

REFERENCES

1. Ashutosh S, Sharma S, Lakhchaura P, Ghosh Sourav, Tripathi S and Uniyal M (2019). India's Nationally Determined Contribution of Creating an Additional Carbon Sink of 2.5 to 3 billion tonnes of CO₂ eq through Additional Forest & Tree Cover: Possibilities, Scale & Costs for Formulating Strategy. *FSI Technical Information Series, Vol 1* (3):1-54. **ISBN:** 978-81-941018-1-9.
2. Ashutosh S, Lakhchaura P, Pandey K, Ghosh Sourav, Tripathi S., Tripathi HK (2020). Trees Outside Forest Resources in India. *FSI Technical Information Series, Vol 2* (1): 1-30. **ISBN:** 978-81-941018-4-0.
3. Ashutosh S, Joshi M, Chandra S, Jain H, Kumar S, Gusain V, Das T, Pal A (2020). Rapid Assessment of Fire affected Forest Areas in the Country based on MODIS-detections following a Sampling Approach. *FSI Technical Information Series, Vol 2* (2): 1-20. **ISBN:** 978-81-941018-5-7.
4. Ashutosh S, Sharma S, Lakhchaura P, Pandey K, Tripathi H K, Tripathi S, Uniyal M (2020). Variability in forests and optimum sample size for estimation of Growing Stock in different districts of the country: a ready reckoner for working plan preparation or any other forest resource assessment exercise. *FSI Technical Information Series, Vol 2* (3): 1-25.
5. Ashutosh S and Ghosh Sourav (2020). A New Grid Based Algorithm for Detecting Locations of Change in Forest Vegetation in a Pin-Pointed Manner over Large Landscapes. *FSI Technical Information Series, Vol 2* (4): 1-21. **ISBN:** 978-81-950073-0-1.
6. Ashutosh S, Sharma S, Lakhchaura P, Joshi M, Ghosh Sourav, Rao V (FSI, DEHRADUN); Chaturvedi R (BITS PILANI, GOA); (2020). Mapping Climate Change Hotspots in Indian Forests Based on Observed Climate Change and High Resolution Climate Model Projections. *FSI Technical Information Series, Vol 2* (5): 1-62.
7. Champion HG and Seth SK (1968). A revised survey of: The Forest Types of India. Forest Research Institute, Dehradun.
8. Chaturvedi RK, Gopalakrishnan R, Jayaraman M, Bala G, Joshi NV, Sukumar R, Ravindranath NH (2011) Impact of climate change on Indian forests: a dynamic vegetation modelling approach. *Mitigation & Adaptation Strategies for Climate Change, Vol 16:* 119-142.
9. FAO (2007). World bamboo resources: A thematic study prepared in the framework of the Global Forest Resources Assessment. Non-wood forest products-18, Food and Agriculture Organization of the United Nations, Rome.
10. Food & Agriculture Organization (2014). The State Of The World's Forest Genetic Resources. **ISBN** 978-92-5-108402-1. Rome.
11. Food & Agriculture Organization (2020). Global Forest Resources Assessment 2020: Main report. Rome. **ISBN:** 978-92-5-132974-0. <https://doi.org/10.4060/ca9825en>
12. India State of Forest Report (2015). Forest Survey of India, Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India.
13. India State of Forest Report (2019), Forest Survey of India, Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India. **ISBN:** 978-81-941018-0-2.
14. Ghosh Subimal (2010). SVM-PGSL Coupled Approach for Statistical Downscaling to Predict Rainfall from GCM Output. *Journal of Geophysical Research, 115:*D22102.
15. Global Wildfire Information System (GWIS), 2019. <https://gwis.jrc.ec.europa.eu/>
16. Good Practice Guidance for Land Use, Land-Use Change and Forestry (2003), Intergovernmental Panel on Climate Change, Japan.

17. GTF (2016). Global Wild Tiger Status 2016, World Wildlife Fund and Global Tiger Forum.
18. Harris I, Jones PD, Osborn TJ, Lister DH (2014). Updated high-resolution grids of monthly climatic observations - the CRU TS3.10 Dataset, *International Journal of Climatology*, **34**(3):623-642.
19. IMD (2020). Statement on Climate of India during 2019, Press Release, 6th January 2020, India Meteorological Department, Ministry of Earth Sciences, New Delhi; accessed: https://mausam.imd.gov.in/backend/assets/press_release_pdf/Statement_on_Climate_of_India_during_2019.pdf (accessed on 10 November, 2020).
20. India's Intended Nationally Determined Contribution: Working towards Climate Justice (2015), MoEF & CC, Government of India.
21. India State of Forest Report (2017), Forest Survey of India, Ministry of Environment, Forest and Climate Change, Government of India.
22. IPCC (2003). Good Practice Guidance for Land Use, Land-Use Change and Forestry. Intergovernmental Panel on Climate Change. Printed in Japan. **ISBN: 4-88788-003-0**.
23. IPCC Guidelines for National Green House Gas Inventories (2006), Intergovernmental Panel on Climate Change.
24. IPCC (2014) Summary for policymakers, In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field CB, Barros VR, Dokken DJ, Mach KJ, Mastrandrea MD, Bilir TE, Chatterjee M, Ebi KL, Estrada YO, Genova RC, Girma B, Kissel ES, Levy AN, MacCracken S, Mastrandrea PR, White LL (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
25. IPCC Special Report (2018). Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments.
26. IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V, P Zhai, A Pirani, SL Connors, C Péan, S Berger, N Caud, Y Chen, L Goldfarb, MI Gomis, M Huang, K Leitzell, E Lonnoy, J B R Matthews, T K Maycock, T Waterfield, O Yelekçi, R Yu, and B Zhou (eds.)]. Cambridge University Press. In Press.
27. Jensen Robert J (2007). Remote Sensing of the Environment: An Earth Resource Perspective. 2nd Edition. Prentice-Hall. **ISBN: 0-13-188950-8**.
28. Khan M, Coulibaly P, Dibike Y (2006). Uncertainty Analysis of Statistical Downscaling Methods. *Journal of Hydrology*, **319** (1):357-382.
29. Masui, Toshihiko & Matsumoto, Ken'ichi & Hijioka, Yasuaki & Kinoshita, Tsuguki & Nozawa, Toru & Ishiwatari, Sawako & Kato, Etsushi & Shukla, Priyadarshi & Yamagata, Yoshiki & Kainuma, Mikiko. (2011). An Emission Pathway for Stabilization at 6Wm-2 Radiative Forcing. *Climatic Change*. **109**. 59-76. 10.1007/s10584-011-0150-5.
30. NAPFF (2018). National Action Plan on Forest Fires. Report by Forest Protection Division, Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India.
31. National Forest Policy (1988), Ministry of Environment and Forests, Government of India.
32. Pai DS, Sridhar L, Badwaik MR, Rajeevan M (2014). Analysis of the daily rainfall events over India using a new long period (1901-2010) high resolution (0.25°× 0.25°) gridded rainfall data set. *Climate Dynamics*, **45**:755-776.

33. Riahi K, Gruebler A, Nakicenovic N (2007). Scenarios of long-term socio-economic and environmental development under climate stabilization. *Technological Forecasting and Social Change*, **74**:887-935.
34. Reichstein M and Carvalhais N (2019). Aspects of Forest Biomass in the Earth System: Its Role and Major Unknowns, *Surveys in Geophysics*. **Vol 40**: 693-707.
35. Singh AP and Nala RR (2018). Estimation of the Status of Asiatic Lion (*Panthera leo persica*) Population in Gir Lion Landscape, Gujarat, India. *Indian Forester*, **144** (10): 887-892.
36. Srivastava AK, Rajeevan M, Kshirsagar SR (2009). Development of a high resolution daily gridded temperature data set (1969-2005) for the Indian region. *Atmospheric Science Letters*, **10** (4): 249-254.
37. Telwala Y, Brook BW, Manish K, Pandit MK (2013). Climate-Induced Elevational Range Shifts and Increase in Plant Species Richness in a Himalayan Biodiversity Epicentre. *PLoS ONE* **8** (2): e57103. doi:10.1371/journal.pone.0057103
38. Tiger Census (2018). National Tiger Conservation Authority. Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India.
39. The Paris Agreement (Based on COP 21, 2015, Paris, France) (2016). United Nations Framework Convention On Climate Change (UNFCCC).
40. University of Idaho (2009). Online Information from College of Natural Resources: Principles of Vegetation Measurement & Assessment and Ecological Monitoring & Analysis. https://www.webpages.uidaho.edu/veg_measure/
41. Van Vuuren, D.P., Edmonds, J., Kainuma, M. *et al.* (2011). The representative concentration pathways: an overview. *Climatic Change* **109**, 5. <https://doi.org/10.1007/s10584-011-0148-z>
42. Wise, MA, Calvin KV, Thomson AM, Clarke LE, Lamberty BB, Sands RD, Smith SJ, Janetos AC, Edmonds JA (2009). Implications of Limiting CO₂ Concentrations for Land Use and Energy. *Science*, **324**:1183-1186.
43. World Wide Fund for Nature (WWF) (2020). Fires, forests and the future: A crisis raging out of control Joint Report by the World Wide Fund for Nature (WWF), Switzerland and Boston Consulting Group (BCG), US.
44. World Wide Fund for Nature (WWF) (2021). Terrestrial Ecoregions. World Wildlife Fund. Retrieved 16 September 2021. <https://www.worldwildlife.org/ecoregions/im0206>

ANNEXURE-I

Sl. No.	Name of the State/UT	Period of FCC/data used for ISFR-2021	
		From	To
1	Andhra Pradesh	November-2019	May-2020
2	Arunachal Pradesh	November-2019	April-2020
3	Assam	March-2019	September-2020
4	Bihar	November-2019	
5	Chhattisgarh	November-2019	February-2020
6	Delhi	March-2020	
7	Goa	November-2019	
8	Gujarat	October-2019	January-2020
9	Haryana	October-2019	March-2020
10	Himachal Pradesh	September-2019	December-2019
11	Jharkhand	November-2019	January-2020
12	Karnataka	November-2019	January-2020
13	Kerala	November-2019	January-2020
14	Madhya Pradesh	October-2019	January-2020
15	Maharashtra	November-2019	February-2020
16	Manipur	December-2019	March-2020
17	Meghalaya	November-2019	April-2020
18	Mizoram	November-2019	January-2020
19	Nagaland	December-2019	March-2020
20	Odisha	November-2019	January-2020
21	Punjab	October-2019	December-2019
22	Rajasthan	October-2019	January-2020
23	Sikkim	November-2019	April-2020
24	Tamil Nadu	January-2020	November-2020
25	Telangana	November-2019	April-2020
26	Tripura	November-2019	May-2020
27	Uttar Pradesh	October-2019	January-2020
28	Uttarakhand	October-2019	November-2019
29	West Bengal	November-2019	January-2020
30	A & N Islands	March-2020	April-2020
31	Chandigarh	March-2020	
32	Dadra & Nagar Haveli and Daman & Diu	November-2019	
33	Jammu & Kashmir	September-2019	May-2020
34	Ladakh	September-2019	May-2020
35	Lakshadweep	December-2019	October-2020
36	Puducherry	January-2020	October-2020

ANNEXURE-II

Volume equations to compute volume of wood in predominate trees in each State/UT are provided in the following tables:

ANDHRA PRADESH

Sl. No.	Species Name	Volume Equation
1	<i>Albizia amara</i>	$V=(0.13817-2.16947*D+11.4087*D^2+1.11636*D^3)$
2	<i>Anogeissus latifolia</i>	$V=(0.034725-0.78412*D+7.1873*D^2+6.9495*D^3)$
3	<i>Dalbergia paniculata</i>	$\sqrt{V}=(-0.144504+2.943115*D)$
4	<i>Ficus species</i>	$V=(0.088074-1.449236*D+8.760534*D^2)$
5	<i>Hardwickia binata</i>	$V=(0.025091-0.185618*D+3.561089*D^2+10.80139*D^3)$
6	<i>Lannea coromandelica</i>	$V=(0.057424-1.153088*D+8.542648*D^2)$
7	<i>Pterocarpus marsupium</i>	$V=(0.058424-1.233468*D+9.433633*D^2)$
8	<i>Tamarindus indica</i>	$V=(0.088074-1.449236*D+8.760534*D^2)$
9	<i>Terminalia crenulata</i>	$V=(0.05061-1.11994*D+8.77839*D^2)$
10	<i>Xylia xylocarpa</i>	$V=(0.098-1.52*D+8.963*D^2)$

ARUNACHAL PRADESH

Sl. No.	Species Name	Volume Equation
1	<i>Bischofia javanica</i>	$V=(0.00978-0.21005*D+5.62160*D^2)$
2	<i>Bombax ceiba</i>	$V=(0.00978-0.21005*D+5.62160*D^2)$
3	<i>Castanopsis indica</i>	$V=(0.05331-0.87098*D+6.52533*D^2+1.74231*D^3)$
4	<i>Castanopsis species</i>	$V=(0.05331-0.87098*D+6.52533*D^2+1.74231*D^3)$
5	<i>Duabanga grandiflora</i>	$\sqrt{V}=(0.13199+3.35856*D-0.79250*?D)$
6	<i>Gmelina arborea</i>	$V=0.01156+0.21230*D+5.10448*D^2)$
7	<i>Pinus roxburghii</i>	$\sqrt{V}=(0.291801+6.041763*D-2.430993*?D)$
8	<i>Pterospermum acerifolium</i>	$V=(0.00978-0.21005*D+5.62160*D^2)$
9	<i>Sterculia villosa</i>	$\sqrt{V}=(0.35895+4.99513*D-2.14135*?D)$
10	<i>Terminalia myriocarpa</i>	$V=(-0.096981+10.65*D^2)$

ASSAM

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
2	<i>Bauhinia retusa</i>	$V=(-0.04262+6.09491*D^2)$
3	<i>Bombax ceiba</i>	$V=(0.04507-0.93461*D+5.48513*D^2+9.16037*D^3)$
4	<i>Gmelina arborea</i>	$V=(0.1156+0.21230*D+5.10448*D^2)$
5	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.32985+2.21152*D+0.78769*?D)$
6	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$
7	<i>Shorea robusta</i>	$\sqrt{V}=(-0.22388+3.29474*D)$
8	<i>Stereospermum personatum</i>	$\sqrt{V}=(0.49746+5.98454*D-2.84986*?D)$
9	<i>Tectona grandis</i>	$\sqrt{V}=(-0.405890+1.98158*D+0.987373*?D)$
10	<i>Terminalia bellirica</i>	$\sqrt{V}=(-0.14325+3.07937*D)$

BIHAR

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$\sqrt{V}=(-0.07738+2.592167*D)$
2	<i>Boswellia serrata</i>	$V=(0.03356-1.124*D+10.306*D^2)$
3	<i>Butea monosperma</i>	$V=(0.136196-2.07674*D+10.1566*D^2)$
4	<i>Ficus racemosa</i>	$V=(0.05396-0.82031*D+6.17975*D^2)$
5	<i>Ficus religiosa</i>	$V=(0.05396-0.82031*D+6.17975*D^2)$
6	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.32985+2.21152*D+0.78769*D)$
7	<i>Madhuca latifolia</i>	$V=(-0.00092-0.55547*D+7.3446*D^2)$
8	<i>Mallotus philippinensis</i>	$V=(0.14749-2.87503*D+19.61977*D^2-19.11630*D^3)$
9	<i>Shorea robusta</i>	$V=(0.1563-2.45104*D+11.90581*D^2)$
10	<i>Terminalia crenulata</i>	$V=(0.08565-1.51685*D+10.24871*D^2)$

CHHATTISGARH

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$V=(-0.02958+8.05003*D^2)$
2	<i>Boswellia serrata</i>	$V=(0.044621-1.25694*D+10.86801*D^2-3.009085*D^3)$
3	<i>Cleistanthus collinus</i>	$V=(-0.03915+0.16295*D+4.09182*D^2)$
4	<i>Diospyros melanoxylon</i>	$V=(0.12401-2.00966*D+10.87747*D^2)$
5	<i>Lagerstroemia parviflora</i>	$V=(0.0568-1.19611*D+9.11319*D^2)$
6	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.11751+2.86874*D)$
7	<i>Madhuca latifolia</i>	$V=(-0.00092-0.55547*D+7.3446*D^2)$
8	<i>Pterocarpus marsupium</i>	$V=(-0.04659+8.06901*D^2)$
9	<i>Shorea robusta</i>	$V=(0.17279-2.54241*D+13.08048*D^2-3.49087*D^3)$
10	<i>Terminalia crenulata</i>	$V=(0.00376-0.77604*D+8.35533*D^2)$

DELHI

Sl. No.	Species Name	Volume Equation
1	<i>Acacia arabica</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
2	<i>Acacia catechu</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
3	<i>Acacia lenticularis</i>	$\sqrt{V}=(-0.00142+2.61911*D-0.54703*D)$
4	<i>Azadirachta indica</i>	$V=(-0.03510+5.32981*D^2)$
5	<i>Cassia fistula</i>	$V=(0.05159-0.53331*D+3.46016*D^2+10.18473*D^3)$
6	<i>Ehretia laevis</i>	$V=(-0.03844+0.946490*D-5.40987*D^2+33.17338*D^3)$
7	<i>Ficus virens</i>	$\sqrt{V}=(0.03629+3.95389*D-0.84421*D)$
8	<i>Holoptelea integrifolia</i>	$\sqrt{V}=(0.21569+4.329878*D-1.504977*D)$
9	<i>Leucaena leucocephala</i>	$V=(0.081467-1.063661*D+6.452918*D^2)$
10	<i>Prosopis juliflora</i>	$V=(0.081467-1.063661*D+6.452918*D^2)$

GOA

Sl. No.	Species Name	Volume Equation
1	<i>Anacardium occidentale</i>	$V=(4.5899*D^2-0.422*D+0.0148)$
2	<i>Careya arborea</i>	$\sqrt{V}=(-0.23738+2.33289*D+0.48512*D^2)$
3	<i>Dillenia pentagyna</i>	$V=(0.070-1.295*D+9.429*D^2)$
4	<i>Lagerstroemia lanceolata</i>	$\sqrt{V}=(-0.13034+2.824203*D)$
5	<i>Lannea coromandelica</i>	$\sqrt{V}=(0.404153+5.555051*D-2.545525*D^2)$
6	<i>Schleichera trijuga</i>	$V=(0.01-0.912*D+11.396*D^2)$
7	<i>Syzygium cumini</i>	$\sqrt{V}=(0.30706+5.12731*D-2.0987*D^2)$
8	<i>Terminalia crenulata</i>	$\sqrt{V}=(-0.203947+3.159215*D)$
9	<i>Terminalia paniculata</i>	$V=(0.131-1.87132*D+9.47861*D^2)$
10	<i>Xylia xylocarpa</i>	$V=(0.007602-0.033037*D+1.868567*D^2+4.483454*D^3)$

GUJARAT

Sl. No.	Species Name	Volume Equation
1	<i>Adina cordifolia</i>	$\sqrt{V}=(0.21569+4.329878*D-1.504977*D^2)$
2	<i>Anogeissus latifolia</i>	$V=(0.030502-1.105937*D+12.261268*D^2)$
3	<i>Butea monosperma</i>	$V=(-0.032-0.0619*D+7.208*D^2)$
4	<i>Diospyros melanoxylon</i>	$V=(0.033867-0.975148*D+8.255412*D^2)$
5	<i>Lannea coromandelica</i>	$\sqrt{V}=(0.404153+5.555051*D-2.545525*D^2)$
6	<i>Madhuca latifolia</i>	$V=(0.074069-1.230020*D+7.726902*D^2)$
7	<i>Mitragyna parviflora</i>	$V=(0.099768-1.744274*D+10.086934*D^2)$
8	<i>Tectona grandis</i>	$V=(0.032011-0.995414*D+9.91129*D^2)$
9	<i>Terminalia crenulata</i>	$V=(0.060344-1.569539*D+12.090296*D^2)$
10	<i>Wrightia tinctoria</i>	$\sqrt{V}=(0.050294+3.115497*D-0.687813*D^2)$

HARYANA

Sl. No.	Species Name	Volume Equation
1	<i>Acacia arabica</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
2	<i>Acacia catechu</i>	$V=(0.02384-0.72161*D+7.46888*D^2)$
3	<i>Acacia tortilis</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
4	<i>Anogeissus latifolia</i>	$\sqrt{V}=(0.2122+4.947663*D-1.5929*D^2)$
5	<i>Dalbergia sissoo</i>	$V=(0.00331+0.000636*D^2*10000)$
6	<i>Eucalyptus species</i>	$V=(0.02894-0.89284*D+8.72416*D^2)$
7	<i>Lannea coromandelica</i>	$V=(0.14004-2.3599*D+11.90726*D^2)$
8	<i>Phoenix sylvestris</i>	$V=(0.0239-0.6266*D+5.4067*D^2)$
9	<i>Prosopis juliflora</i>	$V=(0.17553-0.71434*D+7.94663*D^2)$
10	<i>Syzygium cumini</i>	$V=(0.08481-1.81774*D+12.63047*D^2-6.69555*D^3)$

HIMACHAL PRADESH

Sl. No.	Species Name	Volume Equation
1	<i>Abies densa</i>	$\sqrt{V}=(-0.084305+3.060072*D)$
2	<i>Abies pindrow</i>	$V=(7.92*D^2+0.244*D-0.061)$
3	<i>Abies smithiana</i>	$V=(0.163269-2.232068*D+11.770869*D^2+1.06041*D^3)$
4	<i>Cedrus deodara</i>	$V=(10.03982*D^2-1.28303*D+0.07367)$
5	<i>Pinus excelsa</i>	$V=(10.44*D^2-0.851*D+0.020)$
6	<i>Pinus roxburghii</i>	$\sqrt{V}=(0.05131+3.9859*D-1.0245*D)$
7	<i>Quercus leucotrichophora</i>	$V=(0.0988-1.5547*D+10.1631*D^2)$
8	<i>Quercus semecarpifolia</i>	$V=(0.098800-1.55471*D+10.16317*D^2)$
9	<i>Rhododendron arboreum</i>	$\sqrt{V}=(0.306492+4.31536*D-1.749908*D)$
10	<i>Shorea robusta</i>	$\sqrt{V}=(0.16306+4.8991*D-1.57402*D)$

JHARKHAND

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$\sqrt{V}=(-0.07738+2.592167*D)$
2	<i>Boswellia serrata</i>	$V=(0.03356-1.124*D+10.306*D^2)$
3	<i>Buchanania latifolia</i>	$V=(0.031-0.64087*D+6.04066*D^2)$
4	<i>Butea monosperma</i>	$V=(0.0417-0.47789*D+3.50714*D^2+9.76048*D^3)$
5	<i>Diospyros melanoxylon</i>	$V=(0.12401-2.00966*D+10.87747*D^2)$
6	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.11751+2.86874*D)$
7	<i>Madhuca latifolia</i>	$V=(-0.00092-0.55547*D+7.3446*D^2)$
8	<i>Schleichera trijuga</i>	$V=(0.010-0.912*D+11.396*D^2)$
9	<i>Shorea robusta</i>	$V=(0.022585-0.70158*D+8.714*D^2)$
10	<i>Terminalia crenulata</i>	$V=(0.08565-1.51685*D+10.24871*D^2)$

KARNATAKA

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$V=(0.030502-1.105937*D+12.261268*D^2)$
2	<i>Careya arborea</i>	$\sqrt{V}=(0.23738+2.33289*D+0.48512*D)$
3	<i>Lagerstroemia lanceolata</i>	$V=(0.066188-1.334512*D+9.403257*D^2)$
4	<i>Olea dioica</i>	$V=(-0.03001+5.75523*D^2)$
5	<i>Poeciloneuron indicum</i>	$\sqrt{V}=(-0.153973+2.724109*D)$
6	<i>Syzygium cumini</i>	$\sqrt{V}=(0.30706+5.12731*D-2.0987*D)$
7	<i>Tectona grandis</i>	$\sqrt{V}=(-0.40589+1.98158*D+0.987373*D)$
8	<i>Terminalia crenulata</i>	$\sqrt{V}=(-0.203947+3.159215*D)$
9	<i>Terminalia paniculata</i>	$V=(0.131-1.87132*D+9.47861*D^2)$
10	<i>Xylocarpus xylocarpa</i>	$\sqrt{V}=(0.01631+2.20921*D)$

KERALA

Sl. No.	Species Name	Volume Equation
1	<i>Artocarpus hirsute</i>	$V=(0.076-1.319*D+11.37*D^2)$
2	<i>Diospyros species</i>	$\sqrt{V}=(-0.184139+2.892723*D)$
3	<i>Lagerstroemia lanceolata</i>	$V=(-0.06183+0.411348*D+1.84813*D^2+12.43582*D^3-4.26661*D^4)$
4	<i>Syzygium cumini</i>	$\sqrt{V}=(0.30706+5.12731*D-2.0987*D)$
5	<i>Tectona grandis</i>	$\sqrt{V}=(-0.40589+1.98158*D+0.987373*D)$
6	<i>Terminalia bellirica</i>	$\sqrt{V}=(-0.153973+2.724109*D)$
7	<i>Terminalia crenulata</i>	$\sqrt{V}=(-0.203947+3.159215*D)$
8	<i>Terminalia paniculata</i>	$V=(0.131-1.87132*D+9.47861*D^2)$
9	<i>Vateria indica</i>	$\sqrt{V}=(-0.15493+3.1119*D)$
10	<i>Xylia xylocarpa</i>	$\sqrt{V}=(0.01631+2.20921*D)$

MADHYA PRADESH

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$V=(0.145667-2.704089*D+17.4656*D^2-10.4903*D^3)$
2	<i>Boswellia serrata</i>	$V=(0.050452-1.228748*D+9.123381*D^2)$
3	<i>Butea monosperma</i>	$V=(0.0417-0.47789*D+3.50714*D^2+9.76048*D^3)$
4	<i>Diospyros melanoxylon</i>	$V=(0.033867-0.975148*D+8.255412*D^2)$
5	<i>Lagerstroemia parviflora</i>	$V=(0.0568-1.19611*D+9.11319*D^2)$
6	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.11751+2.86874*D)$
7	<i>Madhuca latifolia</i>	$V=(-0.00092-0.55547*D+7.3446*D^2)$
8	<i>Shorea robusta</i>	$\sqrt{V}=(0.19994+4.57179*D-1.56823*D)$
9	<i>Tectona grandis</i>	$V=(-0.003673-0.379175*D+6.368282*D^2)$
10	<i>Terminalia crenulata</i>	$V=(0.060344-1.569539*D+12.090296*D^2)$

MAHARASHTRA

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$V=(-0.061856+7.952136*D^2)$
2	<i>Boswellia serrata</i>	$V=(0.050452-1.228748*D+9.123381*D^2)$
3	<i>Butea monosperma</i>	$V=(0.18573-2.85418*D+15.03576*D^2)$
4	<i>Careya arborea</i>	$\sqrt{V}=(0.23738+2.33289*D+0.48512*D)$
5	<i>Lagerstroemia parviflora</i>	$V=(0.06466-1.371984*D+9.629971*D^2)$
6	<i>Lannea coromandelica</i>	$V=(0.093318-1.531417*D+9.011590*D^2)$
7	<i>Madhuca latifolia</i>	$V=(0.074069-1.230020*D+7.726902*D^2)$
8	<i>Pterocarpus marsupium</i>	$V=(0.028252-0.833643*D+8.033788*D^2)$
9	<i>Tectona grandis</i>	$\sqrt{V}=(-0.106720+2.562418*D)$
10	<i>Terminalia crenulata</i>	$V=(0.048532-1.05615*D+8.204564*D^2)$

MANIPUR

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
2	<i>Albizia procera</i>	$V=(0.13817-2.16947*D+11.4087*D2+1.11636*D3)$
3	<i>Callicarpa arborea</i>	$V=(0.11079-1.81103*D+11.4132*D2+0.38528*D3)$
4	<i>Castanopsis species</i>	$V=(-0.02301+0.12721*D+2.4127*D2+8.12834*D3)$
5	<i>Duabanga grandiflora</i>	$\sqrt{V}=(-0.01217+3.3993*D-0.28981*?D)$
6	<i>Ficus species</i>	$\sqrt{V}=(0.03629+3.95389*D-0.84421*?D)$
7	<i>Gmelina arborea</i>	$\sqrt{V}=(-0.00189+2.10033*D)$
8	<i>Pinus kesiya</i>	$V=(-0.01523+5.65779*D2)$
9	<i>Quercus species</i>	$V=(0.14153-2.27358*D+12.9049*D2)$
10	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$

MEGHALAYA

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
2	<i>Areca catechu</i>	$V=(0.0239-0.6266*D+5.4067*D2)$
3	<i>Artocarpus chaplasha</i>	$\sqrt{V}=(-0.15154+2.79983*D)$
4	<i>Artocarpus heterophyllus</i>	$\sqrt{V}=(-0.15154+2.79983*D)$
5	<i>Callicarpa arborea</i>	$\sqrt{V}=(-0.04506+2.33446*D)$
6	<i>Careya arborea</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
7	<i>Gmelina arborea</i>	$\sqrt{V}=(-0.00189+2.10033*D)$
8	<i>Hevea brasiliensis</i>	$\sqrt{V}=(-0.226400+2.935870*D)$
9	<i>Pinus kesiya</i>	$V=(-0.01523+5.65779*D2)$
10	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$

MIZORAM

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
2	<i>Callicarpa arborea</i>	$\sqrt{V}=(-0.04506+2.33446*D)$
3	<i>Castanopsis species</i>	$V=(0.05331-0.87098*D+6.52533*D2+1.74231*D3)$
4	<i>Cedrela toona</i>	$\sqrt{V}=(-0.05514+2.67753*D)$
5	<i>Duabanga grandiflora</i>	$\sqrt{V}=(-0.01217+3.3993*D-0.28981*?D)$
6	<i>Dysoxylum binectariferum</i>	$V=(-0.04752+0.50667*D+1.88433*D2+11.30632*D3)$
7	<i>Gmelina arborea</i>	$\sqrt{V}=(-0.00189+2.10033*D)$
8	<i>Macaranga species</i>	$V=(0.13333-2.18825*D+13.12678*D2)$
9	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$
10	<i>Tectona grandis</i>	$V=(0.19112-3.25372*D+17.9194*D2-1.66117*D3)$

NAGALAND

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*?D)$
2	<i>Alnus species</i>	$V=(0.0741-1.3603*D+10.9229*D^2)$
3	<i>Artocarpus chaplasha</i>	$\sqrt{V}=(-0.226400+2.935870*D)$
4	<i>Bauhinia retusa</i>	$\sqrt{V}=(-0.226400+2.935870*D)$
5	<i>Cedrela toona</i>	$\sqrt{V}=(-0.05514+2.67753*D)$
6	<i>Erythrina species</i>	$V=(-0.07803+1.70258*D-9.1618*D^2+33.91455*D^3)$
7	<i>Ficus species</i>	$\sqrt{V}=(0.03629+3.95389*D-0.84421*?D)$
8	<i>Quercus semiserrata</i>	$\sqrt{V}=(-0.226400+2.935870*D)$
9	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$
10	<i>Sterculia villosa</i>	$\sqrt{V}=(0.35895+4.99513*D-2.14135*?D)$

ODISHA

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$?V=(-0.357373+2.430449*D+0.794626*?D)$
2	<i>Diospyros melanoxylon</i>	$V=(-0.009124-0.494103*D+7.610416*D^2)$
3	<i>Ficus bengalensis</i>	$V=(0.020853-0.610255*D+6.108230*D^2)$
4	<i>Lannea coromandelica</i>	$V=(0.057424-1.153088*D+8.542648*D^2)$
5	<i>Madhuca latifolia</i>	$V=(-0.058016+0.352354*D+2.92291*D^2+3.624110*D^3)$
6	<i>Mangifera indica</i>	$V=(0.108-1.706*D+7.559*D^2)$
7	<i>Schleichera trijuga</i>	$?V=(-0.24358+3.58273*D)$
8	<i>Shorea robusta</i>	$?V=(0.19994+4.57179*D-1.56823*?D)$
9	<i>Syzygium cumini</i>	$\text{Loge}V=2.132776+2.479397 \text{ Loge}D$
10	<i>Terminalia crenulata</i>	$V=(0.05061-1.11994*D+8.77839*D^2)$

PUNJAB

Sl. No.	Species Name	Volume Equation
1	<i>Acacia catechu</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
2	<i>Albizia lebbeck</i>	$V=(-0.0367+5.87369*D^2)$
3	<i>Butea monosperma</i>	$\sqrt{V}=(-0.24276+2.95525*D)$
4	<i>Dalbergia sissoo</i>	$V=(0.00331+6.36*D^2)$
5	<i>Eucalyptus species</i>	$V=0.02894-0.89284*D+8.72416*D^2)$
6	<i>Grewia oppositifolia</i>	$V=(0.05858-1.20414*D+9.80167*D^2)$
7	<i>Holoptelea integrifolia</i>	$V=(0.17553-0.71434*?D+7.94663*D^2)$
8	<i>Lannea coromandelica</i>	$V=(0.14004-2.3599*D+11.90726*D^2)$
9	<i>Prosopis juliflora</i>	$V=(0.17553-0.71434*?D+7.94663*D^2)$
10	<i>Terminalia arjuna</i>	$\sqrt{V}=(-0.203947+3.159215*D)$

RAJASTHAN

Sl. No.	Species Name	Volume Equation
1	<i>Acacia catechu</i>	$V=(0.26949-1.61804*D+8.79495*D2+2.49489*D3)$
2	<i>Acacia lenticularis</i>	$V=(-0.048108+5.873169*D2)$
3	<i>Anogeissus latifolia</i>	$V=(-0.01662+4.4268*D2)$
4	<i>Anogeissus pendula</i>	$V=(0.00085-0.35165*D+4.77386*D2-0.90585*D3)$
5	<i>Boswellia serrata</i>	$\sqrt{V}=(-0.11629+2.4254*D)$
6	<i>Butea monosperma</i>	$V=(-0.032-0.0619*D+7.208*D2)$
7	<i>Diospyros melanoxylon</i>	$\sqrt{V}=(-0.184139+2.892723*D)$
8	<i>Lannea coromandelica</i>	$\sqrt{V}=(0.404153+5.555051*D-2.545525*D^2)$
9	<i>Madhuca latifolia</i>	$V=(0.081467-1.063661*D+6.452918*D2)$
10	<i>Tectona grandis</i>	$V=(0.062108-0.927983*D+6.613031*D2)$

SIKKIM

Sl. No.	Species Name	Volume Equation
1	<i>Abies densa</i>	$V=(0.10774-2.09529*D+12.62008*D2-1.61065*D3)$
2	<i>Acer species</i>	$\sqrt{V}=(-0.10851+3.0425*D)$
3	<i>Alnus species</i>	$V=(0.0741-1.3603*D+10.9229*D2)$
4	<i>Castanopsis species</i>	$V=(0.05331-0.87098*D+6.52533*D2+1.74231*D3)$
5	<i>Engelhardtia spicata</i>	$V=(0.007602-0.033037*D+1.868567*D2+4.483454*D3)$
6	<i>Eurya japonica</i>	$V=(-0.01097+5.30991*D2)$
7	<i>Machilus species</i>	$V=(4.84009*D2-0.02402)$
8	<i>Schima wallichii</i>	$\sqrt{V}=(-0.112426+2.54133*D)$
9	<i>Shorea robusta</i>	$\sqrt{V}=(-0.22388+3.29474*D)$
10	<i>Symplocos theaeifolia</i>	$V=(-0.03754+5.87*D2)$

TAMILNADU

Sl. No.	Species Name	Volume Equation
1	<i>Acacia Mearnsii</i>	$V=(0.088074-1.449236*D+8.760534*D2)$
2	<i>Albizia amara</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*D^2)$
3	<i>Anogeissus latifolia</i>	$V=(0.045731-1.020606*D+9.656667*D2)$
4	<i>Commiphora ostdets</i>	$V=(0.088074-1.449236*D+8.760534*D2)$
5	<i>Eucalyptus globules</i>	$\sqrt{V}=(-0.115412+3.12191*D)$
6	<i>Eucalyptus species</i>	$V=(0.02894-0.89284*D+8.72416*D2)$
7	<i>Ficus species</i>	$V=(0.088074-1.449236*D+8.760534*D2)$
8	<i>Pterocarpus marsupium</i>	$V=(0.058424-1.233468*D+9.433633*D2)$
9	<i>Tamarindus indica</i>	$V=(0.131-1.87132*D+9.47861*D2)$
10	<i>Tectona grandis</i>	$\sqrt{V}=(-0.405890+1.98158*D+0.987373*D^2)$

TELANGANA

Sl. No.	Species Name	Volume Equation
1	<i>Anogeissus latifolia</i>	$V=(-0.061856+7.952136*D^2)$
2	<i>Boswellia serrata</i>	$V=(0.028917+7.777047*D^3)$
3	<i>Cleistanthus collinus</i>	$V=(0.011617-0.309699*D+4.629527*D^2)$
4	<i>Dalbergia paniculata</i>	$\sqrt{V}=(-0.144504+2.943115*D)$
5	<i>Lagerstroemia parviflora</i>	$V=(0.066188-1.334512*D+9.403257*D^2)$
6	<i>Lannea coromandelica</i>	$V=(0.091153-1.66153*D+10.24624*D^2)$
7	<i>Madhuca latifolia</i>	$V=(0.046883-0.894379*D+7.220441*D^2)$
8	<i>Tectona grandis</i>	$V=(0.023613-0.531006*D+6.731036*D^2)$
9	<i>Terminalia crenulata</i>	$V=(0.051812-1.076790*D+7.991280*D^2)$
10	<i>Xylia xylocarpa</i>	$V=(0.05823+4.597986*D^3)$

TRIPURA

Sl. No.	Species Name	Volume Equation
1	<i>Albizia species</i>	$\sqrt{V}=(-0.07109+2.99732*D-0.26953*D^2)$
2	<i>Artocarpus chaplasha</i>	$\sqrt{V}=(-0.15154+2.79983*D)$
3	<i>Artocarpus heterophyllus</i>	$\sqrt{V}=(-0.15154+2.79983*D)$
4	<i>Gmelina arborea</i>	$\sqrt{V}=(-0.00189+2.10033*D)$
5	<i>Hevea brasiliensis</i>	$\sqrt{V}=(-0.226400+2.935870*D)$
6	<i>Lannea coromandelica</i>	$\sqrt{V}=(-0.21972+2.86603*D)$
7	<i>Macaranga species</i>	$V=(0.13333-2.18825*D+13.12678*D^2)$
8	<i>Pterospermum acerifolium</i>	$\sqrt{V}=(0.21596+4.14881*D-1.38264*D^2)$
9	<i>Schima wallichii</i>	$\sqrt{V}=(-0.11242+2.54133*D)$
10	<i>Tectona grandis</i>	$V=(0.19112-3.25372*D+17.9194*D^2-1.66117*D^3)$

UTTAR PRADESH

Sl. No.	Species Name	Volume Equation
1	<i>Acacia catechu</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
2	<i>Anogeissus latifolia</i>	$\sqrt{V}=(-0.07738+2.592167*D)$
3	<i>Butea monosperma</i>	$\sqrt{V}=(-0.24276+2.95525*D)$
4	<i>Ficus racemosa</i>	$\sqrt{V}=(0.03629+3.95389*D-0.84421*D^2)$
5	<i>Lannea coromandelica</i>	$V=(0.14004-2.3599*D+11.90726*D^2)$
6	<i>Mallotus philippinensis</i>	$V=0.14749-2.87503*D+19.61977*D^2-19.11630*D^3$
7	<i>Shorea robusta</i>	$\sqrt{V}=(-0.16306+4.8991*D-1.57402*D^2)$
8	<i>Syzygium cumini</i>	$V=(0.08481-1.81774*D+12.63047*D^2-6.9555*D^3)$
9	<i>Tectona grandis</i>	$V=(0.08847-1.46936*D+11.98979*D^2+1.970560*D^3)$
10	<i>Terminalia crenulata</i>	$V=(0.18149-2.85865*D+18.60799*D^2)$

UTTARAKHAND

Sl. No.	Species Name	Volume Equation
1	<i>Abies smithiana</i>	$V=(0.163269-2.232068*D+11.770869*D^2+1.06041*D^3)$
2	<i>Lyonia ovalifolia</i>	$V=(0.007602-0.033037*D+1.868567*D^2+4.483454*D^3)$
3	<i>Mallotus philippinensis</i>	$V=(0.14749-2.87503*D+19.61977*D^2-19.11630*D^3)$
4	<i>Pinus roxburghii</i>	$\sqrt{V}=(0.05131+3.9859*D-1.0245*?D)$
5	<i>Quercus floribunda</i>	$V=(0.0988-1.5547*D+10.1631*D^2)$
6	<i>Quercus leucotrichophora</i>	$\sqrt{V}=(0.240157+3.820069*D-1.39452*?D)$
7	<i>Quercus semecarpifolia</i>	$V=(0.098800-1.55471*D+10.16317*D^2)$
8	<i>Rhododendron arboreum</i>	$\sqrt{V}=(0.306492+4.31536*D-1.749908*?D)$
9	<i>Shorea robusta</i>	$\sqrt{V}=(0.16306+4.8991*D-1.57402*?D)$
10	<i>Terminalia crenulata</i>	$V=(0.08658-2.04096*D+13.28405*D^2-3.58047*D^3)$

WEST BENGAL

Sl. No.	Species Name	Volume Equation
1	<i>Acacia auriculiformis</i>	$V=(0.04235-0.74240*D+7.26875*D^2)$
2	<i>Butea monosperma</i>	$V=(0.031-0.64087*D+6.04066*D^2)$
3	<i>Eucalyptus species</i>	$V=(0.02894-0.89284*D+8.72416*D^2)$
4	<i>Lagerstroemia spaciola</i>	$V=(0.11740-1.58941*D+9.76464*D^2)$
5	<i>Madhuca latifolia</i>	$V=(0.046883-0.894379*D+7.220441*D^2)$
6	<i>Schima wallichii</i>	$\sqrt{V}=(0.28069+4.61980*D-1.65381*?D)$
7	<i>Shorea robusta</i>	$V=(0.16019-2.81861*D+16.19328*D^2)$
8	<i>Sterculia villosa</i>	$V=(0.025584-0.89224*D+9.5879*D^2)$
9	<i>Tectona grandis</i>	$V=(0.19112-3.25372*D+17.9194*D^2-1.66117*D^3)$
10	<i>Trewia nudiflora</i>	$V=(0.0549-1.31*D+10.0*D^2)$

ANDAMAN & NICOBAR ISLANDS

Sl. No.	Species Name	Volume Equation
1	<i>Bombax ceiba</i>	$V=(0.136196-2.07674*D+10.1566*D^2)$
2	<i>Canarium euphyllum</i>	$V=(0.004338-0.7315*D+11.1750*D^2)$
3	<i>Dillenia pentagyna</i>	$V=(0.070-1.295*D+9.429*D^2)$
4	<i>Dipterocarpus species</i>	$V=(-0.045595+8.576*D^2)$
5	<i>Dipterocarpus turbinatus</i>	$?V=(0.06063+3.43666*D-0.75571*?D)$
6	<i>Perishia insignis</i>	$?V=(0.06063+3.43666*D-0.75571*?D)$
7	<i>Pterocarpus indicus</i>	$?V=(0.06063+3.43666*D-0.75571*?D)$
8	<i>Pterocymbium tinctorium</i>	$V=(0.019795-0.99448*D+10.101*D^2)$
9	<i>Terminalia procera</i>	$V=(0.05061-1.11994*D+8.77839*D^2)$
10	<i>Tetrameles nudiflora</i>	$?V=(0.06063+3.43666*D-0.75571*?D)$

CHANDIGARH

Sl. No.	Species Name	Volume Equation
1	<i>Acacia arabica</i>	$V=(0.16609-2.78851*D+17.22127*D^2-11.60248*D^3)$
2	<i>Acacia catechu</i>	$V=(0.02384-0.72161*D+7.46888*D^2)$
3	<i>Dalbergia sissoo</i>	$V=(0.00331+6.36*D^2)$
4	<i>Eucalyptus species</i>	$V=(0.02894-0.89284*D+8.72416*D^2)$
5	<i>Leucaena leucocephala</i>	$V=(0.17553-0.71434*D+7.94663*D^2)$
6	<i>Melia azadirachta</i>	$V=(-0.03510+5.32981*D^2)$
7	<i>Morus species</i>	$V=(-0.0351+5.32981*D^2)$
8	<i>Populus species</i>	$?V=(-0.143393+3.040067*D)$
9	<i>Prosopis juliflora</i>	$V=(0.17553-0.71434*D+7.94663*D^2)$
10	<i>Terminalia bellirica</i>	$?V=(-0.14017+3.36423*D)$

DADRA & NAGAR HAVELI AND DAMAN & DIU

Sl. No.	Species Name	Volume Equation
1	<i>Acacia catechu</i>	$V=(-0.048108+5.873169*D^2)$
2	<i>Anogeissus latifolia</i>	$V=(0.030502-1.105937*D+12.261268*D^2)$
3	<i>Bridelia retusa</i>	$V=(-0.032-0.0619*D+7.208*D^2)$
4	<i>Butea monosperma</i>	$V=(-0.032-0.0619*D+7.208*D^2)$
5	<i>Grewia tiliaefolia</i>	$?V=(-0.153973+2.724109*D)$
6	<i>Lannea coromandelica</i>	$?V=(0.404153+5.555051*D-2.545525*D^2)$
7	<i>Madhuca latifolia</i>	$V=(0.074069-1.230020*D+7.726902*D^2)$
8	<i>Tectona grandis</i>	$?V=(-0.40589+1.98158*D+0.987373*D^2)$
9	<i>Terminalia belerica</i>	$V=(0.074706-1.430082*D+10.181971*D^2)$
10	<i>Terminalia crenulata</i>	$?V=(-0.203947+3.159215*D)$

JAMMU & KASHMIR

Sl. No.	Species Name	Volume Equation
1	<i>Abies densa</i>	$V=(0.10774-2.09529*D+12.62008*D^2-1.61065*D^3)$
2	<i>Abies pindrow</i>	$V=(0.10774-2.09529*D+12.62008*D^2-1.61065*D^3)$
3	<i>Abies smithiana</i>	$\sqrt{V}=(0.20050+4.58840*D-1.42603*D^2)$
4	<i>Cedrus deodara</i>	$V=(10.03982*D^2-1.28303*D+0.07367)$
5	<i>Mallotus philippinensis</i>	$V=(0.14749-2.87503*D+19.61977*D^2-19.11630*D^3)$
6	<i>Pinus excelsa</i>	$V=(0.02-0.851*D+10.44*D^2)$
7	<i>Pinus roxburghii</i>	$V=(0.128812-2.285176*D+11.950158*D^2)$
8	<i>Quercus floribunda</i>	$V=(0.04430-0.84266*D+6.36239*D^2+2.27556*D^3)$
9	<i>Quercus leucotrichophora</i>	$V=(0.04430-0.84266*D+6.36239*D^2+2.27556*D^3)$
10	<i>Taxus baccata</i>	$V=(0.007602-0.033037*D+1.868567*D^2+4.483454*D^3)$

Annexure- III A

Estimated number of trees by species and diameter class in Forest at Country level (in '000)

S. No.	Species	Diameter Class (cm)			Total	Percent
		10-30	30-60	60+		
1.	<i>Abies densa</i>	6,635	9,197	3,325	19,157	0.14
2.	<i>Abies pindrow</i>	22,439	28,248	12,693	63,380	0.45
3.	<i>Abies smithiana</i>	17,511	12,741	8,288	38,540	0.28
4.	<i>Acacia catechu</i>	1,69,582	5,035	242	1,74,859	1.25
5.	<i>Adina cordifolia</i>	37,944	10,747	2,521	51,212	0.37
6.	<i>Anogeissus latifolia</i>	4,60,793	50,692	2,211	5,13,696	3.67
7.	<i>Bombax ceiba</i>	27,396	14,030	4,770	46,196	0.33
8.	<i>Boswellia serrata</i>	57,114	44,927	1,372	1,03,413	0.74
9.	<i>Buchanania latifolia</i>	2,46,855	6,674	80	2,53,609	1.81
10.	<i>Butea monosperma</i>	1,80,760	17,530	410	1,98,700	1.42
11.	<i>Careya arborea</i>	47,302	4,894	216	52,412	0.37
12.	<i>Castanopsis species</i>	1,01,217	19,698	5,417	1,26,332	0.90
13.	<i>Cedrus deodara</i>	53,279	33,084	13,170	99,533	0.71
14.	<i>Cleistanthus collinus</i>	2,51,938	7,264	207	2,59,409	1.85
15.	<i>Dalbergia paniculata</i>	58,339	13,786	839	72,964	0.52
16.	<i>Diospyros melanoxylon</i>	2,70,396	30,424	1,219	3,02,039	2.16
17.	<i>Ficus benghalensis</i>	5,316	1,555	2,489	9,360	0.07
18.	<i>Ficus species</i>	59,542	8,682	4,397	72,621	0.52
19.	<i>Lagerstroemia lanceolata</i>	15,124	7,250	1,751	24,125	0.17
20.	<i>Lagerstroemia parviflora</i>	2,89,492	20,529	611	3,10,632	2.22
21.	<i>Lannea coromandelica</i>	3,50,309	57,522	1,809	4,09,640	2.92
22.	<i>Madhuca latifolia</i>	1,42,701	41,677	4,732	1,89,110	1.35
23.	<i>Mallotus philippinensis</i>	1,47,779	5,555	202	1,53,536	1.10
24.	<i>Pinus wallichiana</i>	1,01,327	53,843	11,991	1,67,161	1.19
25.	<i>Pinus roxburghii</i>	1,98,874	96,353	10,344	3,05,571	2.18
26.	<i>Pterocarpus marsupium</i>	88,887	23,645	1,869	1,14,401	0.82
27.	<i>Quercus dilatata</i>	24,730	5,956	1,761	32,447	0.23
28.	<i>Quercus leucotrichophora</i>	2,27,538	39,869	4,241	2,71,648	1.94
29.	<i>Quercus semecarpifolia</i>	20,741	10,395	4,365	35,501	0.25
30.	<i>Rhododendron arboreum</i>	1,11,116	17,939	846	1,29,901	0.93
31.	<i>Schima wallichii</i>	1,00,980	14,326	2,368	1,17,674	0.84
32.	<i>Schleichera trijuga</i>	66,949	22,181	1,832	90,962	0.65
33.	<i>Shorea robusta</i>	9,78,143	2,22,651	17,983	12,18,777	8.70
34.	<i>Syzygium cumini</i>	1,15,438	33,494	3,951	1,52,883	1.09
35.	<i>Tectona grandis</i>	8,23,427	94,170	2,769	9,20,366	6.57
36.	<i>Terminalia belerica</i>	44,992	12,232	3,727	60,951	0.44
37.	<i>Terminalia tomentosa</i>	4,03,689	85,807	5,621	4,95,117	3.53
38.	<i>Terminalia myriocarpa</i>	23,902	11,658	1,857	37,417	0.27
39.	<i>Terminalia paniculata</i>	79,806	21,253	4,449	1,05,508	0.75
40.	<i>Xylocarpus xylocarpa</i>	1,25,985	25,021	2,050	1,53,056	1.09
41.	Rest of Species	53,38,884	6,31,021	84,225	60,54,130	43.21
Total		1,18,95,171	18,73,555	2,39,220	1,40,07,946	100.00

Annexure- III B

Estimated volume by species and diameter class in Forest at Country level

(in million cum)

S. No.	Species	Diameter Class (cm)			Total	Percent
		10-30	30-60	60+		
1	<i>Abies densa</i>	1.60	12.56	21.68	35.84	0.82
2	<i>Abies pindrow</i>	5.90	39.92	71.48	117.30	2.67
3	<i>Abies smithiana</i>	3.28	19.18	71.61	94.07	2.15
4	<i>Acacia catechu</i>	17.82	4.18	0.78	22.78	0.52
5	<i>Adina cordifolia</i>	5.05	11.59	13.97	30.61	0.7
6	<i>Anogeissus latifolia</i>	69.55	51.87	8.26	129.68	2.96
7	<i>Bombax ceiba</i>	4.36	14.17	18.83	37.36	0.85
8	<i>Boswellia serrata</i>	10.96	41.14	4.21	56.31	1.28
9	<i>Buchanania latifolia</i>	19.51	3.65	0.21	23.37	0.53
10	<i>Butea monosperma</i>	24.04	14.90	1.69	40.63	0.93
11	<i>Careya arborea</i>	17.74	7.63	1.08	26.45	0.6
12	<i>Castanopsis species</i>	11.77	16.66	19.99	48.42	1.1
13	<i>Cedrus deodara</i>	10.61	44.80	66.99	122.40	2.79
14	<i>Cleistanthus collinus</i>	20.06	3.49	0.49	24.04	0.55
15	<i>Dalbergia paniculata</i>	8.52	13.89	3.46	25.87	0.59
16	<i>Diospyros melanoxylon</i>	26.57	27.54	4.52	58.63	1.34
17	<i>Ficus benghalensis</i>	0.60	1.52	20.17	22.29	0.51
18	<i>Ficus species</i>	7.29	8.93	39.94	56.16	1.28
19	<i>Lagerstroemia lanceolata</i>	2.27	8.73	8.44	19.44	0.44
20	<i>Lagerstroemia parviflora</i>	30.06	17.13	2.41	49.60	1.13
21	<i>Lannea coromandelica</i>	52.58	51.85	6.68	111.11	2.53
22	<i>Madhuca latifolia</i>	18.27	37.47	16.32	72.06	1.64
23	<i>Mallotus philippinensis</i>	14.78	4.32	0.74	19.84	0.45
24	<i>Pinus wallichiana</i>	21.61	76.46	59.83	157.90	3.6
25	<i>Pinus roxburghii</i>	33.33	104.01	43.51	180.85	4.12
26	<i>Pterocarpus marsupium</i>	14.42	25.05	8.51	47.98	1.09
27	<i>Quercus dilatata</i>	3.18	6.44	9.45	19.07	0.44
28	<i>Quercus leucotrichophora</i>	28.52	34.62	17.06	80.20	1.83
29	<i>Quercus semecarpifolia</i>	3.97	13.93	21.74	39.64	0.9
30	<i>Rhododendron arboreum</i>	12.71	14.62	3.22	30.55	0.7
31	<i>Schima wallichii</i>	15.66	14.28	10.08	40.02	0.91
32	<i>Schleichera trijuga</i>	11.60	26.58	8.99	47.17	1.07
33	<i>Shorea robusta</i>	136.38	251.20	89.36	476.94	10.87
34	<i>Syzygium cumini</i>	13.97	30.74	19.72	64.43	1.47
35	<i>Tectona grandis</i>	100.63	80.62	10.64	191.89	4.37
36	<i>Terminalia belerica</i>	6.62	13.85	14.80	35.27	0.8
37	<i>Terminalia tomentosa</i>	54.18	90.88	25.02	170.08	3.88
38	<i>Terminalia myriocarpa</i>	6.16	15.82	11.71	33.69	0.77
39	<i>Terminalia paniculata</i>	9.55	20.40	19.76	49.71	1.13
40	<i>Xylia xylocarpa</i>	16.50	18.76	5.20	40.46	0.92
41	Rest of Species	533.86	535.80	368.38	1,438.04	32.77
Total		1,406.04	1,831.18	1,150.93	4,388.15	100.00

Annexure- III C

Estimated number of trees by species and diameter class in TOF at Country level (in '000)

S. No.	Species	Diameter Class (cm)			Total	Percent
		10-30	30-60	60+		
1	<i>Acacia arabica</i>	1,83,077	44,856	1,533	2,29,466	3.29
2	<i>Acacia auriculiformis</i>	1,06,085	4,526	237	1,10,848	1.59
3	<i>Acacia lenticularis</i>	39,580	7,185	146	46,911	0.67
4	<i>Albizia species</i>	25,449	7,142	383	32,974	0.47
5	<i>Areca catechu</i>	3,61,189	152	0	3,61,341	5.18
6	<i>Artocarpus heterophyllus</i>	43,027	14,123	1,547	58,697	0.84
7	<i>Azadirachta indica</i>	3,73,956	97,243	5,630	4,76,829	6.84
8	<i>Bombax ceiba</i>	30,616	9,829	1,103	41,548	0.60
9	<i>Borassus flabelliformis</i>	16,222	91,643	909	1,08,774	1.56
10	<i>Butea monosperma</i>	1,57,770	29,945	1,216	1,88,931	2.71
11	<i>Castanopsis species</i>	54,753	6,311	505	61,569	0.88
12	<i>Cocos nucifera</i>	2,32,033	1,03,513	316	3,35,862	4.81
13	<i>Dalbergia sissoo</i>	61,190	14,034	538	75,762	1.09
14	<i>Elaeis guineensis</i>	505	6,795	9,461	16,761	0.24
15	<i>Eucalyptus species</i>	1,61,778	14,994	964	1,77,736	2.55
16	<i>Ficus benghalensis</i>	5,921	3,531	4,652	14,104	0.20
17	<i>Ficus racemosa</i>	13,345	6,296	2,020	21,661	0.31
18	<i>Ficus religiosa</i>	9,584	5,228	5,710	20,522	0.29
19	<i>Ficus species</i>	25,872	3,101	1,359	30,332	0.43
20	<i>Hevea brasiliensis</i>	1,71,486	7,832	33	1,79,351	2.57
21	<i>Holoptelea integrifolia</i>	33,143	6,804	465	40,412	0.58
22	<i>Madhuca latifolia</i>	26,009	26,879	19,861	72,749	1.04
23	<i>Mangifera indica</i>	4,95,599	1,18,445	29,285	6,43,329	9.22
24	<i>Phoenix sylvestris</i>	39,057	17,468	29	56,554	0.81
25	<i>Pinus roxburghii</i>	61,131	14,788	1,197	77,116	1.11
26	<i>Pinus wallichiana</i>	25,622	11,474	2,614	39,710	0.57
27	<i>Pongamia pinnata</i>	45,004	7,707	975	53,686	0.77
28	<i>Populus species</i>	83,990	7,710	5,153	96,853	1.39
29	<i>Prosopis cineraria</i>	58,645	37,118	1,349	97,112	1.39
30	<i>Prosopis juliflora</i>	1,29,250	3,549	320	1,33,119	1.91
31	<i>Prunus species</i>	21,782	1,842	3,706	27,330	0.39
32	<i>Quercus leucotrichophora</i>	26,750	11,399	280	38,429	0.55
33	<i>Schima wallichii</i>	45,433	5,087	320	50,840	0.73
34	<i>Shorea robusta</i>	1,28,132	24,606	4,082	1,56,820	2.25
35	<i>Syzygium cumini</i>	51,611	17,758	2,053	71,422	1.02
36	<i>Tamarindus indica</i>	26,327	21,496	8,123	55,946	0.80
37	<i>Tectona grandis</i>	2,03,459	12,846	599	2,16,904	3.11
38	<i>Terminalia arjuna</i>	34,198	14,720	1,357	50,275	0.72
39	<i>Terminalia tomentosa</i>	62,158	9,046	1,165	72,369	1.04
40	<i>Zizyphus mauritiana</i>	1,21,281	10,108	414	1,31,803	1.89
41	Rest of Species	19,33,019	2,43,278	27,129	22,03,426	31.59
Total		57,25,038	11,02,407	1,48,738	69,76,183	100.00

Annexure- III D

Estimated volume by species and diameter class in TOF at Country level

(in million cum)

S. No.	Species	Diameter Class (cm)			Total	Percent
		10-30	30-60	60+		
1	<i>Acacia arabica</i>	19.05	26.85	3.33	49.23	2.77
2	<i>Acacia auriculiformis</i>	6.36	2.42	0.51	9.29	0.52
3	<i>Acacia lenticularis</i>	4.64	4.35	0.35	9.34	0.52
4	<i>Albizia species</i>	3.38	5.23	1.09	9.70	0.55
5	<i>Areca catechu</i>	8.97	0.06	0.00	9.03	0.51
6	<i>Artocarpus heterophyllus</i>	5.14	8.80	5.19	19.13	1.07
7	<i>Azadirachta indica</i>	41.13	64.38	15.14	120.65	6.78
8	<i>Bombax ceiba</i>	3.74	8.11	4.61	16.46	0.92
9	<i>Borassus flabelliformis</i>	3.00	47.59	1.65	52.24	2.94
10	<i>Butea monosperma</i>	17.78	21.70	4.48	43.96	2.47
11	<i>Castanopsis species</i>	6.90	5.36	2.55	14.81	0.83
12	<i>Cocos nucifera</i>	42.94	36.62	0.70	80.26	4.51
13	<i>Dalbergia sissoo</i>	11.50	12.02	1.54	25.06	1.41
14	<i>Elaeis guineensis</i>	0.05	5.61	16.07	21.73	1.22
15	<i>Eucalyptus species</i>	15.17	11.19	2.72	29.08	1.63
16	<i>Ficus benghalensis</i>	0.62	3.10	29.10	32.82	1.84
17	<i>Ficus racemosa</i>	1.38	4.64	7.52	13.54	0.76
18	<i>Ficus religiosa</i>	1.06	4.40	30.76	36.22	2.04
19	<i>Ficus species</i>	2.31	1.86	5.74	9.91	0.56
20	<i>Hevea brasiliensis</i>	15.16	3.66	0.07	18.89	1.06
21	<i>Holoptelea integrifolia</i>	3.50	4.70	1.43	9.63	0.54
22	<i>Madhuca latifolia</i>	2.90	19.23	60.57	82.70	4.65
23	<i>Mangifera indica</i>	54.40	81.96	93.97	230.33	12.94
24	<i>Phoenix sylvestris</i>	5.88	6.43	0.05	12.36	0.69
25	<i>Pinus roxburghii</i>	7.96	12.54	4.89	25.39	1.43
26	<i>Pinus wallichiana</i>	6.40	12.80	15.88	35.08	1.97
27	<i>Pongamia pinnata</i>	3.47	4.32	2.39	10.18	0.57
28	<i>Populus species</i>	7.73	3.82	12.21	23.76	1.34
29	<i>Prosopis cineraria</i>	5.90	19.00	2.71	27.61	1.55
30	<i>Prosopis juliflora</i>	7.76	2.12	1.06	10.94	0.61
31	<i>Prunus species</i>	1.08	1.25	8.20	10.53	0.59
32	<i>Quercus leucotrichophora</i>	3.93	9.34	1.07	14.34	0.81
33	<i>Schima wallichii</i>	7.52	4.94	1.47	13.93	0.78
34	<i>Shorea robusta</i>	12.33	15.65	10.17	38.15	2.14
35	<i>Syzygium cumini</i>	6.22	13.47	6.95	26.64	1.50
36	<i>Tamarindus indica</i>	2.94	13.89	22.99	39.82	2.24
37	<i>Tectona grandis</i>	21.08	8.81	3.61	33.50	1.88
38	<i>Terminalia arjuna</i>	4.43	10.22	4.47	19.12	1.07
39	<i>Terminalia tomentosa</i>	5.91	6.01	3.42	15.34	0.86
40	<i>Zizyphus mauritiana</i>	11.52	5.57	1.12	18.21	1.02
41	Rest of Species	187.66	172.00	100.79	460.44	25.89
	Total	580.80	706.02	492.54	1779.35	100.00

Annexure- IV

State/UTs wise Standard Error for Growing stock & Tree Cover

Sr. No.	State/UTs	SE% Forest	SE% TOF	SE% Tree Cover
1	Andhra Pradesh	4.36	4.43	2.73
2	Arunanchal Pradesh	8.46	13.36	3.77
3	Assam	7.25	5.13	5.25
4	Bihar	7.55	4.40	4.05
5	Chhattisgarh	2.69	3.84	3.43
6	Delhi	12.23	7.15	6.57
7	Goa	6.58	5.45	9.85
8	Gujarat	4.87	2.95	13.51
9	Haryana	10.34	4.46	6.22
10	Himanchal Pradesh	3.88	5.37	5.21
11	Jharkhand	3.85	4.96	3.87
12	Karnataka	3.73	4.10	4.34
13	Kerala	3.90	3.75	3.83
14	Madhya Pradesh	2.05	3.41	2.70
15	Maharashtra	3.11	2.18	2.26
16	Manipur	11.45	11.23	9.17
17	Meghalaya	7.75	7.17	10.38
18	Mizoram	10.34	10.96	8.34
19	Nagaland	13.55	9.32	4.13
20	Odisha	3.53	4.63	2.99
21	Punjab	9.22	7.03	6.39
22	Rajasthan	4.97	2.76	2.23
23	Sikkim	11.71	7.03	8.27
24	Tamil Nadu	5.67	2.27	6.78
25	Telangana	3.79	4.49	6.40
26	Tripura	6.19	7.20	8.81
27	Uttar Pradesh	4.25	1.91	2.63
28	Uttrakhand	3.77	4.30	4.42
29	West Bengal	8.72	4.97	5.27
30	A & N Island	8.96	15.60	10.50
31	Chandigarh	12.91	7.87	9.79
32	Dadar & Nagar Haveli & Daman & Diu	15.95	12.52	16.49
33	Jammu & Kashmir	4.13	4.77	5.25
34	Ladakh*	-	22.02	-
35	Lakshadweep	-	4.73	5.58
36	Puducherry*		11.60	7.24
Total		4.60	6.10	4.01

Note*:- Due to inadequate data, Standard Error (SE) is not given.

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