

Monthly report for the Month of February 2022

Institute of Wood Science & Technology, Bengaluru

IMPORTANT RESEARCH FINDINGS:

Project Title: AICRP-31 :Study of climate driven effects on Indian forests through long term monitoring :

- Spatial data analyses: To develop spatial temporal change maps for the field sites – Kudremukh NP and AnshiDandeli Tiger Reserve requested for shapefiles from the Information Communication Technology Centre of Karnataka Forest Department.
- Analyzed rainfall data from 2014-2021 from Kulagi rain gauge.
- Stone pole fixing and numbering work was completed in Permanent Observation plots (10 Ha) at Kudremukh NP and work is under progress in Anshi-Dandeli Tiger Reserve.
- Weather Station -01 No. Installation was done at Kudremukh NP.
- 350 Trees in different ranges- KulagiPhansoli and Gund ranges in Anshi-Dandeli NP and 400 trees in Kudremukh NP in Kudremukh and Kerekatte ranges were marked for Phenology observation and recorded data on Phenology for the month of February 2022.
- Litter traps were laid in all the permanent observation plots and litters accumulated were collected for nutrient analyses and nutrient cycle dynamics.
- Herbarium of the collected specimens from Kudremukh and AnshiDandeli Biodiversity Transects were prepared, identified and labeled.
- Biodiversity Estimation for Anshi-DandeliNP from Kulagi, Phansoli and Gund ranges completed. Data analyses done.
- Biodiversity Estimation for Kudremukh NP (Kudremukh and Kerekatte ranges) were done. Data analyses is in progress.
- Soil sampling from plots at Kudremukh and Anshi-Dandeli NP has been completed and analyses are in progress.
- Recorded photosynthetic observations from *Dalbergialatifolia* seedlings with different biofertilizer (AM Fungi) treatment.



: Soil Sample collections

Weather station installation

1. NEW PROJECTS SANCTIONED DURING THE MONTH: NIL

2. PROJECTS CONCLUDED DURING THE MONTH: NIL

Name of the project	Amount Sanctioned	Sponsoring Authority

3. PARTICIPATION IN SEMINARS/WORKSHOPS (BOTH NATIONAL & INTERNATIONAL): 03

Sl. No	Topic	Duration	No. of participants	Beneficiaries
1.	Properties of nano-wood composite (NWC) prepared from Populus deltoids impregnated with nano zinc oxide fortified PVAc resin - presented in international e-conference on "Nanomaterials and Nanoengineering" (APA NANOFORUM -2022) Authors -PriyaNagraik and S.R.Shukla Project: AICRP 6 (Component II)	24 - 26 Feb 2022.	-	-
2.	Processing cellulose nanofibrils (CNF) by ultrasonication and cryo-crushing techniques presented in international e-conference on "Nanomaterials and Nanoengineering" (APA NANOFORUM -2022) Authors- S.R.Shukla and K. Manjunatha. Project Title: Cellulose nanofibrils (CNF) from different lignocellulosic materials using cryo-crushing and ultrasonication techniques	24 - 26 Feb 2022.	-	-
3.	Chemi-mechanical processing of cellulose nanofibres from bamboo and development of natural fibre-based nanocomposites -presented in international e-conference on "Nanomaterials and Nanoengineering" (APA NANOFORUM -2022) Authors- Garima Joshi, S.R. Shukla and S.S. Chauhan. Project: AICRP 6 (Component IV)	24- 26 Feb, 2022.	-	-

4. MEETINGS ORGANIZED: Nil

Sl. No	Topic	Duration	No. of participants	Beneficiaries

5. MEETINGS ATTENDED: 01

	Topic	Duration	No. of participants	Beneficiaries
1	Research Policy Committee Meeting constituted by ICFRE to finalize new research project proposals	23-25 Feb 2022 (3 days)		GCR, Scientists and Technical staff of IWST

6. WORKSHOP ORGANIZED: NIL

Sl. No	Topic	Duration	No. of participants	Beneficiaries

7. TRAININGS ORGANIZED: 04

Sl.No	Topic	Duration	No. of participants	Beneficiaries
1	Webinar on Wood and Bamboo Polymer Composites as part of AzadiKaAmritMahotsav	04 Feb 2022 (1 Day)	160	Wood Researchers, students, Industry and academians
2	Webinar on Creation of Awareness on Biofertilizers to Attivatta Farmers under AzadiKaAmritMahotsav	08 Feb 2022 (1 day)	23	Farmers of Attivatta
3	Webinar on Problems and its solution strategies for wooden handicraft sector in India under AzadiKaAmritMahotsav	11 Feb 2022 (1 day)	343	Artisans, Students, Handicrafts traders, Academicians and Researchers.
4	Sandalwood Cultivation and its prospects.	21 Feb 2022	75	Sandalwood growers and field staff of Karnataka Forest

				Department, Bhadravathi Division,
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8. TRAININGS ATTENDED:04

Sl. No	Topic	Duration	No. of participants	Beneficiaries
1.	IInd Phase- Induction training program for new Scientists of ICFRE (organized by FRIDU)	Attending from 13 Dec 2021 till date	2	Scientists of ICFRE
2	Biodiversity assessment, conservation and development	21-25 Feb.2022		Scientists of ICFRE, Dehradun
3	Online training on Emotional Intelligence at workplace for Scientists/Technologists	21- 25 ^h Feb, 2022		
4	Bioinformatics and Computational Biology	28 Feb to 4 Mar.2022	1	Scientists of ICFRE

9. DEMONSTRATIONS: Nil

Sl.No	Topic	Duration	No. of participants	Beneficiaries

10. PARTICIPATION IN KISAN MELA/EXHIBITION/TRADE FAIR ETC: 01

Institute	Participated	Duration	Place
IWST	VigyanSarvathraPujyate - Mega Exposition showcasing various achievements in Science and Technology	22-28 Feb 2022	New Delhi

11. OTHER EXTENSION ACTIVITY:

- About 415 students of class VIII, IX and X on industrial visit from KGF, Kolar, Bangarpet, Srinivaspura, and Malur visited IWST under Prakriti program of ICFRE. The visit of these rural school students was organized in 4 batches on 15, 18, 22 and 25 February 2022 by K C Reddy Sarojamma Welfare Foundation, Bangalore.

12. RESEARCH PAPERS:

- PW Barnes, TM Robson, PJ Neale, CE Williamson, RG Zepp, S Madronich, SR Wilson, AL Andrady, AM Heikkilä, GH Bernhard, AF Bais, RE Neale, JF Bornman, MAK Jansen, AR Klekociuk, J Martinez-Abaigar, SA Robinson, Q-W Wang, AT Banaszak, D-P Häder, S Hylander, KC Rose, S-Å Wängberg, B Foereid, W-C Hou, R Ossola, ND Paul, JE Ukpebor, MPS Andersen, J Longstreth, T Schikowski, KR Solomon, B Sulzberger, LS Bruckman, **KK Pandey**, CC White, L Zhu, M Zhu, PJ Aucamp, JB Liley, RL McKenzie, M Berwick, SN Byrne, LM Hollestein, RM Lucas, CM Olsen, LE Rhodes, AR Young (2022). Environmental effects of stratospheric ozone depletion, UV radiation, and interactions with climate change: UNEP Environmental Effects Assessment Panel, Update 2021. Photochemical & Photobiological Sciences, pp.1-27.
- Tamta, B.P., **Kumar, R.**, Uniyal, S. and Uniyal, A., 2022. Exploration, Distribution and Screening of Quality Germplasm of Medicinal Tree *Oroxylum indicum* (L.) Benth. Ex Kurz.(SHYONAK) in Forest Divisions of Haryana. Indian Forester, 148(1), pp.18-25.
- Almas Khannam, TresaHamalton, Somashekar P.V., Chandrakala D (2021) Hydroponic acclimatization of micropropagated Bamboo plantlets. Indian Journal of Tropical Biodiversity, 29(1): 34-39.
- TresaHamalton, Janofer U., Almas Khannam (2022) In Vitro Production of Embelin from Callus Cultures of *Embeliaribes*. Current Trends in Biotechnology and Pharmacy, 16 (1): 56 – 63.

Popular Articles

- Sundararaj, R., R. Raja Rishi, K.N. Manjula, S. Padma and N. Kavya (2021). Sandalwood spike disease: A Raising threat to the conservation of Indian sandalwood. Wood is Good (IWST). Vol.2 Issue 2 – July-September 2021, 79-82. (Printed during February 2022).
- Sundararaj, R., K.N. Manjula, S. Padma, N. Kavya and R. Raja Rishi (2021). Conserve Engomophily paradise of Indian Sandalwood (*santalum album* L.). Wood is Good (IWST). Vol.2 Issue 2 – July-September 2021, 87-88. (Printed during February 2022).
- Muthukumar, A., Sandhya, G.M. and Dakshayini, G.M. (2021). Compartmentalization of damage in Trees (CODIT) wityh a glimpse on sandalwood. Wood is Good (IWST). Vol.2 Issue 2 – July-September 2021, 83-85. (Printed during February 2022).
- Athulya, R., R. Sundararaj and J. Nandhini (2021). A variant maneuvers from Aromatic wood – A Rich heritage of vitality continues. Wood is Good (IWST). Vol.2 Issue 2 – July-September 2021, 163-165. (Printed during February 2022).
- Satish Kumar sinha, A.N. Arun Kumar and R. Vijendra Rao; Wood structure and Indian Sandaalwood: its adultrants and key to identificaton (2021) Wood is Good 2(2) 97-100
- G. Ravikumar, A.N. Arun Kumar and Chandraprabha; Sandalwood Resources in India: A reveiw on conservaton and policy issues (2021) Wood is Good 2(2) 125-127

- Divakara B.N, Prabuddha H.R and Chaitra, S. Heartwood Estimation in standing trees of *Santalum album L.* (2021) Wood is Good 2(2) 89-92
- Manohara, T.N. and Sandeep C, Historical and Cultural Singificance of *Santalum album L.* In India . (2021) Wood is Good 2(2) 105-108
- Chandrashekar, B.S. and G. Ravikumar Perfumery and pharmacological importance of Indian Sandalwood and tis value added products (2021) Wood is Good 2(2) 113-116
- G. Ravikumar, P.V. Somashekar, and K.T. Chandrashekar Potential utilization of sandalwood seed oil (2021) Wood is Good 2(2) 117-118
- Durai, M.V. Variations in growth, heartwood and oil content of commercial sandalwoods (2021) Wood is Good 2(2) 110-124
- Durai, M.V. Production and Trade of Commercial sandalwoods- An overview (2021) Wood is Good 2(2) 129-136
- Dr. N. Ravi, Sandalwood: seed handling and propagation (2021) Wood is Good 2(2) 57-60
- Durai, M.V. Sandalwood based Agroforestry system (2021) Wood Is Good 2 (2) 71-78
- Almas Khannam and TresaHamalton (2021) Tissue Culture of the Scented Tree, *Santalum album L.* Wood is Good, 2(2): 61-65.
- TresaHamalton (2021) Fresh Scents of the Ancient Aroma. Wood is Good, 2(2): 159-161

13.

VISIT OF DIGNITARIES:

14. CONSULTANCIES: NIL

15. OTHER IMPORTANT ACTIVITIES:

- Patent filled: Indian Patent Application No. 202241004804, Title “A method for Deacidification of oil”
- Dr. A. Muthukumar, Scientist-E as an Expert Member of TEC (assigned by High Court of Karnataka / Govt. of Karnataka) executed Field Inspection related to BBMP and Bengaluru Urban projects on 10/02/2022 and submitted Inspection Reports on 17/02/2022, followed by TEC meeting on 18/02/2022.
- Dr. A. Muthukumar, Scientist-E as an Expert Member of TEC (assigned by High Court of Karnataka / Govt. of Karnataka) executed Field Inspection related to BMRCL projects on 22/02/2022.
- Dr. A. Muthukumar, Scientist-E presented / delivered a lecture on “Mycorrhizae – Wonders of Nature” in a Regional Research Conference on “Bio-fertilizers and Bio-

control Agents – Success, Challenges and Future” organised by IFGTB on 15th February 2022 through virtual mode.

- Test reports of 9 samples for identification, 10 samples for moisture content, 10 samples for Density, hardness 1 No. and oil sample 1 No. the same were sent to the concerned department/parties.