down under the instructions for marking reference point in the last chapter are drawn on the back side of the plot approach form. The instructions are reproduced below.

The following recordings will be made on the back side of the plot approach form.

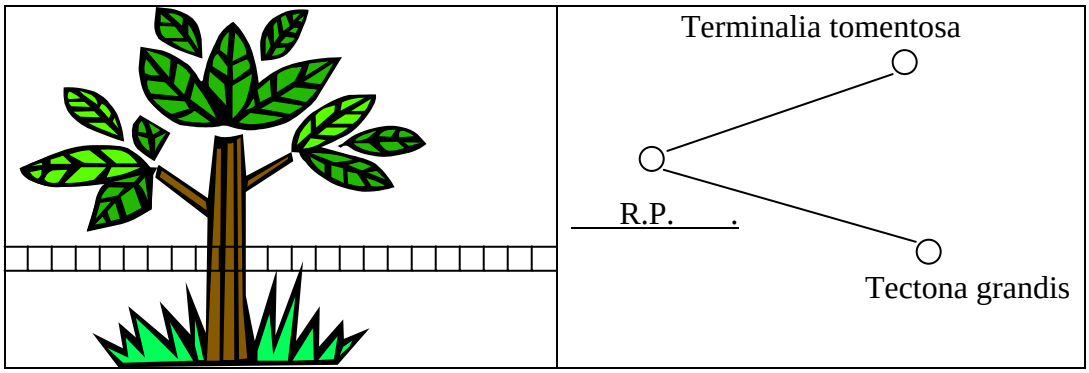
A) A free hand diagram of nearly 10 cm x 10 cm size showing the reference point and its surrounding prominent features. This is specially useful for locating the junctions of small nallas, roads etc. which are adopted as reference points by the Crew Leaders.

B) A rough diagram of nearly 10 cm x 10 cm showing distance and bearing from two nearby prominent trees or structures to the reference point.

The names of the trees be given preferably on the diagram.

For example

A B



2.2 PLOT DESCRIPTION FORM (Field form No.2)

This form will be filled in for every plot which is laid on ground/vicinity visited. An area of 2 ha. i.e 80 m radius around the centre of the plot will be considered for filling up this form. However, the 2 ha. plot will not be demarcated on the ground.

Coding instructions are as under :-

1.	Job No. (Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zone for record keeping
2.	Survey code (Col. 4)	Type of survey will be coded here 1 for forest inventory
3.	Form Code (Col. 5-6)	Two digit code 01 will be filled in by the DES for PDF.

4. FSI Zone (Col. 7)

Name of the zone will be coded here as under:

Code	Item
1	Northern Zone
2	Central Zone
3	Southern Zone
4	Eastern Zone

5. Physiographic Zone (Col. 8-9)

Name of the physiographic zone will be coded in two digits here as under:

Code	Item
01	Western Himalayas
02	Easterm Himalayas
03	North East Ranges
04	Northern Plains
05	Eastern Plains
06	Western Plains
07	Central Highlands
08	North Deccan
09	East Deccan
10	South Deccan
11	Western Ghats
12	Eastern Ghats
13	West Coast
14	East Coast

6. State (Col. 10-11)

Two digit code will be used. The codes are given in the Annexure II.

7. District (Col. 12-13)

Two digit code will be used. The codes for districts falling in each State are given in the Annexure III.

8. Forest Division (Col. 14-15)

Two digit code will be used. The codes for Forest Divisions for each State are given in the Annexure III.

9. Mapsheet No. (Col. 16-21)

Six digit code will be used for denoting a mapsheet. Example of coding pattern is given in the Annexure IV.

10. Grid Code (Col. 22-25)

Four digit code will be filled in within each mapsheet, coding of grid no. is explained in Annexure V

11. Latitude (Col. 26-31)

In six digits actual latitude of the sample plot will be given in degree, minutes and seconds by using GPS

12. Longitude (Col. 32-37) — In six digits actual longitude will be given in degree, minutes and seconds by using GPS

13. Legal Status (Col. 38) — One digit code will be filled in as under. The information regarding legal satus will be filled with reference to information on the map and/or by making enquiries with local forest officers.

Code	Item	Particulars
1.	Reserved Forests	An area so constituted under provisions of Indian Forest Act 1927 or State Forest Acts, having full degree of protection. In reserved forest all activities are prohibited unless permitted.
2.	Protected Forests	An area notified under the provisions of Indian Forest Act 1927 and other State Forest Acts, having limited degree of protection. In protected forests all activities are permitted unless prohibited.
3.	Unclassed	Areas, which are not classified as reserved or protected forests but which are Govt. lands. They may be property of any Govt. department.
4.	National Park	Areas which have been declared as National park by a legislation will be kept under this class.
5.	Private forests	Forest lands and Agricultural tree lands owned by Private individuals, communities or Corporations will come under this category.
6.	Private land with trees owned by Govt.	This will include lands owned by individuals on which tree growth including bamboos belongs to Govt.
7.	Undetermined	Any forest land which cannot be classed under any of the above categories will be classified here.

14. Land use (Col.39-40) — Two digit code has been assigned to denote various land use classes. The crew leaders should remember that this is very important obsevation on which entire data processing and estimation of potentiality of the Catchment etc. are based.

Code	Item	Description
01	Closed forests	All lands with a forest cover of trees with canopy density 70-100% and above (Canopy density is defined as the relative completeness of Canopy expressed as percentage taking closed Canopy as 100. Standing in a plot or in area around it observe the tree growth and assess the percentage of the space covered).
02	Dense forest	All lands with a forest cover of trees with canopy density

		40-69%
03	Open Forests	All lands with a Forest cover of trees with Canopy density 10% to 39%.
04	Scrub	Inferior tree growth chiefly of small or stunted trees. With Canopy density less than 10%.
05	Bamboo Brakes	No need to be filled up this land use class. This will be taken care of by bamboo density and crop composition
06	Shifting cultivation	Areas under current as well as last years shifting cultivation will come under this class. The agricultural crop may be standing or may have been harvested.
07	Young plantations of forestry species	No need to fill up this land use class. This will be taken care of by origin of stand, size class and intensity of regeneration.
08	Trees in line	This will include trees planted along canal banks, along road sides, along railway lines, wind brakes and shelter belts planted under various Social Forestry Schemes.
09	Forest roads etc.	This class will include areas under forest roads, depots, colonies, nurseries, and such other forest land used in connection with forest administration.
10	Govt. Grass lands	This will include areas under natural or planted grass lands pastures etc. which are owned by Government.
11	Barren lands	This will include areas with exposed surfaces like rock sheets, sand dunes, swamps and area without any vegetation.
12	Agricultural land without trees in surround	All lands under cultivation including fallow lands will come under this category. These lands will not have any tree growth along bunds or in thier vicinity of 2 ha.
13	Agricultural land with trees in surround	This will include all lands under cultivation including fallow lands which are covered with trees along bunds and in their surround within 2 ha.
14	Non forestry plantations	All lands with tree growth planted primarily for purposes other than forestry such as Cashew, Coffee, gardens, parks, zoos, private grass lands etc.
15	Habitation	This will include village, city sites, industrial area, grave yards, grounds, houses, colonies etc.
16	Water bodies	Land under lakes, water courses etc.

2.3 WORKING OUT FOREST AREA OF THE DISTRICT/ PHYSIOGRAPHIC ZONE ON THE BASIS OF LEGAL STATUS & LAND USE.

For the purpose of arriving at the forest area of the district/physiographic zone the following categories of Legal Status and Land Use will be taken into consideration.

Code nos. 1, 2, 3, 4 of legal status combined with Code no. 01 to 17 of land use.

Code nos. 5, 6, 7 of legal status combined with code no. 01 to 07 and 17 of land use. If land use code number is between 08 to 16, then field form number 8 and 9 need not to be filled up.

Thus any land use within Legal status code no.1 to 4 will be considered as Forest. In addition, land use Code No.01 to 07 & 17 with Legal Status Code no.5, 6 & 7 will also be considered as forest.

15 General topography (Col. 41)

General topography of the area around the centre of the plot (i.e. of the area comprising of eastern and western half of the grid depending upon the location of the plot) will be determined from 1:50,000 or 1:63,360 toposheets. This observation on map will be confirmed by field observation also.

Code	Item
1	Flat
2	Gently rolling
3	Hilly
4	Very Hilly

16 Slope (Col.42-44)

Determine the average slope of the hill face by standing at the Plot Centre and looking both ways up and down. Put the actual figures in percentage. If the instrument used reads slope in degrees, same should be converted to percentage slope as per Annexure VI. These codes should be filled up according to the General Topography codes i.e. 1, 2, 3 and 4 with upto 3^0, 4^0-15^0, 16^0-40^0 and 41^0+ respectively.

17 Position on slope (Col. 45)

The position of a plot will be examined on 1:50,000 or 1:63,360 scale toposheets and its position with reference to hill slope and general topography on which it is located will be classified as :

Code	Item
1	Ridge top
2	Upper one third
3	Middle

4	Lower one third
5	Valley bottom
6	Flat land
7	Plateau
8	Shallow ravine (depth of ravine less than 5 metres)
9	Deep ravine (depth of ravine over 5 metres)

18 Altitude (Col.46-49)

The altitude of plot will be examined on toposheet 1:50,000 or 1:63,360 scale toposheet or GPS and the altitude in metres will be recorded in four digits e.g. 550 metres shall be recorded as 0550.

19 Aspect (Col.50)

Aspect refers to the direction of the slope. Aspect will be recorded in one of the following classes:

Code	Item
1	Northern
2	North-Eastern
3	Eastern
4	South-Eastern
5	Southern
6	South-Western
7	Western
8	North-Western
9	No aspect

20 Rockiness (Col.51)

Rockiness refers to the degree of presence of rock covering the land surface in a 2 ha. area around the plot centre. Small pieces of broken stones, boulders and pebbles will not constitute 'rock'. the various classes will be as under :

Code	Item	Description
1	High	When more than 80% area is covered by rock
2	Medium	When 30 to 80% area is covered by rock
3	Low	When less than 30% area is covered by rock
4	No rock	Rock absent and entire land surface is available for tree growth

21 Soil data (Col. 52-58)

Soil information will be collected for plots belonging to such areas which are treated as 'Forest' as per note given in para 2.3. The information on soil, humus, soil colour, soil consistency, soil texture, coarse fragments, soil depth would be collected by examining the soil sample obtained by digging a soil pit in the predominant soil type occurring in about 2 ha. area around the plot centre. The depth upto, which the pit would be dug shall not be less than 15 cms.

21 (a) Humus (Col.52)

Humus is the decomposed organic matter (leaves, twigs, branches etc.) which has become a part of the upper most soil layer. It should be clearly distinguished from the undecomposed leaf litter.

The litter should, therefore, be removed from soil surface before making any measurement. presence of humus will be classified in one of the following classes :

Code	Item	Description
1	Shallow	When the humus is less than 5 cms. thick
2	Medium	When the thickness of humus layer is from 5 cms to under 10 cms.
3	Deep	When the thickness of humus layer is 10 cms and more
4	No humus	When the humus layer is absent.

21 (b) Soil Colour (Col. 53)

The colour of the upper horizon of the soil below the humus layer will be determined and classified as under :

Code	Item
1	Black
2	Brown
3	Red
4	Other
5	No soil

21 (c) Soil consistency (Col. 54)

Soil consistency comprises the nature of soil material that is expressed by the degree and kind of cohesion or resistence to deformation or rupture. To evalute consistency select and attempt to crush in the hand a small soil mass that appears slightly moist and code as follows :

Code	Item	Description
1	Friable	Soil which is loose and which crumbles very easily with a slight pressure of fingers Sand content is high in this type. Digging is very easy.
2	Slightly compact	Soil which sticks together as a lump when taken in hand. Digging a pit in this type of soil is very easy with a pick-axe and is comparatively easier than in a compact soil. Such a soil can be scrapped easily with the toe of shoe.
3	Compact	Soil which is difficult to dig. Clay content

		is high in this type and the soil is hard due to soil particles sticking compactly.
4	Cemented	Soil in which digging is practically impossible due to soil particles cemented together.
5	No soil	-

21 (d) Soil Texture (Col.55)

Texture of soil refers to relative occurrence of clay, silt and sand particles. Examine the texture of the soil in the region of the pit where the humus and the mineral soil are mixed by feeling with the hand and classify it in one of the following categories and record the code number.

Code	Item	Description
1	Clayey	Soil contains mostly clay particles
2	Clayey loam	Soil having higher percentage of clay particles but also having some sand and silt.
3	Loam	Soil having mostly silt and with some clay.
4	Sandy loam	Soil in which sand particles are pre-dominant but also containing silt.
5	Sandy	Soil having mostly sand particles.
6	No soil	-

21 (e) Coarse-Fragments (Col.56)

Coarse fragments like gravel, boulders, loose stones present in the soil mass should be indicated as per code given below:

Code	Item	Description
1	Loose stones	Stones more than 25 cm dia. present.
2	Bouldery	Broken stones of diameter varying from 8 cms. to 25 cms. present.
3	Gravely	Stoney fragments less than 8 cms. dia. present
4	No coarse fragments	Gravels/stones absent

Note:- The presence of coarse fragments will be recorded on when more than 50 % of 2 ha. plot is covered with such fragments. Otherwise code number 4 will be given.

21 (f) Soil depth (Col. 57)

Depth of soil will be estimated by digging a 15 cm. deep pit and guessing the remaining depth. The guess will be based on

all available information, i.e. exposed soil profiles on nalla banks, road cutting etc. and on luxuriance of vegetation.

Code	Item	Description
1	No soil	-
2	Very shallow	Soil depth less than 15 cms.
3	Shallow	Soil depth 15 cms. and more but less than 30 cms.
4	Medium	Soil depth 30 cms. and more but less than 90 cms.
5	Deep	Soil depth 90 cms. and more.

21 (g) Soil Erosion (Col.58)

Erosion means the wearing away of the earth's surface by the forces of water and wind. The extent of soil erosion may be codified as under:

Code	Item	Description
1	Heavy	Areas which have deep guillies, ravines, land slips etc.
2	Moderate	Where mild gullies and rills are formed on the top surface of the soil.
3	Mild	No erosion or slight erosion where only surface erosion has taken place.
4	No erosion	-

22 Origin of stand (Col.59)

Origin of forest stand will be classified as:

Code	Item
1	Natural forest of seed origin.
2	Natural forest of coppice origin.
3	Man-made forest - A forest crop raised artificially either by sowing or by planting.
4	Not applicable

23 Crop composition (Col.60-61)

This will be distinguished only when the land use is identified as 01 to 07 and 17. Crop composition of the plot as also that of its 2 ha. surround will be distinguished as per two digit codes given in Annexure VII. In case of lands use 06, the crop composition will be taken as available from the nearest peripheri.

24 Canopy layer or storey (Col.62)

This will be distinguished only when the land use is identified by code No.01 to 07 and 17. Canopy layer is defined as a horizontal stratum in a plant community, each layer being

called a storey.

Code	Item	Description
1	No storey	Crop is absent or found young and canopy formation has not taken place.
2	One storeyed forest	A small height variation may exist even in one storeyed forest.
3	Two storeyed	Variation in canopy layers distinguishable into upper and lower storeys.
4	Three or more storeyed forest	The variation in height is very large and in most cases it is not possible to group the trees in canopies.

25 Top height (Col.63-64)

The average height of dominant trees occurring in the plot or its surround of 2 ha. area will be estimated. The estimated height will be checked by measuring a few trees say 2-3 trees and average height will be recorded into the nearest metre.

Note :- In a young crop with scattered mother trees the top height of the young trees should be recorded. Ignore the mother trees while estimating the height.

26 Size class (Col.65)

Depending on the use to which the tree crop of a stand can be put, following classes will be distinguished.

Code	Item	Description
1	Regeneration	Crop below 10 cms. diameter pre-dominating.
2	Pole crop	Crop between 10-20 cms. diameter pre-dominating.
3	Small timber	Crop between 20 to under 30 cms. diameter pre-dominating.
4	Big timber	Trees with diameter 30 cms. and over pre-dominating.
5	Mixed size class	Trees crop with no marked domination of any size class.

27 Intensity of Regeneration (Col. 66)

The number of seedlings in all the four plots of regeneration will be added and code will be recorded as follows

Code	Item	Description
1	Adequate	18 or more seedlings.
2	Inadequate	Less than 18 seedlings
3	Absent	No seedlings

28 Species under regeneration (Col.67-70)

The species code, which is most common amongst regeneration will be given here in four digits from Annexure VIII

29 Injuries to crop (Col.71)

Borer attack, top drying, girdling, scarring etc. of trees as judged by occular estimation will be recorded as follows, provided the affected trees form at least 10 % of the crop.

Code	Description
1	Borer attack, leaf defoliater attack, or damage by other pest epidemic.
2	Top drying of timber trees which may have occurred in the current year or one year back.
3	Gridling and illicit felling of trees.
4	Scarring of trees
5	Lopping for fodder.
6	Wind damage and flood damage.
7	Other injuries (e.g. climber damage, lightening damage, wild life damage.
8	No injury.

30 Fire incidence (Col.72)

Judge the fire incidence occularly and classify in one of the following codes:

Code	Item
1	Heavy
2	Moderate
3	Occasional
4	No fire

31 Grazing incidence (Col.73)

Depending upon the intensity of the grazing classify it in one of the following:

Code	Item
1	Heavy grazing
2	Moderate grazing
3	Light grazing
4	No grazing

32 Presence of weeds (Col.74)

Have a look on the ground cover over area of about 2 ha. around the plot center and classify the plot in one of the following categories:

Code	Item	Description
1	Very dense	When more than 50% of the surface is covered by weeds.
2	Dense	Where 25-50% of surface is covered by weeds.
3	Moderate	Where 10-25% of surface covered by weeds.
4	Scanty	Where less than 10% of the surface is covered by weeds.
5	Absent	No weeds.

33 Presence of grass (Col.75)

Have a look on the ground cover over area of about 2 ha. around the plot center and classify the plot in one of the following categories:

Code	Item	Description
1	Very dense	Where more than 50% of the surface is covered by grass.
2	Dense	Where 25-50% of the surface is covered by grass.
3	Moderate	Where 10-25% of the surface is covered by grass.
4	Scanty	Where less than 10% of the surface is covered by grass
5	Absent	No grass

34 Occurrence of Bamboo (Col.76-79)

The occurrence of bamboo will be indicated from the following item taking an area of 2 ha. around the plot centre.

(a) Bamboo density (Col.76)

The density of the bamboo clumps of all species will be depicted using following code numbers:

Code	Item	Description	
		Clump forming	Non-clump Forming
1	Pure Bamboo	200 or more clumps/ha	More than 12000 culms
2	Very dense	151-200 clumps/ha.	9001-12000 culms
3	Dense	101-150 clumps/ha.	6001-9000 culms
4	Moderately dense	51-100 clumps/ha.	3001-6000 culms
5	Scattered	21-50 clumps/ha.	1201-3000 culms
6	Sparse	1-20 clumps/ha.	10-1200 culms
7	Bamboo present but clumps completely hacked by people.		
8	No bamboo	Bamboo totally absent.	
9	Regeneration crop	clump formation has not yet taken place.	

Note :- 1. Bamboo clump means an aggregate of culms issuing from the same rhizome system (A clump would normally have more than one culm). A clump will be distinguished as an independent clump where its periphory is easily discernible from adjacent clumps irrespective of its distance from others. However, when such distinction is not possible two clumps within half metre distance will be recorded as one.
2. In case on non-clump forming the height of a culm for density code 1 to 6 should be more than 2 meters and DBH more than 2 cms.

34 (b) Bamboo quality (Col.77)

For determining the bamboo production capacity of a site, bamboo areas will be classified into bamboo-site quality classes. For this purpose the average of measurments of tallest culms occurring in 2 ha. area will provide the data. Following codes will denote the bamboo quality classes.

Code	Site class	Description
1	I	Average culm height 9 metres or more for *Dendrocalamus strictus* and 14 metres or more for *Bambusa arundinacea*.
2	II	Average culm height 6 metres or more but less than 9 metres for *Dendrocalamus strictus* and 10 metres or more but less than 14 metres for *Bambusa arundinacea*.
3	III	Average culm height of 2 metres or more but less than 6 metres for *Dendrocalamus strictus* and two metres or more but less than 10 metres for *Bambusa arundinacea*.
4	IV	Rgeneration crop
5	Not applicable	

Note: The quality of other species will be decided on the lines of *Dendrocalamus strcitus.*

34 (c) Bamboo Flowering (Col.78)

The extent of flowering will be filled in as follows:

Code	Item	Description
1	Sporadic	When more than zero and less than 10% of the clumps (culms in case of non clump forming) have flowered.
2	Gregarious	When largescale flowering has taken place.

		3	No flowering -

34 (d) Bamboo Regeneration (Col.79)

Such bamboo areas, where clump formation has not yet taken place or which are under natural or artificial regeneration of bamboos. These will be classified as follows:

Code	Item
1	Dense
2	Medium
3	Scattered
4	Absent

35 Plantation potential (Col.80)

All those forests where the crown density is 40 % or more, plantation potential is not of any significance and hence the code pertaining to 'Not applicable' is to be written. In all other cases the land class to which the sample plot belongs will be studied and it will be observed whether it is a potential land for growing forest or not. While determining the potentiality of the land, give due consideration to aspect, soil depth, drainage, crop in the surrounding area, and other biotic and climatic factors. The maximum permissible slope upto which plantation can be raised will be 40^0 and minimum soil depth should be 20 cm. The column should be filled for land use code 04 to 07 and 17 only.

Code	Item
1	Plantable
2	Un-plantable
3	Not applicable.

36 Distance from road to plot (Col.81)

It will be classified as follows:

Code	Description
1	Distance less than 1 km.
2	Distance 1 to less than 3 kms.
3	Distance 3 to less than 5 kms.
4	Distance 5 to less than 7 kms.
5	Distance 7 to less than 10 kms.
6	Distance 10 to less than 15 kms.
7	Not applicable (if distance is more than 15 kms)

37 Distance from River/Stream to plot (Col. 82)

Code	Description
1	Distance less than 25 meters
2	Distance 25 to less than 50 meters
3	Distance 50 to less than 75 meters
4	Distance 75 to less than 100 meters
5	Not applicable (if distance is more than 100 m)

Note: The above information is required for plant diversity study.

38 Plot status (Col. 83) — Write the suitable code No. depending upon the plot status as under :

Code	Description
1	Sample plot visited and all data collected.
2	Sample plot visited, described but could not be laid out due to steep slopes or other obstructions.
3	Sample plot could not be approached but vicinity visited and plot described.
4	Sample plot could not be seen even from the distance or could be seen but vicinity could not be visited the distance (inaccessible plots).

Note: The term vicinity for this purpose means, the area near the sample point in the same crop composition in which the point falls. It must be ensured that the data of the crop composition recorded from the place approached is the same (in the PDF) as it would have been had the sample point been actually approached. This would be possible only when crew leader can see the site where the sample plot actually lies and he is convinced that the type of forest in which he is standing extends to the sample point. If crew leader cannot see the site he cannot be sure of the type in which the sample point falls and in this case the sample point should be inaccessible.

In case of plot status 3 all the informations in PDF will be filled up as far as possible. In case plot status 4 if possible crop composition will be filled up.

39 Degraded forests (Col.84-85) — This will be judged on the basis of following factors: Grazing, brousing, fire, pollarding, illicit cutting & lopping.

a. Biotic influences (Col.84)

Code	Item
1	Heavily degraded
2	Moderately degraded
3	Mildly degraded
4	Not degraded.

b. Natural calamities (Col.85) — Such as land slides, glaciers, flood, rain fall, natural mortality, due to pathological and physiological features.

Code	Item
1	Heavily degraded
2	Moderately degraded
3	Mildly degraded.
4	Not degraded

3.1 PLOT ENUMERATION FORM (Field Form No.3)

In this form data of trees and bamboo clumps will be recorded. Trees below 10 cms. diameter at breast height over bark (dbhob) and dead trees of having utility less than 70 % are not to be enumerated.

Plot Enumeration form for each plot (of 0.1 ha) will be maintained separately. If a plot contains so large a number of trees/bamboo clumps that the data of all cannot be accommodated in one single form sheet additional form sheets in continuation may be used and in that case the toal of all trees/bamboo clumps in the plot will be given in each page.

Trees, the stems of which touch the North and West border lines of the plot (called border-line trees) will be enumerated. However, trees the stems of which touch the East and South border lines of the plot will be treated as 'out trees' and will not be eumerated. 'In' and 'out' bamboo would be similarly decided and treated.

Enumeration of trees/bamboo will commence from the NW corner in North quadrant of the plot and will proceed in clockwise direction. All bamboo clumps occurring in a plot will be serially numbered by a jet-writer pen and a separate series of numbers will be used for each different bamboo species. Similarly trees will be numbered separately and simultaneously.

The coding instructions for filling up of the Plot Enumeration Form are as under:-

1.	Job No. (Col.1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2.	Form Code (Col. 4-5)	Two digit code 02 will be filled in by DES for PEF
3.	Map sheet No. (Col. 6-11)	Six digit code will be used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4.	Grid code (Col. 12-15)	Four digit code will be filled in within each mapsheet, coding of grid no. is explained in Annexure V
5.	Enumeration Data (Col. 16-71)	

(i) Species Name : Local or botanical name of the species will be written in the form.

(ii) Species Code : To be given in four digit code from the Annexure VIII.

(iii) DBHOB : The diameter in cms. at breast height over bark will be filled in three digits for trees and bamboo clumps.

The diameter of trees will be measured at a height of 1.37 metres from ground level (i.e. at breast height) measuring on up hill side of the tree and will be recorded to the nearest centimetre. The axis of the callipers (i.e. the long arm of the callipers) will always be kept pointed to the centre of the plot while taking diameter measurement of trees. If there is flare at the breast height of a tree, in that case, the diameter measurement would be taken immediately above or below the flare whichever is nearer to breast height. In case of butteressed and large sized trees diameter may be measured by tape or taking girth and converting it to diamter by multiplying with 7/22 or 0.318 factor.

In case there is forking of a tree below its breast height, diameter or each forked stem will be measured at breast height (above forking) and recorded separately, as if for two trees.

Dead trees, if not rotten and provided 70% of their wood is utilizable, will also be enumerated.

The diameter of a bamboo clump will be measured at its base with the help of a tape.

6	Total number of bamboo clumps (Col. 72-74)	- Total number of bamboo clumps occurring in the sample plot will be recorded in three digits.
7	Total number of trees. (Col. 75-77)	- Total number of trees occurring in the sample plot will be recorded in three digits.

Note :- The field form No.3 will be filled for every plot which is laid on the ground.

4.1 SAMPLE TREE FORM (Field Form No. 4)

The sample tree form is to be filled in only when the field form No.3 is filled. The dead trees having utility less than 70% will not be enumerated and all trees less than 10 cms. diameter at breast height over bark should be ignored.

The data of trees of 10 cms. and above for filling up this form would be collected from 1/4th area of the total plot i.e. 0.025 ha. area. It should be collected from North quadrant of the plot. On each sample tree, sample tree card will be nailed and data as given in Sample Tree Form will be filled in the columns provided in the card.

CODING INSTRUCTIONS

1	Job No.	(Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2	Form Code	(Col. 4-5)	Two digit code 03 will be filled in by DES for STF
3	Map sheet No.	(Col. 6-11)	Six digit code is used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	(Col. 12-15)	Four digit code will be filled in within each mapsheet, coding of grid no. is explained in Annexure V
5	Species name & serial No. of the tree	(Col. 16-17) (Col. 34-35)	Local or botanical name of the species will be written in the form. Write the serial no. of the sampled tree i.e. 01,02,03,..... etc. This number & species name & code will be same as given in P.E.F. to each of those trees.
6	Species code	(Col. 18-21) (Col. 36-39)	Code of species to be given in 4 digits from the Annexure VIII.
7	Dominance	(Col. 22) (Col. 40)	Classify the sample tree in one of the following dominance classes and record the code accordingly.

Code	Item	Description
1	Predominant	Comprising all the taller trees, which determine the general top level of the canopy and are free from vertical competition.
2	Co-dominant	Comprising the rest of the dominants falling short of and averaging about 5/6th of the average height of predominant trees.
3	Dominated	Trees which do not form part of the upper most leaf canopy, but the leading shoots of which are not definitely over-topped by the neighbouring trees. Their height is about 3/4th of the predominant trees.

4	Suppressed		Trees which reach only about 1/2 to 5/8th of the height of the predominant trees with their leading shoots definitely over-topped by their neighbours or atleast shaded on all sides by them.
5	Solitary		When trees are scattered or standing individually and dominance cannot be determined.
6	Abnormal and damaged tree		Trees either moribund, diseased, damaged, hollowed etc.
7	Dead trees		Having utility more than 70%

8. D.B.H.O.B. (Col. 23-25) (Col. 41-43) Record the DBHOB of sample tree from plot enumeration form data.

9. D.B.T. (Col. 26-27) (Col. 44-45) Double bark thickness will be measured (with 6″ steel scale) towards plot centre and opposite to this at breast height add these two readings and record to the nearest mm. in two digits.

10. Tree Height (Col. 28-29) (Col. 46-47) Height of tree will be measured to the nearest metre with Blueleiss Hypsometer (or any other height measuring instrument) rounding up to the nearest metre and record in two digit code. In case the fraction comes to 0.5 metres it should be rounded off to the nearest even number. Height measurement will be taken from the base of the tree on up-hill side to the top of its crown. While measuring the height of a tree standing on slope of more than 3^0, necessary slope correction will be applied as per the correction factor given at the back of the Hypsometer. The estimated height is to be multiplied by the correction factor and the value so obtained is to be substracted from the estimated height to get the exact height of the tree.

11. Crown width
    (a) cw1 (Col. 30-31) Crown width of the tree will be

	(b) cw2	(Col. 48-49) (Col. 32-33) (Col. 50-51)	measured to the nearest meter, first towards plot centre and second should be perpendicular
12.	Total number of trees sampled	(Col. 52-53)	Total number of trees sampled will be recorded in two digits.

5.1 BAMBOO CLUMP ANALYSIS FORM (Field Form No.5)

The information concerning total number of bamboo clumps and their respective diameters occurring in each 0.1 ha. plot has already been recorded on Plot Enumeration Form.

In this form, data of each individual culms, occurring in certain selected clumps in the plot is to be recorded. The clumps to be selected would be those which bear serial No.1, 9, 17,25,33 etc. (i.e. first clump and every eighth clump thereafter) of each series (i.e. for each species occurring in the plot).

For carrying out this analysis, it would first of all be determined whether a culm is green sound, green damaged, dry and damaged are then further classified as current years' culms, one to two year old culms and over two years old culms. In case of dry and decayed culms (both sound as well as damaged), however, the age classified is not necessary. The culms, other than the current year's and decayed culms, both green and dry, are further grouped under diameter at breast height classes 2 cms. to under 5 cms., 5 cms. to under 8 cms. and 8 cms. and over.

Note :- A culm is defined as a bamboo which has dbh 2 cms. and over and height 2 metres and over. Bamboos measuring less than these measurements, if occurring in the clumps (to be analysed) would be ignored from analysis.

CODING INSTRUCTIONS

1	Job No. (Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2	Form Code (Col. 4-5)	Two digit code 04 will be filled in by DES for BEF
3	Map sheet No. (Col. 6-11)	Six digit code will be used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	Four digit code will be filled in within each mapsheet,

	(Col. 12-15)	coding of grid no. is explained in Annexure V
5.	Species name & code (Col. 16-19)	Four digit code will indicate the bamboo species as given in Annexure VIII.
6.	Clump serial No. (Col. 20-22)	This will be recorded in three digit code i.e. 001, 009, 017, etc.
7.	Clump diameter (Col. 23-25)	The clump diameter of the clump from Plot Enumeration Form data in three digits.
8.	Clumps size class (Col. 26)	One digit code as follows would be used:

Code	Class	Description
1	Small	All clumps less than 1 metre average diameter.
2	Medium	Clumps of average diameter between 1 metre. to less than 2 metres.
3	Large	Clumps of average diameter 2 metres and over.

9.	Culm Enumeration (Col. 27-71)	All culms occurring in the clump selected for analysis would be enumerated and each enumerated culm would be recorded by dash dot method under its appropriate class. The total number of culms found under each class would ultimately be recorded in two digits.

A culm can easily be assigned to the primary status of green-sound, green damaged, dry-sound, dry-damaged or decayed class by simply observing it. A damaged culm would be the one which has been lopped, grazed or browsed in such a manner that it is top broken. Further classification into current years culms, one to two years old culms and over two years old culms would also be made on the basis of earlier field experience. The recording as already explained would initially be done following the dash dot method, under appropriate columns.

Green sound culms:

i) Current year's (Col.27-28).
These are not to be further divided into diameter classes.

ii) One to two years old
These are divided into three diameter classes:

(i) 2 to under 5 cms. (Col. 29-30)

(ii) 5 to under 8 cms. (Col.31-32)
(iii) 8 cms. and over (Col. 33-34).

iii) Over two years old
These are divided into three diameter classes:

(i) 2 to under 5 cms. (Col. 35-36)
(ii) 5 to under 8 cms old (Col. 37-38)
(iii) 8 cms and over (Col. 39-40).

Green Damaged Culms:

All culms which are green and damaged will be recorded here. These are further divided into:-

I) Current year's (Col. 41-42)
These are not to be further divided into diameter classes.

II) One to two years old.
These are further divided into diameter classes:

i) 2 to under 5 cms. (Col. 43-44).
ii) 5 to under 8 cms. (Col. 45-46)
iii) 8 cms and over (Col. 47-48).

III) Over two years old.
These are further divided into diameter classes:

i) 2 to under 5 cms. (Col. 49-50)
ii) 5 to under 8 cms. (Col. 51-52)
iii) 8 cms. and above (Col. 53-54).

Dry Sound Culms:

Dry culms will not be analysed by age. These will be analysed only in three diameter classes viz.

i) 2 to under 5 cms. (Col. 55-56)
ii) 5 to under 8 cms. (Col. 57-58)
iii) 8 cms. and above (Col. 59-60).

Dry Damaged Culms:

All culms which are dry and damaged will be recorded here. These will be classified under following classes:

i) 2 to under 5 cms. (Col. 61-62)
ii) 5 to under 8 cms. (Col. 63-64)
iii) 8 cms. and above (Col. 65-66).

Decayed culms:

The number of burnt and rotten bamboos over 2 metres in length having no utility will be recorded under this category (Col. 67-68)).

Total number of culms:

The total number of culms in each clump will be recorded here (Col. 69-71).

10. Average culm Height (Col. 72-77)

The average of height of three culms felled for bamboo weight data collection (Field Form No.7) will be recorded in decimeter.

i) Upto 1 cm. top diameter of the culm and recorded in Col. 72-74 in three digit code.
ii) Upto 2 cm. top diameter of culm and recorded in Col. 75-77 in three digit code.

11. Bamboo quality (Col. 78)

For determining the bamboo production capacity of site, bamboo areas will be classified into bamboo site quality classes. For this purpose, the average height measurements of tallest culms occurring in the plot will provide the data. It may be collected for the following two species of bamboos.

i) Dendrocalamus strictus
ii) Bambusa arundinacea
iii) Melocanna bombusiodes

Code	Quality class	Description
1	I	Average culm height 9 metres or more for Dendrocalamus strictus and 14 metres or more for Bambusa arundinacea.
2	II	Average culm height 6 metres or more but less than 9 metres for Dendrocalamus strictus and 10 metres or more but less than 14 metres for Bambusa arundinacea.
3	III	Average culm height 2 metres or more but less than 6 metres for Dendrocalamus strictus and 2 metres and more but less than 10 metres for Bambusa arundinacea.

Note: The quality of other species of bamboo will be decided on the lines of Dendrocalamus strictus

6.1 BAMBOO ENUMERATION AND ANALYSIS FORM (NON-CLUMP FORMING) (Field Form No.6)

In this form information is collected for non-clump forming bamboos occurring in the sample plot. For the purpose of counting the culms, only 1/8th area of the plot (touching North West semi-diagonal) will be considered. Counting will be done only in 0.0125 ha. area i.e. in 1/2 North quadrant. For this purpose the North quadrant will be disected by taking bearing of 360^0 from the centre. A rope will be put on this bearing upto the point where this bearing crosses the North West, North East side of plot.

All culms falling in 0.0125 ha. area will be counted and categorised in the following classes:-

i) Green Sound
ii) Green Damaged
iii) Dry Sound
iv) Dry Damaged
v) Decayed

These will be further classified as current year's culms, one to two years old culms, over two years old culms. In case of dry and decayed culms (both sound as well as damaged), the age classification is not necessary.

The culm, other than the current years and decayed culm both green and dry, are further grouped under diameter at breast height classes 2 cms. to under 5 cms., 5 cms. to under 8 and 8 cms. and over.

Note:- A culm is defined as a bamboo which has dbh 2 cms. and over and height 2 metres and over. Bamboos measuring less than these measurement, if occurring in the clumps (to be analysed) would be ignored from analysis.

CODING INSTRUCTIONS

1	Job No.	(Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2	Form Code	(Col. 4-5)	Two digit code 05 will be filled in by DES for BEF (Non-clump Forming)
3	Map sheet No.	(Col. 6-11)	Six digit code is used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	(Col. 12-15)	Four digit code will be filled in within

			each mapsheet, coding of grid no. is explained in Annexure V
5.	Species code	(Col. 16-19)	To be given in four digit code from the Annexure VIII
6.	Culm Enumeration		

A culm can easily be assigned to the primary status of green-sound, green damaged, dry-sound, dry-damaged or decayed class by simply observing it. A damaged culm would be the one which has been lopped, grazed or browsed in such a manner that it is top broken. Further classification in two years old culms, one to two years old culms and over two years old culms would also be made on the basis of earlier field experience. The recording as already explained would initially be done following the dash dot method, under appropriate columns.

Green Sound culms:

i) Current year's (Col.20-22).
These are not to be further divided into diameter classes.

ii) One to two years old
These are divided into three diameter classes

(i) 2 to under 5 cms. (Col. 23-25)
(ii) 5 to under 8 cms. (Col.26-28)
(iii) 8 cms. and over (Col.29-30).

iii) Over two years old
These are divided into 3 diameter classes

(i) 2 to under 5 cms. (Col. 31-33)
(ii) 5 to under 8 cms. old (Col. 34-36)
(iii) 8 cms and over (Col.37-38).

Green Damaged Bamboo:

All culms which are green and damaged will be recorded here. These are further divided into:-

I) Current year's (Col. 39-41)
These are not to be further divided into diameter classes.

II) One to two years old which are further divided into following diameter classes:

i) 2 to under 5 cms. (Col. 42-44).
ii) 5 to under 8 cms. (Col. 45-47)
iii) 8 cms and over (Col. 48-49).

III) Over two years old. These are further divided into following diameter classes:

i) 2 to under 5 cms. (Col. 50-52)
ii) 5 to under 8 cms. (Col. 53-55)
iii) 8 cms. and above (Col. 56-57).

Dry Sound Bamboo

Dry bamboo will not be analysed by age. These will be analysed only in three diameter classes viz.

i) 2 to under 5 cms. (Col. 58-60)
ii) 5 to under 8 cms. (Col. 61-62)
iii) 8 cms. and above (Col. 63-64)

Dry Damaged

All culms which are dry and damaged will be recorded here. Those will be classified under following classes:

i) 2 to under 5 cms. (Col. 65-67)
ii) 5 to under 8 cms. (Col. 68-69)
iii) 8 cms. and above (Col. 70-71)

Decayed

The number of burnt and rotten bamboos over 2 metres in length of no utility will be recorded under this category (Col. 72-73).

Average culm height (Col. 74-76)

The average of the heights of three culms felled for bamboo weight data collection for each diameter class will be measured in decimetres and recorded in 3 digits.

Total No. of culms (Col. 77-80)

The total number of culms will be recorded here in four digits.

7.1 BAMBOO WEIGHT FORM (Field Form No. 7)

For determining correlation between green and dry weights of utilizable bamboo culm length, data will be collected in this form. This form will, however, be filled up for plots, in which bamboo has actually been found in 2 ha. One mature bamboo culm from each culm diameter class 2 to under 5 cms., 5 to under 8 cms. and 8 cms. and over, will be selected for felling from the first clump enumerated in the plot. If, however, the required type of necessary number of culms of any diameter classes is/are not available in

the first clump, the short fall will be made good from the clump next in the serial order of enumeration. But, if the necessary number of suitable culms are not available from any other clump of the plot, in that case the required number of culms will be obtained from the area in the immediate vicinity of the plot.

Mature culms for this purpose would mean, the one which has put on more than two years of growth. Also the data will be collected for each bamboo species occurring in the plot separately e.g. two species occur in the plot then data for first species will be noted as sample one and other species as sample No.2. the selected bamboo culms for obtaining the weight data will be felled at a height of 25 cms. above ground level for each diameter class. The total length of each felled bamboo culm including stump height will be measured upto the tip and recorded in col. 23-25, 39-41 or 55-57 of field form. The top ends of each felled bamboo culm from a point where the diameter is just 1 cm. will then be chopped off. The length of the culm so left will be the utilizable length of the bamboos. The utilizable length of each culm will be measured and recorded in the appropriate column of the field form (Col. 26-28, 42-44 & 58-60) and col. 29-31, 45-47, 61-63 will be used for utilizable length upto 2 cm.

Green weight of the utilizable culms of each diameter class will thus be taken to the nearest 5 gms. with the help of weighing balance and recorded in the appropriate columns (Col.32-36, 48-52 & 64-68) in grams.

Now, three 30 cms. long pieces, obtained on each from the top, middle and bottom portions of the utilizable culm from each class will be cut out and their green weight would be recorded in the appropriate columns (Col.69-72, 73-76 & 77-80) in grams.

The 30 cms. long pieces of each diameter class would thus be tied with a bamboo strip of the same species. Before the pieces are tied in a bundle, however, their diameter class, species code, the grid no. and the mapsheet code would be noted down on each piece for subsequent identification. The date of collection of sample to be recorded on the bamboo sample pieces for easy reference of duration for calculation of dry weight correlation. The samples should be sent to the base camp. The base camp incharge will arrange to record the dry weight of these samples after every 30 days till 90 days or till weight of pieces remains constant.

Note: If inventory of Bamboo has been carried out earlier in the same area where in green weight and dry weight have been taken, then the same may not be again carried out.

CODING INSTRUCTIONS

1	Job No.	(Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose

2	Form Code	(Col. 4-5)	Two digit code 06 will be filled in by DES for BWF.
3	Map sheet No.	(Col. 6-11)	Six digit code will be used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	(Col. 12-15)	Four digit code will be filled in within each mapsheet, coding of grid no. is explained in Annexure V
5.	Species name & code	(Col.16-19)	To be given in four digit code from Annexure VIII
6.	Sample No.	(Col.20)	
7.	Green weight data	(Col.21-68)	

i) Culm diameter at breast height measured in cm. for diameter classes 2 cms. to 5 cms, 5 cms to 8 cms, 8 cms and over will be recorded in two digits against each sample in Cols.21-22, 37-38 & 53-54.

ii) The total length of the felled bamboo culm obtained by adding the stump height to the length measured upto the top will be recorded in decimetres in three digits in Col.23-25, 39-41 and 55-57 as the case may be.

iii) Utilizable length of felled bamboo culms measured in decimetres will be as follows:-

a) Upto 1 cm. top diameter of the culm in three digits in Cols. 26-28, 42-44, 58-60 as the case may be.
b) Upto 2 cm. top diameter of culm in three digits in Col. 29-31, 45-47 and 61-63 as the case may be.

iv) Green weight (in gms.) of utilizable culm length upto 1 cm. top diameter will be recorded to the nearest 5 gm. in five digits in Col. 32-36, 48-52 & 64-68 as the case may be.

8. <u>Data for dry weight correlation</u> (Col. 69-80)

i) Green weight (in grams) of all the three 30 cms. pieces obtained from the top, middle and basal parts of utilizable culm of each species will be recorded to the nearest 5 cm. in 4 digits in Cols. 69-72, 73-76 & 77-80 as the case may be.

ii) Air dry weight (after 90 days or when the air dry weight of samples become constant) of the corresponding three pieces of each diameter class will be recorded to the nearest 5 gms. in a separate register.

8.1 HERBS, SHRUBS & REGENERATION FORM (Field Form No.8)

The data regarding herbs is to be collected from 4 square sub-plots of 1m x 1m laid out at the distance of 50 mtrs. from the centre of main plot.

Similarly, the data regarding shrubs and regeneration is to be collected from 4 square plots of 3m x 3m laid out at a distance of 50 mtrs. from the centre of main plot.

Definitions of herbs & shrubs are given as under:

Herbs: Usually not exceeding 1m in height with soft stem.

Shrubs: Usually not exceeding 3m in height with woody stem.

Note:
1. To capture seasonal variation of plant diversity of the area, the same district should be visited twice. Group Officer, under the guidance of Regional Director should decide the course of action as convenient for field work.
2. If any plant diversity rich area is known in the district and is not being covered through herbs/shrubs plots then additional plots may be laid out and enumerated in that area
3. Care may be taken that young regeneration of the tree species is not included in the categories of herbs & shrubs.
4. Herbarium specimen of unidentified herbs and shrubs should be collected.
5. For tree regeneration data all trees with dbh 10 cm and above are to be ignored.
6. Collar diameter: Diamter at the position of a plant which marks the transition between stump and root. It is approximately at 4-6 inches from the ground.

Coding instruction for filling up Herbs, Shrubs & Regeneration form are as under:

1	Job No.	(Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2	Form Code	(Col. 4-5)	Two digit code 07 will be filled in by DES for Herbs, Shrubs & Regeneration Form
3	Map sheet No.	(Col. 6-11)	Six digit code will be used for denoting the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	(Col. 12-15)	Four digit code will be filled in within each mapsheet, coding of grid no. is

explained in Annexure V

5. Plot location (Col. 16)

One digit code will be filled in as given below:

Code	Item
1	North East
2	North West
3	South West
4	South East

6. Slope (Col. 17-19) This is to be determined and filled up in the same manner as applied for while filling slope percentage in PDF.

7. Altitude (Col. 20-23) This is to be determined and filled up in the same manner as applied while filling altitude in PDF

8. Aspect (Col. 24) This is to be determined and filled up in the same manner as applied while filling aspect in PDF

9. Species name & code (for herbs) (Col. 25-30)

This is to be coded as under:

Col. 25 – FSI Zone code
Col. 26-27 – Crew number
Col. 28-30 – Species code between 001-500 to be assigned by respective crew

10. Herbarium reference number (Col. 31-36)

This is to be filled as above if herbs is not identified.

11. No. of plants (Col. 37-48)

No. of Plants will be recorded into following collar diameter classes:
(i) 0-2 mm (Col. 37-39)
(ii) 2-5 mm (Col. 40-42)
(iii) 5-8 mm (Col. 43-45)
(iv) 8 and above (Col. 46-48)

12. Species name & code (for shrubs) (Col. 49-54)

Col. 49 - Same as Col. 25

Col. 50-51 - Same as Col. 26-27
Col. 52-54 - Species code between 501-999 to be assigned by respective crew.

13. No. of plants (Col. 55-66)

No. of Plants will be recorded into following collar diameter classes:

(i) 0-2 cm (Col. 55-57)
(ii) 2-5 cm (Col. 58-60)
(iii) 5-8 cm (Col. 61-63)
(iv) 8 and above (Col. 64-66)

14. Herbarium reference number (Col. 67-72)

This is to be filled up as given in Col. 49-54 if shrub is not identified.

15. Tree regeneration data (Col. 73-83)

(a) Species name & code (Col. 73-76): Species code is to be filled up in four digit code from Annexure VIII
(b) Diameter at breast height (Col. 77): DBH is to be taken in cm for all tree plants having dbh more than 5cm and less than 10cm. For these plants category of regernation will not be filled up.

16. No. of plants (Col. 78-83)

No. of plants will be recorded in category of regeneration given below for all tree plants having dbh less than 5 cm. in two digits each

Code	**Category of regeneration**	**Description**
1	Established	Plants having height more than 2m
2	Un-established	Plants which having height less than 2m but are more than one year old seedling (It will include whippy and sub-whippy plants.
3	Recruit	Very small plants having 2-4 leaves but are current years seedling

Note: In case if a particular sub plot could not be laid out the same should be mentioned in the corresponding form.

9.1 SOIL & FOREST FLOOR CARBON FORM (Field form No.9)

For determining soil and forest floor carbon, data will be collected in this form. This form will be filled up for all the four plots, which are laid out on all the corners within the plot of 0.1 ha area i.e. NE, NW, SW & SE.

a. Collection of Forest Floor (Litter & Humus) Data

In each plot for Forest Floor data fresh, partially and fully decomposed leaves, twigs and branches will be collected and weighed in kgs rounded up to one decimal place. Then the forest floor (litter & humus) collected from all the four plots will be mixed thoroughly and a sample of 200 gms will be taken from it. These samples will be kept in separate transparent polythene bags, which will be properly labeled. A sample card bearing sample No. and details of the plot should be kept in the bag. If the samples are wet then care should be taken that the label should not be spoiled. Sample card should bear the following particulars:

1. Mapsheet No.
2. Grid code
3. District Name
4. Sample No.
5. Date of collection

Signature ……
Name & Designation of Crew Leader……

This sample bag should be tied up with a rubberband and deposited at the zonal headquarter on regular intervals.

b. Collection of Soil Data

Soil sample data shall also be collected from the same marked four sub plots in the following manner. The area from which the soil sample is to be taken should be cleared of vegetation with the help of bill hook or axe. Then with the help of crowbar/ spade dig a pit of 30cm x 30cm x 30cm in each plot and collect the soil sample of 250 gms after mixing throroughly. In case of gravel stone, the proportion of soil and gravel should be occularly estimated and noted in the form, which is annexed to this manual. The soil so collected from all the four corners of the plot shall be mixed thoroughly and take a sample of 200 gms and keep the sample as it is already described above.

Coding Instructions

1	Job No.	(Col. 1-3)	Three digit code will be filled in by Data Entry Section (DES) of respective zones for record purpose
2	Form Code	(Col. 4-5)	Two digit code 08 will be filled in by DES for Soil & Forest Floor Carbon Form
3	Map sheet No.	(Col. 6-11)	Six digit code will be used for denoting

			the mapsheet. Example of coding pattern is given in Annexure IV
4	Grid Code	(Col. 12-15)	Four digit code will be filled in within each mapsheet, coding of grid no. is explained in Annexure V
5.	Proportion of gravel (in percent)	(Col. 16-18)	
6.	Proportion of soil (in percent)	(Col. 19-21)	
7.	Forest Floor sample No.	(Col. 22-25)	
8.	Soil sample No.	(Col. 26-29)	

Note: For item 7 and 8 above, first digit for zone code next two digit for Crew code and fourth digit for forest floor and soil as given below:

Code	**Item**
1	Forest floor sample
2	Soil sample

For example, if zone code is 1, crew code is 02 and sample taken for forest floor sample No. will be coded as 1021.

9. Weight of forest floor has to be given in grams.

a. North East	(Col. 30-33)
b. North West	(Col. 34-37)
c. South West	(Col. 38-41)
d. South East	(Col. 42-45)

10.	Volume of soil (Col. 46-49)	Volume of soil has to be given in 4 digit which is already known as per specification of ‘soil density sampling core’
11.	Weight of soil (Col. 50-53)	Weight of soil has to be given in 4 digits in grams

Note: Soil weight will be taken by processing the ‘soil density sampling core’ inside the earth after digging 7 cm soil from the surface in any one of the four sample plots.

10.1 SPECIAL STUDY FORM FOR VOLUME UTILITY CLASSES (Field Form No.10)

Felled tree data of important species of the area may be collected either by felling trees during inventory or from felling coupes in the area where inventory is in progress. For each diameter class data of about 10 (ten) may be collected.

Note: This form will not be filled up with usual forest inventory unless instructions are issued from the Headquarter.

ANNEXURE - I

SLOPING DISTANCE ON DIFFERENT DEGREE OF SLOPES CORRESPONDING TO THE HORIZONTAL DISTANCE

Distance in metres

Slope degree	1	2	3	4	5	6	7	8	9	10	20	30	40	50
0	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	20.00	30.00	40.00	50.00
1	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	20.00	30.01	40.01	50.01
2	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.01	10.01	20.01	30.02	40.02	50.06
3	1.00	2.00	3.00	4.01	5.01	6.01	7.01	8.01	9.01	10.01	20.03	30.04	40.06	50.07
4	1.00	2.00	3.01	4.02	5.01	6.01	7.01	8.02	9.02	10.02	20.04	30.05	40.10	50.12
5	1.00	2.01	3.01	4.02	5.02	6.02	7.03	8.03	9.03	10.04	20.08	30.11	40.15	50.19
6	1.01	2.01	3.02	4.02	5.03	6.03	7.04	8.04	9.05	10.06	20.11	30.12	40.22	50.28
7	1.01	2.02	3.02	4.04	5.04	6.05	7.05	8.06	9.07	10.08	20.15	30.23	40.30	50.38
8	1.01	2.02	3.03	4.04	5.05	6.06	7.07	8.08	9.09	10.10	20.20	30.29	40.40	50.50
9	1.01	2.02	3.04	4.05	5.06	6.07	7.09	8.10	9.11	10.12	20.25	30.37	40.50	50.62
10	1.02	2.03	3.05	4.06	5.08	6.09	7.11	8.12	9.14	10.15	20.31	30.46	40.62	50.77
11	1.02	2.04	3.06	4.07	5.09	6.11	7.13	8.15	9.17	10.19	20.37	30.56	40.75	50.94
12	1.02	2.04	3.07	4.09	5.11	6.13	7.16	8.18	9.20	10.22	20.45	30.67	40.85	51.11
13	1.03	2.05	3.08	4.10	5.13	6.16	7.18	8.21	9.24	10.26	20.52	30.79	41.05	51.31
14	1.03	2.06	3.09	4.12	5.15	6.18	7.21	8.24	9.27	10.31	20.61	30.92	41.22	51.33
15	1.04	2.07	3.11	4.14	5.18	6.21	7.25	8.28	9.32	10.35	20.71	31.06	41.44	51.77
16	1.04	2.08	3.12	4.16	5.20	6.24	7.28	8.32	9.36	10.40	20.80	31.21	41.61	52.01
17	1.05	2.09	3.14	4.18	5.23	6.27	7.32	8.36	9.41	10.46	20.91	31.37	41.82	52.28
18	1.05	2.10	3.15	4.21	5.26	6.31	7.36	8.41	9.46	10.51	21.03	31.54	42.06	52.57
19	1.06	2.12	3.17	4.23	5.29	6.35	7.40	8.46	9.52	10.58	21.15	31.73	42.30	52.88
20	1.06	2.13	3..19	4.26	5.32	6.38	7.45	8.51	9.58	10.64	21.28	31.92	42.56	53.20

ANNEXURE - I CONTINUATION SHEET

Distance in metres

Slope degree	60	70	80	22.36	31.62	38.73	44.72	54.77	63.24
0	60.00	70.00	80.00	22.36	31.62	38.73	44.72	54.77	63.24
1	60.01	70.01	80.02	22.36	31.62	38.74	44.73	54.78	63.25
2	60.04	70.04	80.05	22.37	31.64	38.76	44.75	54.80	63.28
3	60.08	70.10	80.10	22.39	31.66	38.78	44.78	54.84	63.33
4	60.14	70.17	80.19	22.41	31.70	38.82	44.83	54.90	63.39
5	60.23	70.27	80.30	22.44	31.74	38.88	44.89	54.98	63.48
6	60.33	70.39	80.44	22.48	31.79	38.94	44.97	55.07	63.59
7	60.45	70.53	80.60	22.53	31.86	39.02	45.05	55.18	63.71
8	60.59	70.69	80.78	22.58	31.93	39.10	45.16	55.31	63.86
9	60.74	70.87	80.99	22.64	32.01	39.21	45.27	55.45	64.02
10	60.92	71.08	81.23	22.70	32.11	39.32	45.41	55.61	64.21
11	61.12	71.31	81.50	22.78	32.21	39.45	45.56	55.79	64.42
12	61.34	71.56	81.78	22.86	32.33	39.59	45.72	55.99	64.65
13	61.57	71.83	82.10	22.95	32.35	39.74	45.89	56.20	64.90
14	61.84	72.14	82.45	23.04	32.59	39.91	46.09	56.45	65.17
15	62.12	72.47	82.82	23.15	32.74	40.09	46.30	56.70	65.47
16	62.41	72.81	83.22	23.26	32.89	40.28	46.52	56.97	65.78
17	62.74	73.19	83.65	23.38	33.06	40.49	46.76	57.27	66.12
18	63.08	73.60	84.11	23.51	33.25	40.72	47.02	57.58	66.49
19	63.36	74.03	84.61	23.65	33.44	40.96	47.30	57.92	66.88
20	63.85	74.49	85.13	23.79	33.65	41.20	47.50	58.28	67.29

ANNEXURE - I CONTINUED

Slope degree	1	2	3	4	5	6	7	8	9	10	20	30	40	50
21	1.07	2.14	3.21	4.28	5.36	6.43	7.50	8.57	9.64	10.71	21.42	32.13	42.84	53.55
22	1.08	2.16	3.24	4.31	5.39	6.47	7.55	8.63	9.71	10.78	21.57	32.35	43.14	53.92
23	1.09	2.17	3.26	4.35	5.43	6.52	7.60	8.69	9.78	10.86	21.73	32.59	43.45	54.31
24	1.09	2.19	3.28	4.38	5.47	6.57	7.66	8.76	9.85	10.95	21.89	32.84	43.78	54.73
25	1.10	2.21	3.31	4.41	5.52	6.62	7.72	8.83	9.93	11.03	22.70	33.10	44.13	55.16
26	1.11	2.22	3.34	4.45	5.56	6.68	7.79	8.90	10.01	11.12	22.25	33.37	44.50	55.62
27	1.12	2.24	3.37	4.49	5.61	6.73	7.86	8.98	10.10	11.22	22.45	33.67	44.89	65.11
28	1.13	2.27	3.40	4.53	5.66	6.80	7.93	9.06	10.19	11.33	22.65	33.98	45.30	56.63
29	1.14	2.29	3.43	4.57	5.72	6.86	8.00	9.15	10.29	11.43	22.87	34.30	45.73	57.16
30	1.16	2.31	3.46	4.62	5.77	6.93	8.08	9.24	10.39	11.55	23.09	34.64	46.80	57.73
31	1.17	2.33	3.50	4.67	5.83	7.00	8.17	9.33	10.50	11.66	23.33	34.99	46.66	58.32
32	1.18	2.35	3.53	4.71	5.89	7.07	8.25	9.43	10.61	11.79	23.58	35.37	47.16	58.96
33	1.19	2.38	3.58	4.77	5.96	7.15	8.35	9.54	10.73	11.92	23.85	35.77	47.69	59.61
34	1.21	2.41	3.62	4.82	6.03	7.24	8.44	9.65	10.86	12.06	24.12	36.19	48.25	60.31
35	1.22	2.44	3.66	4.88	6.10	7.32	8.55	9.77	10.99	12.21	24.41	36.62	48.83	61.03
36	1.24	2.47	3.71	4.94	6.18	7.42	8.65	9.85	11.12	12.36	24.72	37.08	49.44	61.80
37	1.25	2.50	3.76	5.01	6.26	7.51	8.76	10.02	11.27	12.52	25.04	37.56	50.08	62.60
38	1.27	2.54	3.81	5.08	6.34	7.61	8.88	10.15	11.42	12.69	25.38	38.07	50.76	63.45
39	1.29	2.57	3.86	5.15	6.43	7.72	9.01	10.29	11.58	12.87	25.74	38.16	51.47	64.34
40	1.31	2.61	3.92	5.22	6.53	7.83	9.14	10.44	11.75	13.05	26.10	39.16	52.22	65.27
41	1.32	2.65	3.97	5.30	6.62	7.95	9.27	10.60	11.82	13.25	26.50	39.75	53.00	66.25
42	1.35	2.69	4.04	5.38	6.73	8.07	9.42	10.77	12.11	13.46	26.91	40.37	53.83	67.28
43	1.37	2.73	4.10	5.47	6.84	8.20	9.57	10.94	12.30	13.67	27.34	41.02	54.69	68.36
44	1.39	2.78	4.17	5.56	6.95	8.34	9.73	11.12	12.51	13.90	27.80	41.71	55.61	69.51
45	1.41	2.83	4.24	5.66	7.07	8.49	9.90	11.31	12.73	14.14	28.28	42.43	56.57	70.71

ANNEXURE -I CONTINUATION SHEET

Slope degree	60	70	80	22.36	31.62	38.73	44.72	54.77	63.24
21	64.27	74.98	85.69	23.95	33.87	41.48	47.90	58.66	67.74
22	64.71	75.49	86.28	24.12	34.10	41.77	48.23	59.07	68.20
23	65.18	76.04	86.90	24.29	34.35	42.07	48.58	59.50	68.70
24	65.58	76.62	87.57	24.48	34.61	42.39	48.95	59.95	69.22
25	66.20	77.23	88.26	24.67	34.89	42.73	49.34	60.43	69.77
26	66.75	77.87	89.00	24.88	35.18	43.08	49.75	60.93	70.35
27	67.34	78.66	89.78	25.09	35.49	43.47	50.19	61.47	70.97
28	67.96	79.28	90.61	25.32	35.81	43.86	50.65	62.03	71.62
29	68.60	80.03	91.46	25.56	36.15	44.28	51.13	62.62	72.30
30	69.28	80.83	92.38	25.82	36.51	44.70	51.64	63.24	73.02
31	69.99	81.65	93.32	26.08	36.88	45.18	52.16	63.99	73.77
32	70.75	82.54	94.33	26.37	37.29	45.67	52.73	64.58	74.57
33	71.54	83.46	95.38	26.66	37.70	46.18	53.32	65.30	75.40
34	72.37	84.43	96.50	26.97	38.14	46.74	53.94	66.06	76.20
35	73.24	85.45	97.66	27.29	38.60	47.28	54.59	68.86	77.20
36	74.16	86.52	98.88	27.64	39.08	47.87	55.27	66.70	78.18
37	75.13	87.65	100.17	28.00	39.59	48.49	55.99	68.58	79.18
38	76.14	88.13	101.52	28.37	40.13	49.15	56.75	69.50	80.25
39	77.31	90.08	102.94	28.77	40.69	49.84	57.55	70.48	81.38
40	78.32	91.38	104.43	29.19	41.28	50.56	58.38	71.50	82.55
41	79.50	92.75	106.00	29.63	41.90	51.32	50.25	72.57	93.79
42	80.74	94.20	107.66	30.09	42.55	52.12	60.18	73.70	85.10
43	82.03	95.70	109.38	30.57	43.23	52.95	61.14	74.88	86.40
44	83.41	97.31	111.22	31.08	43.96	53.84	62.17	76.14	87.92
45	84.85	98.99	113.14	31.62	44.72	54.77	63.24	77.46	89.43

ANNEXURE - I CONTINUED

Slope degree	1	2	3	4	5	6	7	8	9	10	20	30	40	50
46	1.44	2.88	4.32	5.76	7.20	8.64	10.08	11.52	12.96	14.40	28.79	43.19	57.58	71.98
47	1.47	2.93	4.40	5.87	7.33	8.80	10.26	11.73	13.20	14.66	29.33	43.99	58.65	73.31
48	1.49	2.99	4.48	5.98	7.47	8.97	10.46	11.96	13.45	14.94	29.89	44.83	59.78	74.72
49	1.52	3.05	4.57	6.10	7.62	9.15	10.67	12.19	13.72	15.24	30.49	45.73	60.97	76.21
50	1.56	3.11	4.67	6.22	7.78	9.33	10.89	12.45	14.00	15.56	31.11	46.67	62.23	77.79
51	1.58	3.18	4.77	6.36	7.95	9.53	11.12	12.71	14.30	15.89	31.78	47.67	63.56	79.45
52	1.62	3.25	4.87	6.50	8.12	9.75	11.37	12.99	14.62	16.24	32.49	48.73	64.97	81.21
53	1.66	3.32	4.98	6.65	8.31	9.97	11.63	13.29	14.95	16.62	33.23	49.85	66.47	83.08
54	1.70	3.40	5.10	6.81	8.51	10.21	11.91	13.61	15.31	17.01	34.03	51.04	68.05	85.07
55	1.74	3.49	5.25	6.97	8.72	10.46	12.20	13.95	15.69	17.45	34.87	52.30	69.74	87.17
56	1.79	3.58	5.36	7.15	8.94	10.73	12.52	14.31	16.09	17.88	35.77	53.65	71.53	89.41
57	1.84	3.67	5.51	7.34	9.18	11.02	12.85	14.69	16.52	18.36	36.72	55.08	73.44	91.80
58	1.89	3.77	5.66	7.55	9.44	11.32	13.21	15.10	16.98	18.87	37.74	56.61	75.48	94.35
59	1.94	3.88	5.82	7.77	9.71	11.65	13.59	15.53	17.47	19.42	38.83	58.25	77.66	97.08
60	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	40.00	60.00	80.00	100.00
61	2.06	4.13	6.19	8.25	10.31	12.38	14.44	16.50	18.56	20.63	41.25	61.88	82.51	103.13
62	2.13	4.26	6.39	8.52	10.65	12.78	14.91	17.04	19.17	21.30	42.60	63.90	85.20	106.50
63	2.20	4.41	6.61	8.81	11.01	13.22	15.42	17.62	19.82	22.03	44.05	66.08	88.11	110.13
64	2.28	4.56	6.84	9.12	11.41	13.69	15.97	18.25	20.53	22.81	45.62	68.44	91.25	114.06
65	2.37	4.73	7.10	9.46	11.83	14.20	16.56	18.93	21.30	23.66	47.32	70.99	94.65	118.31
66	2.46	4.92	7.38	9.83	12.29	14.75	17.21	19.67	22.13	24.59	49.17	73.76	98.34	122.93
67	2.56	5.12	7.68	10.24	12.80	15.36	17.92	20.47	23.03	25.59	51.19	76.78	102.37	127.97
68	2.67	5.34	8.01	10.68	13.35	16.02	18.69	21.36	24.03	26.69	53.39	80.08	106.78	133.47
69	2.79	5.58	8.37	11.16	13.95	16.74	19.53	22.32	25.11	27.90	55.81	83.71	111.62	139.52
70	2.92	5.85	8.77	11.70	14.62	17.54	20.47	23.39	26.31	29.24	58.48	87.71	116.95	146.19

ANNEXURE - I CONTINUATION SHEET

Slope degree	60	70	80	22.36	31.62	38.73	44.72	54.77	63.24
46	86.37	100.77	115.16	32.19	45.52	55.75	64.38	78.84	91.04
47	87.98	102.64	117.30	32.79	46.36	56.79	65.57	80.31	92.73
48	89.67	104.61	119.56	33.42	47.26	57.88	66.83	81.85	94.51
49	91.46	106.70	121.94	34.08	48.20	59.03	68.16	83.48	96.39
50	93.34	108.90	124.46	34.79	49.19	60.25	69.57	85.21	98.38
51	95.34	111.25	127.12	35.53	50.24	61.54	71.06	87.03	100.49
52	97.46	113.70	129.94	36.32	51.36	62.91	72.64	88.96	102.72
53	99.70	116.31	132.93	37.15	52.54	64.36	74.31	91.01	105.08
54	102.08	119.09	136.10	38.04	53.80	65.89	76.08	93.18	107.59
55	104.61	122.04	139.48	38.98	55.13	67.52	77.97	95.49	110.26
56	107.30	125.18	143.06	39.99	56.55	69.26	79.97	97.94	113.09
57	110.16	128.53	146.89	41.05	58.06	71.11	82.11	100.56	116.11
58	113.22	132.10	150.97	42.20	59.67	73.09	84.39	103.36	119.34
59	116.50	135.91	155.33	43.41	61.39	75.20	86.83	106.34	122.79
60	120.00	140.00	160.00	44.72	63.24	77.46	89.44	109.54	126.48
61	123.76	144.39	165.01	46.12	65.22	79.89	92.24	112.97	130.44
62	127.80	149.10	170.40	47.63	67.35	82.50	95.26	116.66	134.70
63	132.16	154.19	176.22	49.25	69.65	85.31	98.50	120.64	139.30
64	136.87	159.68	182.49	51.01	72.13	88.35	102.01	124.94	144.26
65	141.97	165.63	189.30	52.91	74.82	91.64	105.82	129.60	149.64
66	147.52	172.10	196.69	54.97	77.74	95.22	109.95	134.66	155.48
67	153.56	179.15	204.74	57.23	80.93	99.12	114.45	140.17	161.85
68	160.17	186.86	213.56	59.69	84.41	103.39	119.38	146.21	168.82
69	167.43	195.33	223.23	62.39	88.23	108.07	124.79	152.83	176.47
70	175.43	204.67	233.90	65.38	92.45	113.24	130.75	160.14	184.90

ANNEXURE - II

CODE OF DIFFERENT STATES AND UNION TERRITORIES IN EACH ZONE

Zone	Code No.	State/U.T.
Northern Zone	01	Jammu & Kashmir
Code - 1	02	Himachal Pradesh
	03	Punjab
	04	Chandigarh (U.T.)
	05	Uttaranchal
	06	Haryana
	07	Delhi
	08	Rajasthan
	09	Uttar Pradesh
Central Zone	21	Orissa
Code - 2	22	Chhatisgarh
	23	Madhya Pradesh
	24	Gujarat
	25	Daman & Diu (U.T.)
	26	Dadra & Nagar Haveli (U.T.)
	27	Maharashtra
	30	Goa
Southern Zone	28	Andhra Pradesh
Code - 3	29	Karnataka
	31	Lakshadweep (U.T.)
	32	Kerala
	33	Tamil Nadu
	34	Pondicherry (U.T.)
Eastern Zone	10	Bihar
Code - 4	11	Sikkim
	12	Arunachal Pradesh
	13	Nagaland
	14	Manipur
	15	Mizoram
	16	Tripura
	17	Meghalaya
	18	Assam
	19	West Bengal
	20	Jharkhand
	35	Andaman & Nicobar Islands (UT)

ANNEXURE - III

CODE OF DISTRICTS AND FOREST DIVISIONS IN EACH STATE

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
01	**JAMMU & KASHMIR**	01	Kupwara	01	01	Baramula
		02	Baramula	01	02	Langate
		03	Srinagar	01	03	Zangali
		04	Badgam	01	04	Karalpora
		05	Pulwama	01	05	Bijbehare
		06	Anantnag	01	06	Khanabal
		07	Leh (Ladakh)	01	07	Shopian
		08	Kargil	01	08	Ganderbal
		09	Doda	01	09	Chittarnar
		10	Udhampur	01	10	Budgam
		11	Punch	01	11	Batote
		12	Rajauri	01	12	Ramban
		13	Jammu	01	13	Doda
		14	Kathua	01	14	Bhaderwah
					15	Kishtwar
					16	Marwah
					17	Reasi
					18	Rajouri
					19	Poonch
					20	Nowshena
					21	Mahore
					22	Jammu
					23	Kathua
					24	Udhampur
					25	Billawar
					26	Ram Nagar
02	**HIMACHAL PRADESH**	01	Chamba	01	01	Bilaspur
		02	Kangra	01	02	Bharmour
		03	Lahul & spiti	01	03	Chamba
		04	Kullu	01	04	Churah
		05	Mandi	01	05	Dalhousie
		06	Hamirpur	01	06	Pagi
		07	Una	01	07	Hamirpur
		08	Bilaspur	01	08	Dharmashala
		09	Solan	01	09	Dehra
		10	Sirmaur	01	10	Nurpur
		11	Shimla	01	11	Palampur
		12	Kinnaur	01	12	Kulllu
					13	Seraj
					14	Parvati
					15	Kotgarh
					16	Rampur
					17	Lahaul
					18	Spiti
					19	Mandi

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
					20	Nachan
					21	Karsog
					22	Joginder Nagar
					23	Suket
					24	Chopal
					25	Jubbal
					26	Rohru
					27	Shimla
					28	Theog
					29	Nahan
					30	Paonta
					31	Rajgarh
					32	Renuka
					33	Kunihar
					34	Nalagarh
					35	Solan
					36	Una
					37	Nichan
					38	Pooh
					39	Kinnaur
					40	Upper Ravi
					41	Kaza
					42	Sundergarh
03	**PUNJAB**	01	Gurdaspur	04, 35% in 01	01	Amritsar
		02	Amritsar	04 02	Jalandhar	
		03	Kapurthala	04	03	Gurdaspur
		04	Jalandhar	04	04	Ludhiana
		05	Hosiarpur	04, 20% in 01	05	Firozpur
		06	Nawanshahr	04	06	Patiala
		07	Rupnagar	04, 40% in 01	07	Sangrur
		08	Fatehgarh Sahib	04	08	Faridkot
		09	Ludhiana	04	09	Bhatinda
		10	Moga	04	10	Mansa
		11	Firozpur	04	11	Fatehgarh Sahib
		12	Muktsar	04	12	Ropar
		13	Faridkot	04	13	Hoshiarpur
		14	Batinda	04	14	Garhshankar
		15	Mansa	04	15	Dasuya
		16	Sangrur	04		
		17	Patiala	04		
04	**CHANDIGARH**	01	Chandigarh	04	01	Chandigarh
05	**UTTARANCHAL**	01	Uttarkashi	01	01	Almora (East)
		02	Chamoli	01	02	Almora (west)
		03	Rudraprayag	01	03	Pithoragarh (North)
		04	Tehri Garhwal	01	04	Pithoragarh (South)
		05	Dehradun	01	05	Nainital
		06	Garhwal	01	06	Haldwani
		07	Pithoragarh	01	07	Haldwani (Tarai East)
		08	Bageshwar	01	08	Haldwani (Tarai Central)
		09	Almora	01	09	Haldwani (Tarai West)
		10	Champawat	01	10	Ram Nagar
		11	Nainital	01	11	Lansdowne

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
		12	Udhamsingh Nagar	04	12	Dehradun
		13	Hardwar	04	13	Kalsi
					14	Hardwar
					15	Tons
					16	Mussoorie
					17	Chakrata
					18	Upper Yamuna
					19	Narendra Nagar
					20	Tehri
					21	Uttarkashi
					22	Tehri Dam –I
					23	Tehri Dam -II
					24	Garhwal
					25	Badrinath
					26	Karna Prayag
					27	Ram Nagar (Tiger Reserve)
					28	Kalagarh (Tiger Reserve)
06	**HARYANA**	01	Panchkula	04	01	Morni Pinjore
		02	Ambala	04	02	Ambala
		03	Yamunanagar	04	03	Yamuna Nagar
		04	Kurukshetra	04	04	Krukshetra
		05	Kaithal	04	05	Kaithal
		06	Karnal	04	06	Karnal
		07	Panipat	04	07	Sonipat
		08	Sonipat	04	08	Gurgaon
		09	Jind	04	09	Mohindergarh
		10	Fatehabad	04	10	Rohtak
		11	Sirsa	04	11	Faridabad
		12	Hisar	04	12	Bhiwani
		13	Bhiwani	04	13	Hissar
		14	Rohtak	04	14	Jind
		15	Jhajjar	04	15	Sirsa
		16	Mahendragarh	04, 15% in 07		
		17	Rewari	04		
		18	Gurgaon	04		
		19	Faridabad	04		
07	**DELHI**	01	North West	04	01	Central
		02	North	04	02	West
		03	North East	04	03	South
		04	East	04		
		05	New Delhi	04		
		06	Central	04		
		07	West	04		
		08	South West	04		
		09	South	04		
08	**RAJASTHAN**	01	Ganganagar	06	01	Ajmer
		02	Hanumangarh	06	02	Barmer
		03	Bikaner	06	03	Bharatpur

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
		04	Churu	06	04	Bikaner
		05	Jhunjhunun	06, 45% in 07	05	Chhatargarh
		06	Alwar	07	06	Bundi
		07	Bharatpur	07	07	Chittorgarh
		08	Dhaulpur	07	08	Pratapgarh
		09	Karauli	07	09	Jodhpur
		10	Sawai Madhopur	07	10	Churu
		11	Dausa	07	11	Hanunangarh
		12	Jaipur	07	12	Dungarpur
		13	Sikar	07, 48% in 06	13	Ganganagar
		14	Nagaur	06, 20% in 07	14	Jaipur (East)
		15	Jodhpur	06	15	Jaipur (West)
		16	Jaisalmer	06	16	Alwar
		17	Barmer	06	17	Jaisalmer
		18	Jalor	06	18	Jalore
		19	Sirohi	06, 48% in 07	19	Jhalawar
		20	Pali	06, 15% in 07	20	Jhunjhunu
		21	Ajmer	07	21	Kota
		22	Tonk	07	22	Nagaur
		23	Bundi	07	23	Pali
		24	Bhilwara	07	24	Rajsamand
		25	Rajsamand	07	25	Swai Madhopur
		26	Udaipur	07	26	Karauli
		27	Dungarpur	07	27	Sikar
		28	Banswara	07	28	Sirohi
		29	Chittaurgarh	07	29	Banswara
		30	Kota	07	30	Tonk
		31	Baran	07	31	Udaipur (North)
		32	Jhalawar	07	32	Udaipur (South)
					33	Bharatpur
					34	Udaipur
					35	Suratgarh
					36	Baran (West)
					37	Baran (East)
					38	Mount Abu
					39	Sariska (TP)
					40	Jaipur (Central)
					41	Dausa
					42	Dholpur
					43	Bhilwara
09	**UTTAR PRADESH**	01	Saharanpur	04	01	Meerut
		02	Muzaffarnagar	04	02	Bulandshaher
		03	Bijnor	04	03	Ghaziabad
		04	Moradabad	04	04	Gautam Budh Nagar
		05	Rampur	04	05	Muzaffar Nagar
		06	Jyotiba Phule Nagar	04	06	Saharanpur
		07	Meerut	04	07	Moradabad
		08	Baghpat	04	08	Jyotiba Phule Nagar
		09	Ghaziabad	04	09	Rampur
		10	Gautam Budh Nagar	04	10	Bijnor
		11	Bulandshahar	04	11	Agra
		12	Aligarh	04	12	Ferozabad
		13	Hathras	04	13	Mathura

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
		14	Mathura	04	14	Hathras
		15	Agra	04, 15% in 07	15	Mainpuri
		16	Firozabad	04	16	Aligarh
		17	Etah	04	17	Etah
		18	Mainpuri	04	18	Baraily
		19	Budaun	04	19	Budaun
		20	Bareilly	04	20	Shahjahanpur
		21	Pilibhit	04	21	Piliphit
		22	Shahjahanpur	04	22	Allahabad
		23	Khiri	04	23	Kaushambi
		24	Sitapur	04	24	Fatehpur
		25	Hardoi	04	25	Pratapgarh
		26	Unnao	04	26	Gorakhpur
		27	Lucknow	04	27	Kushi Nagar
		28	Rao Bareli	04	28	Deoria
		29	Farrukhabad	04	29	Basti
		30	Kannauj	04	30	Siddharth nagar
		31	Etawah	04	31	Ajamgarh
		32	Auraiya	04	32	Mau
		33	Kanpur Dehat	04	33	Balia
		34	Kanpur Nagar	04	34	Varanasi
		35	Jalaun	07	35	Gazipur
		36	Jhansi	07	36	Jaunpur
		37	Lalitpur	07	37	Mirzapur
		38	Hamirpur	07	38	Bhadohi
		39	Mahoba	07	39	Sonbhadra
		40	Banda	07	40	Avadh
		41	Chitrakoot	07	41	Rae Bareli
		42	Fatehpur	04 42	Hardoi	
		43	Pratapgarh	04	43	Unnao
		44	Kaushambi	04	44	Sitapur
		45	Allahabad	04, 40% in 07	45	Khiri North
		46	Barabanki	04	46	Khiri South
		47	Faizabad	04	47	Kanpur
		48	Ambedkar Nagar	04	48	Etawah
		49	Sultanpur	04	49	Farrukabad
		50	Bahraich	04	50	Faizabad
		51	Shrawasti	04	51	Ambedkar Nagar
		52	Balrampur	04	52	Sultanpur
		53	Gonda	04	53	Barabanki
		54	Siddarthnagar	04	54	Bahraich
		55	Basti	04	55	Gonda
		56	Sant kabir Nagar	04	56	Shravasti
		57	Mahrajganj	04	57	Jhansi
		58	Gorakpur	07	58	Urai
		59	Kushinagar	04	59	Lalitpur
		60	Deoria	04	60	Hamirpur
		61	Azamgarh	04	61	Mahoba
		62	Mau	04	62	Banda
		63	Ballia	04	63	Chitrakoot
		64	Jaunpur	04	64	Shiwalik
		65	Ghazipur	04	65	Reinkoot
		66	Chandauli	04, 45% in 07	66	Ubra

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		67	Varanasi	04		
		68	Sant Ravidas Nagar	04		
		69	Mirzapur	07		
		70	Sonbhadra	04		
10	**BIHAR**	01	Pashchim Champaran	05	01	Sasaram
		02	Purba Champaran	05	02	Bhabhua
		03	Sheohar	05	03	Ara
		04	Sitamarhi	05	04	Patna
		05	Madhubani	05	05	Nalanda
		06	Supaul	05	06	Gaya
		07	Araria	05	07	Nawada
		08	Kishanganj	05	08	Munger
		09	Purnia	05	09	Banka
		10	Katihar	05	10	Jamui
		11	Madhepura	05	11	Muzaffarpur
		12	Saharsa	05	12	Darbhanga
		13	Darbhanga	05	13	Chhapra
		14	Muzaffarpur	05	14	Sewan
		15	Gopalganj	05	15	Purnia
		16	Siwan	05	16	Katihar
		17	Saran	05	17	Begusarai
		18	Vaishali	05	18	Saharsa
		19	Samastipur	05	19	Shahabad
		20	Begusarai	05	20	Purnia Extn.
		21	Khagaria	05		
		22	Bhagalpur	05		
		23	Banka	05, 30% in 09		
		24	Munger	05, 20% in 09		
		25	Lakhisarai	05, 15% in 09		
		26	Sheikhpura	05		
		27	Nalanda	05, 8% in 09		
		28	Patna	05		
		29	Bhojpur	05		
		30	Buxar	05		
		31	Kaimur (Bhabua)	07, 40% in 05		
		32	Rohtas	05		
		33	Jehanabad	05		
		34	Aurangabad	05		
		35	Gaya	05, 20% in 09		
		36	Nawada	05		
		37	Jamui	09, 20% in 05		
11	**SIKKIM**	01	North	01	01	North
		02	West	01	02	West
		03	South	01	03	South
		04	East	01	04	East
12	**ARUNACHAL PRADESH**	01	Tawang	02	01	Bomdila
		02	West Kameng	02	02	Shergaon
		03	East Kameng	02	03	Khellong
		04	Papum Pare	02	04	Seppa
		05	Lower Subansiri	02	05	Banderdewa

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		06	Upper Subansiri	02	06	Sagalee
		07	West Siang	02	07	Hapoli
		08	East Siang	02	08	Daporijo
		09	Upper siang	02	09	Along
		10	Dibang Valley	02	10	Pasighat
		11	Lohit	03	11	Yingkiong
		12	Changlang	03	12	Debang
		13	Tirap	03	13	Lohit
					14	Namsai
					15	Deomali
					16	Khonsa
					17	Nampong
13	**NAGALAND**	01	Mon	03	01	Kohima
		02	Tuensang	03	02	Peren
		03	Mokokchung	03	03	Wokha
		04	Zunheboto	03	04	Phek
		05	Wokha	03	05	Mokokchung
		06	Dimapur	03	06	Tuensang
		07	Kohima	03	07	Mon
		08	Phek	03	08	Zunheboto
14	**MANIPUR**	01	Senapati	03	01	Porompat
		02	Tamenglong	03	02	Thoubal
		03	Churachandpur	03	03	Bishnupur
		04	Bishnupur	03	04	Ukhrul
		05	Thoubal	03	05	Kangpokpi
		06	Imphal West	03	06	Cepur
		07	Imphal East	03	07	Tamenglong
		08	Ukhrul	03	08	Lamphelpat
		09	Chandel	03	09	Chandel
15	**MIZORAM**	01	Mamit	03	01	Aizwal
		02	Kolasib	03	02	Darlawn
		03	Aizwal	03	03	Champhai
		04	Champhai	03	04	Kolasib
		05	Serchhip	03	05	Kawr Thal
		06	Lunglai	03	06	Mamit
		07	Lawngtlai	03	07	Thenzawl
		08	Saiha	03	08	Lunglai
					09	Vanlaiphai (North)
					10	T Labung
					11	Chhimtuipui
16	**TRIPURA**	01	West Tripura	03	01	Agartala
		02	Soluth Tripura	03	02	Teliamura
		03	Dhalai	03	03	Ambassa
		04	North Tripura	03	04	Manu
					05	Kailasahgr
					06	Kanchanpjur

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					07	Udaipur
					08	Bagafa
					09	Jatanbari
17	**MEGHALAYA**	01	West Garo Hills	03	01	Shillong
		02	East Garo Hills	03	02	Jowar
		03	South Garo Hills	03	03	Tura
		04	West Garo Hills	03		
		05	Ri Bhoi	03		
		06	East Khasi Hills	03		
		07	Jaintia Hills	03		
18	**ASSAM**	01	Kokrajhar	05	01	Kamrup (East)
		02	Dhubri	05	02	Kamrup (West)
		03	Goalpara	05	03	Kamrup (North)
		04	Bangaigaon	05	04	Goalpara
		05	Barpeta	05	05	Darrang (East)
		06	Kamrup	05	06	Darrang (West)
		07	Nalbari	05	07	Lakhimpur
		08	Darrang	05	08	Nagaon
		09	Marigaon	05	09	Nagaon (South)
		10	Nagaon	05, 40% in 03	10	Aie-Valley
		11	Sonitpur	05	11	Kachugaon
		12	Lakhimpur	05	12	Haltugaon
		13	Dhemaji	05	13	Dhubri
		14	Tinsukia	05, 30% in 03	14	Dibrugarh
		15	Dibrugarh	05	15	Golaghat
		16	Sibsagar	05	16	Sibsagar
		17	Jorhat	05	17	Digboi
		18	Golaghat	05, 40% in 03	18	Doom Dooma
		19	Karbi Anglong	05, 45% in 03	19	Silchar
		20	North Cachar Hills	03	20	Karimganj
		21	Cachar	03	21	N.C. Hills
		22	Karimganj	03	22	K.A. (East)
		23	Hailakandi	03	23	K.A. (West)
					24	Hamren
					25	Bakhimpur
					26	Haltugaon
					27	West Assam
					28	Eastern Assam
19	**WEST BENGAL**	01	Darjiling	01, 30% in 05	01	Bankura (North)
		02	Jalpaiguri	05	02	Bankura (South)
		03	Koch Bihar	05	03	Birbhum
		04	Uttar Dinajpur	05	04	Bardwan
		05	Dakshin Dinajpur	05	05	Cooch Bihar
		06	Maldah	05	06	Baikunthapur
		07	Murshidabad	05	07	Darjiling
		08	Birbhum	05	08	Kurseong
		09	Barddhaman	05	09	Buxa (East)
		10	Nadia	05	10	Buxa (West)

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		11	North 24 Parganas	05	11	Jalpaiguri
		12	Hugli	05	12	Dinajpur (West)
		13	Bankura	05	13	Midnapore (East)
		14	Puruliya	05	14	Midnapore (West)
		15	Medinipur	05	15	Nadia Murshidabad
		16	Haora	05	16	24 Pargana (North)
		17	Culcutta	05	17	24 Pargana (South)
		18	South 24 Parganas	05	18	Purulia
					19	Central Forest Div.
20	**JHARKHAND**	01	Garhwa	09	01	Garhwa (North)
		02	Palamu	09	02	Garhwa (South)
		03	Chatra	09	03	Chhatra (North)
		04	Hazaribagh	09	04	Chhatra (South)
		05	Kodarma	09	05	Hazaribagh (East)
		06	Giridih	09	06	Hazaribagh (West)
		07	Deoghar	09	07	Koderma
		08	Godda	09	08	Giridih
		09	Sahibganj	09	09	Deoghar
		10	Pakaur	09	10	Shaibganj
		11	Dumka	09	11	Dumka
		12	Dhanbad	09	12	Dhanbad
		13	Bokaro	09	13	Ranchi (East)
		14	Ranchi	09	14	Ranchi (West)
		15	Lohardaga	09	15	Gumla
		16	Gumla	09	16	Saranda
		17	Pashchimi singhbhum	09	17	Kolhan
		18	Purbi Singhbhum	09	18	Porahat
					19	Chaibasa (South)
					20	Chaibasa (North)
					21	Dhalbhum
					22	Latehar
					23	Daltanganj (North)
					24	Daltanganj (South)
21	**ORISSA**	01	Bargarh	09	01	Angul
		02	Jharsuguda	09	02	Athamallik
		03	Sambalpur	09	03	Deogarh
		04	Debagarh	09	04	Baripada
		05	Sundargarh	09	05	Sambalpur
		06	Kendujhar	09, 7% in 14	06	Khariar
		07	Mayurbhanj	09, 35% in 14	07	Jeypore
		08	Baleshwar	14, 20% in 09	08	Bolangir
		09	Bhadrak	14, 10% in 09	09	Boudh
		10	Kndrapara	14	10	Athagarh
		11	Jagatsinghapur	14	11	Puri
		12	Cuttack	14, 30% in 09	12	Bamra
		13	Jajapur	14, 35% in 09	13	Dhenkanal
		14	Dhenkanal	09	14	Parla Khemundi
		15	Anugul	09	15	Ghumsur (North)
		16	Nauagarh	12, 10% in 09	16	Ghumsur (South)

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		17	Khordha	14, 20% in 12	17	Kalahandi
		18	Puri	14	18	Phulbani
		19	Ganjam	12, 45% in 14	19	Balliguda
		20	Gajapati	12	20	Keonjhar
		21	Kandhamal	12	21	Nowrangour
		22	Baudh	12, 5% in 09	22	Rayagadha
		23	Sonapur	09	23	Karanjia
		24	Balangir	09, 5% in 12	24	Nayagarh
		25	Nuapada	09	25	Raira Khel
		26	Kalahandi	09, 30% in 12	26	Sundargarh
		27	Rayagada	12	27	Bonai
		28	Nabarangapur	09	28	Nuaoada
		29	Koraput	12, 15% in 09	29	Khurda
		30	Malkangiri	12		
22	**CHHATISGARH**	01	Koria	09	01	Kawardha
		02	Surguja	09	02	Rajnandgaon
		03	Jashpur	09	03	Khairagarh
		04	Raigarh	09	04	Durg
		05	Korba	09	05	Raipur
		06	Janjgir-Champa	09	06	Raipur East
		07	Bilaspur	09	07	Udanti
		08	Kawardha	09	08	Mahasumand
		09	Rajnandgaon	09	09	Damtari
		10	Durg	09	10	Kanker
		11	Raipur	09	11	Bhanupratappur East
		12	Mahasamund	09	12	Bhanupratappur West
		13	Dhamtari	09	13	Narayanpur
		14	Kanker	09	14	Kondagaon North
		15	Baster	09	15	Kondagaon South
		16	Dantewara	09	16	Baster
					17	Dantewada
					18	Vijaypur
					19	Sukuma
					20	Bilaspur
					21	Janjgir (Champa)
					22	Korba
					23	Katghora
					24	Raigarh
					25	Dharamhjaigarh
					26	Jashpur
					27	Sarguja North
					28	Sarguja East
					29	Sarguja South
					30	Korea
					31	Manandragarh
23	**MADHYA PRADESH**	01	Sheopur	07	01	Balaghat North
		02	Morena	07	02	Balaghat South
		03	Bhind	07	03	Betul North
		04	Gwalior	07	04	Betul South

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		05	Datia		07	05	Betul West
		06	Shivpuri		07	06	Bhopal
		07	Guna		07	07	Sehore
		08	Tikamgarh		07	08	Abdullahganj
		09	Chhatarpur		07	09	Raisen
		10	Panna		07	10	Rajgarh
		11	Sagar		07	11	Vidisha
		12	Damoh		07	12	Chhindwara East
		13	Satna		07	13	Chhindwara West
		14	Rewa		07	14	Chhindwara South
		15	Umaria		09, 25% in 08	15	Gwalior
		16	Shahdol		09, 30% in 08	16	Datia
		17	Sidhi		09	17	Bhind
		18	Neemuch		07	18	Morena
		19	Mandsaur		07	19	Sheopur Kala
		20	Ratlam		07	20	Hoshangabad
		21	Ujjain		07	21	Harda
		22	Shajapur	07	22	Indore	
		23	Dewas		07	23	Dhar
		24	Jhabua		07, 25% in 08	24	Jhabua
		25	Dhar		07, 15% in 08	25	Jabalpur
		26	Indore		07	26	Katani
		27	West Nimar		08, 30% in 07	27	Mandla East
		28	Barwani		08	28	Mandla West
		29	East Nimar		08, 8% in 07	29	Dindori
		30	Rajgarh		07	30	Khandwa (Nimar East)
		31	Vidisha		07	31	Burhanpur
		32	Bhopal		07	32	Khargone (Nimar Wset)
		33	Sehore		07	33	Badwaha
		34	Raisen		07	34	Badwain
		35	Betul		08	35	Sendhwa
		36	Harda		08	36	Rewa
		37	Hoshangabad		08	37	Satna
		38	Katni		09, 20% in 07	38	Sidhi East
		39	Jabalpur		07, 40% in 08	39	Sidhi West
		40	Narsimhapur		07, 45% in 08	40	Sagar North
		41	Dindori		08	41	Sagar South
		42	Mandla		08	42	Damoh
		43	Chhindwara		08	43	Shahdol North
		44	Seoni		08	44	Shahdol South
		45	Balaghat	08	45	Umria	
						46	Seoni North
						47	Seoni South
						48	Narsinghpur
						49	Shivpuri
						50	Guna
						51	Chhatarpur
						52	Tikamgarh
						53	Panua North
						54	Panua South
						55	Ujjain
						56	Mansour
						57	Neemuch

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					58	Ratlam
					59	Sajapur
					60	Dewas
24	**GUJARAT**	01	Kachchh	06 01	Bhavnagar	
		02	Banas kantha	06, 40% in 13	02	Banas Kantha
		03	Patan	13, 45% in 06	03	Rajpipla (West)
		04	Mahesana	13, 5% in 07	04	Baria
		05	Sabar kantha	13, 35% in 07	05	Dangs (North)
		06	Gandhinagar	13	06	Dangs (South)
		07	Ahmadabad	13, 25% in 06	07	Gandhinagar
		08	Surendranagar	06, 8% in 13	08	Jamnagar
		09	Rajkot	06	09	Junagarh
		10	Jamnagar	06	10	Kachchh (East)
		11	Porbandar	06	11	Kachchh (West)
		12	Junagadh	06	12	Vyara
		13	Amreli	06	13	Godhra
		14	Bhavnagar	06	14	Saherkantha
		15	Anand	13	15	Saharkantha (South)
		16	Kheda	13	16	Surendranagar
		17	Panch Mahals	13	17	Chotaudepur
		18	Dohad	13	18	Valsad (North)
		19	Vadodara	13, 20% in 08	19	Valsad (South)
		20	Narmada	08, 8% in 13	20	Rajpipla East
		21	Bharuch	13		
		22	Surat	13, 20% in 11& 10% in 08		
		23	The Dangs	11		
		24	Navsari	13, 20% in 11		
		25	Valsad	11, 30% in 13		
25	**DAMAN & DIU**	01	Diu	06		
		02	Daman	13		
26	**DADRA & NAGAR HAVELI**	01	Dadra & Nagar Haveli	11	01	Silvasa
27	**MAHARASHTRA**	01	Nandurbar	08, 20% in 11	01	Thane
		02	Dhule	08, 20% in 11	02	Dahanu
		03	Jalgaon	08	03	Shahapur
		04	Buldana	08	04	Jawhar
		05	Akola	08	05	Alibagh
		06	Washim	08	06	Roha
		07	Amaravati	08	07	Nasik (East)
		08	Wardha	08	08	Nasik (West)
		09	Nagpur	08	09	Ahmadnagar
		10	Bhandara	08	10	Dhule (North)
		11	Gondiya	08	11	Dhule (West)
		12	Gadchiroli	08	12	Mewasi
		13	Chandrapur	08	13	Jalgaon
		14	Yavatmal	08	14	Yawal
		15	Nanded	08	15	Pune
		16	Hingoli	08	16	Junnar

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		17	Parbhani	08 17	Bhor	
		18	Jalna	08	18	Solapur
		19	Aurangabad	08	19	Kolhapur
		20	Nashik	08, 40% in 11	20	Satara
		21	Thane	13, 40% in 11	21	Savantwadi
		22	Mumbai (Suburban)	13	22	Sangli (Subdiv)
		23	Mumbai	13	23	Chiplun (Subdiv)
		24	Raigarh	13, 40% in 11	24	Aurangabad
		25	Pune	08, 30% in 11	25	Nanded
		26	Ahmadnagar	08, 10% in 11	26	Parbhani
		27	Bid	08	27	Beed (Sub Div)
		28	Latur	08	28	Osmanabad
		29	Osamanabad	08	29	Melghat (East)
		30	Solapur	08	30	Melghat (West)
		31	Satara	08, 30% in 11	31	Amravati
		32	Ratnagiri	13, 35% in 11	32	Budhana
		33	Sindhudurg	13, 40% in 11	33	Yavatmal
		34	Kolhapur	08, 45% in 11	34	Pusad
		35	Sangli	08, 15% in 11	35	Pandhar Kawada
					36	Akola
					37	Nagpur
					38	Wardha
					39	Bhandara
					40	Gondia
					41	Chandrapur
					42	Brahampuri
					43	Gadchiroli
					44	Wadsa
					45	Allapalli
					46	Bhamragad
					47	Sironcha
					48	Chanda (Central)
					49	Kolaba
					50	Koyna
					51	Bjor
28	**ANDHRA PRADESH**	01	Adilabad	10	01	Adilabad
		02	Nizamabad	10	02	Bellampally
		03	Karimnagar	10	03	Nirmal
		04	Medak	10	04	Kaghaznagar
		05	Hyderabad	10	05	Mancherial
		06	Rangareddi	10	06	Jannaram
		07	Mahbubnagar	10, 20% in 12	07	Anantpur
		08	Nalgonda	10, 30% in 12	08	Chittoor (East)
		09	Warangal	10	09	Chittoor (West)
		10	Khammam	10, 20% in 12	10	Guntur
		11	Srikakulam	14, 30% in 12	11	Giddalur
		12	Vizianagaram	14, 45% in 12	12	Nellore
		13	Visakhapatnam	12, 25% in 14	13	Markapur
		14	East Godavari	14, 40% in 12	14	Kurnool
		15	West Godavari	14, 30% in 12	15	Cudappa
		16	Krishna	14, 35% in 12	16	Produttur
		17	Guntur	14, 35% in 12	17	Nandyal

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
		18	Prakasam	14, 45% in 12	18	Rajampet
		19	Nellore	14, 15% in 12	19	Atmakur
		20	Cuddapah	12, 10% in 10	20	Khammam
		21	Kurnool	12, 45% in 10	21	Kothagudem
		22	Anantapur	10, 20% in 12	22	Paloucha
		23	Chittoor	12, 10% in 14	23	Bhadrachalam (North)
					24	Bhadrachalam (South)
					25	Nizamabad
					26	Kamareddy
					27	Medak
					28	Vishakapattanam
					29	Paderu
					30	Vizianagaram
					31	Srikakulam
					32	Narsipatnam
					33	Hydradad
					34	Nalgonda
					35	Mahbubnagar
					36	Achampet
					37	Kakinada
					38	Eluru
					39	Vijaywada
					40	Warangal (North)
					41	Warangal (South)
					42	Karim Nagar (East)
					43	Karim Nagar (West)
29	**KARNATAKA**	01	Belgaum	10, 10% in 11	01	Bangalore (Urban)
		02	Bagalkot	10	02	Bangalore (Rural)
		03	Bijapur	10	03	Bhagalkot
		04	Gulbarga	10	04	Bellary
		05	Bidar	10	05	Belgaum
		06	Raichur	10	06	Bhadravati
		07	Koppal	10	07	Bidar
		08	Gadag	10	08	Chickmaglur
		09	Dharwad	10	09	Chitradurga
		10	Uttara Kannada	11, 30% in 10, 15% in 13	10	Dharwad
		11	Haveri	10	11	Gadag
		12	Bellary	10	12	Gokak
		13	Chitradurga	10	13	Gulbanga
		14	Davanagere	10	14	Hassan
		15	Shimoga	10, 25% in 11	15	Haliyal
		16	Udupi	13, 30% in 11	16	Honnavar
		17	Chikmagalur	10, 25% in 11	17	Karwar
		18	Tumkur	10	18	Kolar
		19	Kolar	10, 25% in 12	19	Kollegal
		20	Bangalore	10	20	Koppa
		21	Bangalore (Rural)	10	21	Kundapur
		22	Mandya	10	22	Mandya
		23	Hassan	10, 10% in 11	23	Mangalore
		24	Dakshina Kannada	13, 25% in 11	24	Madikeri
		25	Kodagu	11, 35% in 10	25	Mysore

Code	Name of State/UT	Code	Name of District	Physiographic Zone Code	Code	Name of Division
		26	Mysore	10	26	Raichur
		27	Chamarajanagar	10, 40% in 12	27	Sagar
					28	Shimoga
					29	Sirsi
					30	Tumkur
					31	Yellapur
					32	Virajpet
					33	Hunsar
					34	Davnagere
					35	Koppal
					36	Haveri
					37	Bijapur
30	**GOA**	01	North Goa	13, 10% in 11	01	North Goa
		02	South Goa	13	02	South Goa
31	**LAKSHADWEEP**	01	Lakshadweep	13	01	Kavarathi
32	**KERALA**	01	Kasaragod	13, 25% in 11	01	Thiruvananthpuram
		02	Kannur	13	02	Punalur
		03	Wayanad	11	03	Thenmala
		04	Kozhikode	13, 10% in 11	04	Achencoil
		05	Malappuram	13	05	Konni
		06	Palakkad	13, 20% in 11	06	Ranni
		07	Thrissur	13, 10% in 11	07	Kottayam
		08	Ernakulam	13, 30% in 11	08	Munnar
		09	Idukki	11	09	Mankulam
		10	Kottayam	13, 15% in 11	10	Kothamangalam
		11	Alappuzha	13	11	Malayattoor
		12	Pathanamthitta	13, 40% in 11	12	Trissur
		13	Kollam	13, 20% in 11	13	Chalakkudy
		14	Thiruvananthapuram	13	14	Vazhachal
					15	Palakkadu
					16	Nenmara
					17	Mannar Kkadu
					18	Nilambar (North)
					19	Nilambar (South)
					20	Kozhikkode
					21	Wayanad (North)
					22	Wayanad (South)
					23	Kannur
					24	Kasargode
33	**TAMILNADU**	01	Tiruvallur	14, 5% in 12	01	Chengalpattu
		02	Chennai	14	02	Vellore
		03	Kanchipuram	14	03	Tirupathur
		04	Vellore	12, 40% in 14	04	Tiruvannamalai
		05	Dharmapuri	12	05	Dharmapuri
		06	Triuvannamalai	14, 20% in 12	06	Hosur
		07	Villupuram	14, 10% in 12	07	Harur
Code	**Name of State/UT**	**Code**	**Name of District**	**Physiographic Zone Code**	**Code**	**Name of Division**

		08	Salem	12, 15% in 14	08	Villupuram
		09	Namakkal	12, 5% in 14	09	Kallakurichi
		10	Erode	12	10	Salem
		11	Nilgiris	11	11	Attur
		12	Coimbatore	12, 15% in 11	12	Erode
		13	Dindigul	12, 8% in 11	13	Sathyamangalam
		14	Karur	14, 42% in 12	14	Dindigul
		15	Triuchirappalli	14, 40% in 12	15	Kodaikanal
		16	Perambalur	14	16	Madurai
		17	Ariyalur	14	17	Theni
		18	Cuddalore	14	18	Tiruchy
		19	Nagapattinam	14	19	Thanjavur
		20	Triuvarur	14	20	Tirunelveli
		21	Thanjavur	14	21	Kanyakumari
		22	Pudukkottai	14	22	Coimbatore
		23	Sivaganga	14, 5% in 12	23	Nilgiris North
		24	Madurai	14, 30% in 12	24	Nilgiris South
		25	Theni	12, 35% in 11	25	Gudalur
		26	Virudunagar	14, 5% in 11	26	Sivaganga
		27	Ramanathapuram	14	27	Udalur
		28	Thoothukkudi	14	28	Cuddalore
		29	Tirunelveli	14, 20% in 11		
		30	Kanniyakumari	14, 30% in 11		
34	**PONDICHERRY**	01	Yanam	14	01	Pondicherry
		02	Pondicherry	14		
		03	Mahe	13		
		04	Karaikal	14		
35	**A & N ISLANDS**	01	Andamans	14	01	Wimberly Ganj (SA)
		02	Nicobars	14	02	Baratang
					03	Rangat (MA)
					04	Mayabandar
					05	Diglipur
					06	Hutbay (LA)
					07	Campbell bay (Nicobar)
					08	North Andaman

Annexure – IV

CODE FOR MAP SHEETS

The procedure to be adopted for coding the map sheet number (six digits) will be as explained hereinafter. Every map sheet 1:50,000 is given a number on top of the sheet. The first two digits of this sheet number are the Index Number the alphabet is the 'Degree Sheet Number' and the last remaining digit is the 1:50,000 SHEET NUMBER. When recording the map sheet code the first two number of the map sheet will be written as they appear on the map. The alphabet of the Degree Sheet number will have two digits and will be coded. The codes for the alphabets are given below (there are sixteen such alphabets). The last remaining number will be recorded in two digits.

Degree Sheet No.	Code
A	01
B	02
C	03
D	04
E	05
F	06
G	07
H	08
I	09
J	10
K	11
L	12
M	13
N	14
O	15
P	16

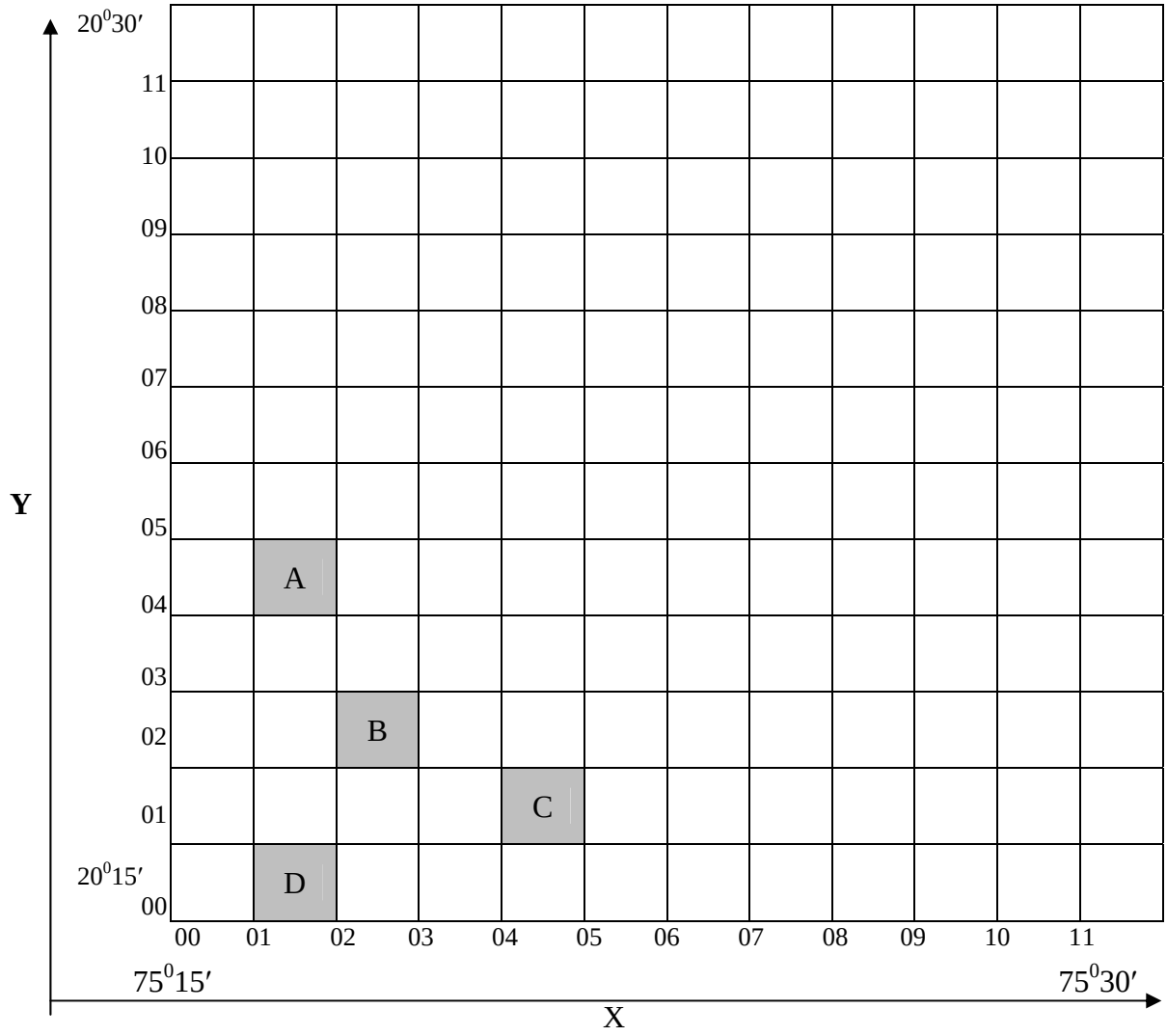
Example : The map sheet No. 73 I/9 will be coded as '730909' and map sheet No. 43 K/16 as '431116'

Annexure-V

Coding of Grid Number for 1 ¼′ × 1 ¼′ grids

A grid will be identified by the coordinate of the SW corner of the grid. Four digit code will be used to denote the grid No. It should be noted that the first two digits give the coordinate along the X (LONG) axis and the last two digits along its Y axis (LAT).

For example Grids A, B, C & D will be read as 0104, 0202, 0401 and 0100.



Annexure-VI

Table showing slope percentage

Angle of slope in degrees	Slope percentage	Angle of slope in degrees	Slope percentage
1	002	43	093
2	003	44	096
3	005	45	100
4	007	46	103
5	009	47	107
6	010	48	111
7	012	49	115
8	014	50	119
9	016	51	123
10	018	52	127
11	019	53	133
12	021	54	138
13	023	55	142
14	025	56	148
15	027	57	154
16	029	58	160
17	030	59	166
18	032	60	173
19	034	61	180
20	036	62	188
21	038	63	196
22	040	64	205
23	042	65	214
24	044	66	225
25	046	67	236
26	049	68	248
27	051	69	261
28	053	70	275
29	055	71	290
30	058	72	308
31	060	73	327
32	062	74	349
33	065	75	373
34	067	76	401
35	070	77	433
36	072	78	470
37	075	79	514
38	078	80	567
39	081	81	631
40	084	82	712
41	087	83	814
42	090	84	951

Annexure-VII

Code of different crop compositions (Forest type)

Code	Crop composition (Forest type)	Description
01	Fir	When Fir is predominant* species and constitute more than 25%
02	Spruce	Where Spruce is predominant species and constitute more than 25%
03	Fir-Spruce	Where Fir & Spruce both taken together are predominant species and constitute more than 25%
04	Blue-pine (Kail)	Where Blue pine is predominant species and constitute more than 25%
05	Deodar	Where Deodar is predominant species and constitute more than 25%
06	Chir-pine	Where Chir-pine is predominant species and constitute more than 25%
07	Mixed conifers	Where no single species is predominant and all conifers taken together constitute more than 50%
08	Oak-Rhododendrom Forest	Where Oak and Rhododendrom constitute 50% of the crop with at least 15% of minimum of each
09	Up-land hardwoods	Broad leaved species constitute more than 50% in the Upper /chir zone above 1500 metre altitude
10	Teak	Where teak is predominant species and constitute more than 50%
11	Sal	Where Sal is predominant species and constitute more than 50%
12	Bamboo forest	Where bamboo is predominant and constitute more than 50%
13	Mangrove	Mangrove forests
14	Garjan forest (Dipterocarpus tuibinatus)	Where Garjan is predominant species and constitute more than 50% in the top canopy
15	Garjan with Miscellaneous	Where Garjan constitute at least 25% alongwith misc. species
16	Khasi pine	Where Khasi pine is predominant species and constitute more than 25%
17	Khair forest	Where Khair trees are predominant and constitute more than 25%
18	Salai forest	Where salai is predominant species and constitute more than 25%
19	Alpine pastures/Alpine scrub	Alpine pastures/Alpine scrub
20	Teak with Misc.	Occurance of teak over 25% and less than 50%

Code	Crop composition (Forest type)	Description
21	Sal with Misc.	Occurance of Sal over 25% and less than 50%
22	Mixed Bamboo	Bamboo predominant and not less than 25%
23	Teak mixed with Bamboo	Teak and Bamboo together constitute over 50% with each constituting at least 15%
24	Salai with Misc.	Salai 20-50%
25	Anogeissus Pendula (Kardhai)	Where Anogeissus is predominant species and forms more than 25% of the crop
26	Teak mixed with Sal	Together they constitute more than 50% with at least 15% of each
27	Conifers mixed with hardwoods	Where the conifers constitute at least 50% and no single species is predominant
28	Khair and Sisham	Both constituting over 50% with at least 15% of each
29	Oaks	Where Oak/Kharsu Oak/Ban Oak individually or together constitute more than 50% of the crop
30	Low Land Hardwood	Where low land hard woods i.e. miscellaneous broad leaved spp. Constitute more than 50% of the crop (At altitudes below 1500 mts)
31	Miscellaneous forest	Forest which could not be classified in any of the above classes
32	Eucalyptus	Where Eucalyptus is predominant species and constitute more than 50% of the crop
33	Eucalyptus with Miscellaneous	Occurrence of Eucalyptus over 25% and less than 50% of the crop
34		
35		
36		
37		
38		
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40		

* Predominant: occurrence atleast 25% and more than any other species.

Annexure-VIII

LIST OF SPECIES AND CODE NUMBERS

Note: 1. The plants which are identified upto Genera only but species is not identifiable should be put under group species of that Genera if code is provided.

2. The plants which cannot be identified upto Genera or species and plants which are not given code numbers should be put under following codes:

(i)	Unidentified trees/Miscellaneous	1999
(ii)	Identified and uncoded trees	2000
(iii)	Unidentified bamboos	2100
(iv)	Unidentifed canes	2150

Species Code	**Botanical Name**	**Common/Local Names**
0001	*Abies densa*	Fir
0002	*Abies pindrow*	Silver Fir, Tosh, Raga, Rainsal, Morinda
0003	*Abies smithiana*	Spruce, Rai
0004	*Abies spectabilis* *(Old) Abies webbiana*	Rainsal, Morinda
0005	*Acacia arabica/ Acacia nilotica/indica*	Babul, Kikar, Bawar, Bawal
0006	*Acacia auriculiformis*	Akasmani, Sona jhuri
0007	*Acacia catechu*	Khair, Velsundra
0008	*Acacia eburnea*	Udaivel, Kaludai
0009	*Acacia ferruginea*	Velsundra, Vel., Subsam, Babar, Soukhar, Konp
0010	*Acacia latronum*	Hottejali
0011	*Acacia lenticularis/ leucophlaea*	Safed babul, Amiar, Kanti, Gohira
0012	*Acacia melanoxylon*	
0013	*Acacia pennata*	
0014	*Acacia planifrons*	Dontari
0015	*Acacia suma (old)* *Acacia polyacantha*	Sundra, Khair
0016	*Acacia sundra*	Umbrellathorn, Sali, Odei, Solei
0017	*Acacia tortolis*	Mulvara, Barnei, Muglimara
0018	*Acacia totahu*	
0019	*Acer acuminatum*	Kainchli, Kamia, Kanjal, Kainjal, Kamia, Marik, Maple
0020	*Acer campbellii*	Kapasi
0021	*Acer laevigatum*	Kapasi, Putli
0022	*Acer niveum*	

Species Code	Botanical Name	Common/Local Names
0023	*Acer oblongum*	Phisphuri, Kimolo, Kirmola
0024	*Acer pictum*	
0025	*Acer species*	Gadha, Papri, Manesatiru, Kainchji, Titru, Mandraputi, Maple, Kainjal
0026	*Acrocarpus fraxinifolius*	Kuragaon, Kurangatti, Mandhani, Balanji, Kurangam
0027	*Acronychia pedunculata (old) Acronychia laurifolia*	
0028	*Actinodaphne angustifolia*	
0029	*Actinodaphne hookeri*	Pisa
0030	*Actinodaphne sikkimensis*	Sissi
0031	*Adenanthera pavonina*	Yewagyi
0032	*Adhatoda vasica*	Adusoga
0033	*Adina cordifolia/Haldin cordifolia*	Haldu, Haladva, Hedu, Taraksopa, Maja, Kadambu, Arasintega, Bandar
0034	*Adina oligacephala/ khasia culnea oligocephla*	Haldu, Haludchapa
0035	*Adina sessilifolia*	Heludehaki
0036	*Adrisia floribunda*	
0037	*Aegle marmelos*	Bel, Billi, Bil, Belpatra, Belphas
0038	*Aesculus indica/Pavia indica*	Horse chestunut, Panger
0039	*Aesculus punduana*	
0040	*Agalia andamanica*	Letuk
0041	*Agalia edulis*	Manai, Letchu
0042	*Agalia maice*	Santhane viri, Vandakamin
0043	*Agalia minutiflora*	Thevathali
0044	*Agalia roxburghiana*	Chokhala, Punyaya, Kalbendek
0045	*Ailanthus altissima/grandis*	Borpat, Swinde
0046	*Ailanthus excelsa*	Maharukh, Ardusa, Butazod, Arru, Mahalimla, Peddamman, Dhella
0047	*Ailanthus tryphas (Ailanthus malbaricum)*	
0048	*Alagia lavarckii*	Lueki, Ansoroli, Ankola, Nirmulei
0049	*Alangium salvifolium*	
0050	*Albizzia amara*	
0051	*Albizzia chinensis (Old) Albizzia stipulata*	Bombeza
0052	*Albizzia julibrissin*	Sirse
0053	*Albizzia lebbek*	Kala Siris, Bhander, Sarsaoda, Koko, Kalbage
0054	*Albizzia lucida/lucidior*	Maj, Sundi
0055	*Albizzia mollis*	Sirsa, Kunera, Mandehar
0056	*Albizzia odoratissima*	Siris, Pullivage, Nellivega, Hiharu, Bilwara, Chamkoroi
0057	*Albizzia procera/Mimosa elata*	Safed Siris, Garkhai, Jantala, Koroi, Kinai
0058	*Albizzia species*	Hiharu, Moroi, Mog, Kako, Sundi, Pujala

Species Code	Botanical Name	Common/Local Names
0059	*Alcimandra catheartii* *(Old) Michelia catheartii*	
0060	*Alnus nepalensis*	Utis
0061	*Alnus nitida*	
0062	*Alnus species*	Utis, Kunis
0063	*Alphonsea ventricosa*	Paknola, Nagakola
0064	*Alphonsea zeylanica*	
0065	*Alpinia galanga*	Duperasme, Greater Galngal
0066	*Alseodaphne semecarpifolia*	Mase, Mashe, Phudgus, Melheve
0067	*Alseodaphne species*	Qwdenii
0068	*Alstonia scholaris*	Chatidu, Chatiwan, Satwin, Chatim, Pala, Chatuin, Chhatyal, Chaitan, Cheeni, Pale, Satiama
0069	*Altingia excelsa*	Jutali
0070	*Amoora canarana*	Hottenola
0071	*Amoora obleona*	
0072	*Amoora species*	Rath, Bordardime
0073	*Amoora wallichi/aglaia hiernii*	Lali, Lakhini, Amari
0074	*Anacardium occidentale*	Kaju
0075	*Anacolosa densiflora*	Maiadi, Kalamanikkam, Moradi, Malambara
0076	*Andromeda elliptica*	Angesi
0077	*Anisoptera scaphula*	
0078	*Anneslea fragrens*	
0079	*Annona squamosa*	Seethapal
0080	*Anogeissus acuminata*	Phasi
0081	*Anogeissus latifolia*	Dhauda, Dhaura, Bakli, Tirman, Vekkali, Dhanda, Damado
0082	*Anogeissus pendula*	Dhauk
0083	*Anthocephalus cadamba/ chinensis* *(Old) Anthocephalus indica*	Kadamb, Attutek, Kodavara, Kadam, Vellaikadamby
0084	*Antiaris toxicaria*	Arunjellia, Marauri, Junglia, Lakuch, Aranji
0085	*Antidesma bunius*	
0086	*Antidesma diandrum*	Halimajjige
0087	*Antidesma menasu*	Naikuttimari
0088	*Aphanamixis polystachya karagie* *(Old) Amoora rohituka*	
0089	*Aphnamixis polystachya*	Karagil
0090	*Apodytes andamanica*	
0091	*Apodytes beddomei*	
0092	*Aporosa acuminata*	Nirvetti
0093	*Aporosa lindleyana*	Chella, Sali
0094	*Aporosa roxburghii*	Carokht, Chapnole
0095	*Aquilaria agallocha*	Agar, Diang
0096	*Ardisia floribunda*	

Species Code	Botanical Name	Common/Local Names
0097	*Areca catechu*	Adike, Supari
0098	*Areca triandra*	Jangli supari
0099	*Arenga wightii*	Dada salai
0100	*Artabotrys odoratissimus*	Kathalichapa
0101	*Artocarpus chaplasha/chama*	Chemal, Champ, Sam, Tongpeing
0102	*Artocarpus gomeziana*	Kala lakuch
0103	*Artocarpus heterophyllus (Old) Artocarpus integrifolia*	Plavu/Phannan, Kathal, Jack fruit, Fanas
0104	*Artocarpus hirsute*	Aini, Ayani, Patphanas, Ramphanas
0105	*Artocarpus lakoocha/lacucha*	Lakooch, Thellipilavu, Bohat, Dowachali, Pulinchekke, Watamb
0106	*Arundinaria species/ Thamnocalamus spathiflorus*	Ningal
0107	*Arytera littorolis*	
0108	*Asteriastigma macrocarpa*	
0109	*Atalantia monophylla*	Kadunimbe
0110	*Atalantia racemosa*	Kod-Kanchi
0111	*Atalantia spinosa*	
0112	*Averrhoa carambola*	
0113	*Avicennia officinalis*	Thame
0114	*Azadirachta indica/ Melia indica*	Neem, Nibbaro, Nimdo, Vepa
0115		
0116		
0117		
0118		
0119		
0120		
0121		
0122		
0123		
0124		
0125	*Baccaurea courtallensis*	
0126	*Baccaurea sapida*	Pauli, Khataphal
0127	*Bagenlia serrata*	
0128	*Balanites aegyptiaca*	Hingota
0129	*Balanocarpus litelis*	Kharkong
0130	*Balasamodendron caudata*	Kondamavu, Kilve, Nilve, Kondamamidi
0131	*Balasamodendron mukul*	
0132	*Baliospermum micranthum*	
0133	*Barringtonia acutangula*	Pani kusum, Hanjala, Hijal, Sumudra or Datta phal
0134	*Barringtonia species*	Hijal, Nivar
0135	*Bassia butyracea*	Chewri
0136	*Bassia malabarica*	Yanachi

Species Code	Botanical Name	Common/Local Names
0137	*Bauhinia lawii*	Basavanapada
0138	*Bauhinia malabarica*	Amta, Arampuli, Amli, Kanchilwalla
0139	*Bauhinia purpurea*	Kachna, Chameli, Pasau
0140	*Bauhinia racemosa*	Apta, Asotri, Asintro, Basuvanapada ari
0141	*Bauhinia retusa/Variegata*	Sahra, Kachnar, Kachan
0142	*Bauhinia species*	Kachanar, Papri, Jhingora, Kuiral, Guayal, Kanol, Kawaral, Kanadian, Knola, Semal
0143	*Bauhinia vahlii*	Basavanapada balli
0144	*Beilschmiedia assamica/ brandissi*	Amsoi, Laluk, Bangolokai
0145	*Beilschmiedia roxburghiana*	Katti
0146	*Beilschmiedia sikkimensis*	Tarsing
0147	*Belanites cregyptiaca*	
0148	*Benthamidia capitata*	Bamora, Tankoi
0149	*Berberis nepalensis*	Chutra, Kesari
0150	*Berberis angulosa*	
0151	*Berrya ammonilla*	
0152	*Betiaspermum meirantha*	
0153	*Betula alnoides*	Birch, Chambar, Payyan, Kathboj
0154	*Betula cylindrostachys*	Saur
0155	*Betula utilis*	Bhojpatra, Birch
0156	*Bischofia javanica*	Kaen, Pansemal, Nira, Jrium, Thirippa, Theejia, Charakali, Nedi
0157	*Boehmeria species*	Genthi, Bora, Kharga, Biomat, Bimoe
0158	*Bombax ceiba/malabaricum/ Salmalia malabarica/Intagne*	Semal, Sawar, Semer, Simul, Shimola, Elavo, Buruga
0159	*Borassus flabelliformis*	Tar/Tad, Palm
0160	*Boswellia serrata*	Salai, Salar, Gugal, Salasi, Anduk
0161	*Bouca burmica*	
0162	*Brassiopsis mitis*	Chuletro or phuta
0163	*Brassiopsis speciosa*	
0164	*Bridelia Montana verrucosa*	Gaya
0165	*Bridelia retusa/squamosa*	Kasai, Kag, Khaja, Asan, Asana, Ashal, Mukkayini, Mulluvenga, Kuhir, Kutgi, Gowigi, Mullumaddi, Katak
0166	*Bridelia sonemess*	Mulla honne
0167	*Broxgentia wallichi*	Niruateberu, Chkrani, Beru, Nirssgni
0168	*Bruguiera species*	Khair, Lakir
0169	*Buchanania angustifolia/ axillaris*	Keradi
0170	*Buchanania latifolia/lanzan*	Achar, Chironji, Char, Muria, Phathbhilawa, Pista, Pial, Charolia, Mora, Mungapira, Chera
0171	*Buddleia species*	Shimsenpat
0172	*Bursera delpechinen/serrata*	Bursera, Levendar
0173	*Butea monosperma (Old) Butea frondosa*	Palas, Kakhar, Khakhara, Palasin, Samatha, Dhak, Sumortha

Species Code	Botanical Name	Common/Local Names
0174	*Buxus sempervirens*	
0175	*Buxus wallichiana*	Papri, Chikri, Kangi, Boxwood
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0186	*Caesalpinia bondue (Caesalpinio anducella)*	Gijjaga, Garige
0187	*Caesalpinia coriaria*	Divi-Divi
0188	*Caesalpinia pulcherrima*	
0189	*Callicarpa arborea*	Bahmala, Bahari, Kumbhar (Korta bowl), Gobarhata Maksi
0190	*Callicarpa lanata*	Tawadatti
0191	*Callicarpa longifolia*	
0192	*Callicarpa macrophylla*	Fulvijhe
0193	*Calophyllum elatum*	Kattapinna
0194	*Calophyllum inophyllum/ tomentosum*	Poon, Undi
0195	*Calophyllum polyanthum*	Kurta
0196	*Calophyllum spectabile*	Poon
0197	*Calophyllum tetrapetalum*	Trai, Bobbi
0198	*Calophyllum wightianum*	Kalpoone, Irai
0199	*Camellia sinensis*	
0200	*Camellia thea*	
0201	*Canarium bengalense*	Dhup
0202	*Canarium euphyllum*	White Dhup
0203	*Canarium resiniferum/ sikkimensis*	Gokul Dhup, Dhuna, Dhunarata
0204	*Canarium strictum*	Thellim, Payin, Kuthrikka, Doopamara
0205	*Canthium decoccum (Old) Carallia integerrima*	Balasua, Nallababusu
0206	*Canthium didymum*	Bilachi heddarane
0207	*Canthium neilgherrense*	Belachi, Woppe
0208	*Canthium parviflorum*	Heddarve
0209	*Canthium pergracile*	Meleammepannu
0210	*Capparis deciduas*	Khair
0211	*Capparis decidues*	
0212	*Capparis grandis*	Torate, Kauntel
0213	*Carallia barachiata*	Mahithekerh, Bangana, Phanshi

Species Code	Botanical Name	Common/Local Names
	(Old) Carallia integerrima	
0214	*Carallia indica*	Varanga, Valovam
0215	*Careya arborea*	Kumbhi
0216	*Careya nepalensis*	
0217	*Carissa caranda*	Kalbli, Kawli, Garchunakai
0218	*Carpinus viminea*	Cham, Khirk, Khirki
0219	*Carytaurens*	Sulphi, Sagapalm, Bherlimad
0220	*Casearia carcandus*	Karamcha, Bherlimad
0221	*Casearia esculenta*	Pannimurunga
0222	*Casearia graveolens*	Gilchi, Dedak, Manja, Mango, Bokada
0223	*Casearia rubescens*	
0224	*Casearia species*	
0225	*Casearia tomentosa/ elliptica*	Gilchi, Dhola, Umbh, Kirrniro, Chilla, Mera, Phempri, Mallampavatta
0226	*Cassia fistula*	Amaltas, Sonari, Bahra, Bhawa, Garmala, Kirola, Konna, Kakke
0227	*Cassia nodosa*	Sonari
0228	*Cassia occidentalis*	Anechagate
0229	*Cassia siamea*	Minjiri, Nellatangedu
0230	*Cassia tomentosa*	Sillangi, Killangi
0231	*Cassia tora*	Tagate
0232	*Cassia uriculata*	Taravada, Avarkay, Tangadi
0233	*Castanopsis aronata*	
0234	*Castanopsis hystrix/ tribuloides*	Katnoj, Kaloni, Kotani
0235	*Castanopsis indica*	Hingori
0236	*Castanopsis javanica*	
0237	*Castanopsis species*	Hingori
0238	*Casuarina equisetifolia*	Saru
0239	*Cedrela febrifuga*	Lekh toon
0240	*Cedrela toona/Toona ciliata/ Toon Microcarpa febrifuga*	Tun, Darli, Darloi, Dal, Mathagiri, Vedi, Vembu, Malavepa, Noga, Chonagil, Jatipoma, Poma
0241	*Cedrus deodara*	Depdar, Dayar, Devadaru
0242	*Ceiba pentandra (Eriodendron anfractusum)*	Seemeburga, Silk cotton, Seauel
0243	*Celtis australis/tetrandra*	Kharik
0244	*Cephalanthus occidentalis*	Kalikat
0245	*Cephalostachyum fuchsianum*	
0246	*Cephalostachyum latifolium*	
0247	*Cephalostachyum pallidum*	
0248	*Cephalostachyum pergracile*	
0249	*Chickrassia velutina/tabularis*	Chikrasi, Veppu, Karadi keta, Bogipoma, Mala
0250	*Chloroxylon swietenia*	Bhirra, Satin
0251	*Chrysophyllum roxburghii*	Palepannu

Species Code	Botanical Name	Common/Local Names
0252	*Cinnamomum cecicodaphne*	Gonsoroi
0253	*Cinnamomum impressinervium*	Sissi
0254	*Cinnamomum iners*	Kankutala, Kankula
0255	*Cinnamomum oblongifolium*	
0256	*Cinnamomum obtusifolium*	Meduriduma, Paderi, Tozia, Nagalarhira, Patihunda
0257	*Cinnamomum species*	Mahidal, Gonsordi, Dalchini
0258	*Cinnamomum tamala*	Dalchini, Tejpat
0259	*Cinnamomum wightianum/ zeylanicum*	Naikambagam, Karpamara
0260	*Cipadessa baccifera (Cipadessa freiticosa)*	Chitumba, Sidugoli
0261	*Citrus grandis*	Batabi nebu, Pummelo
0262	*Citrus hystrix*	
0263	*Citrus medica*	Elmichai
0264	*Citrus sinesis*	Mausmi
0265	*Citrus species*	Lemon, Nimbu
0266	*Clausena dentala/vildonorii*	Barpe
0267	*Cleidion javanicum*	Yellari
0268	*Cleistanthus collinus*	Karra, Nallkodigha
0269	*Clerodendron venosum*	Kacungyi
0270	*Clochidion assamicum*	Latimanwa
0271	*Cocculus laurifolius*	Tilaphara
0272	*Cochlospermum religiosum/ gossypium*	Galgal, Derani, Jerani, Kendo gogu
0273	*Cochlospermum tomentosum*	
0274	*Cocos nucifera*	Narkel, Naryal
0275	*Colubrina asiatica*	Vira
0276	*Columbia floribunda*	
0277	*Commiphora mukul*	
0278	*Commiphora ostdets*	Vandemavu, Aswel, Bettamavu
0279	*Congea tomentosa*	
0280	*Cordia angustifolia*	
0281	*Cordia campanulata*	
0282	*Cordia dichotoma (Old) Cordia obliqua*	Gundi, Samar, Bhokar
0283	*Cordia dichotoner*	Tasura
0284	*Cordia fragrantissima*	Kowathutii
0285	*Cordia gharaf*	Gondi
0286	*Cordia grandis*	Thanet
0287	*Cordia macleodii*	Hadage, Dharivar, Satare, Pilichelle, Dahivan
0288	*Cordia myxa*	Mahidal, Bowll, Bhokar, Boal, Semri, Shelu
0289	*Cordia odoratissima*	
0290	*Cordia species*	Lassora, Bairula, Borala
0291	*Cordia tomentosa*	

Species Code	Botanical Name	Common/Local Names
0292	*Corniphora caudate*	Kondamavu, Aswai, Pachakilurai
0293	*Cornus macrophylla*	Khagsa, Khasri, Khugsi
0294	*Corylus colurna*	Bhutiabadam, Kapasi, Bhuj
0295	*Corylus ferox*	Lekh katus
0296	*Corypha umbraculifera*	Tale
0297	*Coscinium fenestratum*	Meramenjali
0298	*Cotoneaster bacillaris*	Ruins
0299	*Crataeva adansomii/Odora*	Odora
0300	*Crataeva unilocularis* *(Old) Crataeva religiosa/ roxburghii*	Gundi, Barun, Barna
0301	*Cratoxylon formosum*	Yepadak
0302	*Cratoxylon neriifolium*	
0303	*Croton joufra*	
0304	*Croton malabaricum*	Kolvachi
0305	*Croton oblongifolius*	Kanki
0306	*Croton tiglium*	Lapcho
0307	*Crypocarya wightiana*	Kadamanpari
0308	*Crypomeria japonica*	
0309	*Crypteronia paniculata*	Garumarh
0310	*Cryptocarya amygdalina*	Bonlonalus
0311	*Cullenia excelsa*	Karanini
0312	*Cupressus kashmiriana*	
0313	*Cupressus species*	
0314	*Cupressus torulosa*	Cupress, Devidiar, Leuri, Surai
0315	*Curcuma aromatica*	Kadarshina
0316	*Cycas circinalis anceotaria*	Madana kamarin, Sanning kai, Erigei, Nalvalanga, Kalarei intha, Kalanga
0317	*Cycas Pectinata*	Thakai
0318	*Cyclostemon assamicus/ Drypetes assamica*	Rali
0319	*Cyclostomon marcrophyllus*	Mala payin
0320	*Cynometra beddomei/ ramiflora*	Irapu
0321	*Cynometra polyandra*	Ping
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Species Code	Botanical Name	Common/Local Names
0332	*Daemonorops jenkinsianus*	
0333	*Dalbergia latifolia*	Sissam, Veetti, Eetti, kareetti, Jitregi, Biti, Shisham
0334	*Dalbergia paniculata*	Dhobin, Padri, Patarali, Naibiti, Khobi, Sapperra
0335	*Dalbergia sissoo*	Sissoo, Shisham, Tahli
0336	*Dalbergia species*	Bandmi
0337	*Dalium travencoricum*	Malampuli
0338	*Daracontomelum mangiferum*	Chinyok
0339	*Debregeasia wallichiana*	Sunkathi, Sankeswari
0340	*Delonix elate*	
0341	*Delonix regia*	Golmohan/Krishnachura
0342	*Dephnephyllum himalayanse*	Ratniali, Rakta chandan
0343	*Dichopsis elliptica*	Panchonta, Ketellupei, Illupei, Pala, Keipales
0344	*Dichrostachys cinerea*	Yettur, Yletur
0345	*Diemycarpus recemosus*	
0346	*Dillenia indica*	Owtenga
0347	*Dillenia pentagyna*	Karmat, Kerju, Karvat, Karaval, Kathak, Zindyum, Modapana, Pattippana, Valappana, Otenga, Karambel, Karamble
0348	*Diospyros assimilis*	Karimara
0349	*Diospyros candolleana*	Kerigide, Karimitka
0350	*Diospyros chloroxylon*	Illintha
0351	*Diospyros crumentata*	Kantumri
0352	*Diospyros marmorata/malabarica*	Marblewood
0353	*Diospyros melanoxylon*	Tendu, Kendu, Timru, Abhus, Timbaroo
0354	*Diospyros microphylla*	Chunde
0355	*Diospyros nilagirica*	Kartha, Choote
0356	*Diospyros obenum*	Ebony, Karu, Mushtimbi
0357	*Diospyros paniculata*	Kari-Koomar-Karmarala
0358	Diospyros peregrina *(Old) Diospyros embryopteris Sylvantica/Montana/ceubroypteris*	Madad tendu, Kakchi, Honeymoontree, Goinda
0359	*Diospyros species*	Kendu, Kala kendu, Tendu
0360	*Diospyros tupru*	Tupra
0361	*Diospyros variegata*	
0362	*Diploknema butyracea/madhuca butyracea/bassis butyracea*	Raktchena, Danchura, Mohwa
0363	*Dipterocarpus boundilloni*	Karanjili, Charatta angeli
0364	*Dipterocarpus gracidin (Old)*	
0365	*Dipterocarpus indicus*	Kalapayin, Vellanini, Kalpaini
0366	*Dipterocarpus macrocarpus*	Hollong
0367	*Dipterocarpus species*	
0368	*Dipterocarpus tuberculatus*	Medsingh
0369	*Dipterocarpus turbinatus*	Garjan

Species Code	Botanical Name	Common/Local Names
0370	*Dokichandrone crispa*	Godmurgi
0371	*Dolichandrone falcata*	Metarsingh, Medhasingi waddi
0372	*Drimycarpus recemosus*	
0373	*Drypetes lancifolia*	Haro
0374	*Dubanga grandiflora/ sonneratioides*	Khakan, Mau, Lampate
0375	*Dysoxylum beddomei*	Adanthei
0376	*Dysoxylum binectariferum*	Rata, Bandardima
0377	*Dysoxylum hamiltonii*	Gendhaki poma, Rannipoma
0378	*Dysoxylum malabaricum*	Agie, Vella
0379	*Dysoxylum species*	Lahsune
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0391	*Ehretia acuminata*	Gaul
0392	*Ehretia laevis*	Chamror, Khoba, Datrang
0393	*Eigenia armottiana*	Naval, Ayri
0394	*Elaeagnus Kologa*	Wild olive tree
0395	*Elaeagnus umbellate*	Giwain, Giwai
0396	*Elaeocarpus cuneatus*	Bigadamara
0397	*Elaeocarpus lanceaefolius*	
0398	*Elaeocarpus munroii*	Narebekki, Kalbikki, Badaga
0399	*Elaeocarpus oblongus*	Analthari
0400	*Elaeocarpus rugosus*	Panmaku
0401	*Elaeocarpus serratus*	Athkusye, Athakunge
0402	*Elaeocarpus species*	
0403	Elaeocarpus sphaoricus *(Elaeocarpus Grantiris)*	Rudharakshi
0404	*Elaeocarpus tuberculatus*	Magara, Kodavasi, Lampathi
0405	*Elaeocarpus varunua*	
0406	*Elaeodendron glaucum*	Jamrasi, Kalmukho, Dhebri, Loonia, Sauri, Neridu
0407	*Elaeodendron paniculata*	Purali
0408	*Elaeodendron roxburghii*	
0409	*Elengium lamarchi/Saivifolium*	
0410	*Emblica officinalis/ Phyllanthus*	Amla, Aonla, Amlaki, Nellimara

Species Code	Botanical Name	Common/Local Names
	emblica	
0411	*Endospermum chinense* *(Old) Endospermum malaccense*	Bakota, Phulgamani, Tarua Bakola, Halundrahakj, Handospoka
0412	*Engelhardtia colebrookiana*	Godhmohinia, Mohwia
0413	*Engelhardtia spicata*	Mewa, Mauwa
0414	*Enterolobium saman*	Raintree
0415	*Erinocarpus nimmoanus*	Andari-Bendi
0416	*Eriobotrya bengalensis*	
0417	*Eriobotrya petiolata*	Maya
0418	*Erioglossum rubiginosum*	
0419	*Eriolaena candollei*	
0420	*Eriolaena hokeriana*	Guakasi, Narbothu
0421	*Eriolaena quinqu ocularis*	
0422	*Eriolaena spetabilis*	
0423	*Erythrina species*	Mandan
0424	*Erythrina stricta*	Ilalivane, Keechakenanara
0425	*Erythrina suberosa*	Pangra, Gararo, Mander, Dhaul, Dhak
0426	*Erythrina variegata* *(Old) Erythrina indica*	Pangra, Pangaro, Pengaro, Mendo
0427	*Erythroxylon monogynum*	Deodari
0428	*Eucalyptus citriodora*	Nilgiri
0429	*Eucalyptus globules*	Blue gum
0430	*Eucalyptus grandis*	Nilgiri
0431	*Eucalyptus hybrid*	Nilgiri
0432	*Eucalyptus rostrata*	Red gum
0433	*Eucalyptus species*	Nilgiri
0434	*Eucalyptus tereticornis*	Nilgiri hybrid
0435	*Eugenia alternifolia*	Manchi, Moyadi, Mogi, Mege
0436	*Eugenia carymbosa*	Nyara
0437	*Eugenia caryophyllaea* *(Syzygium caryopayllaea)*	Kunti-Neeral
0438	*Eugenia cymosa*	Jam, Tita, Nerudu
0439	*Eugenia formosa* *(Old) Jambosa formosa*	Ambake
0440	*Eugenia frondosa*	Dhubka
0441	*Eugenia gardneri*	Maleherlu
0442	*Eugenia grandis*	Jia
0443	*Eugenia hemispherica*	Jabbalae
0444	*Eugenia laeta*	Madle
0445	*Eugenia montana*	Poriyil
0446	*Eugenia mundagam*	Kattasamba, Mudagam
0447	*Eugenia praecox* *(Old) Jambosa praecox*	Bogi-jaruk
0448	*Eugenia species*	Nerala, naga, javal, Niralu
0449	*Eugenia zeylanica*	Meerongi, Pitkuli, Bhodas

Species Code	Botanical Name	Common/Local Names
0450	*Euonymus dichotomus*	Kenkutle
0451	*Euonymus lacerus*	Pinna, Dhyar
0452	*Euonymus pendulus*	Katha, Konkon, Katli, Kapkan
0453	*Euphorbia antiquorum*	Bonthekalli, Mundugalli
0454	*Euphorbia royleana*	
0455	*Euphorbia species*	Sil
0456		
0457	*Eurya japonica*	Jhingri
0458	*Evodia fraxinifolis*	
0459	*Evodia lunuankenda* *(Old) Evodia roxburghiana*	Kambli, Chattavamara
0460	*Evodia meliofolia*	Khanakpa
0461	*Evodia species*	Kannlei, Dapper, Kattashambagan
0462	*Excaecaria agallocha*	Tayaw
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0473	*Fagara budrunga* *(Old) Zamthoxylum budrunga*	Bojrong, Bojorani
0474	*Feronia elephantum*	Kaweet, Kaitha
0475	*Feronia limonia*	Balnvalgida
0476	*Ficus asperrima*	Gargatti, Kharwatti
0477	*Ficus bengalensis*	Figs, Wad
0478	*Ficus callosa*	Nirvala
0479	*Ficus carica*	Common fig, Dumur
0480	*Ficus cunia*	Jog dumur
0481	*Ficus drupace* *(Ficus mysereovsis)*	Genimere, Colicare
0482	*Ficus elastica*	Ved, Vadlo
0483	*Ficus hispida*	Khakhri, Pipri, Tel, Umerdo, Kharodi
0484	*Ficus nervosa*	Khaipan, Kharipan
0485	*Ficus racemosa* *(Ficus glomerata)*	Atti, Rumdi, Atthi
0486	*Ficus religiosa*	Pipal, Pipli, Papada, Pripari, Ragi, Pimpal
0487	*Ficus semicordata*	
0488	*Ficus species*	Gular, Anjar, Aumbar, Umerao, Bad, Kheura, Khomnia, Budita, Gaujine, Tungla, Bargad,

Species Code	Botanical Name	Common/Local Names
		Akhar, Pair
0489	*Ficus tsiela*	Bilibasari
0490	*Ficus tsjehele*	Kari, Penarimare
0491	*Ficus virene* *(Ficus infectorial)*	Basarimare, Karibasari
0492	*Filicium decipiens*	Niroli, Valmurricha, Irim-birakki
0493	*Firmiana colorata*	Phirphire
0494	*Flacourtia cataphracta*	Vayankarei charalu, Vayoenkatha thalira, Kanaji
0495	*Flacourtia indica* *(Old) Flacourtia ramontchi*	Kangu, Kakai
0496	*Flacourtia montana*	Sompi, Bensapige, Gudda, Champhar
0497	*Flacourtia species*	Kangukandai
0498	*Flucagea mirocarpa*	Huligida
0499	*Fraxinus floribunda*	
0500	*Fraxinus species*	Ash, Angu
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0511	*Gaesalpinia pulcherima*	Radhachura
0512	*Gamblea ciliata*	
0513	*Ganltheria fregrantissiam*	Winter green oil tree, Moolai
0514	*Garcinia campoiga*	Kudgelmurga
0515	*Garcinia cowa*	
0516	*Garcinia edunculata*	Bonthekora
0517	*Garcinia indica*	Muriyia, Kokam, Bhirand
0518	*Garcinia morella*	Arsingurge
0519	*Garcinia species*	Ponpuli
0520	*Garcinia spicta*	Haraluguriga, Kenjeraka, Kokokattai
0521	*Garcinia tinctoria*	Kevanhuli, Garigehuli, Devangi
0522	*Garcinia xanthochymus*	Devanhuli, Gari, Genuli, Devangi
0523	*Gardenia optusa*	Mallanga
0524	*Gardenia resinifera* *(Old) Gardenia turgida/Lucida/ latifolia/gummifera*	Papada, Damburuda, Karinga, Dikamali
0525	*Gardenia species*	Thenele
0526	*Garuga pinnata*	Kekad, Thutmule, Titmira, Kajikara, Kharpat
0527	*Gironniera reticulata*	Chuchi

Species Code	Botanical Name	Common/Local Names
0528	*Gironniera species*	
0529	*Gironniera subaequalis*	
0530	*Givotia rottleriformis*	Punki, Panki, Tellapoliki
0531	*Glochidion acuminatum*	Nirvetti
0532	*Glochidion neilgherrense*	Salle
0533	*Glochidion seylanioum*	Bends, Nirsalle, Sevregiada
0534	*Glochidion species*	
0535	*Glochidion velutimum*	Kathmalu, Kathnawha, Salai
0536	*Gluta travancorica*	Sheugurni
0537	*Glycosmis mauritiana*	Mavikyan, Kedumarela
0538	*Glycosmis pentaphylla*	Kodumaralugida
0539	*Gmelina arborea*	Siwana, Gumari, Sivan, Gambhar, Kumhar, Khamhal, Gumurteak, Kuli, Kumbil
0540	*Gordonia obtusa*	
0541	*Grevillea robusta*	Silver oak
0542	*Grewia abutilifolia*	
0543	*Grewia asiatica*	Phalsa
0544	*Grewia elastica*	
0545	*Grewia elatostenioides*	
0546	*Grewia flavescens*	Guthu
0547	*Grewia laevigata*	Achinaru
0548	*Grewia microcos*	Pickla
0549	*Grewia oppositifolia*	Bhimal, Behul
0550	*Grewia salvifolia*	Ulli
0551	*Grewia species*	Diamiul, Gharbhimti, Pharasai
0552	*Grewia tiliaefolia*	Dhaman, Tada, Thadachiee, Chadichi
0553	*Guazuma tomentosa*	Thainpuchi, Rudraksha
0554	*Gymnosporia acuminata*	
0555	*Gymnosporia montana*	Tondarsai, Tandarsi
0556	*Gymnosporia royaleana*	
0557	*Gymnosporia rufa*	
0558	*Gynocardia odorata*	Bandre, Ramphal
0559	*Gyrocarpus jacquini* *(Old) Gyrocarpus americanus*	Kumar penki
0560	*Gyrocarpus odorata*	Dalmugra
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Species Code	Botanical Name	Common/Local Names
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0571	*Haplophragma aclenophylbium*	Palthan, Chonapaini
0572	*Hardwickia binata*	Anjan, Vereppa
0573	*Hardwickia pinnata*	Madeyan, Sampirani, Kolavu nei, Kottei, Uram, Surali, Kiyavu, Kolla, Chittila
0574	*Harpullia cupanoides*	Madakku
0575	*Helicteres isora*	Kowri, Kavargi
0576	*Helicteres isora*	
0577	*Hemicyclia elata*	Velthachoote
0578	*Hemicyclia venusta*	Vellelambu, Palla, Kanni, Vella kasavu
0579	*Heritiera attenuata*	Boroi, Dhaman
0580	*Heritiera littoralis*	Sundri
0581	*Heritiera macrophylla*	
0582	*Hernada reparia*	Hole, Basari
0583	*Heteropanax fragrans*	Totila
0584	*Heynea triguga*	Banritha
0585	*Hibiscus furcatus*	Huligowri, Huligabari
0586	*Hibiscus macrophyllus*	Chama
0587	*Hibiscus rosasinensis*	Jaba
0588	*Hibiscus tiliaceus*	Safed chilka
0589	*Hiptage benghalensis (Hiptage madablota)*	Madvilata, Pikigisam
0590	*Holarrhena antidysenterica*	Inderraja, Dudkhira, Kudi, Inderajav, Kuda, Kurchi, Isteripala
0591	*Holigarna arnottiana*	Cheracheru, Malegeru
0592	*Holigarna beddomei*	Palvidinyax
0593	*Holigarna grahamii*	Genu
0594	*Holoptelea integrifolia*	Kaneji, Pungo, Aval, Chiebil, Nambinara, Wavala
0595	*Homalium tomentosum*	
0596	*Homalium zeylanicum*	Manthalaa-mukki, Wavala
0597	*Hopea glabra*	
0598	*Hopea odorata*	Pongu, Thingon
0599	*Hopea parviflora*	Thanbagam, Irupu, Kambagam
0600	*Hopea recopholoea*	Neducalipenga, Naikambagam
0601	*Hopea species*	
0602	*Hopea utilis*	
0603	*Hopea wightiana*	Nai-irulu, Kalhoni
0604	*Hovea brasiliensis*	Rubber tree
0605	*Hovenia dulcis*	Bangi
0606	*Humboldtia brunonis*	Hasiga
0607	*Humboldtia species*	Koratthi, Kunthani
0608	*Hydnocarpus alpina*	
0609	*Hydnocarpus kurzii*	Chalmugra

Species Code	Botanical Name	Common/Local Names
	(Old) Taraktojenos kurzii	
0610	*Hydnocarpus species*	Matrupa, Banrang
0611	*Hydnocarpus wightiana/laurifolia*	Nireetia, Nirveti, Mirolhakai, Kawti
0612	*Hymenodictyon excelsum*	Match, Kavai, Kadia, Matrupa, Mad, Banrang
0613	*Hymenodictyon flaccidum*	
0614	*Hymenodictyon obovatum*	Gendale, Bogi, Hirename, Phose, Kurwei, Sirid
0615	*Hyppophael salicifolia*	Amej, Chook
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0626	*Ilex denticulata*	Malam thidappu
0627	*Ilex excelsa*	
0628	*Illex fragilis*	
0629	*Illex godajam*	Hatikirepa
0630	*Illex species*	Kumkum, Gaib, Kandai, Kanderu, Kandek
0631	*Illex wightiana*	Herale, Hurula
0632	*Illicium griffithii*	Lissi
0633	*Inga dulcis*	Vilayari, Humse, Jangle, Jilebee
0634	*Isonandra polyantha*	
0635	*Ixonamthes khasiana*	
0636	*Ixora arborea* *(Old) Ixora parviflora*	Lakhandi, Telkurma, Korvi, Toroh tree, Kurat
0637	*Ixora brachiata*	Gurani, Gorbale (small tree)
0638	*Ixora calycina*	
0639	*Ixora nigricans*	Lokhandi, Yelgare
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0650	*Jonesia asoca/Saraca indica*	Asoka
0651	*Juglans regia*	Akhrot, Akhor

Species Code	Botanical Name	Common/Local Names
0652	*Juniperus macropoda*	Dhimp, Dhup
0653	*Juniperus pseudosabina*	Black juniper
0654	*Juniperus recurva*	Small juniper
0655	*Juniperus species*	
0656	*Jurinea pomofera*	Thati, Nagpat
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0667	*Kayea assamica*	Sixnahar
0668	*Kayea floribunda*	Karal
0669	*Kigelia pinnata*	
0670	*Kingiodendron binata*	Shurali, Kiyavu
0671	*Kingiodendron pinnata*	Piney, Shurali
0672	*Knema attennata*	Hedmengan, Buktamsra
0673	*Knema glaucescens*	
0674	*Korthalisia laciniosa*	Kadpla
0675	*Kurrimia bipartite*	Kadapla, Konnai
0676	*Kurrimia indica* *(Old) Kurrimia laipartita*	Kadapla
0677	*Kydia calycina*	Baranga, Banakapsia, Pichela, Pula, Bhindi, Waring, Petari, Warang
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0688	*Lagerstroemia hypoleuca*	Jalut, Pyman
0689	*Lagerstroemia indica*	Gulbahar
0690	*Lagerstroemia lanceolata/ inicrocarpa*	Ventheku, Vellilavap, Benteak, Nana
0691	*Lagerstroemia parviflora*	Lendia, Kaka, Padia, Jarup, Bondaro, Supazo, Dhauri, Sidha, Pyinma, Chinangi, Londi,

Species Code	Botanical Name	Common/Local Names
		Bongda
0692	*Lagerstroemia spaciosa* *(Old) Lagerstroemia flosreginae*	Ajhar, Jaruch, Nirben teak, Manimaruthu, Nirmeruthu, Taman, Bondara
0693	*Lagerstroemia species*	
0694	*Lannea coromandelica/lannea grandis/odina wodier*	Mode, Modal, Jhingan, Godal, Nabbee, Moi, Shamat, Godda, Gompena
0695	*Lansium anamalayanum* *(Old) Aglaia anamalayanum*	Chodimare, Chingfwari
0696	*Laportea crenulata*	Morange
0697	*Larix griffithii*	Jalut
0698	*Lasiosiphon eriocephalus*	Mukkan daka
0699	*Lasiosiphon species*	Mukardel, Mukadala
0700	Leea indica *(Les sambucina)*	Nurche, Jini, Midichi
0701	*Leucaena leucocephala*	
0702	*Leucosceptrum species*	Churpis
0703	*Licuala peltata*	Salaipatti
0704	*Ligustrum neilgherrense*	Chantrike
0705	*Limonia acidissima*	
0706	*Limonia species*	
0707	*Lindera assamica*	Sanu pahale
0708	*Lindera heterophylla*	Lekhpipli
0709	*Lindera neesiana*	Siltimur
0710	*Lindera pulcherrima*	Sinkoli
0711	*Lingustrum robustum*	
0712	*Linociera malabarica*	Akkarkal
0713	*Lipisanthes tetraphylia*	Jhingan
0714	*Litchi senensis*	Lichu, Lichi
0715	*Lithecarpus elegans*	
0716	*Lithecarpus pachyphyllus*	Singrekatus
0717	*Lithecarpus spicatus* *(Old) Pasania spicata/oxylocarpa*	Arkawala
0718	*Litsaea citrata*	
0719	*Litsaea grandis*	
0720	*Litsaea laeta*	
0721	*Litsaea monopetala* *(Old) Litsaea polyantha*	Huoria
0722	*Litsaea oblonga*	
0723	*Litsaea panamonja*	Buichapa
0724	*Litsaea salificolia*	
0725	*Litsaea shasyana*	
0726	*Litsaea species*	Lakri, Narkh, Bailara, Shurur, Lampatia, Maida
0727	*Litsaea stoksii*	Litsae
0728	*Litsaea wightiana*	Litsae
0729	*Litsaea zeylanica*	Messi, Sudagenasu

Species Code	Botanical Name	Common/Local Names
0730	*Lonicera quinquelocularis*	
0731	*Lophopetalum fimbriatum*	Sutrang
0732	*Lophopetalum wightianum*	Venkotha, Venkottai, Palmani, Popsa
0733	*Lyonia ovalifolia/pieris ovalifolia*	Ainyar, Ayar
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0744	*Macaranga denticulata*	Jageru, Bhura
0745	*Macaranga indica*	
0746	*Macaranga peltata*	Vetta
0747	*Macaranga pustulata*	
0748	*Macaranga species*	Malata
0749	*Machilus edulis*	
0750	*Machilus gamblei*	Shum
0751	*Machilus gammieana/ persea gammicana*	Chupli kawla
0752	*Machilus globosa*	Kanta
0753	*Machilus macrantha*	Uravu, Gulumb
0754	*Machilus odoratissima*	Latikawala
0755	*Machilus parviflora*	
0756	*Machilus species*	Kaula, Sunkaula
0757	*Machilus villosa*	
0758	*Macropanax oreophilum*	
0759	*Madhuca latifolia/m.indica (Old) Bassia latifolia*	Mohwa, Lappa, Mahudo
0760	*Magnolia campbellii*	Choge champ
0761	*Magnolia pterocarpa*	Patpate
0762	*Magnolia species*	Sapa
0763	*Mallotus albus*	Morolia
0764	*Mallotus khasianus*	
0765	*Mallotus philippinensis*	Rehini, Sindhuri, Ruina, Rolli, Kamela, Kaplo, Kalujhade, Kanku, Kumkum, Kamalagundi, Shendri, Kukkum
0766	*Mammea longifolia (Gehrocarpus longifolia)*	Surigi, Suragi
0767	*Mangifera andamanica*	Jangliam
0768	*Mangifera indica*	Am, Amb, Ambo, Mavu, Moru, Mamidi
0769	*Mangifera sylvatica*	Banam, Lakshmi

Species Code	Botanical Name	Common/Local Names
0770	*Manihot esculenta*	
0771	*Manihot glayiwoii*	Rubber, Sabarchuk
0772	*Manihot utilissima*	Safeda, Chiku
0773	*Manilkara achras*	Khirni, Rayan
0774	*Manilkara hexandra* *(Old) Mimusopa hexandra*	
0775	*Manilkara littoralis*	Bullet wood
0776	*Manilkara roxburghiana* *(Nimusops roxburghiana)*	Gunolale, Ranjal
0777	*Manilota polyandra*	
0778	*Mansonia dipke*	
0779	*Mappia foetida*	Arali chorla
0780	*Mastixia arborea*	Kumbalamara gulle
0781	*Mastixia pentandra*	Velladambu, Nir, Kuranthu
0782	*Maytenus emarginata*	Kankera
0783	*Melanorrhoea usitata*	Mansonia
0784	*Melia azadirachta*	Bijainn, Baknia, Motilimdo, Betain, Bakamlimdo
0785	*Melia composita*	
0786	*Melia dubia*	Bucavbevu
0787	*Melia species*	Vishapari
0788	*Meliosma arnottiana*	Kusavithagari
0789	*Meliosma pinnata*	
0790	*Meliosma simplicifolia*	
0791	*Meliosma species*	Gwel, Busha, Goi, Gex
0792	*Memecylon angustifolium*	Mathu, Kavumara
0793	*Memecylon edule*	Anjani
0794	*Mentha srawensis*	Mentha
0795	*Mesua ferrea*	Negeshwar, Nangu, Peri, Vellathappala, Nahar, Atha, Gangan, Nagchapha
0796	*Michelia baillonii*	
0797	*Michelia champaca*	Champa, Titasopa, Bampige
0798	*Michelia doldsopa/excelsa*	
0799	*Michelia languinosa*	Purrochamp
0800	*Michelia leailleni*	
0801	*Michelia montana*	Sundi
0802	*Michelia nilagirica*	Kadu sampige
0803	*Michelia parviflora*	
0804	*Michelia species*	Champ, Garari, Kanjira
0805	*Michslns parviflora*	
0806	*Miliusa species*	Jangli, Segwan
0807	*Miliusa tomentosum* *(Old) Saccopetalum tomentosum*	Kari, Umbh
0808	*Miliusa velutina*	
0809	*Miliusa wightiana*	

Species Code	Botanical Name	Common/Local Names
0810	*Millingtonia hortensis*	Akashneem, Akash limdo
0811	*Mimusops elengi*	Bakul, Yelande, Wawli
0812	*Mimusops roxburghiana*	Kanapalei
0813	*Mimusops species*	Dhekul, Khaja
0814	*Mistixia arborea*	Kunbalnara, Gulle
0815	*Mitragyna parviflora*	Mundi, Phaldu, Kaiz, Battaganam, Kalamb
0816	*Monsonia species*	Badam
0817	*Morinda oleifera* *(Old) Moringa pteryogosperma*	Sohnigna, Sainjana, Shivga
0818	*Morinda tinctoria/tomentosa*	Al, Ali, Aledi, Achu, Togarmoghli
0819	*Moringa species*	Sohjna, Sajna, Munga
0820	*Morus alba*	
0821	*Morus laevigata*	Bola
0822	*Morus species*	Tut, Kimu, Shahtoot
0823	*Munaya amygdalina*	
0824	*Murraya exotica/ paniculata*	
0825	*Murraya koenigii* *(Old) Murraya paniculata*	
0826	*Myrica sapida* *(Old) Myrica nagi*	Kaphal
0827	*Myristica andamanica*	
0828	*Myristica attenuata*	Paktamara
0829	*Myristica beddomei* *(Old) Myristica dactyloides*	Hed-Patre, Zajikui
0830	*Myristica canarica*	Pindi
0831	*Myristica laurifolia/ Myristica linifolia*	Kathi, Jai, Juthi, Choremara, Ramgote, Katijijaji
0832	*Myristica magnifica*	Ramanadike
0833	*Myristica malabarica*	Bempatre, Kadjaiphal, Ranjaiphal
0834	*Myristica species*	Jaiphal
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0845	*Nauclea gageana*	Jeinkola
0846	*Nauclea grifithi*	
0847	*Neonauclea gageana*	Teiukala
0848	*Nephelium longana (Old)*	Kana, Kindali, Kendale, Chakotta, Sannale

Species Code	Botanical Name	Common/Local Names
	Dimocarpus longan	
0849	*Nephelium stipulaceum*	Malekoomathi
0850	*Nerium indicum (Oleander)*	Karabi, Kaner
0851	*Nothapodytes foetida*	Peenari, Helari
0852	*Nothopegia colebrookiana*	Ambari
0853	*Nyctanthes arbortristis*	Harshingar, Kari
0854	*Nyssa javanica* *(Old) Nyssa sessiliflora*	Goharisapa
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0865	*Ochna squarrosa* *(Old) Ochna obtusata*	Nadli
0866	*Ochna wightiana*	Silimbi, Katkurai
0867	*Ochrema lagopus*	
0868	*Ochrema pyramidale*	Balse
0869	*Ochrocarpus longifolius*	Surangi
0870	*Ochrocarpus slamansis*	
0871	*Olea cuspidata*	Bairbanj, Kau
0872	*Olea dioica*	Akksale, Madle, Parjambhul, Lauki
0873	*Olea ferruginea*	Olive
0874	*Olea glandulifera*	Garura
0875	*Operculina turpethum*	Bilialutigadda, Trupeth
0876	*Ormosia travancorica*	Manchadi
0877	*Oroxylum indicum*	Tarlu, Tantia, Dumpii, Jaimangal, Dingorri, Teta, Telvo, Sona, Pharkot
0878	*Osmanthus fragrans*	Silang, Silangi
0879	*Ostodes paniculata*	Bepari
0880	*Ostodes zeylanica*	Balinga
0881	*Ougeinia dalbergioides*	Tinsa, Sandhan, Tenaph, Tiwas, Dargu
0882	*Oxytenanthera monostigma*	Garate, Choua
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Species Code	Botanical Name	Common/Local Names
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0893	*Pajanelia longifolia*	Jingin
0894	*Pajanelia rheedii*	Jingan, Ohirw
0895	*Palaquim ellipticum*	Pala, Cheppala, Pacherthi, Pali
0896	*Palaquim polyanthum*	Kurta
0897	*Palm oil tree*	
0898	*Pandanus furcatus*	Mundige, Gubbikedini
0899	*Pandanus tictorius* *(Old) Pandanus odoratissimus*	Sathepu
0900	*Parashorea stellata*	
0901	*Parinarium indicum*	
0902	*Parkia joyrica/ roxburghii*	Manipurmuroh
0903	*Parkinsonia aculeata*	Kodanchi
0904	*Pavetta indica*	Pavate, Pappadi, Pavattei
0905	*Pemphis aciduta*	Kiri
0906	*Pentace burmannica*	
0907	*Pentace suavis*	
0908	*Perishia insignis*	Red dhup
0909	*Persea owdenii* *(Old) Alseodaphne owdenii*	Tulsi sundi
0910	*Pettaporum ferrugineum*	
0911	*Phoebe attenuata*	Nikahi
0912	*Phoebe cooperiana*	Makahi
0913	*Phoebe goalparensis*	Bonsum
0914	*Phoebe hainesiana*	
0915	*Phoebe lanceolata*	Tumri, Bhadrai, Bhader, Kekra, Suankaula, Bagdo
0916	*Phoebe paniculata*	
0917	*Phoebe species*	
0918	*Phoenix humilis*	Shawri
0919	*Phoenix sylvestris*	Betha, Khajur
0920	*Phoenix tarnifera*	Kirichilu
0921	*Picea smithiana/morinda*	Spruce
0922	*Picea spinulsa*	Spruce
0923	*Pieris villosa*	Lek, Augeri
0924	*Pinanga dicksonii*	Jonjarige
0925	*Pinus arinendi*	
0926	*Pinus excelsa/wallichiana*	Kail
0927	*Pinus gerardiana*	Chilgoza
0928	*Pinus kasya/insularis*	Pine, Dingsa, Saral
0929	*Pinus roxburghii/longifolia*	Chir

Species Code	Botanical Name	Common/Local Names
0930	*Pistacia integerrima*	Kakkar, Kakroi, Kakra
0931	*Pithecolobium bigeminum*	Muthakopappen
0932	*Pithecolobium dulce*	Seemehunse
0933	*Pittosporum floribundum*	Dadgoli, Tamatta
0934		
0935	*Planchonia andamanica*	Red bambhury
0936	*Plumeria rubra* *(Old) Plumeria acutifolia*	Devakekigal
0937	*Podocarpus latifolia*	Narambali
0938	*Podocarpus neriifolia*	Jinari, Jhitamin
0939	*Poeciloneuron indicum*	Ballagi
0940	*Poeciloneuron pacifolium*	Puttangkolta, Puli vayila
0941	*Pogostemon patchouli*	Patchouli
0942	*Poinciana elata*	Nirangi, Padenarayam, Sukeswar, Shakesulta
0943	*Polyalthia cerasoides*	Kala kasAI, Chilkaduddi
0944	*Polyalthia coffeoides*	Maragowri
0945	*Polyalthia fragrans*	Nedunar, Kakechapaya
0946	*Polyalthia longifolia*	Chorwnna, Arunna, Assotham
0947	*Polyalthia species*	Chami, Kohori
0948	*Pometia pinnata*	Jhit, Kandam
0949	*Pongamia pinnata* *(Old) Bongamia glabra*	Karanji, Kauge, Polangunge
0950	*Populus ciliata*	Poplar, Safeda, Paharipipal
0951	*Populus species*	Bonpipal, Godhpipal
0952	*Pouteria grandiflora*	
0953	*Premna bengalensis*	Gohra, Pingta, Guze, Pakirhar
0954	*Premna latifolia*	Gunaru
0955	*Premna milleflora*	Silgomari
0956	*Premna species*	Bakarcha
0957	*Premna tomentosa*	
0958	*Prosopis ceneraria*	Hingota
0959	*Prosopis guliflora*	
0960	*Prosopis species*	Pahari kikar
0961	*Prosopis spicigera*	Jamrai, Jamni
0962	*Protium caudatum*	Kondamavu
0963	*Protium serratum* *(Old) Bursera serrata*	Mirtegna, Neur, Hern
0964	*Prunus communis/ varinsitia*	Pulum
0965	*Prunus cornata* *(Old) Prunus padus*	Payyan, Jamun, Padam, Paji
0966	*Prunus domestica*	
0967	*Prunus martabanica*	Lal thingam
0968	*Prunus nepalensis*	Arupate
0969	*Prunus species*	Aria, Gont, Aru, Khurmani, Chiller

Species Code	Botanical Name	Common/Local Names
0970	*Pruspopis cineraria*	Jand, Jant
0971	*Pseudostachyam polymorphum*	Bajal
0972	*Psidium guyava*	Guava, Jam
0973	*Psychotria dalzellii*	Dutiyale, Fatpati
0974	*Psychotria species*	Ottumadikay
0975	*Pterocarpus indicus/ dalbergioides*	Pokak, Podauk
0976	*Pterocarpus marsupium*	Bija, Bijo, Bib, Bijasal, Pesur, Vengi, Honne, Damsal, Bibla, Asan
0977	*Pterocarpus santalinus*	Rakta chandan
0978	*Pterocymbium tinctorium/ sterculia companculata*	Papita
0979	*Pterospermum acerifolium*	Kapak, Champa, Ratipalia
0980	*Pterospermum canescens*	Hathipalli
0981	*Pterospermum glabrescens*	Vatta Polavu, Pambaram
0982	*Pterospermum heyneanum*	Giringa
0983	*Pterospermum lanceaefolium*	Bongloguri
0984	*Pterospermum reticulatum*	Mulipolovu, Tholpuli, Kora toverary, Malavuram punangke
0985	*Pterospermum rubigonosum*	Malamthodali, Chittilei, Polavo
0986	*Pterospermum species*	Bhatgila, Togune
0987	*Pterospermum suberifolium*	Sownamara
0988	*Pterygota alata* *(Old) Sterculia alata*	
0989	*Punica granatum*	Anar, Kotla, Darum, Sarchamia, Bandurpela
0990	*Putranjiva roxburghii*	Putajan, Putranjiv
0991	*Pyrularia edulis*	Amplu
0992	*Pyrus pashia*	Kainth, Mehal
0993	*Pyrus species*	Galya, Mohul, Moi, Moli
0994		
0995		
0996		
0997		
0998		
0999		
1000		
1001		
1002		
1003		
1004	*Quercus acutissima*	
1005	*Quercus dilatata*	Titonj, Moru, Moruoak
1006	*Quercus dilatata floribunda*	Moru, Moru oak
1007	*Quercus glauca*	
1008	*Quercus griffithii*	
1009	*Quercus Himalayana*	

Species Code	Botanical Name	Common/Local Names
1010	*Quercus incana*	Ban oak, Banj
1011	*Quercus lamellosa*	Bajrant, Buk
1012	*Quercus lanceaefolia*	Patle, Katus
1013	*Quercus lanuginosa*	
1014	*Quercus leucotrichophora*	
1015	*Quercus lineata*	Phalat, Katus
1016	*Quercus pachyphylla*	
1017	*Quercus semecarpifolia*	Kharsu oak
1018	*Quercus semiserrata/Velutina*	
1019	*Quercus serrata*	Kharsu
1020	*Quercus species*	Oak, Philiant, Rainj, Riani
1021	*Quercus spicata*	Ar kanla
1022		
1023		
1024		
1025		
1026		
1027		
1028		
1029		
1030		
1031		
1032	*Radermachera xylocarpa*	Genasu
1033	*Randia dumetorum*	Phetra, Kala phetra, Gela
1034	*Randia species*	Mainphal
1035	*Randia uliginose*	Kala phetra
1036	*Rauwolfia serpentina*	Sarpagandhi, Garudapotala
1037	*Rhizophora species*	Khair
1038	*Rhododendron arboreum*	Burans, Biirans
1039	*Rhododendron barbatum*	Lalchimal
1040	*Rhododendron falooneri*	Korlingo
1041	*Rhododendron griffithianum*	Sctochimal
1042	*Rhododendron hodgsoni*	Korlings
1043	*Rhododendron species*	Ghemula, Talias, Simris, Taqueaha
1044	*Rhus javanica*	
1045	*Rhus species*	Jung, Nizas, Tibri, Arkhol, Almora
1046	*Rhus succedanea*	
1047	*Robinia pseudocacia*	
1048		
1049		
1050		
1051		
1052		

Species Code	Botanical Name	Common/Local Names
1053		
1054		
1055		
1056		
1057		
1058	*Saccopetalum tomentosum*	Ubalu
1059	*Sageraea elliptica*	Chvoi
1060	*Sageraea laurifolia*	Kanakaitha
1061	*Sageraea oppositifolia*	Gonta
1062	*Salix acmophylla*	
1063	*Salix alba*	Bhains
1064	*Salix species*	Bed, Bhainshara, Bashroi, Manju, Gadhbhains
1065	*Salix tetrasperma*	Bheh
1066	*Salmalia insignis* *(Old) bambax insignis*	Karilavu, Pareillavu, Dumboil, Kalilavu, Pariilavu
1067	*Salvadora oleoides*	Piloo, Mithijar
1068	*Salvadora persica*	Piloo, Khanjau
1069	*Salvadora species*	Jal, Jhal
1070	*Sananea samom*	Raintree
1071	*Santalum album*	Chandan, Santhanam, Sukhad
1072	*Sapindus attenuatus*	
1073	*Sapindus emarginatus* *(Old) Sapindus trifoliatus*	Ritha, Aritha, Chootokoi, Kumkuda
1074	*Sapindus laurifolius*	Arithi
1075	*Sapindus mukorossi*	Ritha/Bhilwa, Bhilam, Bhiwalo
1076	*Sapium baccatum*	Selling, Bella
1077	*Sapium eugeniaefolium*	
1078	*Sapium insigne*	Khinna, Khirna, Khimi, Hure
1079	*Sapium sebiferum*	
1080	*Sarcosperma arboreum*	Kalikath
1081	*Saurauja nepaulensis*	Gogun
1082	*Saurauja punduana*	
1083	*Schima khasiana*	Diengan
1084	*Schima khasiana*	Makrisal
1085	*Schima wallichii*	Makrisal
1086	*Schleichera trijuga/oleosa*	Kusum, Poova, Segade, Gosum, Katha, Ume, Koshimb, Kosam, Poovam
1087	*Schrebera swietenioides*	Mokha, Mokho, Mokab
1088	*Scolopia crenata*	Kodelimara, Sompai, Japal, Charle
1089	*Semecarpus anacardium*	Bhilwa, Bhela, Bibi
1090	*Semecarpus auriculata*	Vellei charei, Man cherei, Charei
1091	*Semecarpus kurzii*	Bora bhilwa, Bibi
1092	*Semecarpus travancorica*	Kattu, Shenkottei, Punnacheri, Avukeram
1093	*Sesbania bispinosa*	Chaveri

Species Code	Botanical Name	Common/Local Names
1094	*Sesbania grandiflora*	Bakful
1095	*Shorea assamica*	Makai
1096	*Shorea robusta*	Sal
1097	*Shorea talura*	
1098	*Shorea tambugarg*	Congu, Tambugai, Tanbagum, Thamba guggilapukara
1099	*Sideroxylon grandifolium*	
1100	*Sideroxylon longepetiolatium/ Planchonellia longipetiolata*	Lambapretti
1101	*Sloanea assamica (Old) Echinocarpus assamicus*	Joba, Kori, Gingori
1102	*Sloanea dasycarpa (Old) Echinocarpus dasycarpa*	Seta, Binder, Gobra
1103	*Smilax prolifera*	Nirubetta, Karinarigaddi
1104	*Solanum nigrum*	Piloo, Pilchhi
1105	*Sonneratia apetala*	Keowara, Keoda
1106	*Sonneratia caseolaris (Old) Sonneratia acida*	Lamu
1107	*Soymida febrifuga*	Rohan, Royan, Somi
1108	*Spondias acuminata*	Ambat
1109	*Spondias axillaris*	Lapsi
1110	*Spondios pinnata/ Spondias mangifera*	Ambra, Amra, Amar, Amria, Amora, Khati, Kadambate, Ambudi, Ambada
1111	*Stephegyne parviflora*	Panikadam
1112	*Sterculia asper*	Eairadanti, Mitle
1113	*Sterculia foetida*	Badam
1114	*Sterculia guttata*	Kithendi, Thendi, Kudare punclal, Kokar, Kolindar
1115	*Sterculia urens*	Kullu, Kadaya, Kadu, Genduli, Tapsi, Panerukh, Kandol, Salad
1116	*Sterculia villosa*	Udala, Vikka, Chilk, Sarda, Udal, Godgh, Dala
1117	*Stereospermum aungstifolium*	Chaipatoli
1118	*Stereospermum personatum/ Colaris/Chelonoides*	Padar, Paroli, Malai, Karingkhuru, Pumbhathiri, Dharmara
1119	*Stereospermum suaveolens*	Pedal, Pader, Khadsing
1120		
1121	*Straamvaesia glaucescens*	Gadh meha
1122	*Strobilanthes species*	Gurgi, Yelegargu
1123	*Strobosia ceylinca*	Yeeya
1124	*Strombosia leprosa*	Chitramara
1125	*Strychnos nuxvomica*	Ruchala, Mushti, Kajra
1126	*Strychnos potatorum*	Nirmali
1127	*Styrox serratum*	
1128	*Swietenia febrifuga*	
1129	*Swietenia mahagoni*	Mohogani

Species Code	Botanical Name	Common/Local Names
1130	*Symingtoria populnea* *(Old) Bucklanbia populnea*	Pipli
1131	*Symphyllia mallotiformas*	Ammemara
1132	*Symplocos crataegoides*	Lodh, Lodhra
1133	*Symplocos laurina* *(Old) Symplocos spicata*	Kharana
1134	*Symplocos theaefolia*	Kharana
1135	*Syzygium cerasoideum* *(Old) Euginea cerasoides/ operculatus*	Piamam, Raijamuni
1136	*Syzygium cumini/jambolanum* *(Old) Eugenia jambolana*	Jamun, Jamoon, Piaman, Rajamun, Jamak, Jambudo, Jambu, Jambudi, Jambhul
1137	*Syzygium gardneri*	Bilitrupe, Boliurpa, Bilichuropa
1138	*Syzygium jambos*	Rose apple, Golap jam
1139	*Syzygium mentanum*	Ped, Neralu, Panjambul
1140	*Syzygium ornottianvm*	Vhikksri
1141	*Syzygium ramphiphylla*	
1142	*Syzygium sonnaranangense*	Jamrul
1143	*Syzygium syrygoides*	
1144	*Syzygium utilis*	Hanneralu, Henneri
1145	*Syzygium zeylanicum* *(Old) Eugenia spicata*	Hole, Lukki, Nekral, Hole-lucky
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1155		
1156	*Tabernae montana/ heyneana* *(Old) Ervatamia heyneana*	Madderse, Kuda, Nab, Maddlemera
1157	*Tabernoe montendichotama*	Maddrasa
1158	*Talauma hodgsoni*	Boramanfluri
1159	*Talauma phellocarpa*	Khari, Kasopa, Tite sopa
1160	*Tamarindus indica*	Imali, Amli, Chinch, Ambli, Tentulii, Chinta
1161	*Tamarix articulata*	Farash
1162	*Taxus baccata*	Thuder
1163	*Tecomella undulata*	
1164	*Tectona grandis*	Sagwan, Teak
1165	*Teinostachyum dullooa*	Palso
1166	*Terma amboinensis*	Bukin patti
1167	*Terminalia arjuna*	Arjun, Kahuwa, Sadadoe, Naiain, Sadada

Species Code	Botanical Name	Common/Local Names
1168	*Terminalia belerica*	Behera, Behdo, Gowa, Phomra, Kamia, Tharala, Thani, Thannia, Thavale, Hela, Vehela
1169	*Terminalia bialata*	White chuglam
1170	*Terminalia catappa*	Bengal almond
1171	*Terminalia chebula*	Harra, Karaka, Har, Harar, Hirdo kadukkai, Karida, Haritaki, Karida
1172	*Terminalia citrina*	Hilka, Hirtake, Bombwe
1173	*Terminalia crenulata/tomentosa*	Saja, Sajad, Saj, Ain, Alu, Asan, Sain, Pakasaj, Karimaradu, Thambavu
1174	*Terminalia manii*	Black chuglam
1175	*Terminalia myriocarpa*	Hollock, Pani
1176	*Terminalia paniculata*	Pillemaradu, Kinjal, Maruthu
1177	*Terminalia procera*	
1178	*Terminalia species*	Bomda
1179	*Terminalia travancorensis*	Pei kadukkai, Chule maruther, Kattakadukkai
1180	*Ternstroemia gymnathera* *(Old) Ternstroemia japonica*	
1181	*Tetrameles nudiflora*	Bhulu, Tulu, Chini, Kapsin, Vellacheeni, Vellapasa, Thitpok, Chandul, Siddam
1182	*Thespesia populnea*	Bhendi
1183	*Thuja compacta*	
1184	*Toddalia bilocularis*	Mangappe
1185	*Trema orientalis*	Geta, Klargol, Kapshi
1186	*Trewia nudiflora*	Gutel, Thumri, Retari, Dhenleppedda, Perumera, Borra, Pituli, Kumbil, Bhura, Mera
1187	*Trigonostemon semperflorens*	
1188	*Tsuga dumosa* *(Old) Tsuga brunoniana*	Tamer, Hemlock, Tansen
1189	*Tupidanthus calyptratus*	Thingsaki
1190	*Turpinia cochinchinensis* *(Old) Turpinia nepalensis*	Kanali, Pambe-Vetti
1191		
1192		
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1198		
1199		
1200		
1201	*Ulmus integrifolia*	Manuk
1202	*Ulmus lancifolia*	Diengtyrsam
1203	*Ulmus parviflora*	
1204	*Ulmus wallichiana*	Chamar, Mawa, Himri, Himalayahelm

Species Code	Botanical Name	Common/Local Names
1205	*Uvaria hamiltoni*	
1206		
1207		
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1215		
1216	*V khasiana*	
1217	*Vateria indica*	Payia, Paini, Velthapan
1218	*Vatica chinensis*	Nedunatha
1219	*Vatica lanceaefolia*	Morhal
1220	*Vatica roxburghiana*	Adakapaini
1221	*Vepris bilocularis*	Kareagil
1222	*Viburnum acuminatum*	Yalesandi
1223	*Viburnum punctatum*	Konakaran
1224	*Viburnum species*	Asare
1225	*Vitex alata*	
1226	*Vitex altissima*	Mayilayi, Myla, Mylellu, Bulgi
1227	*Vitex heterophylla*	Panch pate
1228	*Vitex leucoxylon*	Songarbi
1229	*Vitex negundo*	Sinuer
1230	*Vitex peduncularis*	Ahoi
1231		
1232		
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1234		
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1240		
1241	*Walsura piscidia*	Chokumara
1242	*Walsura trijuga*	Attemara
1243	*Webera corymbosa*	Chikoravi
1244	*Wendlandia exserta*	Bathna, Chaulai, Tirchuni, Nirgondi
1245	*Wendlandia notonia*	Puva, Kadamban
1246	*Wendlandia wallichii*	
1247	*Woodfordia floribunda*	Asre
1248	*Wrightia gigantea*	Baini karru

Species Code	Botanical Name	Common/Local Names
1249	*Wrightia tinctoria*	Dhudi, Kadav, Motikudi, Bhura, Aiyapale, Pale, Kudi, Kuda
1250	*Wrightia tomentosa*	Dhudi, Dasla, Dark, Palakodsa, Kuda, Tambada
1251		
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1257		
1258		
1259		
1260		
1261		
1262	*Xanthophyllum andamanicum*	Latpyan
1263	*Xanthophyllum flavescens*	Ksivokki, Chalape
1264	*Xanthophyllum rhetsa*	Mullilem, Rhetsa, Triphal
1265	*Xermophis uliginosa*	Kaikorai
1266	*Xerospermum glabratum*	Thingasaki
1267	*Xylia dolabriformis*	Pyinkado
1268	*Xylia xylocarpus*	Tangan, Trul, Irula konda, tangera, Jamba
1269	*Xylocarpus gangeticus*	
1270	*Xylocarpus granatum* *(Old) Carapa obovata*	Pinllon
1271	*Xylocarpus obovatus*	Pintim
1272	*Xylopia parvifolia*	Kaikoval
1273	*Xylosma longifolium*	Sallu, Kangrur
1274		
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1283		
1284	*Zanthoxylum alatum*	Tiur
1285	*Zanthoxylum budrunga*	
1286	*Zizyphus glabrata*	Karukunti
1287	*Zizyphus mauritiana* *(Old) Zizyphus jujuba*	Ber
1288	*Zizyphus oenoplia*	Sodimullu, Santhu pargi, Kaikoral, Kalpatta
1289	*Zizyphus rugosa*	Bilimaralahannu
1290	*Zizyphus xylopyrus*	Ghont, Gotti, Cathbor

Species Code	Botanical Name	Common/Local Names
1999	Unidentified trees/Miscellaneous	
2000	Identified and uncoded trees	
Bamboo & Cane		
2001	*Arundina maling*	
2002	*Bambusa arundinacea*	Kanta, Banas, Budit bans, Bamboo, Hollow bans, Velu
2003	*Bambusa balcooa*	Bamboo, Bhaluka
2004	*Bambusa khasiana*	Bamboo
2005	*Bambusa kingiana*	Bamboo
2006	*Bambusa nutaus*	Bamboo
2007	*Bambusa offinis*	Bamboo
2008	*Bambusa pallida*	Bamboo, Bijli, Makal
2009	*Bambusa polymorpha*	Bamboo
2010	*Bambusa species*	Bamboo
2011	*Bambusa teres*	Bamboo
2012	*Bambusa tulda*	Bamboo, Jati, Maritonga, Mritenga
2013	*Bambusa vulgaris*	Bamboo
2014	*Calamus andomanicus*	Cane, Thick cane
2015	*Calamus erectus*	Cane
2016	*Calamus floribundus*	Cane
2017	*Calamus latifolius*	Cane
2018	*Calamus leptospadix*	Cane
2019	*Calamus longisetus*	Cane
2020	*Calamus palustris*	Cane, Malaibet
2021	*Calamus species*	Cane
2022	*Calamus tenuis*	Cane
2023	*Dendrocalamus hamiltonii*	Bamboo, Kako, Okagi
2024	*Dendrocalamus longispathus*	Bamboo
2025	*Arundianaria species/ Thamnocalamus spathiflorus*	Ringal
2026	*Dendrocalamus species*	Bamboo
2027	*Dendrocalamus strictus*	Kanak, Shib, Udha, Medar, Bamboo, Solid bans, Chhota bans
2028	*Melocanna bambusoides*	Mooli bans, Bamboo

Species Code	Botanical Name	Common/Local Names
2029	*Nooheuzia balcooa*	Bamboo, Rauthla bans
2030	*Ochlandra brandisii*	Nanyurali, Maieetha, Chittu
2031	*Ochlandra travancorica*	Eral, Chittu, Etha
2032	*Oxytenanthera albociliata*	Bamboo
2033	*Oxytenanthera bourdilloni*	Reed
2034	*Oxytenanthera monostigma*	Bamboo
2035	*Oxytenanthera nigrociliata*	Bamboo
2036	*Oxytenanthera parviflora*	Bamboo
2037	*Oxytenanthera stockeii*	Bamboo, Manga, Konda
2038	*Oxytenanthera thwaitessi*	Reed
2039	*Teinostaliyum wightii*	Nanyura, Maieetha
2100	Unidentified bamboo	
2150	Unidentified canes	

Annexure – IX

List of Herbsous Species & code

(Note: The codes will be given after survey)

Annexure – X

List of Shrubs and Codes

(Note: The codes will be given after survey)

Field Form No.1

PLOT APPROACH FORM

1) Plot Approach Form must be filled in while the journey is in progress
2) While recording date it is essential to record month and year also.

1. FSI Zone
2. Physiographic Zone
3. State and Code
4. Division and Code
5. District and Code
6. Mapsheet No.
7. Grid Code
8. Crew Leader (name)
9. Name of Camp
10. Time (hrs.) at which left the camp
11. Distance covered by vehicle (km)
12. Time taken in journey by vehicle Hours Minutes
13. Name of the place up to which journey was performed by vehicle (describe in brief)
14. Conspicuous features observed during the journey by vehicle (describe in brief)
15. Time at which started on foot
16. Direction and distance covered on foot up to the reference point (km)
17. Conspicuous features observed during the journey on foot (describe in brief)
18. Time (hrs.) at which arrived at the reference point
19. Description of the reference point (describe in details)
20. Compass bearing from reference point to the plot approached for commencing survey
21. Distance of the plot from reference point (mtr.)
22. Time of arrival at the Plot

23. Time of departure from the Plot
24. Time (hrs.) at which returned to the camp
25. Compassing done by
26. Distance measured by
27. Plot laid out by
28. Tree Enumeration done by
29. Height measurements taken by
30. B.T. and other measurements taken by
31. Bamboo enumeration done by
32. Bamboo weight taken by
33. References in the field written by
34. Remarks

Date : Signature of the Crew Leader

Diagrams etc.

A B

Field Form No. 2

PLOT DESCRIPTION FORM

Job No.	Survey code	Form Code	FSI Zone	Phy. Zone	State	District	Forest Division	Mapsheet No.	Grid code	Lat.	Long.	Legal Status	Land Use
1-3	4	5-6	7	8-9	10-11	12-13	14-15	16-21	22-25	26-31	32-37	38	39-40
	1	01											

Terrain Data						Soil Data							Crop Data											Bamboo Data								Degraded Forest	
General Topography	Slope	Position on slope	Altitude	Aspect	Rockiness	Humus	Soil colour	Soil consistency	soil texture	Coarse Fragments	Soil depth	Soil erosion	Origin of stand	Crop composition	Canopy layer or storey	Top height	Size class	Intensity of regeneration	Species under regeneration	Injuries to crop	Fire incidence	Grazing incidence	Presence of weeds	Presence of grass	Bamboo density	Bamboo quality	Bamboo flowering	Bamboo regeneration	Plantation potential	Distance from road (km)	Distance from river/stream (m)	Plot status	Biotic influence	Natural calamity
41	42-44	45	46-49	50	51	52	53	54	55	56	57	58	59	60-61	62	63-64	65	66	67-70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85

Date……..

Signature of the Crew Leader……

Name of the Crew Leader……..……

Field Form No.3

PLOT ENUMERATION FORM

Job No.	Form Code	Mapsheet No.	Grid code
1-3	4-5	6-11	12-15
	02		

Total No. of bamboo clumps	Total No. of trees
72-74	75-77

Species Name		Species Name		Species Name		Species Name		Species Name		Species Name		Species Name		Species Name	
Code	Dia	Code	Dia	Code	Dia	Code	Dia	Code	Dia	Code	Dia	Code	Dia	Code	Dia
16-19	20-22	23-26	27-29	30-33	34-36	37-40	41-43	44-47	48-50	51-54	55-57	58-61	62-64	65-68	69-71

Date……..

Signature of the Crew Leader……
Name of the Crew Leader……..……

Field Form No.4

SAMPLE TREE FORM

Job No.	Form Code	Mapsheet No.	Grid code
1-3	4-5	6-11	12-15
	03		

Total No. of trees
52-53

Species name	Tree serial No.	Species code	Dominance	DBH OB (cm)	DBT (mm)	Tree height (m)	Crown width (m)		Species name	Tree serial No.	Species code	Dominance	DBH OB (cm)	DBT (mm)	Tree height (m)	Crown width (m)	
							CW1	CW2								CW1	CW2
	16-17	18-21	22	23-25	26-27	28-29	30-31	32-33		34-35	36-39	40	41-43	44-45	46-47	48-49	50-51

Date……..

Signature of the Crew Leader……
Name of the Crew Leader……..……

Field Form No.5

BAMBOO CLUMP ANALYSIS FORM

Job No.	Form Code	Mapsheet No.	Grid code
1-3	4-5	6-11	12-15
	04		

Average culm height (in dcm)		Bamboo quality
Upto 1 cm top dia	Upto 2 cm top dia	
72-74	75-77	78

Species		Clump Sl.No.	Clump Dia-meter (cms)	Clump size class	Green sound culm							Green damaged culms							Dry sound			Dry damaged culms			Deca-yed culms	Total no. of culms
Name	Code				Current year's	One to two years old			Over two years old			Current year's	One to two years old			Over two years old										
						2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms		2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms		
	16-19	20-22	23-25	26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	41-42	43-44	45-46	47-48	49-50	51-52	53-54	55-56	57-58	59-60	61-62	63-64	65-66	67-68	69-71

Date……..

Signature of the Crew Leader……

Name of the Crew Leader……..……

Field Form No.6

BAMBOO ENUMERATION & ANALYSIS FORM (NON CLUMP FORMING)

Job No.	Form Code	Mapsheet No.	Grid code
1-3	4-5	6-11	12-15
	05		

Species		Green sound culm							Green damaged culms							Dry sound culms			Dry damaged culms			Deca-yed culms	Average culm height in dcm.	Total no. of culms
Name	Code	Current year	One to two year old			Over two year old			Current year's	One to two year old			Over two year old											
			2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms		2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms	2<5 cms	5<8 cms	8+ cms			
	16-19	20-22	23-25	26-28	29-30	31-33	34-36	37-38	39-41	42-44	45-47	48-49	50-52	53-55	56-57	58-60	61-62	63-64	65-67	68-69	70-71	72-73	74-76	77-80

Date……..

Signature of the Crew Leader……

Name of the Crew Leader……..……

Field Form No.7

BAMBOO WEIGHT FORM

Job No.	Form Code	Mapsheet No.	Grid code
1-3	4-5	6-11	12-15
	06		

Species		Sample No.	2 to under 5 cms					5 to under 8 cm					8 cm and over					Green weight of sub-sample for co-relation with dry weight		
Name	Code		Diameter in cms	Total length in dcm	Utilisable length in dcm		Weight in grams	Diameter in cms	Total length in dcm	Utilisable length in dcm		Weight in grams	Diameter in cms	Total length in dcm	Utilisable length in dcm		Weight in grams	Sub-sample culm 2 & under 5 cm dia	Sub-sample culm 5 & under 8 cm dia	Sub-sample culm 8 cm and over
					Upto 1 cm top dia	Upto 2 cm top dia				Upto 1 cm top dia	Upto 2 cm top dia				Upto 1 cm top dia	Upto 2 cm top dia				
	16-19	20	21-22	23-25	26-28	29-31	32-36	37-38	39-41	42-44	45-47	48-52	53-54	55-57	58-60	61-63	64- 68	69-72	73-76	77-80

Date……..

Signature of the Crew Leader……
Name of the Crew Leader……..……

Note : - If inventory of Bamboo has been carried out earlier in the same area wherein green weight and dry weight have been taken, then the same may not be again carried out.

Field Form No.8

HERBS, SHRUBS & REGENERATION FORM

Job No.	Form Code	Mapsheet No.	Grid code	Plot location	Slope	Altitude	Aspect
1-3	4-5	6-11	12-15	16	17-19	20-23	24
	07						

Herb Plot size: 1m × 1m

Shrub & Regeneration Plot size: 3m × 3m

Herbs							Shrubs							Regeneration					
Species		Herbarium reference No.	No. of plants				Species		No. of plants				Herbarium reference No.	Species		Diameter at breast height (cm)	No. of plants		
Name	Code		Collar diameter class (mm)				Name	Code	Collar diameter class (cm)					Name	Code		Category of regeneration		
			0-2	2-5	5-8	8+			0-2	2-5	5-8	8+					1	2	3
	25-30	31-36	37-39	40-42	43-45	46-48		49-54	55-57	58-60	61-63	64-66	67-72		73-76	77	78-79	80-81	82-83

Date…….

Signature of the Crew Leader……..

Name of the Crew Leader……

Field Form No.9

SOIL & FOREST FLOOR CARBON FORM

Job No.	Form Code	Mapsheet No.	Grid code	Proportion of		Forest floor sample No.	Soil sample No.
				Gravel	Soil		
1-3	4-5	6-11	12-15	16-18	19-21	22-25	26-29
	08						

Weight of Forest Floor in gms.				Volume of soil	Weight of soil (gms)
NE	NW	SW	SE		
30-33	34-37	38-41	42-45	46-49	50-53

Date……

Signature of Crew Leader…...……

Name of Crew Leader…….

SOIL & FOREST FLOOR SAMPLE CARD

(To be read with Field Form 9)

1. Mapsheet No. _____

2. Grid Code _____

3. District Name _____

4. Sample No. _____

5. Date of Collection _____

Signature_____

Name & Signature of Crew Leader_____

Field Form No.10

SPECIAL STUDY FORM FOR VOLUME AND UTILITY CLASSES

Job No.	Form Code	Forest Division	Mapsheet No.	Grid code	Species code	Tree serial No.	Diameter (BHOB) (mm)	Diameter (BHUB) (mm)	Tree height before felling (m)	Tree length after felling (m)
1-3	4-5	6	7-12	13-16	17-20	21-22	23-26	27-30	31-32	33-34

Tree portion	Section No.	Height of section above base (cm)	Diameter 1 (mm)		Diameter 2 (mm)		Cull (code)	Rot		Hollowness		Knots			Split (code)	Twist (spiral grain) (code)	Flute (code)	Log form		External Defect (code)	Utility class (code)
			Over bark	Under bark	Over bark	Under bark		Defect (code)	Diameter (m)	Defect (code)	Diameter (m)	Type (code)	Diameter (m)	Number of knots				Longitudi-nal (code)	Sectional (code)		
35-36	37-38	39-42	43-46	47-50	51-54	55-58	59	60	61-63	64	65-67	68	69-71	72-73	74	75	76	77	78	79	80

Date……..

Signature of the Crew Leader……
Name of the Crew Leader……..……

Field Form No.8

HERBS, SHRUBS & REGENERATION FORM

Job No.	Form Code	Mapsheet No.	Grid code	Plot location	Slope	Altitude	Aspect
1-3	4-5	6-11	12-15	16	17-19	20-23	24
	07						

Herb Plot size: 1m × 1m

Shrub & Regeneration Plot size: 3m × 3m

Herbs				**Shrubs**				**Regeneration**			
Species		**Herbarium reference No.**	**Collar diameter (mm)**	**Species**		**Collar diameter (mm)**	**Herbarium reference No.**	**Species**		**Diameter at breast height (cm)**	**Category of regeneration**
Name	**Code**			**Name**	**Code**			**Name**	**Code**		
	25-30	**31-36**	**37-39**		**40-45**	**46-48**	**49-54**		**55-58**	**59**	**60**

Date…….

Signature of the Crew Leader……..

Name of the Crew Leader……