



ANNUAL REPORT 2023-24

ICFRE – Tropical Forest Research Institute

PO. RFRC, Mandla Road
Jabalpur 482021 (Madhya Pradesh)

OVERVIEW

(Please indicate most important achievements/new initiatives (not more than 200 words) during the period under report).

- Developed form factors for important tree species of Chhattisgarh state i.e., *Tectona grandis*, *Shorea robusta*, *Terminalia tomentosa*, *Pterocarpus marsupium*, *Dalbergia sissoo*, *Adina cordifolia*, *Terminalia arjuna*, *Bridelia retusa*, *Ougeinia dalbergioides*, *Gmelina arborea* and *Mitragyna parviflora*.
- Developed “Herbal Mosquito Repellent Liquids, Creams, sprays and larvicide” tested their efficacy as per BIS standards in NABL accredited Lab.
- To ensure the supply of quality planting stock of *Bambusa balcooa* and *Tectona grandis* to stakeholders, a "Non - Exclusive License Agreement" signed with M/S Mukund Biotech, Jabalpur on 20th March 2024, for mass multiplication of the one clone of teak and one CPC of bamboo.
- Seed germination of teak seeds collected from improved sites was found to be higher by 10-18% in Madhya Pradesh and 15-23% in Chhattisgarh compared to seeds from unimproved sites. Seed production areas (SPAs) proved as an important source of moderately improved planting stock.
- *In-vitro* propagation protocol for *Plumbago zeylanica* and *Celastrus paniculatus* has been developed. Germplasm bank of *P. zeylanica* and *C. paniculatus* with accessions from different locations of Chhattisgarh was established at TFRI, Jabalpur.
- 30 Candidate Plus Trees of *Haldina cordifolia* were selected after extensive survey of different forest divisions of Madhya Pradesh, Chhattisgarh, and Maharashtra. Two progeny trials were established in July 2023, at Jagmandal Range, Mandla, Madhya Pradesh, and at Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, respectively.
- *Withania somnifera* germplasm was collected from different states i.e. Chhattisgarh, Himachal Pradesh, Maharashtra, Uttar Pradesh, Rajasthan and Bihar of the country.
- A biofertilizers production unit is established within TFRI campus. Various biofertilizers like arbuscular Mycorrhiza specific to Teak, Bamboo, Sisso, *Gmelina* etc. is being produced in bulk and kept ready for any requirements raised by the stakeholders.
- The stock culture of egg parasitoid *Trichogramma raoi* were continuously maintained *in vivo* on rice moth *Corcyra cephalonica* in the Insectary of Forest Protection Division of the institute and TFRI Tricho cards were kept ready for any requirements raised by the stakeholders during the period.
- Synthesized Iron nano fertilizer using Sol-gel method.
- Under Van Vigyan Kendra, conducted 10 trainings for 271 stakeholders including women SHGs, farmers
- **Summary of projects**

Project	Completed Projects	Ongoing Projects	New projects initiated during the year
Plan	01	05	04
Externally aided	06	11	01

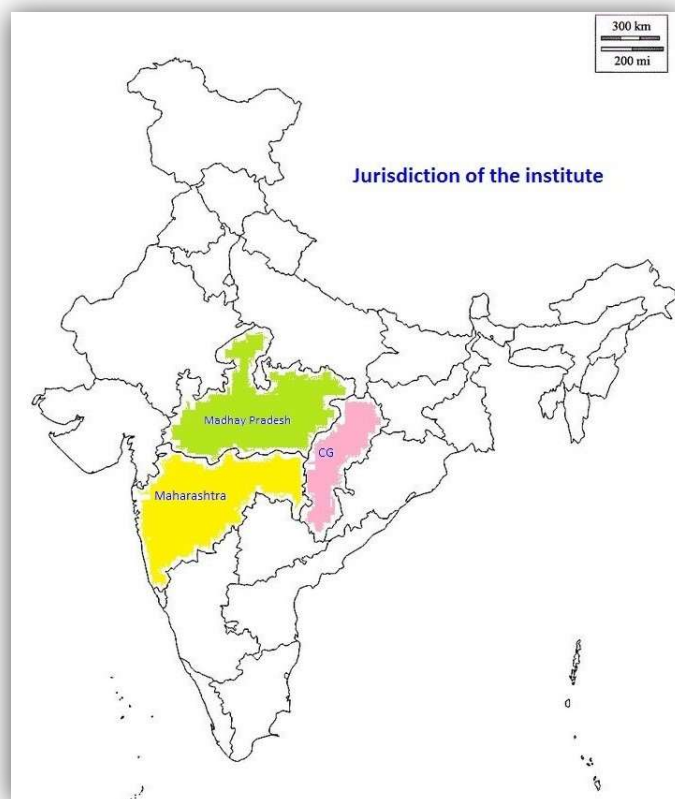
CONTENTS

Sl. No.	Particulars	Page No.
1.	Introduction	1
2.	Research Highlights	
	2.1 Ecosystem Conservation and Management	7
	2.2 Forest Productivity	9
	2.3 Genetic Improvement	15
	2.4 Forest Management	21
	2.5 Wood Products	21
	2.6 Non-Wood and Forest Products (NWFPs)	21
	2.7 Forest Protection	24
3.	Education Visits/Activities	
	3.1 FRI University (Applicable for FRI Dehradun only)	29
	3.2 Training Organized	29
	3.3 Visits Abroad	29
	3.4 Participation in Seminars/Symposia/Workshops/Trainings	29
4.	Extension Panorama / Activities	
	4.1 Trainings Organized	30
	4.2 Report on Van Vigyan Kendras (VVKs) and Demo Village (DV)	30
	4.3 Technologies transferred	34
	4.4 Intellectual Property - Patents Granted/Applied (during the year), any other information regarding IP	35
	4.5 Research Publications	35
	4.6 Consultancies	36
	4.7 Technical Services	36
	4.8 Activities of Rajbhasha	37
	4.9 Awards and Honours	39
	4.10 Special Activities (Such as <i>Van Mahotsava</i> , Forestry Day and other occasions)	40
	4.11 Extension Activities performed under CAMPA Extension (this information is different from the information provided in the Chapter as above)	43
5.	Administration and Information Technology	
	5.1 Information Technology	43
	5.2 Administration	44
	5.3 Welfare measures for the SC/ST/Backward/minority communities.	45

	5.4	Welfare measures for women	45
6.		Annexures	
	1.	RTI (Annexure-1)	46
	2.	Information on vigilance cases (Annexure-2)	46
	3.	Information on audit objections (Annexure-3)	47
	4.	Email and Postal addresses (Annexure-4)	48
	5.	List of abbreviation (Annexure-5)	48
	6.	Details of trainings organized (Annexure-6 - HRD Trainings)	49
	7.	Details of trainings organized (Annexure-6 A -Extn. Trainings)	49
	8.	Details of participation in workshops etc. (Annexure-7)	58
	9.	Details of Workshops/symposia etc. organized (Annexure-8)	80
	10.	Details of Awareness/ Demonstration programmes organized (Annexure -9)	83
	11.	Details on License/ Material Transfer agreements (Annexure -10)	90
	12.	List of publications (Annexure -11)	91

1. INTRODUCTION

ICFRE - Tropical Forest Research Institute (TFRI), Jabalpur (M.P.) with its satellite research centre, ICFRE- Centre for Skill Development, Chhindwara provides research support to State Forest Departments of Madhya Pradesh, Chhattisgarh, Maharashtra and other stakeholders since 1973&1988. The institute is spread over an area of 109 ha, maintain constant liaison with state forest departments, NGOs working in the field of forestry and allied areas, universities imparting education in forestry and forest-based industries.



MoUs Signed:

Sl. No.	Parties		Purpose	Date of MoU	Duration
1.	ICFRE-TFRI	Guru Ghasidas Vishwavidyalaya, Bilaspur (Chhattisgarh)	Collaboration for promotion of students training and quality graduate and postgraduate research in cutting edge areas.	30/5/2023	5 years
2.	ICFRE-TFRI	R&D GLOBAL CONSULTANTS PVT LTD, Thane (W) 400607, Maharashtra	Bioprospecting of lesser known forest species for industrial utilization.	07/7/2023	3 years (extendable)
3.	ICFRE-TFRI	Xavier Institute of Development Action Studies (XIDAS), Jabalpur	Collaboration for promotion of basic and advance research in subject of Forestry, Wildlife, Environment Sciences and other allied subjects. In Natural Resource Management, Agri-business	01/8/2023	5 years

			Management, Rural and Social Entrepreneurship, Rural Legal Environment, Rural Tourism and Management, Gender issues in rural areas, Corporate Social Responsibility, SHG, Microfinance, etc.		
4.	ICFRE-TFRI	Govt. Science College, Jabalpur	In Natural Resource Management, Climate Change, Natural Resource management and Environmental Impact Assessment, etc.	07/8/2023	5 years
5.	ICFRE-TFRI,	M/S Mukund Biotech, Jabalpur	License Agreement is entered between ICFRE-TFRI and Shri Mukund Biotech, Plant Tissue Culture Lab and Nursery, Mazitha, Jabalpur for commercial propagation and supply/ sale of clones of <i>Tectona grandis</i> (teak) and selected CPC of <i>Bambusa balcooa</i> (bamboo) identified or selected by ICFRE.	20/3/2024	3 years
6.	ICFRE-TFRI	State Forest Division Madhya Pradesh	MOU Between ICFRE-Tropical Forest Research Institute and State Forest Division Madhya Pradesh under Demo Village	17/1/2024	
7.	ICFRE-TFRI	Chandrapur Forest Academy of Adm. Dev. & Management, Chandrapur (Maharashtra)	To establish new VVK in Chandrapur Forest Academy Maharashtra under extension plan of ICFRE-TFRI to disseminate various	22/3/2024	3 years

technologies.

Visit of dignitaries:

Sl. No.	Name	Purpose	Duration	From
1.	Shri Vivek Khandekar, APCCF (Social Forestry), Pune	For quality planting material of bamboo	18/04/2023	Pune(Maharashtra)
2.	Shri Ramesh Kumar, CCF (Social Forestry), Nagpur, Maharashtra.	For quality planting material of bamboo	18/04/2023	Nagpur(Maharashtra)
3.	Shri A.K.Patil, MD. Rajya Van Vikas Nigam, Bhopal(MP)	Interaction on implementation of <i>Melia dubia</i> plantation at Betul and Hoshangabad (MP)	07/06/2023	Bhopal(Madhya Pradesh)
4.	Shri A.S. Rawat, IFS, Director General, ICFRE.	To monitor the research, extension activities and involvement of stakeholders in the research programme of the institute.	15/07/2023 to 18/07/2023	ICFRE- Dehradun
5.	Dr. S. P Tiwari, Principal and Dean of Faculty of Agriculture, Manglayatan University, Jabalpur (M.P.)	Interacted with the Scientists	04-08-2023	Jabalpur (Madhya Pradesh)
6.	Dr. A.L. Mahobia, Principal, Science College, Jabalpur Dr. Sunita Sharma, and Dr. R. K. Shrivastav	Signing of MOU and to interact with Scientists	07- 08-2023	Jabalpur (Madhya Pradesh)
7.	Sh. Rajneesh Kumar Singh, IFS, Dy. Director, Pench Tiger Reserve, Seoni	Interacted with the Scientists on matters of Wildlife in the National Parks of Madhya Pradesh	12-08-2023	Pench Tiger Reserve, Seoni
8.	Sh. Brijendra Shrivastav, IFS DFO, East Forest Division, Chhindwara (M.P.)	Visit to ICFRE-SDC, Chhindwara	12-08-2023	Chhindwara (Madhya Pradesh)
9.	Dr. Jochen Statz, Germany, Dr. Sanjiv Tomar and Dr. Atul Gupta, Consultant, India & Ex-PCCF Tripura state	Visit of ICFRE-TFRI, Jabalpur	24-08-2023	GIZ, Consultant
10.	Shri. C. Krishanan, IFS, & PCCF Rtd.	Interacted with the Scientists	27/09/2023	-

11.	Smt. Priyanka Choudhary, SDO, Forest Dept. Chhindwara (Production)	During Wildlife Conservation, week celebration	05/10/2023	State Forest Dept. Chhindwara (Production)
12.	Dr. RS Rajput, Regional Director, Organic Farming, Nagpur	Interacted with Director and Dr. Nanita Berry, Scientist-F for implementing Agroforestry activities in farmlands	26/10/2023.	Nagpur (Maharashtra)
13.	Dr. V.K. Paradkar, Assistant Director Research and Incharge Dean, College of Horticulture, Chhindwara visited the center.	Exposure visit of JNKVV, Jabalpur students under RAWE Programme.	07-11-2023	Chhindwara (Madhya Pradesh)
14.	Shri. P.K. Tamarakar Director, MoEFCC	Visit of ICFRE-TFRI	18-12-2023	MoEFCC New Delhi
15.	Dr. P.C. Dubey, Ex PCCF, Madhya Pradesh, Dr. Syam Vishwanath, Ex Director, KFRI & Scientist G, ICFRE and Dr. R C Dhiman, Advisor, SES, Haldwani	Visit & IFS training programme	13/02/2024 to 14/02/2024	-
16.	Sh. Brijendra Srivastav, IFS, DFO, East Forest Division, Chhindwara (M.P.)	Movement at ICFRE-SDC, Chhindwara	12.08.2023	Chhindwara (M.P.)
17.	National Bank for Agriculture Rural Development (NABARD) officers from Head quarter (Mumbai), South & Central Indian states	For enquiry on herbal products and its techniques at SDC, Chhindwara	06.09.2023	Head quarter (Mumbai)
18.	Dr. V.K. Paradkar, Assistant Director Research and Incharge Dean, College of Horticulture, Chhindwara	Exposure visit of JNKVV, Jabalpur students under RAWE Programme.	7.11.2023	-

New Initiatives:

(A) New appointment during 2023-24.

(i) On deputation - 02

- Dr. H.S. Ginwal, Director, Shri Darshan Gattani, IFS, Dy.C.F.

(ii) New Recruitment of Scientist-B - 04

- Ms. Komal Rani, Dr. Nidhesh T.D., Shri Divya Prakash, Shri A.K. Maurya

(iii) New Recruitment of Technical Services - 01

- Ms. Dipali Narnaure

(iv) New Recruitment of Ministerial staff - 04

- Shri Ankit Rai, Shri Prabhat Sen, Shri Deepanshu Rawat, Shri Durgesh Singh Thakur

(v) M.T.S. Staff - 06

- Shri Sourabh Sharma, Shri Neeraj Yadav, Ms. Sarita Gupta, Shri Gaurav Dwivedi, Shri Braj Kishor Chakrawarti, Shri Apurba Sardar

(B) Promotion during 2023-24:

(i) Scientist - 03

(ii) Technical Services - 12

(iii) Ministerial Staff - 01

Sl. No.	Name of Scientist/Technical staff/min. staff	Previous post	Promoted post
Scientists			
1.	Dr. Vishkha Kumbhare	Scientist-E	Scientist-F
2.	Dr. S.C. Biswas	Scientist-D	Scientist-E
3.	Shri A.J.K. Asaiya	Scientist-C	Scientist-D
Technical service			
1.	Dr. Rajesh Kumar Mishra	ACTO	CTO
2.	Shri Kandhi Singh	ACTO	CTO
3.	Ms. Nidhi Mehta	ACTO	CTO
4.	Shri Nahar Singh Mawai	ACTO	CTO
5.	Dr. P.K. Rana	ACTO	CTO
6.	Shri H.L. Asati	STO	ACTO
7.	Shri K.S. Sengar	STO	ACTO
8.	Shri Beerbal Navik	STO	ACTO
9.	Shri R.K. Malviya	STO	ACTO
10.	Shri P.K. Dhar	TO	STO
11.	Shri M.K. Joshi	TO	STO
12.	Smt. Neelu	STA	TO
Ministerial			
1.	Shri Swaroop Aharwar	Steno-I	P.S.

(C) Transferred/Repatriation during 2023-24:

(i) Scientist/Deputation - 01

(ii) Technical services - Nil

(iii) Ministerial staff - Nil

Sl. No.	Name of Scientist/Technical staff/min. staff	From (Place)	To (Place)
Scientist/Deputation			
1.	Dr. Nitin Kulkarni, Scientist-G	ICFRE-TFRI	RFRI, Jorhat

2.	Shri Ajin Sekhar, Scientist-B	ICFRE-TFRI	ICFRE HQ
Technical			
	Nil		
Ministerial			
1.	Shri Narendra Kumar Shringi, Under Secretary	ICFRE-TFRI	ICFRE HQ
2.	Shri Skariha C.G., P.S.	ICFRE-TFRI	IWST, Bangaluru
3.	Shri Sukh Ram Meena, MTS	ICFRE-TFRI	AFRI, Jodhpur

(D) Retired during 2023-24:

(i)	Scientist	-	Nil
(ii)	Technical services	-	02
(iii)	Ministerial staff	-	01

Sl. No.	Name of Scientist/Technical staff/min. staff	Post
Scientists		
1.	Nil	
Technical		
1.	Shri Ram Bhajan Singh	T.O
2.	Shri H.D.B. Anthony	S.T.O.
Ministerial		
1.	Shri Chhote Lal Burman	MTS

The Regional Research Conference (RRC) on “Nursery technology for propagation of difficult tree species” was organised on 18th August, 2023 at ICFRE-Tropical Forest Research Institute (TFRI), Jabalpur

2. RESEARCH HIGHLIGHTS

CAMPA Activities

1. AICRPs 2. NFGRs 3. CAMPA Extension- Material for this section will be compiled and edited by the NPCs of concerned AICRPs/NFGRs and Head Extension for incorporating in the material to be sent by their respective institutes.

Plan and External Projects

2.1 Ecosystem Conservation and Management

2.1.1 Overview

2.1.1.1 Projects under the Theme

2.1.2 Climate Change

2.1.3 Ecology & Environment

2.1.4 Biodiversity Conservation & Ecological Security

Projects	Completed Projects	Ongoing Projects	New Projects Initiated During the Year
Plan	-	-	01
Externally Aided	-	02	-

Sustainable Management of Grasslands inside Tiger Reserves of Madhya Pradesh with special emphasis on Ingression of Trees.

Ingression of trees or woody shrubs in grasslands significantly reduces the feeding stock of ungulates, shrinking the grasslands ecosystem, converting it into woody habitats. This poses immense threat to the survival of native and endemic ground flora and wildlife. In this study, Forty-five 0.1 ha quadrats were laid for observation of tree species and 180 quadrats of 1 m × 1 m size are being laid for observation of herbaceous species including grasses and weeds at Bandhavgarh and Kanha tiger reserves. A total of 6 grasslands consisting of three categories i.e. (i) Swamp, (ii) Dry meadow (natural) and (iii) Dry meadow (village relocated) in Bandhavgarh Tiger Reserve have been identified and a checklist of grass and weed species from these grasslands have been prepared.



Fig.1 A view of herbaceous sampling in the Dry-meadow type of Bandhavgarh TR

Capacity building of Nursery staffs on preparation of Biofertilizers, Organic Fertilizer & its application in Teak and Bamboo.

A workshop on preparation and application of Jeevamrut and Biofertilizers was organized at Khandwa, MP. Demonstration of Jeevamrut and Biofertilizers preparation to visiting SFD staffs and students was done.



Fig.2 Demo on preparation of Biofertilizers and Organic Fertilizer at Khandwa

Current status of nursery diseases and insect pests of important species in forest nurseries of Madhya Pradesh and their Eco friendly management.

Periodical survey was conducted in Social Forest Nursery of Seoni (Poama nursery), Betul (Kalapatha, sapna nursery), Khandwa (Ashapur, Nimad, and Boregaon nursery), Indore (Bodgonda nursery), Jhabua (Anas and Mojipada nursery), Ujjain (Kshipra Bihar nursery), Sagar (Sironjanursery) and Jabalpur (Sehari nursery) to record the seasonal incidence of insect pests and diseases in nursery.

An average disease incidence ranging from 35 to 45% was noted. The predominant diseases identified included pink leaf spot in *Madhuca longifolia*, Alternaria leaf spot in *Ficus* spp., leaf blight in *Dalbergia longifolia* and *D. sissoo*, leaf spot and dieback in Neem, *Bipolaris* leaf spot in *Bamboo* spp, rust in *Phyllanthus emblica*, anthracnose blight in *Terminalia* spp, and stem blight and rust in Teak.



Fig.3 Leaf skeletonization observed in teak seedlings by *Eutectona machaeralis*



Fig.4 Stem gall formation by *Betousa stylophora* observed in Aonla.



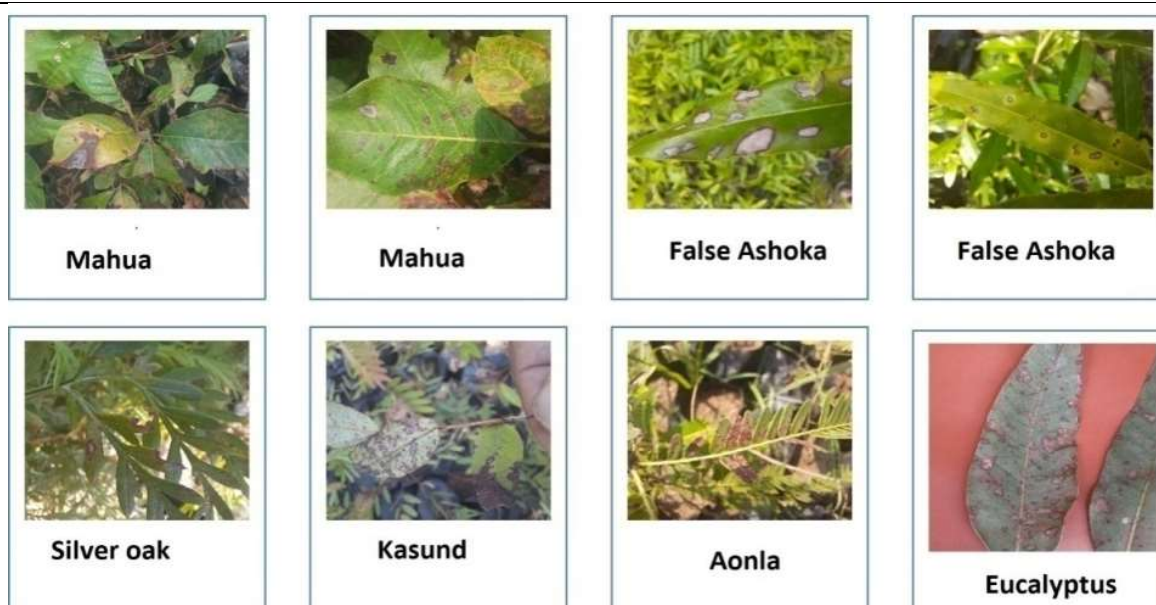


Fig.5 Diseases incidence in different forest tree species in nursery of Madhya Pradesh

2.1.5 Forest Botany

2.1.6 Tribals and Traditional Knowledge System

2.2 Forest Productivity

2.2.1 Overview

2.2.1.1 Projects under the Theme (in table as given at 2.1.1.1)

Projects	Completed Projects	Ongoing Projects	New Projects Initiated During the Year
Plan	-	01	01
Externally Aided	02	06	-

2.2.2 Silviculture:

Impact of Silviculture systems on the natural forests of Chhattisgarh with special reference to Sal and Bamboo.

Prepared a roadmap for execution of work in the bamboo forest which includes trench making, bamboo clump cleaning, removal of diseased culms, soil working, saucer making along with adoption of bamboo regeneration, practices.

Growth data of Bamboo culms from the Bamboo forest of Khairagarh division in the Chhattisgarh under two silviculture systems i.e. RDF (Rehabilitation of the degraded forest) in compartments 260 and 319, and ANR (Assisted natural regeneration) in compartments 279 and 289, were recorded. Laid out quadrats for conducting vegetation survey and recorded associated species of Bamboo i.e. Bhondara/Seena (*Lagerstromia parviflora*), Tendu (*Diospyros melanoxylon*), Saja (*Terminalia elliptica* - 135 cm girth), Dhawda (*Anogeissus latifolia* - 81cm), Bija (147cm) and RDF was dominated by Teak (*Tectona grandis*), Bija (*Pterocarpus marsupium*), Tinsa (*Ougeinia oojensis*), Saja (*Terminalia tomentosa*) species. It was observed that ANR was better than that of RDF.



Fig. 6 Bamboo ANR & RDF system in Khairagarh forest division (Chhattisgarh)

Development of form factors for important tree species of Chhattisgarh.

Developed form factors, volume tables and form quotients for *Tectona grandis* (Teak), *Shorea robusta* (Sal), *Terminalia tomentosa* (Saja), *Pterocarpus marsupium* (Beeja Sal), *Dalbergia sissoo* (Shisham), *Adina cordifolia* (Haldu), *Terminalia arjuna* (Arjun), *Bridelia retusa* (Kasai), *Ougeinia dalbergioides* (Tinsa), *Gmelina arborea* (Khamhar) and *Mitragyna parviflora* (Mundi) in different agroclimatic zones of Chhattisgarh. Provided training to forest officials for validating developed form factors with existing ones and estimating volume of felled tree logs using the developed form factors.



Fig.7 Measurement of diameter of felled trees at different height segments at Dhamtari forest division



Fig.8 Measurement of tree diameter at different height segment at Bastar forest division using Basal Area Finder (BAF) Scope

Tree outside forests of India (TOFI) International Collaborative project ICRAF-USAID, Asia Continental programme (ICFRE-TFRI).

With the objective of expanding the area under agroforestry, six workshop were organized in different states viz. Odisha, Tamil Nadu, Rajasthan, Haryana, Andhra Pradesh and Uttar Pradesh for stakeholder including SFD, SAUs, NGOs, Wood based industries, herbal industries, farmers and SHGs to establish promising agroforestry site specific models in Community land and wasteland, based on needs of wood based industries. Prepared booklet on suitable agroforestry models for various agro-climatic regions of the targeted states drawn from the workshop recommendations.



Fig.9 Group Photographs of Workshop on QPM roadmap and scope of TOF in Odisha under TOFI Programme



Fig.10 Group Photographs of Workshop on QPM roadmap and scope of TOF in Rajasthan under TOFI Programme

Studies on quality of nursery seedlings and its relation to outplanting performance of *Dalbergia latifolia* and *Pterocarpus marsupium*” funded by MPSFD, Bhopal.

To improve the chances of increased growth and survival after the outplanting, morphological seedling attributes were determined by the limiting factors at the outplanting site. The morphological parameters of *Pterocarpus marsupium* seedlings were evaluated with reference to age and height factors as presented in Figure below and it was observed that with increasing age and height, there was a positive increment in the fresh weight, dry weight, and root length. It was observed that root length development was higher in one-year-old seedlings compared to 6 month-old seedlings in each treatment and the range of root length growth in one-year seedling was 16.4 cm to 21.2 cm. The study revealed that a one-year-old seedling is more appropriate for field plantation than a 6-month-old seedling because a one-year-old seedling has good growth in morphological parameters.



Fig.11 View of Field Plantation of *Pterocarpus marsupium*

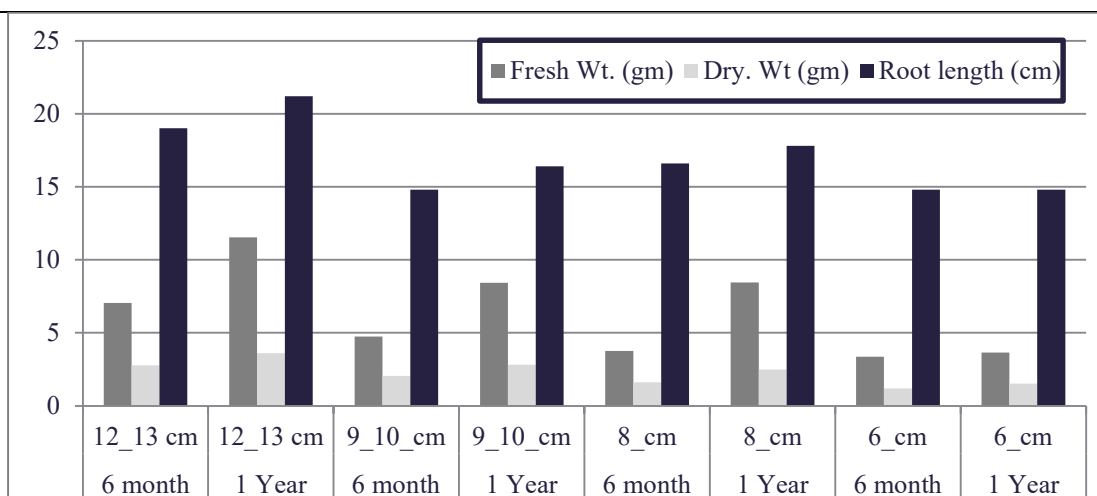


Fig.12 Effect of different age groups and seedling heights (cm) on seedling health parameter

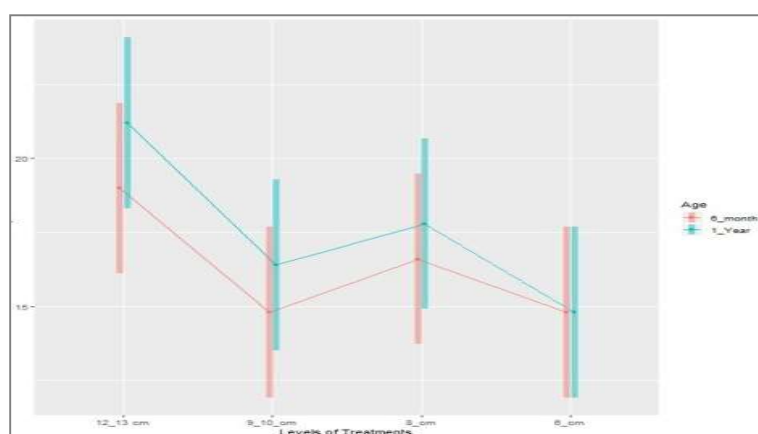


Fig.13. Effect of age and plant height on root length development

2.2.3 Social Forestry, Agro-forestry/ Farm Forestry

Development of *Buchanania lanzan* (Chironji) based agroforestry system in Central India.

B. lanzan based agroforestry system were established in two different sites. Chhindwara (Madhya Pradesh) and Wardha (Maharashtra) using in Randomized Block Design (RBD).

In Chhindwara site, Maize was planted as an inter-crop along with Chironji. Whereas, Wardha site was kept as a control with only Chironji. Both of the experiments had were planted during Kharif season in a 0.5 ha farm land, with a spacing of 10 m × 10 m. The experiment was done in three replicates. The results suggest that, average yield of maize inter-cropped *B. lanzan* site recorded a collar diameter and height of 5.4 mm and 17.2 cm respectively. Whereas, the control site where *B. lanzan* were planted alone recorded 3.5 mm and 14.5 cm respectively.

While the yield of maize in *B. lanzan* inter-cropped site was recorded to be 22.4 q/acre in comparison to 21.7 (q/acre) in a normal maize cultivated area. Total income in case of *B. lanzan* inter-cropped site was also found to be Rs.29632/- per acre.



Fig.14 Experimental site, cultivation of maize during Kharif season



Fig.15 Cultivation of wheat during Rabi season at Wardha district

Capacity building on seed and nursery technology and plantation techniques for prioritized species of Chhattisgarh state.

Organized two training programmes on “Plantation and management techniques of commercially important Tree species” for forest official of Bilaspur and Durg Forest on 12th and 13th March 2024 respectively.



Fig.16 Training for Forest officials on 12th March 2024 at Bilaspur, Chhattisgarh



Fig.17 Training for Forest official on 13th March 2024 at Durg, Chhattisgarh

Technical bulletins on the subject were prepared and printed for commercially important species like *Santalum album*, *Gmelina arborea*, *Melia dubia*, *Swietenia macrophylla*, *Hardwickia binnata* in Hindi language and distributed among the trainees. On site demonstration on plantation and nursery techniques of the said species were also provided.

Popularization of improved variety of *Leucaena leucocephala* (Su-babul) based agroforestry system.

Standardized *Leucaena*- based agroforestry system with *Andrographis paniculata* as an intercrop for income generation of farmers during the lean period and calculated economics of *Leucaena*-based agroforestry system with *Cyamopsis tetragonoloba* rotated with *Brassica juncea*.

The benefit cost ratio (B: ratio) was also recorded as 1.32, which indicates that the model would be profitable. The trees gained height between 10.25 and 13.6 meter and GBH 34.2 and 41.7 cm. Extended *Leucaena*-based Agroforestry model for Madhya Pradesh during State level workshop on Agroforestry held on 12th

April 2023 at Bhopal (Madhya Pradesh) and interacted with farmers, SFDs and wood based industry such as Ballarpur Industries Limited, Chandrapur (Maharashtra).



Fig.18 *Leuceana* + Cowpea + Kalmegh agroforestry model in Jabalpur district

Promotion of bamboo based agroforestry system for economic upliftment and livelihood security of farmers in Madhya Pradesh.

Bamboo based agroforestry model was established successfully in the farmer's field and technical know was provided to the farmers during two on site trainings alongwith demonstration on management of bamboo culm and its harvesting, and soil working for management of its root and boosting the growth. A team of NABARD officials visited farmer's field and interacted with farmers (beneficiaries) to know about the benefits of the system. The growth of four-year old bamboo diameter and height ranged between 30.2-35.5 cm and 12-15 meters respectively under bamboo based agroforestry system. The beneficiary is selling bamboo branches for stacking of tender vegetables like tomato and support climber beans.

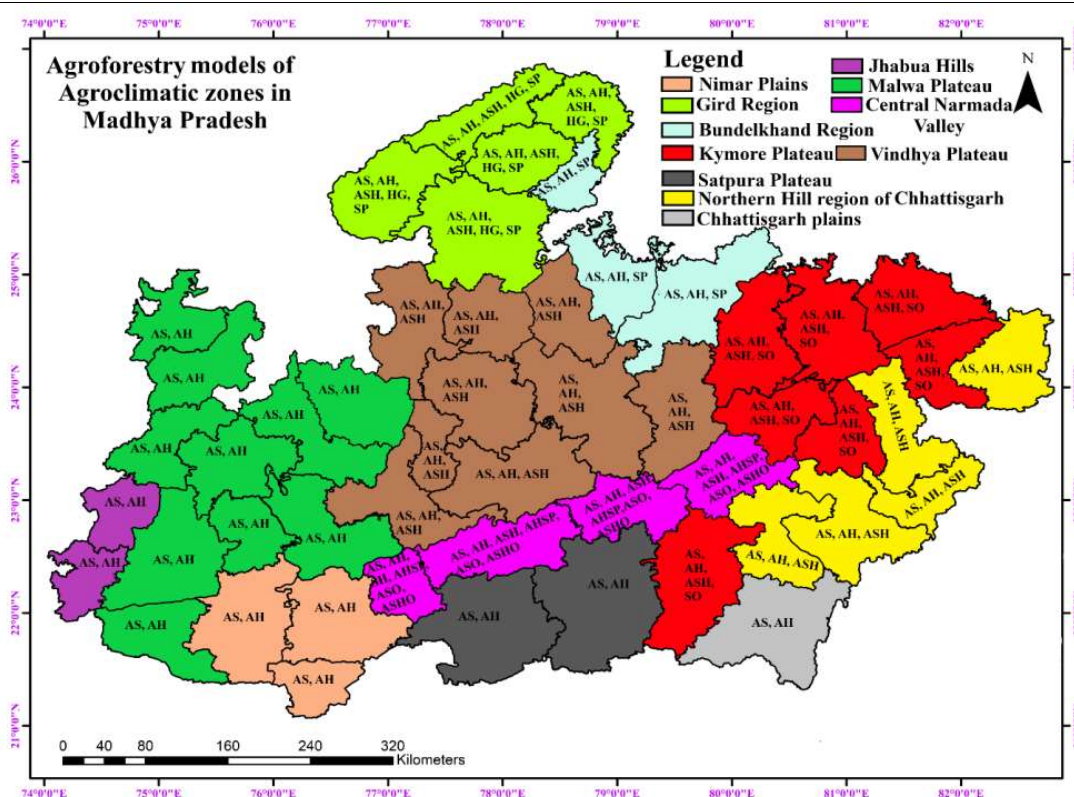
Monitored and maintained the system through silvicultural practices including soil earth working and pruning. Prepared extension material on *Bans Adharit KrishiVaniki Padhti* for the farmers and other stakeholders.



Fig. 19 Maintenance of Agroforestry model and recording of growth data of four-year old culms of bamboo

Development of multitier agroforestry systems in selected agroclimatic zones of Madhya Pradesh" funded by MPSFD Bhopal.

Documented the existing agroforestry models in different agroclimatic zones of Madhya Pradesh based on secondary literature. *Gmelinaarborea* was selected for site specific multitier agroforestry models. Prepared a nursery seedling stocks *Gmelinaarborea*, *Moringa oleifera*, *Annona squamosa*, and horticulture crops in multitier agroforestry systems to provides financial security to farmers and increase the adoption rate of tree plantations.



Agroforestry models under agroclimatic zones in Madhya Pradesh (AS = Agri-Silviculture, AH = Agri-Horticulture, ASH = Agri-Silvi-Horticulture, SO = Silvi-Olericulture, AHSP = Agri-Horti-Silvi-Pasture, ASO = Agri-Silvi-Olericulture, ASHO = Agri-Silvi-Horti-Olericulture, HG = Home-Garden, SP = Silvi-Pasture).

2.2.4 Forest Soils & Land Reclamation

Evaluation of nano-fertilizers on growth and performance of forest tree species in nursery and plantations.

Synthesized Iron based nano fertilizer following Sol-gel method. Iron nitrate and citric acid were used as precursors. The nano fertilizer will be characterized for size, shape and zeta potential using particle size analyser and XRD.

2.2.5 Watershed Management

2.3 Genetic Improvement

2.3.1 Overview

2.3.1.1 Projects under the Theme (in table as given at 2.1.1.1)

Projects	Completed Projects	Ongoing Projects	New Projects Initiated During the Year
Plan	01	02	--
Externally Aided	1	2	1

2.3.2 Conservation of Forest Genetic Resources

Completed Project:

Conservation of RET species of Chhattisgarh – *Plumbago zeylanica* and *Celastrus paniculatus* and production of quality planting material.

Planting material of *Plumbago zeylanica* and *Celastrus paniculatus* was collected from 16 locations of different agro-climatic zones of Chhattisgarh. Rooting of 70% and 40% was recorded in stem cuttings treated with 200 ppm IBA of *Plumbago zeylanica* and *Celastrus paniculatus*, respectively. Also, *Plumbago zeylanica* and *Celastrus paniculatus* exhibited 80-90% and 60-70% seed germination, respectively. Variation was observed in germination percentages in seeds collected from different localities. *In vitro* shoot cultures were established through nodal segments of *P. zeylanica* and *C. paniculatus* on MS medium containing 1mg l^{-1} BA. In *Celastrus paniculatus* organogenesis was carried out on MS medium supplemented with 2mg l^{-1} adenine sulphate, 0.5 mg l^{-1} IBA and 1 mg l^{-1} BA. Similarly, cultures of *P. zeylanica* were multiplied on MS medium supplemented with 2mg l^{-1} adenine sulphate, 0.5 mg l^{-1} IBA and 1 mg l^{-1} BA. Shoot multiplication and rooting experiments were carried out in both species. Germplasm bank of *P. zeylanica* and *C. paniculatus* with accessions from different locations of Chhattisgarh was established at TFRI, Jabalpur



Fig.20 Stem cuttings of *Celastrus paniculatus* and *Plumbago zeylanica*



Fig.21 Shoot cultures of *Celastrus paniculatus* and *Plumbago zeylanica*

Development of value chain for bamboos for mass multiplication, popularization in farmer's field and industrial linkage in central India.

Clonal fidelity testing of five bamboo species *Bambusa balcooa*, *B. tulda*, *B. nutans*, *B. vulgaris* var. green and *Pseudoxytenanthera stocksii* was carried out using ISSR primers. Experiments were carried out to study the effect of eight different concentrations of TDZ on *in-vitro* culture establishment through nodal segments and effect of different auxins viz., NAA, IAA, IBA, IPA, coumarin, phloroglucinol, picloram and β -Naphthoxyacetic acid on *in-vitro* rooting of *Pseudoxytenanthera stocksii*. Maximum number of shoots (4.27) in MS media supplemented with 1 mgL^{-1} TDZ, and maximum number of leaves (3.18) with 0.5 mgL^{-1} TDZ was recorded. Maximum rooting percentage (33%) was recorded in semi-solid MS media fortified with 10 mgL^{-1} coumarin and phloroglucinol. In *P. stocksii* treated, highest rooting percentage (54.87%) was observed in culm cuttings treated with 2000 ppm NAA, while maximum rooting percentage (47.25%) was obtained in culm branch cuttings with 2000 ppm NAA treatment. In terms of root development, culm cuttings exhibited the highest number of roots (12.78) and the longest root length (10.54 cm). On the other hand, culm branch cuttings had the highest number of roots (9.67) and the maximum root length (8.43 cm). Morphometric data for species trial of six bamboo species viz., *B. tulda*, *B. nutans*, *B. vulgaris*, *B. balcooa*, *B. bambos* and *D. strictus* established at Kundam and ICFRE-TFRI, Jabalpur were recorded. In Kundam trial, maximum culm height (3.09 m) and maximum number of culms (5.98) was observed in *B. bambos* (MAN-CL-2), whereas, maximum culm diameter (2.61 cm) was recorded in *B. vulgaris* (RAI-CL-1). In trial

established at TFRI campus, maximum culm height (5.82 m) in *B. balcooa* (BOT-CL-1), maximum number of culms (6.93) in *D. strictus* (BAL-CL-4) and maximum culm diameter (4.94 cm) in *B. nutans* (GEN-CL-1) were recorded.

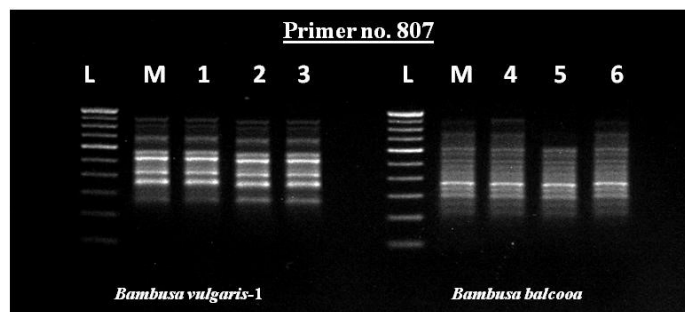


Fig.22 Clonal Fidelity testing of *B. vulgaris* and *B. balcooa* clones (L=Ladder, M=Mother plant)

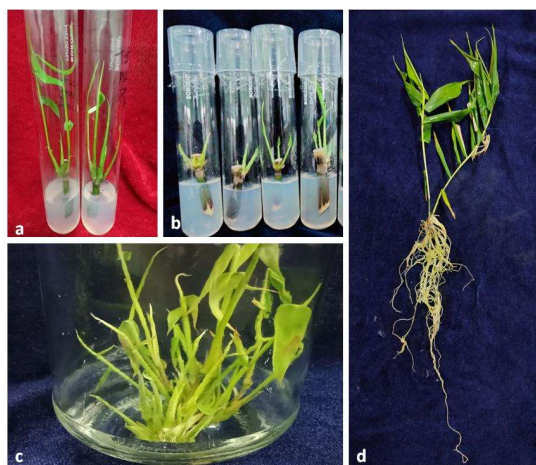


Fig.23 Micropropagation of *Pseudoxystenantha stocksii*: a), b) Bud initiation
c) Shoot multiplication; d) *In vitro* rooting

New project initiated:

Assessment of Variability in Populations of *Cordia macleodii* (Dahiman) and its Conservation in Chhattisgarh.

Dahiman (*Cordia macleodii*) is an important endemic, critically endangered ethno medicinal plant of central India. The extensive field surveys were conducted in twelve forest divisions of Chhattisgarh viz., Pendra-Marvahi, Bilaspur, Korja, Sarguja, Raigarh, Bastar, Dhamtari, Baloda Bajar etc., and geotagging of 125 trees were done to assess biochemical and morphological variations. Macro propagation experiment has been conducted on the stem cutting with three different concentrations of IBA viz., 500 ppm, 1000 ppm and 1500 ppm.



Fig.24 Dahiman's natural condition in the forest area of Chhattisgarh

2.3.3 Tree Improvement

Completed projects:

Variability for Growth, wood traits and natural regeneration status of *Hardwickia binata* a multipurpose tree species in Madhya Pradesh.

- Total 160 wood core samples were extracted at breast height using the Haglof 3-thread increment borer from sixteen suitable populations of *Hardwickia binata*. Girth (cm) data was recorded. Thickness of the bark, sapwood and heartwood length (cm) were recorded. Tree radius was also calculated. Green weight and dry weight (gm) recorded of all the collected wood core samples.
- Quadrates of 10 × 10 m laid out in compartment No.157 and 161 of Narsinghpur range under Narsinghpur forest division for natural regeneration studies. It was observed that regeneration of *H. binata* is poor in this area.



Fig.25 Selected population of *H. binata*



Fig.26 Collection of wood core sample of *H. binata*



Fig.27 Collected wood core samples of *H. binata*



Fig.28 Collected wood core samples of *H. binata*

Ongoing projects:

Selection and Evaluation of *Haldina cordifolia* (Haldu) for Higher Wood Productivity

Thirty Candidate Plus Trees (CPTs) of *Haldina cordifolia* were marked after extensive surveys in three states of central India i.e. Madhya Pradesh, Maharashtra, and Chhattisgarh. Progenies of these CPTs were raised and two trials were established at Jagmandal Range, Mandla, Madhya Pradesh, and at Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh in July 2023. The height of *H. cordifolia* seedlings raised in

polybags ranges from 80 cm to 120 cm, and its diameter ranges from 8 to 13 cm after one year of growth.



Fig.29 Plantations of *H. cordifolia* at Mandla (A), and Bilaspur (B)

Introduction and evaluation of *Melia dubia* in Central India.

- Evaluation trials of *Melia dubia* has been established in five sites (Morena, Chhindwara, Nagpur, Amravati and Durg) by planting 50 improved varieties/genotypes with three replications in a randomized block design.
- Genotypes 700, 2035, 2094, 2059, 2028, 2084, 2093 and 2025 performed better in terms of height and collar diameter among all in the test sites, however these genotypes need further evaluation for site specific recommendation.

Performance of location wise genotypes data on average height (m) and girth (cm) of *Melia dubia* trials established in central India:

Sl. No.	Locations	Genotypes	Avg. girth (cm)	Avg. height (m)
1.	Morena (Madhya Pradesh)	261	25.20	5.00
		2048	24.00	4.50
		2045	17.80	5.10
		13	20.80	5.20
		2068	18.20	5.50
2.	Nagpur (Maharashtra)	700	21.20	7.60
		2035	27.20	8.40
		2094	24.80	7.10
		2059	30.00	6.40
		2028	24.20	6.40
3.	Amravati (Maharashtra)	268	15.70	4.50
		128	13.20	3.50
		2068	15.50	4.50
		2048	14.80	5.50
		53	16.50	5.40
4.	Durg (Chhattisgarh)	268	9.00	2.10

5.	Chhindwara (Madhya Pradesh)	232	7.00	2.50
		2030	12.00	3.50
		2023	10.00	3.50
		2079	12.00	3.70
		2030	13.00	2.10
	Chhindwara (Madhya Pradesh)	2060	14.00	2.50
		2099	12.00	3.10
		13	13.00	3.70
		2094	14.00	3.50



Fig.30 A view of *Melia dubia* experimental site

Evaluation of accessions of *Withania somnifera* (Ashwagandha) collected across India for varietal development.

Germplasm of *Withania somnifera* was collected from different states i.e. Chhattisgarh (Bilaspur), Himachal Pradesh (Shimla & Solan), Maharashtra (Nagpur & Latur), Uttar Pradesh (Varanasi), Rajasthan (Jodhpur) and Bihar (Patna and Bhagalpur) for screening and field evaluation. Multiplication of these germplasm was carried out at the institute for phytochemical screening. The height of *W. somnifera* seedlings raised from seeds of different locations ranged from 30 cm (Amarkantak) to 60 cm (Jhansi) after five months of growth in polybags.



Fig.31 Multiplication of *W. somnifera* germplasm

2.3.4 Tree Improvement : Nil

2.3.4 Vegetative Propagation - Nil

2.3.5 Biotechnology - Nil

2.4 Forest Management

2.4.1 Overview

2.4.1.1 Projects under the Theme (in table as given at 2.1.1.1)

2.4.2 Sustainable Forest Management (SFM)

2.4.3 Forest Economics

2.4.4 Forest Biometrics

2.4.5 Participatory Forest Management

2.4.6 Policy and Legal Issues

2.4.7 Information and Communication Technology (ICT)

2.5 Wood Products

2.5.1 Overview

2.5.1.1 Projects under the Theme (in table as given at 2.1.1.1)

2.5.2 Wood and other Ligno-cellulosic Composites

2.5.3 Wood Processing

2.5.4 Value Addition and Utilization

2.5.5 Wood Chemistry

2.5.6 Pulp and paper

2.6 Non-wood and Forest Products (NWFPs)

2.6.1 Overview

2.6.1.1 Projects under the Theme (in table as given at 2.1.1.1)

Projects	Completed Projects	Ongoing Projects	New Projects Initiated During the Year
Plan	-	02	-
Externally Aided	01	03	-

2.6.2 Resource Development of NWFPs

2.6.3 Sustainable Harvesting and Management

ICFRE funded project:

Evaluation of hydroponics technique for the cultivation of medicinal plants: *Bacopa monnieri*, *Centella asiatica*, *Acorus calamus* and *Stevia rebaudiana*.

Growth kinetics of hydroponically grown medicinal plants *Bacopa monnieri*, *Centella asiatica*, *Acorus calamus* and *Stevia rebaudiana* evaluated indoor and outdoor hydroponics systems with different nutrient solutions and compared with plants grown in soil. The total biomass of *B. monnieri* and *C. asiatica* in hydroponic systems was found 4.37 and 7.96 times more compared to plants grown in soil. Total phenols,

flavonoid and antioxidant activity in leaves of *B. monnieri*, *Centella asiatica* and *Acorus calamus* in different nutrient solutions varied 0.234-1.597%, 0.239-1.575, 0.37-0.93%, 0.22-3.38%, 1.39-9.05%, 2.65-6.44% and 55.06-84.81%, 16.03-66.24% , 30.07-81.16% respectively. Biologically active ingredients, Bacoside (0.016-0.057%) and β -asarone (0.053-0.28%) were quantified. Maximum concentration of bacoside and β -asarone were observed in inorganic nutrient formulations, with NPK ratio 1.5:0.5:2.5 and 3.5:1:7.5, respectively.



Fig.32 Growth performance of *Stevia rebaudiana* in NFT system



Fig.33 Growth performance of *C. asiatica* in NFT system

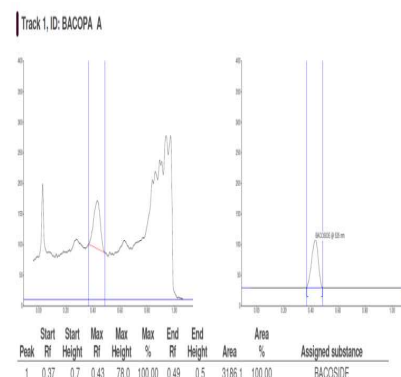


Fig.34 Estimation of Bacoside

Externally Aided Projects:

Conservation of *Stereospermum suaveolens* – A rare species in Madhya Pradesh.

Technical bulletins and extension leaflets on standardized nursery technique of this threatened dashmool species for raising seedlings and a validated HPTLC assay/ analytical method for estimation of active ingredient in *S. suaveolens* were prepared and published. The variation study of triacontanol content revealed that the populations of Khandwa Forest division are superior for *in-situ* and *ex-situ* conservation.



Fig.35a, b, c. Technical bulletins and leaflets on *Stereospermum suaveolens*

Investigation on variations and domestication of *Curculigo orchoides* (*Kali Musli*) in Madhya Pradesh.

The experiments were laid out under three shade levels (0, 50 & 75%) by applying 15 tonnes/ hectare FYM, 20 tonnes/ hectare FYM and 3 ton/ hectare poultry manure to study the germination and growth attributes of different propagation materials (apical, distal, end, segments, whole tuber) of *Kali musli* tubers. Apical buds along with combined effect of FYM at the rate of 20 tonnes/ hectare and 50% shade level showed the maximum germination percentage (73.75%), yield (3.84 q/ hectare) and curculigoside content (0.38 ± 0.05 %). Multilocal trials of *Kali musli* using standardized propagation technique were established at three different sites i.e. Mandla, Jabalpur and Narsinghpur under three different agroclimatic regions of Madhya Pradesh state.



a.



b.

Fig.36 Multilocal trials of *C. orchoides* established at two different sites (a) Mandla (b) Jabalpur

Identification of prominent locations and best populations of *Terminalia chebula* (Harra) and *Anogeissus latifolia* (Dhawda) in Madhya Pradesh in terms of their active chemical ingredients.

Prominent locations of *Terminalia chebula* (Harra) were identified and distribution map of species in Madhya Pradesh was prepared. The fruit samples were collected from 84 beats of 14 forest divisions belonging to Moyakuhi beat of East Chhindwara and Jakli beat of West Betul forest divisions. The content of gallic acid in collected fruit samples were varied from 0.43 ± 0.02 % to 6.22 ± 0.25 %. Average fruit size (length x width) varied from 493.31 mm² to 1151.13 mm², the samples were collected from Dodramau beat of West Chhindwara and Bhimpur beat of North Betul forest divisions.

2.6.4 Chemistry of NWFPs, Value Addition and Utilization

Ongoing Projects:

Exploration and utilization of natural forest resources for formulation of mosquito repellents and their evaluation. (281)

Herbal Mosquito repellent liquids, creams, larvicide and sprays were developed. Herbal mosquito repellent liquid formulations were optimized and tested for mosquito repellent activity, knock down and mortality. Four formulations were found effective and formulate containing species *Lantana camara*, *Hyptissuaveolens*, *Chloroxylon swietenia*, *Murraya koenigii* and *Andrographis paniculata* resulted in 72-92% knockdown and mortality of mosquitoes. Four herbal mosquito larvicidal preparations (ELC, HHS, HLC and HECS) resulted in 100% mosquito larvae mortality, comprised plants viz. *Lantana camara*, *Hyptissuaveolens* and *Chloroxylon*

swietenia. Four herbal mosquito repellent sprays were prepared with plants *Cassia fistula*, *Adhotoda vasica*, *Lantana camara*, *Hyptissuaveolens*, *Pongamia pinnata* and *Andrographis paniculata*. All the developed cream samples complied as per IS 6608:2004 specifications for the tested parameters viz. pH, thermal stability, total fatty substance content, total residue, heavy metals and microbial content.

Herbal Wound healing cream sample was formulated for further testing as per IS 6608-2004 specifications. It was found that the developed cream samples complied as per IS 6608: 2004 specifications for the tested parameters viz. pH, thermal stability, total fatty substance content, total residue and heavy metals content. Work was conducted for development of market linkages for the developed herbal products.



Fig.37Herbal mosquito repellent vaporizers and larvicidals



Fig.38Herbal mosquito repellent sprays



Fig.39Mosquito repellent creams

2.6.5 Bio-fuels and Bio-energy

2.7 Forest Protection

2.7.1 Overview

2.7.1.1 Projects under the Theme (in table as given at 2.1.1.1)

Projects	Completed Projects	Ongoing Projects	New Projects Initiated During the Year
Plan	-	-	02
Externally Aided	-	1	-

2.7.2 Insects pests, diseases and control

Development of Nanoformulation of *Cleistanthus collinus* leaf extract for Management of major Defoliator Pests of Teak and *Gmelina*.

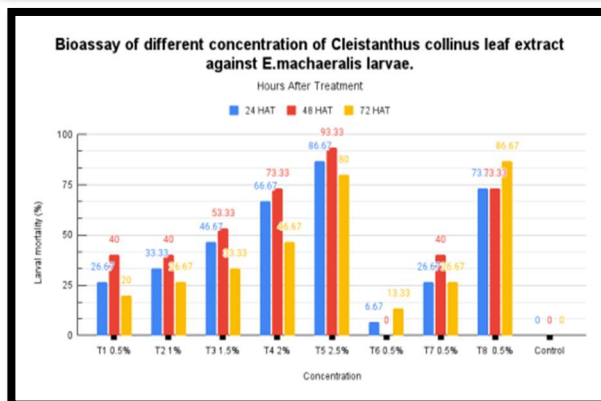
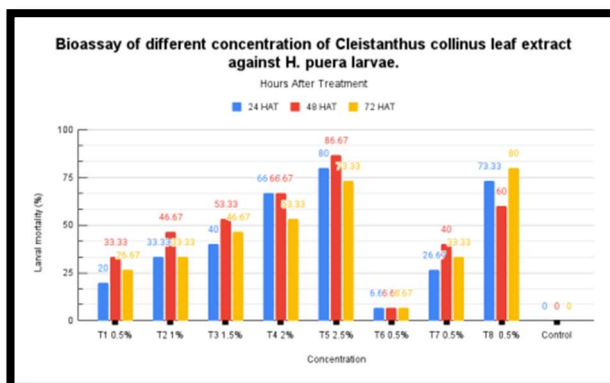
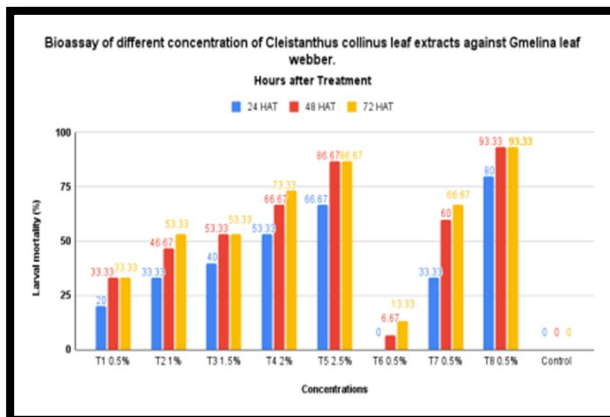
Bioassay experiments were conducted to test the insecticidal effect of different concentrations of *C. collinus* leaf extractives, the results showed that larval mortality of teak skeletonizer, defoliator and *Gmelina* leaf webber @ 2.5% concentration after 72 hours of treatment were 80%, 73.33% and 86.6% respectively.



Fig.40 Extraction of crude extracts using Soxhlet Apparatus



Fig.41 Leaf-disc bioassay of *C. collinus* leaf extract against Teak defoliator and skeletonizer under laboratory condition.



2.7.3 Impact Assessment of *Lantana camara* removal in Chhattisgarh State

Impact of *Lantana camara* removal was assessed in high, medium and low density eradicated areas of three Agro-Climatic Zones of Chhattisgarh. A significant variation in regeneration status of native species, soil properties and microbial diversity was observed in eradicated compared to uneradicated sites at Baster, Balrampur and Marwahi Forest Divisions of Chhattisgarh. In *L. camara* eradicated areas, regeneration of important timber tree species i.e. *Shorea robusta*, *Terminalia tomentosa*, *Pterocarpus marsupium*, *Anogeissus latifolia*, *Dalbergia paniculata* and *Dalbergia latifolia* were recorded. Economically important tree species (*Buchnanian lanzan*, *Diospyros melanoxylon*, *Terminalia chebula*, *Anacardium semicarpus*) were established in all sites.

In all three density classes, 0-15 cm top soil layer was found rich in number of seeds at all sites. The overall composition of the soil microbial populations was analyzed with Principal Component Analysis (PCA). The microbial activity was observed higher in medium density eradicated plot under treated area. The removal of *L. camara* resulted in increased proliferation of P-solubilizing microorganisms that varied 20-105% in selected sites. The soil organic carbon in all sites was found increased (0.51-1.00%) in comparison to control (0.28-0.71%).

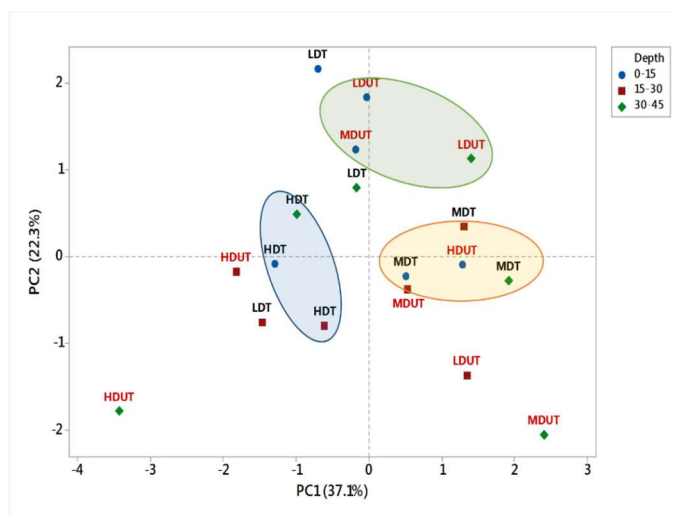


Fig.42 PCA of interactive effect of *L. camara* and its density on beneficial microbial groups at different soil depths in Bastar forest (score plot)

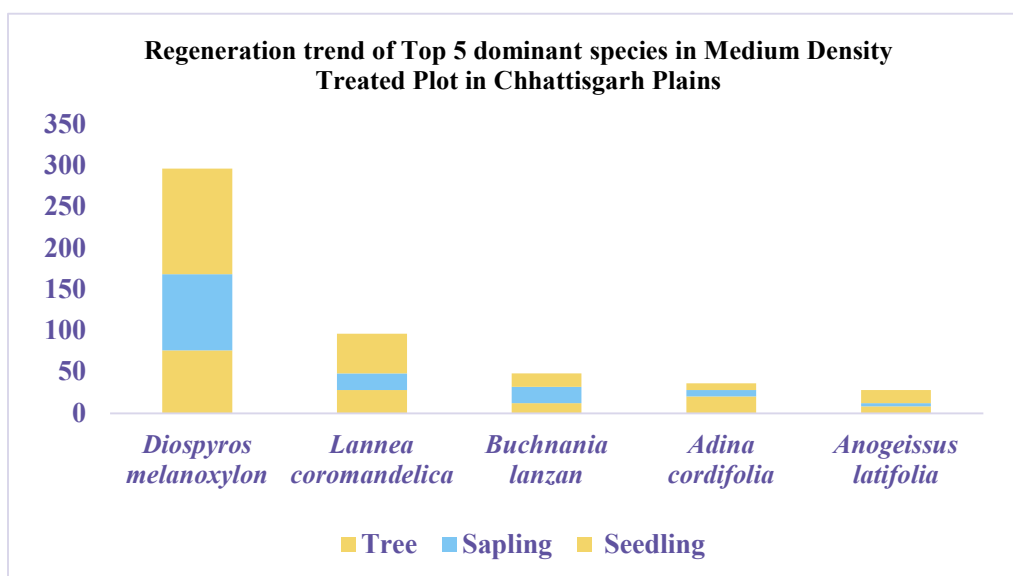


Fig.43Regeneration trend of Top 5 dominant species in Medium Density Treated Plot in Chhattisgarh Plains

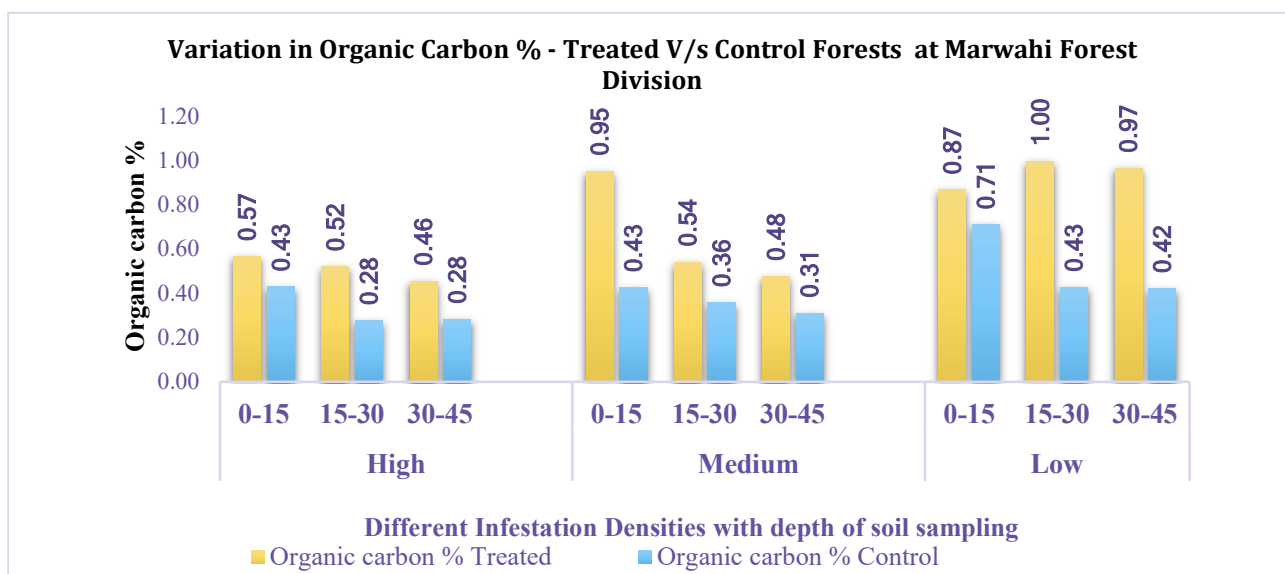


Fig.44 Variation in Organic Carbon % - Treated V/s Control Forests at Marwahi Forest Division

2.7.4 Weeds and Invasive species

Biotization with plant growth promoting rhizosphere and endophytic bacteria for management of nursery diseases of micropropagated bamboo and teak.

Rhizosphere bacterial isolates (20) were isolated and purified from different divisions of Madhya Pradesh (Mandla, Khandwa, Ujjain, Sagar, Jubwa, Pachmari and Damoh (Tejgarh) division). *In vitro* screening work is being initiated for selection of the potential plant growth promoting rhizosphere (PGPR) strains for management of nursery diseases of micropropagated bamboo and teak.



Fig.45Collection and isolation of Rhizosphere bacteria from different division of Madhya Pradesh

2.7.5 Forest Fire and Grazing: Nil

3. EDUCATION VISTAS/ ACTIVITIES

3.1 FRI University (Applicable for FRI, Dehradun only)

3.2 HRD Trainings Organized: Topics must be indicated in annexure while providing numerical information in the table given below:

Note: Please indicate in numerals i.e. 1, 2, 3...n only. Please DO NOT write one week, six months etc.

Sl. No.	No. of Trainings	Duration (in days)	No. of participants
	Nil	Nil	Nil

★ Please provide details of HRD trainings in the given format as annexure -6 (HRDTrainings)

3.3 Visits Abroad - Nil

3.4 Participation in Seminars/Symposia/Workshops/Trainings

No. of Seminars/Symposia/ Workshops/Trainings	Duration (in days)	No. of participants
242	455	980

★ Please provide details in the given format as annexure-7 (participation in Workshops etc.)

4. EXTENSION PANORAMA/ ACTIVITIES

- **National Forest Library and Information Centre (NFLIC)** (Applicable for FRI, Dehradun only)
- **Environmental Information System (ENVIS)** (Applicable for FRI, Dehradun & IFGTB, Coimbatore only)

4.1. Trainings Organized: Topics must be indicated in text while providing information in the table given below

Note: Please indicate in numerals i.e. 1, 2, 3...n only. Please **DO NOT** write one week, six months etc.

No. of Trainings	Duration (in days)	No. of participants
a. Trainings under VVK		
18	18	562
b. Trainings under DV		
2	2	150
c. Trainings under GSDP		
Nil	Nil	Nil
d. Other trainings (excluding HRD trainings)		
43	123	2280
Grand Total	Grand Total	Grand Total
63	143	2992

★ Please provide details of trainings in the given format as annexure -6 (A) (Extension Trainings)

4.2 Report on the activities performed under following:

4.2.1 Van Vigyan Kendras (VVKs):

VVK – Madhya Pradesh

- Established facilities in Model nursery under Van Vigyan Kendra at SDC, Chhindwara (MP). The VVK was inaugurated on 25th July, 2023 and medicinal plants were produced in the model nursery and distributed among the stakeholders as per their requirement.
- Total 10 trainings conducted and 271 participants (Women, SHGs, Farmers) attended the training programmes. Details are enclosed under Annexure -6(A) under (a. Training under VVK)


VVK – Maharashtra

- Established New VVK at Chandrapur (Maharashtra) and signed MoU for the new VVK and Model nursery under CAMPA extension project on 22/03/2024.
- About 100 participants from SFDs of Chandrapur Forest Academy, farmers, wood based industry and SHGs of Maharashtra



4.2.2 Demo Village (DV): Routine maintenance works carried out.

- LIVE DEMONSTRATIONS ORGANIZED UNDER DEMO VILLAGE: 01

Sl. No.	Topic	Duration	No. of participants	Beneficiaries
1.	Live demonstrations on Mushroom cultivation and Charcoal making from weed waste were organized for forest officials and women SHGs of Banjari village, Seoni district (M.P.) under Demo village CAMPA Extension programme	29/02/2024	50	Forest Officials and women SHGs
				

Sl. No.	Topic	Duration	No. of participants	Beneficiaries
2.	Director ICFRE-TFRI and his team visited Demo village, Banjari, Seoni forest Van Mandal (Madhya Pradesh) to inspect the progress of check dam construction and plantation activities with involvement of villagers.	21/03/2024	25	Women SHGs and villagers of demo village



4.2.3 Tree Growers Mela (TGM): Nil

Participation in the Herbal Fair and Agro-vision.

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

Institute	Participated/organized	Duration	Place
भा.वा.अ.शि.प- उष्ण कटिबंधीय वन अनुसंधान संस्थान, जबलपुर	उपनगरीय साप्ताहिक बाजार धुमा में करौंदा फल के उपयोग पर प्रशिक्षण एवं प्रदर्शन,	14-12-2023	Dhuma, Seoni (Madhya Pradesh)

4.2.4 Prakriti:

S.No.	Institute	Participated/organized	Duration	Place
1.	Prakriti program for 300 students of class 9 th to 12 th of Govt H.S. School, Sagada-Jhapni, village, Jabalpur (M.P.)	Organized by ICFRE-TFRI	12-01-2024	300 Students of class 9 th to 12 th
2.	PM Shri K.V. Pandhurna, Chhindwara (MP)	Organized by SDC, Chhindwara	14.02.2024	41 Students of Class 7 th
3.	PM Shri K.V. Pandhurna, Chhindwara (MP)	Organized by SDC, Chhindwara	15.02.2024	43 Students of Class 7 th B
4.	PM Shri K.V. Pandhurna, Chhindwara (MP)	Organized by SDC, Chhindwara	16.02.2024	33 Students of Class 6 th B
5.	PM Shri K.V. Pandhurna, Chhindwara (MP)	Organized by SDC, Chhindwara	20.02.2024	33 Students of Class 6 th
6.	A lecture cum Hand on	Organized by TFRI	21 st March	60 Students of

demonstration on Bio-fertilizer was deliver to the school students under Prakriti Program		2024	Higher Secondary School of Silwa and Sagada Village
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19 programmes conducted under PRAKRITI and total 1095 Students participated. Details are enclosed under Annexure-6(A) under (d. Other Trainings)

4.3 Technologies transferred- *A brief write up with suitable photographs on Efforts made on extension /commercialization of the following:*

4.3.1. Clones/Varieties released (species wise):

- Total 200 plants of two improved varieties of *Rauvolfia serpentina* viz., 100 plants each of TFRI-RS-1 and TFRI-RS-2 were supplied to Chhattisgarh State Minor Forest Produce Federation Limited, Raipur, Chhattisgarh. Revenue of Rs. 0.20 lakh was generated through this transaction.

4.3.2. Packages of practices developed (species wise)

- The package of practices for producing grafted quality planting material from *Madhuca longifolia* was standardized through cleft grafting. Cleft grafting was carried out with scions of CPTs with 40-50 % success.
- Seed handling protocol developed in 10 species *Buchnanania lanzan*, *Putranjiva roxburghii*, *Butea monosperma*, *Kydia calycina*, *Hymenodictyon excelsum*, *Feronia limonia*, *Semacarpus anacardium*, *Nyctanthes arbortristis*, *Mallotus philippensis* and, *Flacourtia indica*.

4.3.3. Products developed

- Herbal Mosquito repellent liquids, creams, larvicide and sprays were developed under the ongoing research project ID-281/TFRI/2021-22/ FRCSD-2/(ICFRE) / (24).

4.3.4. QPM produced and supplied to stakeholders (species wise) –

- QPM of 19 different forestry species and 11 bamboo species were supplied to State Forest Departments, farmers and nursery growers, viz., 207 plants of *Bambusa polymorpha*, 130 of *B. bambos*, 111 of *B. nutans*, 5 of *B. tulda*, 3 of *B. balcooa*, 211 of *B. vulgaris* var. green, 2 of *B. vulgaris* var. yellow, 2 of *B. wamin*, 314 of *Dendrocalamus strictus*, 236 of *D. longispathus*, 3 of *D. asper*, 21 of Teak (*Tectona grandis*), 848 of Shisham (*Dalbergia latifolia*), 13 of Haldu (*Haldina cordifolia*), 13 of Mundi (*Mitragyna parvifolia*), 11 of Mahua (*Madhuca longifolia*), 12 of Neem (*Azadirachta indica*), 11 of Chironji (*Buchanania cochinchinensis*), 26 of Khamer (*Gmelina arborea*), 23 of Maulsiri (*Mimosa elengi*), 27 of Mahaneem (*Albizia excelsa*), 11 of Gulmohar (*Delonix regia*), 26 of Sarpagandha (*Rauvolfia serpentina*), 18 of Chitrak (*Plumbago zeylanica*), 22 of Malkangani (*Celastrus paniculatus*), 20 of Imli (*Tamarindus indica*), 22 of Jamun (*Syzygium cumini*), 22 of Karonda (*Carrisa carandus*), 14 of Kumbhi (*Careya arborea*), 10 of Rain tree (*Samanea saman*) and 14

of Beejasal (*Pterocarpus marsupium*). Revenue of Rs. 88,500/- was generated.

4.3.5. Patented technologies

4.3.5. License/Material Transfer Agreement signed-

"Non - Exclusive License Agreement" with M/S Mukund Biotech, Jabalpur on 20th March 2024, for the tissue culture mass multiplication of one clone of Teak (*Tectona grandis*) and one selected CPC of Bamboo (*Bambusa balcooa*). Revenue of Rs. 10.00 lakhs was generated through license agreement.

4.4 Intellectual Property - Patents Granted/Applied (during the year), any other information regarding IP

4.4.1 Patents applied

- **Title of the patent:** "A liquid herbal hair dye formulation coloring composition containing a decoction of a natural dye for applying to hair" **under AICRP – 16.**

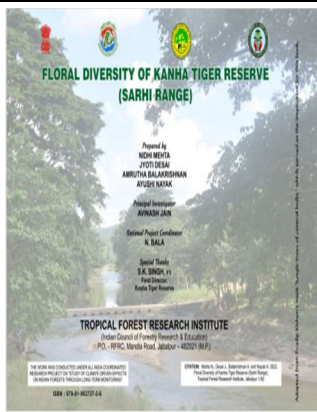

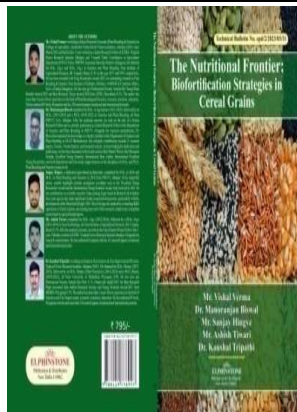

4.4.2 Others: Nil

4.5 Research Publications: Please provide information in the table given below (Numbers only):

Books	Booklets/ Brochure/ Bulletins/ Pamphlets	Article in Seminars/ Conferences/ Workshops etc.		Popular Article	Research Papers in Journals		Chapters in Books/ Proceedings
		Articles	Abstracts		Foreign	Indian	
4	25	02	89	38	11	15	15

Note – List of books along with photograph of cover page are to be submitted separately.

★Please provide a list (with subheads as in 4.5 above) of all the publications (in the manner of enlisting references as followed in the Indian Forester) including impact factor (in case of research papers only) as annexure -10 (publications)

			
Book-1 (cover page)	Book-2 (cover page)	Book-3 (cover page)	Book-4 (cover page)

4.5.1 Seminars/Symposia/Workshops Organized

No. of Seminars/Symposia/ Workshops/ meetings organized	No. of days	No. of participants
22	71	1184

★ *Please provide details in the given format as annexure -8 (seminars etc. organized)*

4.5.2 Awareness /Demonstration programmes organized

No. of Awareness/ Demonstration programmes organized	No. of days	No. of participants
60	109	3318

★ *Please provide details in the given format as annexure -9 (seminars etc. organized)*

4.6 Consultancies:

S.No	Consultancy	User agency
1.	Implementable forestry research for ash utilization promotion and development of research park at APML, Gondia	Adani Power Maharashtra Limited (APML), Maharashtra
2.	Raising short rotation forestry crops for intermittent periods at Dubna-Sakradhi Iron and manganese ore mines in Keonjhar district of Odisha".	Odisha Mining Corporation Limited (OMCL), Odisha

4.7 Technical Services

- 43 soil samples of Indian Institute of Forest Management (IIFM) Bhopal were analyzed for pH, Electrical conductivity, Organic carbon, Nitrogen, Phosphorus, Potassium and Sulphur.
- Soil samples of Gotegaon, Narsinghpur forest division, Madhya Pradesh were analyzed for pH, Electrical conductivity, Organic carbon, Macro (N,P,K,S) and micro nutrients (Fe, Cu, Mn, B, Zn).
- 16 soil samples of Kanha Tiger Reserve, Mandla, Madhya Pradesh were analyzed for pH, Electrical conductivity, Organic carbon, Macro (N,P,K,S) and micro nutrients (Fe, Cu, Mn, B, Zn).
- ICFRE-TFRI, Team (Dr. Mohan C., Scientist- B, Shri Nahar Singh Mawai, A.C.T.O. and Shri Anand Kumar, T.A.) attended field enquiry on insect pests infestations in teak plantations and provided scientific advisories to private teak planter Shri. Satyapal Daryani regarding Biological Management of Teak defoliator and Skeletonizer through TFRI Tricho card at Durganagar, Bargi, Jabalpur. M.P, 25.07.2023.
- ICFRE-TFRI (Dr. Mohan C., Scientist-B) team attended field enquiry on white grub incidence in teak nursery beds and provided scientific advisories to forest officials, nursery frontline staffs, regarding production of insect pests free Teak seedlings at Jiawan forest nursery, Sidhi Forest Division, (MPRVVNL) M.P. 01.08.2023.
- ICFRE-TFRI (Shri. A.J.K. Asaiya, Scientist-C and Dr. Darshan K., Scientist-B) attended field enquiry at Narmada Nagar and Rajul Nursery, Khandwa, M.P., dated 13/09/2023.

4.7.1 Identification and testing services

- Extended HPTLC based testing services to students of NDVSU, Jabalpur and generated revenue of Rs. 8000/-

4.7.2 Advisories given to SFDs and other stakeholders –

4.7.3 Other technical services not covered elsewhere in the report-

- 2198 Soil and 962 forest floor samples received from Forest Survey of India (FSI), Nagpur were analyzed for their organic carbon content. Revenue of Rs. 3,71,818/- generated for the centre and ICFRE, Dehradun.

4.8 Activities of Rajbhasha:

भा.वा.अ.शि.प.-उष्णकटिबंधीय वन अनुसंधान संस्थान, (टी.एफ.आर.आई) जबलपुर में वर्ष 2023-24 दौरान संचालित राजभाषा गतिविधियां

उष्णकटिबंधीय वन अनुसंधान संस्थान, (उ.व.अ.स.) जबलपुर में निदेशक के पर्यवेक्षण में संघ की राजभाषा नीति का अनुपालन सुनिश्चित किया गया, इस दौरान, निदेशक डॉ. एच. एस. गिनवाल की अध्यक्षता में प्रत्येक तिमाही में राजभाषा कार्यान्वयन समिति की तिमाही बैठकें तय समयावधि में आयोजित की गईं एवं बैठकों में उपस्थित सदस्य अधिकारी वर्ग को 'संघ का राजकीय कार्य हिन्दी में करने के लिए राजभाषा विभाग, गृह मंत्रालय, भारत सरकार, नई दिल्ली द्वारा जारी एवं सहायक महानिदेशक (मीडिया एवं विस्तार), विस्तार निदेशालय, भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद् देहरादून द्वारा संसूचित किया गया राजभाषा विभाग का वार्षिक कार्यक्रम में उल्लेखित बिन्दुओं से अवगत कराते हुए इस संस्थान के अधिकार क्षेत्र में आने वाले संबंधित बिन्दुओं पर हस्ताक्षरकर्ता अधिकारी एवं प्राधिकारी वर्ग द्वारा सतर्कता से अमल किया गया।

14 सितंबर 2023 को राजभाषा विभाग द्वारा जारी माननीय गृह मंत्री एवं सहकारित मंत्री का हिन्दी दिवस-2023 पर जारी संदेश का संस्थान के प्रशासनिक भवन के प्रांगण में सामूहिक रूप से वाचन किया गया।

14-29 सितंबर, 2023 तक हिन्दी पखवाड़े का अयोजन किया गया जिस दौरान संस्थान में कार्यरत पदाधिकारियों एवं शोधछात्रों के लिए राजभाषा हिन्दी की विविध प्रतियोगिताएं जैसे कि- वैज्ञानिक तथा तकनीकी शब्दावली का हिन्दी ज्ञान, प्रशासनिक शब्दावली, टिप्पण एवं आलेखन, हिन्दी भाषण, हिन्दी निबंध, हिन्दी में देशभक्ति गीत, एवं हिन्दी में स्वरचित काव्य पाठ की प्रतियोगिताएं आयोजित कर सफल प्रतियोगियों को उचित पुरस्कार प्रदान कर प्रोत्साहित किया गया।

इस दौरान, पदाधिकारी वर्ग द्वारा राजभाषा अधिनियम 1963 यथा संशोधित 1967 की धारा 3(3), राजभाषा नियम, 1976 के नियम 5 का अनुपालन सुनिश्चित किया गया और 'क' 'ख' क्षेत्र स्थित केन्द्र एवं राज्य सरकार के कार्यालयों के साथ हिन्दी में तथा 'ग' क्षेत्र स्थित केन्द्र सरकार के कार्यालयों के साथ हिन्दी-अंग्रेजी अर्थात् द्विभाषी रूप में पत्राचार कर हिन्दी पत्राचार के निर्धारित लक्ष्य को हासिल करने के साथ-साथ संस्थान के शासकीय काम-काज हेतु प्रयोग में रखी हुई प्रचलित फाईलों में मूल हिन्दी में टिप्पणियां लिखकर हिन्दी टिप्पणियां लिखने का निर्धारित लक्ष्य भी हासिल किया गया। यह संस्थान, जबलपुर स्थित नगर राजभाषा कार्यान्वयन समिति कार्यालय-02 का सदस्य कार्यालय है, इस संस्थान द्वारा राजभाषा कार्यान्वयन कार्य में किये गये उत्कृष्ट कार्य के लिए नगर राजभाषा कार्यान्वयन समिति द्वारा प्रशस्ति-पत्र प्रदान कर सम्मनित किया गया।

इस दौरान, संस्थान में सेवारत पदाधिकारी वर्ग में अपने संस्थान के नेमी शासकीय कामकाज में राजभाषा हिन्दी का प्रगामी प्रयोग अधिकाधिक बढ़ाने के वर्तमान उत्साहवर्धक वातावरण को बनाये रखने की दृष्टि से प्रत्येक तिमाही में पदाधिकारी वर्ग के लिए

निदेशक की अध्यक्षता में श्री विजयकुमार डी. काम्बले, सहायक निदेशक (रा.भा.) द्वारा हिन्दी कार्यशालाओं का आयोजन किया गया।

Official language activities conducted at ICFRE-Tropical Forest Research Institute, (TFRI) Jabalpur and during 2023-24

In the Tropical Forest Research Institute, (TFRI) Jabalpur, under the supervision of Dr. H.S. Ginwal Director, the compliance of the official language policy of the Union was ensured. During this, quarterly meetings of the Official Language Implementation Committee were organized in every quarter under the chairmanship of the Director. And issued by the Department of Official Language, Ministry of Home Affairs, Government of India, New Delhi and Assistant Director General (Media and Extension), Directorate of Extension, Indian Council of Forestry Research and Education, Dehradun Communicated by informing about the points mentioned in the annual program of the Department of Official Language. The related points coming under the jurisdiction of this institute were carefully implemented by the signatory officer and office bearers.

On September 14, 2023, the message issued by the Department of Official Language of the Honorable Home Minister and Cooperative Minister on Hindi Day-2022 was collectively read out under the chairmanship of Dr. H. S. Ginwal, Director, in the premises of the Institute's administrative building.

Hindi fortnight was organized from September 14-29, 2023, during which various competitions of official language Hindi were held for the officials and research scholars working in the institute, such as Hindi knowledge of scientific and technical terminology, administrative terminology, noting and drafting, Hindi speech, Hindi Essay, patriotic songs in Hindi and self-composed poetry recitation competitions were organized and the successful contestants were encouraged by giving appropriate prizes.

During this period, compliance of Section 3(3) of the Official Language Act 1963 as amended in 1967, Rule 5 of the Official Language Rules, 1976 was ensured by the office bearers and the Central and State Government offices located in the 'A' 'B' Region were in Hindi and to achieve the set target of Hindi correspondence by conducting correspondence in Hindi-English i.e. bilingual form with the Central Government offices located in 'C' region. The prescribed target of writing noting in Hindi was also achieved by writing comments in the original Hindi in the existing files kept in use for the official work of the Institute. This institute is a member office of City Official Language Implementation Committee Office-02 located at Jabalpur, this institute was felicitated by the City Official Language Implementation Committee by awarding a certificate for the excellent work done in official language implementation work.

During this period, with a view to maintain the present encouraging environment for increasing the progressive use of official language Hindi in the regular official work of the Institute, in every quarter under the chairmanship of the Director, Shri. Vijaykumar D. Kamble, for the office bearers, Hindi workshops were organized by the Assistant Director (OL)



हिन्दी पखवाड़े के दौरान, सभा को संबोधित करते हुए डॉ. एच.एस. गिनवाल निदेशक



हिन्दी पखवाड़े के दौरान आयोजित विविध हिन्दी प्रतियोगिताएं



हिन्दी पखवाड़े के दौरान, आयोजित हिन्दी प्रतियोगिताओं के विजेताओं को नकद पुरस्कार एवं प्रशस्ति पत्र प्रदोन करते हुए डॉ. एच.एस. सिंह गिनवाल निदेशक एवं श्रीमती नीलू सिंह समूह समन्वयक (अनुसंधान)



संस्थान में आयोजित हिन्दी कार्यशाला को संबोधित करते हुए डॉ. एच.एस. सिंह गिनवाल निदेशक



राजभाषा हिन्दी के प्रयोग प्रसार में उत्कृष्ट कार्य के लिये नराकास, जबलपुर द्वारा प्रेरण पुरस्कार (शिल्ड)

4.9 Awards and Honours:

- Dr. Mohan C (Sci-B) Conferred “Dr. A.P.J. Abdul Kalam Young Scientist Award in the field of Entomology” on the occasion of 12th National Conference on Natural Sciences (Virtual mode), jointly organized by Pushkaram college of Agricultural Science and Tamil Nadu Scientific Research Organization, Pudukottai, Tamil Nadu.
- Dr. Nitin Kulkarni, Scientist-G & Director ICFRE-Tropical Forest Research Institute, Jabalpur was awarded with Paryavaran Shri Samman during 1st International Conference on "Nature and Natural Sciences (ICNS-2023)" on 5-6.05.2023 organized by RDVV, Jabalpur jointly with TFRI and ABRF, Prayagraj among other Co-organisation.
- Smt Neelu Singh, Scientist-G was Awarded with "Lal Bahadur Shastri Global Award for Biodiversity" and Certificate for Honour during 1st International Conference on "Nature and Natural Sciences (ICNS-2023)" on 5-6.05.2023 at RDVV, Jabalpur (M.P.)



- Shri Manish Kumar Vijay, Scientist-B received Best Oral Presentation Award in the 2nd National Conference on “Value addition and Marketing of NTFPs/ MAPs for Livelihood

Security (NCVAM - 2023) (02-03 May, 2023 Virtual mode TFRI, Jabalpur)

- Shri Manish Kumar Vijay, Scientist-B received Best Oral Presentation Award in the 1st International Conference on Nature and Natural Sciences (ICNS 2023) (5-6th May, 2023) held at Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur (M.P.)
- Dr. Darshan K., Sci.-B bagged Best Oral Poster Presentation Award (1st place) at national conference: Wild Edible Mushrooms of Forest Ecosystem: Untapped Resource for Forest Dwellers, Darshan K, Manjuprakash and AJK Asaiya. 2nd National conference (Virtual Mode) On Value Addition and Marketing of NTFPS/ Maps for Livelihood Security (NCVAM - 2023), 02 – 03rd May 2023.
- Dr. Darshan K., Sci.-B bagged Best Oral Poster Presentation Award (3rd place) at international conference: Diversity of Kanha National Park and Its Ecosystem Services.
- Shri Mukesh Kumar Sonkar, Technical officer, awarded ICFRE best employee awards for the year 2021
- Shri Saikat Banerjee, Senior technical Officer, awarded ICFRE best employee awards for the year 2022
- Shri Manish Kumar Vijay, Scientist-B, received best oral paper presentation award at the National conference on 'Medicinal Plants, Natural Products and the Indian System of Medicine (NCMP-2023)' organized at ICAR-CAFRI, Jhansi, during September 8–9, 2023, by the V Sivaram Research Foundation, Bengaluru, in collaboration with ICAR-CAFRI, Jhansi.
- Dr. Mohan C (Sci-B) Conferred “YOUNG FOREST ENTOMOLOGIST AWARD 2023” on the occasion of 5th International Conference on “Recent Advances in Agricultural, Industrial Entomology, Environmental Sciences and their impact on food and Environmental Security” held at Entomology Research Institute, Loyola College, Chennai, Tamil Nadu.
- Appreciation letter to Shree AJK Asaiya, Sci C and Dr. Darshan K, Sci B from MPVVK, Khandwa for imparting the training on organic and biofertilizer and also on detection and diagnosis of pest and diseases in forest nursery (Letter no. 1566/26/10/2023)

Radio Talk: 06

- Shri N.D. Khobragade, Scientist-E delivered Radio talk on Agroforestry on 02nd May 2023 at 7:20 pm on Kisanwani, Akashwani Kendra, Chhindwara (M.P.)
- Dr. Nitin Kulkarni, Director, delivered Radio Talk on ‘Agroforestry’ on 25th July, 2023 on Akashvani, Chhindwara (MP)
- Dr. Nitin Kulkarni, Director, delivered Radio Talk on “Value addition of Forest products” on 25th July, 2023 on Akashvani, Chhindwara (MP)
- Dr. Nanita Berry, Scientist-F & Head, FE Division, delivered Radio Talk on ‘Agroforestry and its extension’ on 25th July, 2023 on Akashvani, Chhindwara (MP).
- Dr. Nanita Berry, Scientist F and Head, FE division, delivered one Radio Talk on ‘Management of Bamboo based agroforestry system’ on 25th July, 2023 on Akashvani, Chhindwara (MP).
- Dr. Nitin Kulkarni, Director, delivered One TV Talk on ‘Extension of forest based products and nursery techniques of medicinal plants’ on 25th July, 2023 and telecasted in ‘Kisan Darshan’ programme, Chhindwara (MP).

4.10 Special Activities (Such as Van Mahotsava, Forestry Day and Other occasions)

- Organised an Awareness program on Kodo Kutki Minor millets and distributed seeds of the crops by ICFRE- TFRI the group of farmers under Poshan Pakhwada Programme of MOEF & CC, New Delhi on 3 April 2023.
- Organized ‘World Earth Day’ and delivered a talk on Vermicompost and its importance by R.K. Malviya, STO and AJK Asaiya, Scientist on 22/04/2023.
- ICFRE-TFRI Celebrated National Civil Service Day 20/04/2023.

- Swachhata Abhiyan was conducted by the ICFRE-FRC-SD centre on dated 25/04/2023 under AKAM All the scientist, staff and project staff contributed their service during this cleanliness campaign.
- All scientists, technical officers and research scholars of the ICFRE-TFRI and SDC, Chhindwara attended meeting cum sensitization programme for preparation of action plan and adopt activities of the Mission LiFE under the chairmanship of Director, ICFRE-TFRI
- Celebrated "International Day of Biological diversity, 2023" with the theme "Agreement to action- Build back biodiversity" by conducting a series of events 20 to 22 May 2023
- Conducted Treasure Hunt with the message of Mission LiFE and exploring the rich biodiversity of the TFRI campus for research fellows, PhD scholars and children of TFRI staff on 20 May, 2023.
- TFRI has organized and celebrated "World Environment Day 2023" on the theme- 'Solution of plastic pollution' 5/06/2023
- TFRI has Organized and involved on "International Day for Yoga 2023" with the theme- 'Yoga for Vasudhaivva Kutumbakam' 21/06/2023
- ICFRE-TFRI Organized Environmental Awareness and Plastic Cleaning Rally on 05-06-2023 to sensitize local people and students to avoid plastics from TFRI gate to Gour Tiraha
- Dr. Nitin Kulkarni, Director ICFRE-TFRI, Dr. Fatima Shirin, Head, GTI, Dr. Avinash Jain, Head, FE CC & Dr. Nanita Berry, Head, FE Division participated in the Mass plantation jointly organized by TFRI and ITBP on the occasion of vanmahotsav at ITBP campus, Jabalpur (MP) 06/07/2023
- In a series of Plantation activities, ICFRE - Tropical Forest Research Institute Jabalpur organized a Mass plantation program on the occasion of #VanMahotsav under the #MissionLiFE at TFRI campus, Jabalpur (MP) 07/07/2023
- ICFRE - Tropical Forest Research Institute, Jabalpur organized a 'Wellness campaign' The mass level health checkup program was organized in collaboration with the 'Healthy Wealthy India' with an aim to promote regular health checkup practice to remain healthy and active.
- Bamboo Plantation at "Rani Avanti Bai Sagar Hydel Power House Bargi Nagar. On 3rd August 2023
- Dr. Nanita Berry, Scientist 'F' and Head, FE division organized 'Swachhta Campaign' at Govt. Middle school, Jamuniya village with the involvement of school children on 09/08/2023 under Azadi Ka Amrit Mahotsav.
- Dr. Nanita Berry, Scientist 'F' and Head, FE division organized Awareness programme on conservation of Natural resources for tribal community of Jamuniya village, Beejadandi block on 10-08-2023 under Ajadi Ka Amrit Mahotsava
- All the Scientist and Staff contributed their services in Swachhata Abhiyan conducted by the ICFRE-SDC, Chhindwara on 23.08.2023.
- All Scientist, Officers & Staff participated actively during 'Parthenium eradication programme' at TFRI premises as an institutional activity on 12th August, 2023.
- Celebrated 77th Independence Day by ICFRE-TFRI and SDC, Chhindwara on 15/08/2023, all the scientists & Staff were present on the occasion.
- All Employee shared 'Selfie with Tiranga' under Har Ghar Tiranga campaign from 13th to 15th August, 2023.
- All Scientist, Officers & Staff took 'Sadbhavana pledge' during Sadbhawna Day on 18th August, 2023.
- All employees of the institute and its centre participated in the Swachhta special campaign 3.0 as organized on 02 October 2023 at TFRI and SDC, Chhindwara(MP).
- "Mahatma Gandhi" Jayanti was celebrated by the ICFRE-TFRI and FRC-SD Centre on 02.10.2023. Scientists & staff of the Institute actively participated in the cleanliness campaign.
- Celebrated ICFRE-TFRI & ICFRE-Skill Development Centre, Chhindwara 3rd Janjatiya Gourav divas in memory of Birsamunda 148th birth anniversary on 15 November 2023.

- Rashtriya Ekta Divas (National Unity Day) pledge taken by all employees of ICFRE-TFRI, Jabalpur & ICFRE-SDC, Chhindwara on 31.10.2023
- Swatchhata Abhiyan was conducted by the ICFRE-SDC, Chhindwara on 31.10.2023. All the Scientist and Staff contributed their services during the period.
- Swatchhata Abhiyan was conducted by the ICFRE-Tfri and SDC, Chhindwara on 31.10.2023. All the Scientist and Staff contributed their services during the period.
- Staff contributed their services during the period.
- Swatchhata Abhiyan was conducted by the ICFRE-SDC on 18.12.2023. Scientist & staff of the Centre actively participated in this event.
- Celebrated Women's Day by cleaning Holy river with the involvement of Women SHGs and honored them by the institute representative i.e. Head, FE division on 08/03/2024
- ICFRE-SDC, Chhindwara conducted Swatchhata Abhiyan on 13.03.2024. All Scientists, staff & project staff of the centre actively contributed their services during the event.
- ICFRE- TFRI and SDC- Chhindwara Celebrated International day of Forest by plantation of 16 species in 'Nakshatra Vatika' at Institute's campus and also showed Movie on 'Conservation of Tiger in India' and visit of different lab and museum on 21/03/2024.
- Swachhata Abhiyan was conducted by ICFRE-SDC, Chhindwara on 13.03.2024.
- Swachhata Abhiyan was conducted by the centre on 25.04.2023, 31.10.2023, 18.12.2023, 19.1.2023, 13.02.2023 under AKAM All the scientists, staff and project staffs contributed their services during the cleanliness campaign.
- Sh. N.D. Khobragade, Scientist-E delivered Radio talk on Agroforestry on 02nd May 2023 at 7:20 pm on Kisanwani, Akashwani Kendra, Chhindwara (M.P.)
- "Lifestyle for the Environment" Pledge was conducted by ICFRE-SDC, Chhindwara on 10.05.2023. All Scientists and staffs participated and took pledge and obtained e-certificates.
- World Environment Day was celebrated by the Centre on 05.06.2023 in Guraiya, Bhaissad and village of Chhindwara District in Gram Panchayat Bhsvans and Poama Anganwadi Kendra Chhindwara, During the period "Mission Life Activities" related to Environment Protection & Healthy Lifestyles to be adopted were disseminated to the target groups (Womens/ Villagers/ Farmers etc.).
- 9th International Yoga Day was celebrated by the Centre on 21.06.2023, All the permanent employees and Project staffs of the Centre actively participated in the event.
- Van Mahotsav was celebrated by the Centre on 05.07.2023. During the event plantation of various forestry spp seedlings were planted in campus of the Centre.
- Independence Day was celebrated by the Centre on 15.8.2023. All the scientists & Staff were present on the occasion.
- Hindi Divas was celebrated by the Centre on 14. 9.2023. All the scientists & Staff were present on the occasion.
- "Mahatma Gandhi Jayanti" was celebrated by the Centre on 02. 10.2023.
- Scientist & staff of the Centre actively participated in the cleanliness campaign.
- Vigilance Awareness Week was observed by the centre and pledge was taken by all ICFRE-SDC, Chhindwara employees on 30.10.2023.
- "Rashtriya Ekta Divas" (National Unity Day) pledge taken by employees of ICFRE-SDC, Chhindwara on 31.10.2023.
- ICFRE-Skill Development Centre, Chhindwara organized Janjatiya Guarav Diwas on 15 November 2023. All scientists & staff of the centre participated in the event during Birsa Munda Jayanti celebration.
- Samvidhan Diwas (Constitution Day), was celebrated by the ICFRE-SDC, Chhindwara on 26.11.2023. All the employees were present (read the preamble of the constitution) during the event.

- ICFRE-Skill Development Centre, Chhindwara celebrated “World Forestry Day” on 21.3.2024. During the in-house event, seedlings of important forestry species were planted in campus by all scientists, staff and project staff of the centre. On this occasion, centre also conducted one outreach programme at Danielson Degree College, Chhindwara. Seedlings of economically important species were distributed to the students. Plantation was done successfully by involving principal, faculties and students.
- Celebrated “World soil day” with the theme “Soil and Water: A Source of Life” on 5 December, 2023.
- Worked as a mentor for three students of Aloysius Institute of Technology, Gaur, Jabalpur on herbarium preparation (4 student) and ethnomedicine plants (3 student).
- Provided demonstration to the students of St. Aloysius School on seed and vegetative propagation of medicinal plants under LiFE
- Participated in the organized under Swachh Bharat abhiyan to enhance awareness about alien invasive weed -Parthenium in TFRI Campus on 11/08/2023

4.11 Extension Activities performed under CAMPA Extension (this information is different from the information provided in the Chapter as above)

Administration and Information Technology

Introduction

5.1 Information Technology

Information Technology Cell (2023-24):

- The institute has 100 MBPS NKN link provided under the National Knowledge Network (NKN) scheme of NIC project. The NKN comprises an ultra-high speed CORE (multiples of 10 Gbps), complimented with a distribution layer at appropriate speeds to support Overlay, Dedicated and Virtual Networks.
- The institute has a 100 MBPS fast Ethernet fiber optic backbone LAN, which is used for Internet access and other online activity. Video Conferencing facility also been used throughout the year.
- The local area network has been extended to 10 new locations at Silviculture, Agroforestry & Forest Management Division, Genetics & Tree Improvement Division of the institute.
- Non-functional uplink between Ground Floor and First Floor of Genetics wing has been replaced with armoured cat 6 cables. Also cat 6 cables has been replaced at 5 location damaged by squirrel at this wing.
- Under IFRIS project, Personal Information Management System (PIMS) has been in operation successfully till January 2024.
- Data of all the employees of the institute has been collected complied and submitted to ICFRE headquarter for implementation of e-office at the institute.
- The web pages of institute's website both English (<http://tfri.icfre.org>) and Hindi (<http://tfrihindi.icfre.org>) version have been updated on regular basis and also for the institute's online open access e-magazine 'Van Sangyan' (ISSN 2395 - 468X), institute's journal “Indian Journal of Tropical Biodiversity” linked with institute's web site on regular basis and issues have been uploaded on monthly basis over it for easy access to the users.
- Videos of institutional activities have been uploaded over official You Tube channel of the institute for wider circulation on regular basis throughout the year. The account is also integrated with institutes' web site.
- The social media accounts like Facebook, Instagram, Koo, and Twitter are also integrated with institutes' web site for ease of access.

- The web site of institute's satellite centre, ICFRE- Skill Development (ICFRE-SDC), Chhindwara) has been designed in new format and published over ICFRE server. The social media accounts like YouTube, Facebook, Twitter, Instagram, Koo have been created and integrated with website for ease of access.
- The website and social media accounts of institute's satellite centre ICFRE-SDC have been updated with latest information on regular basis throughout the year.
- Reports have been generated for all the activities undertaken at the institutes level - conferences/seminars/workshops/trainings/visits of dignitaries/visits etc. are uploaded on institute's web site and also sent to the headquarter for uploading over ICFRE website.
- Various networking facilities extended within the institute. All the circulars, notifications, office orders, proceedings of monthly seminars and other documents have been regularly uploaded over the Online Office Records (Order /MoM / Agenda etc.) System for wider circulation.
- All the virtual meetings have been organized through VC end point, Webex, googlemeet, Zoom, Microsoft Teams for trainings, workshops, seminar, In-house meetings and meetings with headquarter and other organizations throughout the year.
- Technical support has been provided to security section for preparing proposal for replacing existing (non-functional) CCTV cameras, cables and installation of new CCTV cameras at different locations for 24x7 hour surveillance of the institute campus and nearby areas. After procurement supervised the installation, configuration and functionality of these cameras, NVR, switches, cables etc.
- Biometric attendance systems and CCTV security systems have been supervised ensures its functionality throughout the year.
- A pair of externally funded projects, entitle "Development of Forest Soil Information System for Madhya Pradesh" and "Comprehensive Database Development of Forest Tree Species Resource Position of Maharashtra," have been prepared and submitted to Madhya Pradesh Council of Science and Technology and Maharashtra State Biodiversity Board respectively.
- Database has been prepared for Demarcation and Geo tagging of trees species of Institutes jurisdictional areas.
- All the activities like in-house meetings, seminars, workshops, trainings, interview, RAG, RRC etc. have been successfully organized virtually through Google meet, WebEx, Microsoft teams etc. Video Conferencing facility through endpoint also been used throughout the period for online activities.
- Procurement of computer and printers under capital assets (equipment) and one time lump-sum grants from UNDP for institutional strengthening for climate change research activities.

5.2 Administration: A brief note on general administration activities along with information on the following:

5.2.1 Sevottam: Activities relating to the Citizens/Clients Charter as detailed below has to be included in the Annual Report.

- Activities related to the citizen /client charter are being followed as per TFRI, Jabalpur

5.2.1.1 Action taken to formulate the Charter for the Department and its subordinate formation;(In case the Charter is yet to formulate)

- Citizen's charter is being drafted by TFRI, Jabalpur and the centre is under the administrative control of TFRI, Jabalpur

5.2.1.2 Action taken to implement the Charter

- Action will be taken for implementing the Charter as per the directives received from TFRI Jabalpur

5.2.1.3 Details of Training Programmes, Workshops, etc. held for proper implementation of Charter; **(this is not the same as provided in chapter no. 4.3 and 4.4. Trainings organized for implementation of charter only is to be given)**

- These programs will be organized after approval of the citizen charter

5.2.1.4 Details of publicity efforts made and awareness campaigns organized on Charter for the Citizen/Clients; **(awareness campaigns organized for charter only)**

5.2.1.5 Details of **internal and external evaluation of implementation of Charter** in the Organization and assessment of the level of satisfaction among Citizen/Clients.

- Evaluation of implementation of charter is to be initiated.

5.3 Welfare measures for the SC / ST/ backward / minority communities

The interests of the above section are being safeguarded and as per the guidelines of Government of India a Liaison Officer is in position that monitors the promotion / recruitment as per the roster.

Trainings were conducted for minor community about awareness on medicinal plants and their uses.

ICFRE- Skill Development Centre, Chhindwara celebrated the Birth Anniversary of Birsa Munda on 18.11.2023 at ICFRE-SDC, Chhindwara (MP)

5.4 Welfare measures for women

An Internal Complaints Committee on Sexual Harassment of Women at workplace was constituted in the institute.

5.5. HR News

Annexure 1-11(total 12nos.)**1. Information on RTI –Annexure -1**

RTI Applications/ Requests	No. of applications received as transfer from other P/As u/s 6(3)	Received during the month (including cases transferred to other Public Authority)	Number of cases transferred to other Public Authorities u/s6(3)	Decisions where requests/ Appeals rejected	Decisions where requests/ Appeals accepted
1st Quarter	Nil				
2nd Quarter	Nil				
3rd Quarter	Nil				
4th Quarter	Nil				
Total	Nil				
RTI First Appeals	Nil				
1st Quarter	Nil				
2nd Quarter	Nil				
3rd Quarter	Nil				
4th Quarter	Nil				
Total	Nil				

2. Information on Vigilance Cases -Annexure-2

Information on the vigilance cases						
Sl.No	Vigilance cases carried forward from previous years	Vigilance cases initiated in the year	Vigilance cases disposed	Vigilance cases pending	Nature of such cases	Remarks, if any
Nil						

3. Information on Audit Objections- Annexure-3

Information on the Audit objections						
Sl.No	Audit objections carried forward from previous years	Audit objections initiated in the year	Audit objections disposed	Audit objections pending	Nature of Audit objections	Remarks , if any
1.CAG Audit Kolkata	2014-15 Para-03nos. 2018-19 to 2020-21 Para-1,2,3,7,8	Year 2021-22 & 2022-23 Para-10nos.	2018-19 to 2020-21Part II, Sec B Para-4,5,6,9	2014-15 Para-03nos. 2018-19 to 2020-21 Para-1,2,3,7,8 & Year 2021-22 & 2022-23 Para10nos.	Administrative/ Research	
2.Govt.of India (MOEF)Internal Audit Wing, New Delhi	01/04/2010 TO 31/03/2013 Para-14nos.	Year 2013-14 TO 2022-23 Para-16nos.	01/04/2010 TO 31/03/2013 Para-1,5,8,9,10,11, 12,13	01/04/2010 TO 31/03/2013 Para-06nos. 2013-14 TO 2022-23 Para-16nos.	Administrative/ Research	
3.Internal Audit Cell, Dehradun	2012-14 & 2014-17 Para-22nos.	Year 2017-18 TO 2020-21 Para-18nos. Year 2021-22 TO 2022-23 Report awaited	2014-17 Para-11nos	2012-14 Para-03nos., 2014-17 Para-08nos. 2017-18to 2020-21 18nos.	Administrative/ Research	

4. Email and postal addresses- Annexure-4

Director

ICFRE- TROPICAL FOREST RESEARCH INSTITUTE

(Indian Council of Forestry Research & Education)

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E-mail – dir_tfri@icfre.org

5. List of abbreviations- Annexure-5

- APLM - Adani Power Maharashtra Limited
- BAF - Basal Area Finder Scope
- CoE-SLM- Centre of Excellence on Sustainable Land Management
- IIFM- Indian Institute of Forest Management
- MP SFD-Madhya Pradesh State Forest Department
- MPRVVN - Madhya Pradesh Rajya Van Vikas Nigam Limited
- NCL - Northern Coalfields Limited
- OMCL - Odisha Mining Corporation Limited
- RDVV-Rani Durgavati Vishwavidyalaya
- SECL– South Eastern Coalfields Limited
- SWAT-Soil Water Assessment Tool
- ICFRE – SDC - ICFRE - Skill Development Centre
- MoEFCC-Ministry of Environment, Forest and Climate Change
- ICFRE-Indian Council of Forestry Research and Education
- FSI-Forest Survey of India
- TFRI-Tropical Forest Research Institute
- DFO-Divisional Forest Officer
- NTFPs-Non Timber Forest Products
- AICRP-All India Co-Ordinated Research Project
- SHGs-Self Help Groups
- RAG-Research Advisory Group
- VVK-Van Vigyan Kendra
- RAWE-Rural Agriculture work experience
- JNV-Jawahar Navodaya Vidyalaya
- JNKVV-Jawaharlal Nehru Krishi VishwaVidyalaya
- KV-Kendriya Vidyalaya
- FRCS- Forest Research Centre for Skill Development
- NWFP-Non Wood Forest Produce
- HRM-Human Resource Management
- IFS-Indian Forest Service
- SDO-Sub-Divisional Officer
- RBD-Randomized Block Design
- AKAM-Azadi Ka Amrit Mahotsav
- NABARD-National Bank for Agriculture and Rural Development

6. Details of trainings organized - annexure-6 (HRD Trainings)

Trainings organized						
SN	Topic	Duration and period		Participants		Overall feedback of Participants
		Days	Date	Category	Numbers	
1	Nil					
2	Nil					

Details of trainings organized - annexure-6(A) (Extn. Trainings)

Trainings organized						
SN	Topic	Duration and period		Participants		Overall feedback of Participants
		Days	Date	Category	Nos.	
a. Trainings under VVK						
1.	Value addition of NTFPs	1day	04/07/2023	Women SHGs, Poama village, Chhindwara (MP)	27	Women from different SHGs were ready to take this value added training on NTFP as their income & employment generating source.
2.	Value addition of NTFPs	1day	04/07/2023	Jai Ambe Maa Women SHGs, Munga village, Chhindwara(MP)	32	
3.	Value addition of NTFPs	1day	04/07/2023	Anmol, Pragati & Jai Sewa, Women SHGs,Guraiya, Chhindwara(MP)	39	
4.	Value addition of NTFPs	1day	05/07/2023	Pragati,Shiva & Lucky Women SHGs haisadand, Chhindwara (MP)	24	
5.	Value addition of NTFPs	1day	08/07/2023	Women SHGs, Singodi (MP)	28	
6.	"Value addition of NTFPs" were organized under VVK, Chhindwara, (MP) and demonstrated the newly developed facilities and equipment for preparation of herbal Dhoop batti, Agarbatti and noodle making process to all the stakeholders.	1 day	25/07/2023	SHGs, farmers, Anganwadi workers, particularly the youngsters from adjoining villages of Chhindwara district	25	Excellent
7.	"Nursery techniques of important Forestry/	1 day	25/07/2023	SHGs, farmers, Anganwadi workers,	25	Very good

	NTFP species" was organized under VVK Chhindwara, MP.			particularly the youngsters from adjoining villages of Chhindwara district		
8.	Vaniki ki Unnat Taknik' under VVK training programme at Payli, Eco-center, Seoni Van Mandal.	1 day	17/01/2024	SFD officials	41	Very good
9.	NTFP and its Value addition 'under VVK for Skill Development	1 day	22/02/2024	Women SHGs of Durga SHG,(Jirlinga), Kalkali SHG, (Sarna) Mata Mai, SHG, (Kudwari), Chhindwara, (M.P.)	18	Excellent
10.	NTFP and its Value addition' under VVK for Skill Development	1 day	27/02/2024	Women SHGs of Rukhmani, Farishta, Dharohar, Chhindwara, (M.P.)	23	Useful training
11.	Value addition of NTFPs	1day	22/02/2024	Durga,Kali & Mata Mai women SHGs,Partala,Chhindwara(MP)	18	Women from different SHGs were ready to take this value added training on NTFP as their income & employment generating source.
12.	Value addition of NTFPs	1day	27/02/2024	Women SHGs (Rukhmini, Farishta, Dharohar)Chhindwara (MP)	23	
13.	Organic farming based Agroforestry	1day	29/02/2024	Farmers, (Manegaon, Chorai, Kundalikala, Khari, Junnardev, Amarwada, Umreth, Aamta, Karabdol, Saliwada) Chhindwara (MP)	21	Farmers were updated on Agroforestry techniques and were ready to implement in their fields.
14.	Nursery and Cultivation Techniques of Important Medicinal Plants & NTFP species under Van Vigyan Kendra (MP)	1day	1/03/2024	Farmers/ Tree growers	35	Excellent
15.	Nursery and cultivation Techniques of important medicinal plants and NTFPs	1day	01/03/2024	Farmers/ Tree growers , Nagpur (MS)	35	Farmers were updated on Nursery and cultivation techniques and were ready to implement in their fields.
16.	'Value Addition of NTFPs/Nursery Technique of Medicinal Plants/Organic Farming 'under Van Vigyan	1day	18/03/2024	SHG Women	24	Excellent

	Kendra, MP					
17.	Value addition of NTFPs /Nursery and cultivation Techniques of important medicinal plants and NTFPs	1day	18/03/2024	Umema, Ganraj Rajola, Kaynath, Swami Vivekananda, Shiv Mahima, Aaro, Vidhi,Shri Shivay, Shivam,Shiv-Shakti, Tejaswani women SHGs,Singodi,Chhindwara(MP)	24	Women from different SHGs were ready to take this value added training on NTFP as their income & employment generating source.
18.	Van Vigyan Kendra, maharashtra ,tfri technology	1day	22/03/2024	SFDs, Industry people, SHGs	100	Excellent
b. Trainings under DV						
1.	‘Vermi Compost and TFRI technology’ at demo village	1day	20/09/2023	SFDs, Scientists, ICFRE-TFRI Farmers	100	Excellent
2.	Live demonstrations on ‘Mushroom cultivation and charcoal making from weed waste’ were organized for forest officials and women SHGs of Banjari village, Seoni district (M.P.) under Demo village- CAMPA Extension programme	1day	29/02/2024	forest officials and women SHGs	50	Excellent
c. Trainings under GSDP						
1.	NIL					
d. Other Trainings (except HRD trainings)						
1.	Short term courses on Plant Tissue Culture for under graduate students under MoU with St. Aloysius Institute of Technology, Jabalpur	24 days	08/05/2023 to 31/05/2023	Graduate students	04	Very Good
2.	‘Recycling of Bio-waste’	1 day	16/05/2023	Students of St. Aloysius College, Jabalpur (MP)	55	Excellent
3.	‘Cultivation of Medicinal trees/ plants for healthy lifestyle’.	1 day	17/05/2023	Students of St. Aloysius College, Jabalpur (MP)	135	Very Good
4.	‘Development and use of herbal products’	1 day	24/05/2023	Student, Technical staff, Sarpanch, Forest Department (Sanjeevani Herbs), Farmers and NGO	200	Excellent
5.	‘Biotechnology’	10 days	May-June, 2023	Students, St. Aloysius College, Jabalpur (MP)	90	Very good
6.	Environment Awareness &	1day	06/07/2023	Students of class 8 th (Govt. Girls Middle	75	The information

	Biodiversity Conservation			School, Guraiya) Chhindwara, (MP)		provided on Bio-diversity conservation was found useful.
7.	Bamboo Propagation and Nursery Management	5 days	24/07/2023 to 28/07/2023	Frontline staff of Chhattisgarh Forest Department	15	A useful Programme for the frontline staff of Chhattisgarh Forest Department on vegetative propagation and nursery techniques of bamboos.
8.	Bamboo Propagation and Nursery Management	5 days	07/08/2023 to 11/08/2023	Frontline staff of Chhattisgarh Forest Department	15	A useful Programme for the frontline staff of Chhattisgarh Forest Department on vegetative propagation and nursery techniques of bamboos.
9.	Plant Diversity & Identification	1day	11/08/2023	Students of JNV, Singodi (class 9A & 9B) Chhindwara (M.P.)	80	
10.	Propagation and Hi-Tech Nursery Techniques	5 days	21/08/2023 to 25/08/2023	Frontline staff of Chhattisgarh Forest Department	15	A useful Programme for the frontline staff of Chhattisgarh Forest Department on vegetative propagation and nursery techniques of forestry species.
11.	Environment Awareness & Biodiversity Conservation	1day	29/08/2023	Students of class 8 th , 9 th , 10 th of Navin Jawahar Boys School, Chhindwara (MP)	160	Environment Protection and Bio-Diversity conservation

						information was found useful for the Students.
12.	Propagation and Hi-Tech Nursery Techniques	5 days	4/09/2023 to 8/09/2023	Frontline staff of Chhattisgarh Forest Department	15	A useful Programme for the frontline staff of Chhattisgarh Forest Department on vegetative propagation and nursery techniques of forestry species.
13.	Environment Awareness & Reduce Use of Single Use Plastics	1day	6/09/2023	Students of class 11 th and 12 th of Govt. Higher Secondary School, Khajri, Chhindwara (MP)	100	Environment/ Healthy Life Styles and Medicinal Plants related information found useful.
14.	Biodiversity Conservation	1day	29/09/2023	9 th and 10 th class Students of Jawahar Navodaya Vidyalaya. Singodi Chhindwara	52	The information provided on Bio-diversity conservation was found useful.
15.	Orientation cum training programme	5 days	01/10/2023 to 30/10/2023	New TFRI Scientists of TFRI	4	Excellent
16.	Wild Life Conservation	1day	5/10/2023	Sunrays Bharat Bharti School Chhindwara (MP).	90	The information was provided on Wild-Life Conservation
17.	'Bamboo Handicrafts' under BTSG-ICFRE Scheme.	5 days	18/12/2023 to 22/12/2023	Bamboo artisans	25	Excellent
18.	Biodiversity Conservation & Medicinal Plants	1day	21/12/2023	9 th class Students PM.Shri Kendriya Vidyalaya Chhindwara (MP)	51	Information about Medicinal plants, local names and their uses were found useful.
19.	Medicinal Plants & Environment Awareness	1day	29/12/2023	Students of class 11 th and 12 th of Govt. Higher Secondary School	46	

				Kamthi ,Chhindwara (MP)		
20.	Biodiversity Conservation & Medicinal Plants	1day	09/01/2024	7 th and 8 th class Students of PM. Shri Kendriya Vidyalaya, Chourai Chhindwara (MP)	46	
21.	Biodiversity Conservation & Medicinal Plants	1day	23/01/2024	10 th class Students PM.Shri. Kendriya Vidyalaya Pandhurna (MP)	32	
22.	Medicinal Plants & Environment Awareness	1day	29/01/2024	9 th class Students PM.Shri Kendriya Vidyalaya. Pandhurna (MP)	34	
23.	Medicinal Plants & Environment Awareness Programme	1day	30/01/2024	8 th class Students PM.Shri Kendriya Vidyalaya Pandhurna (MP)	31	
24.	Medicinal Plants & Environment Awareness	1day	31/01/2024	11 th & 12 th class Students PM.Shri Kendriya Vidyalaya Pandhurna (MP).	32	
25.	“Capacity Building Programme for the Officials of Madhya Pradesh State Forest Department for Promoting Soil Test Based Nutrient Management Practices” at ICFRE-TFRI, Jabalpur.	1 day	1/02/ 2024	Range Officers and Deputy Rangers of MP SFD	100	Highly Satisfactory
26.	“Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides”	3 days	05/02/2024 to 07/02/2024	Forest officials if Chhattisgarh State Forest Dipartment	50	Forest officials if Chhattisgarh State Forest Department
27.	‘Biotechnology’	7 days	05/02/2024 to 09/02/2024	B.Sc. III year (Biotechnology) Students of Govt. Model Science College, Jabalpur	15+13	Excellent
28.	“Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides”	3 days	08/02/2024 to 10/02/2024	Local farmers of Kanker District, Chhattisgarh	35	Local farmers of Kanker District, Chhattisgarh
29.	“Sustainable Agroforestry Ventures: Empowering	3 days	11/02/2024 to 13/02/2024	Local farmers of Kanker District, Chhattisgarh	35	Local farmers of Kanker District,

	Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides”					Chhattisgarh
30.	‘Agroforestry Models and its Management for livelihood Security’	3 days	13/02/2024 to 15/02/2024	IFS Officers	07	Excellent
31.	Medicinal Plants & Environment Awareness	1days	14/02/2024	7 th (A) class Students PM.Shri Kendriya Vidyalaya. Pandhurna (MP).	41	
32.	Biodiversity Conservation & Medicinal Plants	1days	15/02/2024	Students PM.Shri Kendriya Vidyalaya Pandhurna (MP).	43	
33.	Medicinal Plants & Environment Awareness	1days	15/02/2024	Students of (M.Sc. 1 st and 2 nd year) Shri Shivaji Science College Nagpur (M.S.)	90	Information about various Scientific Instruments working, Medicinal Plants uses were found useful. Students were found interested to know about Herbal value added products developed by the Centre.
34.	Medicinal Plants & Environment Awareness Programme	1days	16/02/2024	6 th (B) class Students PM.Shri Kendriya Vidyalaya Pandhurna. (MP).	33	Information about Medicinal plants, local names and their uses were found useful
35.	Medicinal Plants & Environment Awareness Programme	1days	20/02/2024	6 th (A) class Students PM.Shri Kendriya Vidyalaya Pandhurna (MP).	33	Information about Medicinal plants, local names and their uses were found useful
36.	“Training for Officials of Adani Power Limited on Utilization of Flyash in Forestry Sector vis-à-vis Climate Change and Land Degradation” at ICFRE-TFRI, Jabalpur.	3 days	21/02/2023 to 23/02/2024	Officers of Adani Power Limited	17	Highly Satisfactory
37.	Medicinal Plants & Environment	1 day	4/03/2024	M.Sc. (1 st &2 nd year, Zoology) Students	26	Information about various

	Awareness Programme			Rajmata Scindia Govt. P.G. Girls College, Chhindwara(MP).		Scientific Instruments working. Medicinal Plants uses were found useful. Students were found interested to know about Herbal value added products developed by the Centre. Bamboo handicrafts developed under GSDP training were also appreciated.
38.	NIAM sponsored training programs titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B, Dr. Rathod Digvijay U Singh, Scientist- B and assisted by Mr. Amit Kumar (PA).	3 days	4/03/2024 to 6/03/2024	Farmers representatives and Nursery staffs of Jharkhand.	60	Farmers representatives and Nursery staffs.
39.	NIAM sponsored training programs titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B, Dr. Rathod Digvijay U Singh, Scientist- B and assisted by Mr. Amit Kumar (PA).	2 days	7/03/2024 to 9/03/2024		60	Farmers representatives and Nursery staffs.
40.	NIAM sponsored	2days	11/03/2024		60	Farmers

	training programs titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B, Dr. Rathod Digvijay U Singh, Scientist- B and assisted by Mr. Amit Kumar (PA).		to 13/03/2024			representatives and Nursery staffs.
41.	Plantation and Its management of Commercially important tree species’ for Chhattisgarh forest officials’	1 day	12/03/2024	Forest Officials Bilaspur Circle, Chhattisgarh	70	Excellent
42.	‘Plantation and Its management of Commercially important tree species’ for Chhattisgarh forest officials’,	1 day	13/03/2024	Forest Officials Durg Circle , Chhattisgarh	70	Excellent
43.	Propagation of RET and Economically Important Forestry Species along with Hi-Tech Nursery Techniques	5days	11/03/2024 to 15/03/2024	Frontline staff of Chhattisgarh Forest Department	20	A useful Programme for the frontline staff of Chhattisgarh Forest Department on vegetative propagation and nursery techniques of forestry RET and other commercially important species.

Category = Students, farmers, ladies, officers from SFDs, Members of JFMCs etc.

Details of participation in workshops etc. Annexure-7

Workshops/seminars/symposia/meetings etc. participated in					
SN	Topic	Duration and period		Participants from the institute	
		Days	Date	Category	Nos.
	A review meeting with Consortium partners of TOFI project under the chairmanship of Country head, TOFI, CIFOR-ICRAF.	1 day	5/04/2023	Dr. Nanita Berry, Scientist F	1
1.	A National Conference on 'Advances in Polymer Materials'.	2 days	11/04/2023 to 12/04/2023	Smt. Neelu Singh, Scientist-G	1
2.	Participated and attended the state level workshop on "Agroforestry", as organized by MP Forest Department.	1 day	12/04/2023	Dr. Nanita Berry, Scientist F	1
3.	Jointly organized a workshop and delivered a lecture on 'Roadmap for QPM delivery for TOF expansion in Haryana' under TOFI, USAID, Project .	1 day	13/04/2023	Dr. Nanita Berry, Scientist F	1
4.	Training organized on "Mushroom cultivation for beginners"	1 day	16/04/2023	Dr.Nanita berry, Smt. Nellu Singh, Sh.Aviral asaiya, Dr. S.N.Mishra, Dashrath Turkane, Santosh Chaubey A.Francis Arvind Pal	8
5.	Plenary Session 2 'Promoting Circular Economy for Sustainable Development' as part of 16th Civil Services Day" organized by MoEFCC.	1 day	20/04/2023	Dr. Avinash Jain, Mr. M Rajkumar, Shri Dheeraj Gupta and Dr. Jangham Deepika	4
6.	Visited TFRI for quality planting material of bamboo.	1 day	18/04/2023	Shri Vivek Khandekar, APCCF (Social Forestry), Pune, Maharashtra	
7.	Webinar on "Rehabilitation of opencast bauxite mines in Northern Western Ghats, Maharashtra, India" organized by Society for Ecological Restoration (SER), Washington, D.C., USA	1 day	21/04/2023	Scientists, and Research scholars	2
8.	"Application of Artificial Intelligence and Machine learning in Forests insect pests management"	1 day	21/04/2023	Dr. Mohan C, Sci - B	
9.	Delivered an oral presentation on the topic "Efforts of Tropical Forest Research Institute, Jabalpur for the conservation of diminishing medicinal tree species of Central India." in the National Conference on 'Scientific Advancement for Sustainable Environment, Herbal Medicines	2 days	22/04/2023 to 23/04/2023	Sh. Manish K. Vijay, Sci-B	1

	and Impact on Health ‘ held at Institute of Medical Sciences, BHU, Varanasi , jointly organized by Banaras Hindu University, Varanasi, and National Environmental Science Academy, New Delhi.				
10.	Webinar on ‘Introduction to the Global Biodiversity Standard’ organized by Ecological Restoration Alliance- India	1 day	25/04/2023	Scientist	1
11.	“Rational Usage of Antibiotics”	1 day	26/04/2023	Dr. Darshan K, Sci- B	
12.	All scientists, technical officers and research scholars participated in the training programme on “Cultivation of medicinal plants under mission LiFE for students of St. Aloysius college, Jabalpur organized by ICFRE-TFRI, Jabalpur.	1 day	1/05/2023	Students of St. Aloysius college, Jabalpur, Scientists, technical officers and Research scholars of ICFRE-TFRI	120
13.	Presented paper on ‘Species distribution modeling and assessment of environmental drivers responsible for distribution and preferred niche of endangered species <i>taxus baccata</i> In himachal Pradesh. during “2nd national conference on “value addition and marketing of ntfps/ maps for livelihood security (ncvam – 2023)”.	2 days	2/05/2023 to 3/05/2023	Researchers, NGOs, Scientists	20
14.	Presented an oral presentation on the topic “Conservation and domestication of Medicinal Plants: Seed Technological Perspectives.” In Proceedings of the 2nd National Conference on “Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023)”. Virtual mode TFRI, Jabalpur.	2 days	02/05/2023 to 03/05/2023	Scientist and Research Schoolers	20
15.	हिन्दी राजभाषा अभिक्रम कार्यक्रम का आयोजन को निदेशक महोदय की अध्यक्षता में किया गया।	1 day	4/05/2023	Director and Heads	10
16.	Presented an oral presentation on the topic “Conservation, domestication and cultivation of <i>Flacourtia indica</i> : A valuable underutilized fruit species to ensure nutritional security and livelihood of forest dwellers.” In the 1st International Conference on Nature and Natural Sciences (ICNS 2023) (pp. 65). Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur (M.P.).	2 days	05/05/2023 to 06/05/2023	Manish K. Vijay Scientist-B	1
17.	Presented oral presentation on “Biochar induced changes in soil properties and microbial diversity: A meta-analysis” in the 1 st International conference on Nature and Natural Sciences (ICNS 2023) organized by Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur.	2 days	5/05/2023 to 6/05/2023	Deepika Jangam Scientist B	1
18.	Presented research findings on the topic " Morphometric variation in <i>Haldina cordifolia</i> in tropical deciduous forest" in the International conference held at RDVV, Jabalpur in collaboration with TFRI.	2 days	5/05/2023 to 6/05/2023	Nikhil Verma, Scientist-B	1
19.	Seminar- Sketch of Genetic Variation in Tropical	2 days	5/05/2023 to	Scientists	1

	Forest Tree Species: An Overview.		6/05/2023		
20.	Attended a quarterly review meeting for the period Jan-March 2023 under NPFGR	1 day	8/05/2023	NPC, PIs and Co-PIs	16
21.	Meeting cum sensitization of ICFRE-TFRI, Jabalpur and FRC-SDC, Chhindwara employees to prepare action plan and adopt activities of the Mission LiFE under the chairmanship of Director, ICFRE-TFRI.	1 day	09/05/2023	Scientists, and technical officers	5
22.	Attended Workshop on “Apiculture”	1 day	9/05/2023	Researchers & Academicians	5
23.	Mission Life under Mass Mobilization Campaign through online mode conducted by TFRI, Jabalpur	1 day	9/05/2023	All staff & Scientists, ICFRE-SDC, Chhindwara	10
24.	Meeting on Hindi Rajbhasha organized under the chairmanship of Director, ICFRE-TFRI	1 day	10/05/2023	Director and Heads	12
25.	Presented ‘Efforts of tropical forest research institute, Jabalpur for the conservation of diminishing medicinal tree species of central India’ in National Conference on Scientific advancement for sustainable environment, herbal medicines and impact on health: An earth day celebration (SASE).	1 days	12/05/2023	Neeraj Prajapati, Scientist-B	1
26.	Attended a meeting on Forest Productivity & Livelihood through online mode organized by ICFRE, Dehradun.	1day	16/05/2023	Dr. Vishakha Kumbhare, Scientist Incharge / Scientist-E & Mamta Meshram, Scientist-C	2
27.	Provided training programme on “Cultivation of medicinal plants under mission LiFE for students of St. Aloysius college, Jabalpur organized by ICFRE-TFRI, Jabalpur.	1 day	17/05/ 2023	Scientists, and technical officers	7
28.	Participated in Technical workshop on “Developing Methodology for approving and rating bamboo nurseries; at Van Bhawan, Pune, jointly organized by Maharashtra Bamboo Development Board (MBDB) and Maharashtra Bamboo Promotion Foundation (MBPF)	2 days	19/05/2023 to 20/05/2023	Dr. Fatima Shirin, Sci-G	1
29.	“Mainstreaming agrobiodiversity- An integrated approach to reduce climate vulnerability, improve nutrition, livelihood and ecosystem services”	1 day	23/05/2023	Dr.C. Mohan, Scientist B	1
30.	Webinar on ‘Using Ecological Restoration within Landscape Architecture’ organized by Ecological Restoration Alliance- India	1 day	23/05/2023	Scientist	1
31.	All Scientists of the Centre, attended meeting on Annual Review ICFRE Projects (2022-23)	1 day	24/05/2023	Scientists	3
32.	“Biodegradable food packaging – As a alternative to single use plastic”	1 day	25/05/2023	Sh. Manish K. Vijay, Scientist-B	1
33.	Monthly seminar on “Advances in water requirement estimation in forestry with special reference to mission life” by FRI, Dehradun	1 day	25/05/2023	Scientists	4
34.	Seminar on “Science Behind Pure Water and Good Practices to Control Contamination &	1 day	30/5/2023	Scientists, and technical officers	24

	Application of Water” at ICFRE-TFRI organized by Sameer Science Lab, Jabalpur.				
35.	“Solid waste management – Waste or Wealth- Opportunities and challenges”	1 day	1/06/2023	Sh. Ajin Sekhar, Sci-B	1
36.	Delivered online lecture on “Soil Conservation Strategies for Ecosystem Resilience” during seminar on “Soil Health, Our Wealth "organized by Ashvatthasri Foundation, Mumbai on the eve of “World Environment Day, 2023”.	1 day	4/06/2023	Dr. Jangam Deepika, Scientist B	1
37.	Attended special talk organized by IGNFA & ICFRE, Dehradun on the occasion of “World Environment Day, 2023”.	1 day	05/06/2023	Scientists, technical officers and research scholars of ICFRE Institutes	30
38.	Attended online course on “Applications of Machine learning in Urban Studies” conducted by Indian Institute of Remote Sensing, Dehradun during.	5 days	5/06/2023 to 9/06/2023	Dr. Jangam Deepika, Scientist-B	1
39.	Participated in Training programme on ‘Production, processing and quality control of Ayurvedic medicine" At Central Ayurveda by	5 days	5/06/2023 to 9/06/2023	Sh. Nikhil Verma, Scientist-B	1
40.	Attended seminar on “Science Behind Pure Water and Good Practices to Control Contamination & Application of Water” at ICFRE-TFRI as organized by Sameer Science Lab, Jabalpur.	1 day	10/6/2023	Smt. Neelu Singh, GCR, Dr. Nanita Berry, Head, FE division, Shri. Dheearj gupta, Shri. Ajin sekhar, Dr. Jangam Deepika and Smt. Pooja Singh and TOs	20
41.	Attended a review meeting with NPC and PIs of AICRP on Sandalwood.	1 day	12/06/2023	Dr. Nanita Berry, Scientist F	1
42.	Participated in a ICFRE sponsored HRD training programme on Instrumentation (Data Analysis and Interpretation – LCMS & NMR) organized by Chemistry & Bio-prospecting Division, FRI Dehradun	5 days	12/06/2023 to 16/06/2023	Dr. Hari Om Saxena, Scientist–E	1
43.	Attended ‘Hindi Rajbhasha Meeting’ online under the Chairmanship of Director General, ICFRE.	1 day	16/06/2023	Smt. Neelu Singh, GCR, Dr. Nanita Berry, Head, FE division, Shri Vijay Kamble, ADG, Rajbhasha and Shri Darshan Gattani, Under secretary	4
44.	Workshop organized by Centre of Excellence on Sustainable Land Management (CoE-SLM), ICFRE Dehradun marking the occasion of World Day to Combat Desertification and Drought.	1 day	17/06/2023	Scientist	1
45.	Presented findings of PCR of the project titled ‘ Impact assessment of adoption of agroforestry system by the farmers of Madhya Pradesh, during	1 day	19/06/2023	Dr. Nanita Berry, Scientist F	1

	PPEC meeting with ADG (M & E), ICFRE.				
46.	Registered on I-GoT portal under Mission Karmayogi and completed 2 modules.	1 day	21/06/2023	Dr. Nanita Berry, Scientist & Head, Shri Manish Kumar Vijay, Scientist-B, Ms. Alka Singh	3
47.	Hindi Rajbhasha Meeting for Six Monthly Review was organized by District Co-Ordination Committee, Chhindwara	1 day	22/06/2023	Dr. Vishakha Kumbhare, Scientist Incharge / Scientist-E and Sh. Majid Khan, LDC	02
48.	SSD 20 Biodiversity Sectional Committee meeting as Young Professional at Manak Bhawan, Room- Vimarsha, New Delhi, Delhi, India	1 day	23/06/2023	Scientist	1
49.	Attended a lecture on “Biodegradable food packaging as an alternative to single use plastic” organized by ICFRE-IWST, Bengaluru as a part of AKAM and Mission LiFE.	1 day	25/06/2023	Dr. Jangam Deepika	1
50.	Attended review meeting of form factor project held at Aranya Bhavan, PCCF office Raipur, Chhattisgarh.	1 day	26/06/2023	Dr. Avinash Jain and Shri. Ajin Sekhar	2
51.	Review meeting on Expenditure under “General” & “Capital Asset”	1 day	26/06/2023	Director General, ICFRE	1
52.	Presented report of Project entitled "Development of Integrated insect pest and disease control system for <i>Albizia</i> and <i>Dalbergia</i> in plantations of Madhya Pradesh and Maharashtra ", ID-238 on PEC,	1 day	26/06/2023	Mr. Aviral Asaiya, Scientist 'C'	1
53.	Attended the Review meeting of AICRP-14 research project "Forest Fire Research & Knowledge Management" through online mode, organized by National Project Co-Ordinates, ICFRE, Dehradun.	1 day	28/06/2023	Smt. Mamta Meshram, Scientist-C	1
54.	Participated and presented talk on ‘Expansion of Agroforestry Models in Maharashtra’ during two days workshop on “Policy interventions in Agroforestry and Tree Outside of India’ at Chandrapur Forest Academy, Chandrapur, Maharashtra.	2 days	30/06/2023 to 1/07/2023	Dr.Nanita Berry, Scientist F	1
55.	“Insect Taxonomy” to the Scientists of ICFRE at IC NBAIR, Bengaluru, Karnataka.	5 days	03/07/2023 to 07/07/2023	Dr.C Mohan, Scientist B	
56.	Attended Half Yearly Review meeting of AICRP-23 research project and presented the achievements of the project for the period (Oct,2022 –March,2023)	1 day	5/07/2023	Dr. Vishakha Kumbhare, Scientist In charge / Scientist-E	1
57.	Attended the review meeting on Revenue generated upto 1 st quarter (April to June, 2023) at ICFRE	1 day	7/07/2023	Dr. Nitin Kulkarni, Director, ICFRE-TFRI	1
58.	Participated and delivered a lecture on “Scope of agroforestry in Natural farming’ during Two Days	2 days	11/07/2023 To 12/07/2023	Dr. Nanita Berry, Scientist-F	1

	Training on “Organic and Natural Farming” for Extension Officers and Staff” at Krishi Vigyan Kendra, JNKVV, Jabalpur, as jointly organized by Regional Center for Organic Natural Farming and ATARI, Jabalpur (MP).			&Head, FE Division	
59.	Attended the Two Days Training on “Organic and Natural Farming” for Extension Officers and Staff” at Krishi Vigyan Kendra, JNKVV, Jabalpur. Delivered a lecture on ‘Scope of Agroforestry in Organic farming’ for New KVK officers as resource person.	1 day	11/07/2023	Dr. Nitin Kulkarni, Director ICFRE-TFRI as Chief Guest Dr. Nanita Berry, Scientist ‘F’ &Head, Forest Extension Division	2
60.	Participated as team leader of working group four and presented recommendation for academicians, farmers, research institute for its promotions during one day brainstorming workshop on “Strengthening of Forestry Extension System in India” at ICFRE, Dehradun and identified issues and challenges to strengthening Forestry extension in India	1 day	14/07/2023	Dr. Nanita Berry, Head, FE Division	1
61.	Attended an institution review meeting taken by DG, ICFRE	1 day	15/07/2023	All TFRI staff	10
62.	Attended a webinar on "Access and Benefit Sharing (ABS) Compliance for Scientists and Researchers” organized by Biotech Consortium India Limited (BCIL) an initiative of the Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India, with technical support from National Biodiversity Authority (NBA).	1 day	17/07/2023	Sh. Manish K. Vijay, Sci-B	1
63.	Meeting with senior officer of MPSFD	1 day	17/07/2023	PCCF & HoFF and Shri A S Rawat, IFS, DG, ICFRE, Dehradun	2
64.	World day to combat desertification and drought by ICFRE, Dehradun	1 day	17/07/2023	Sh. Dheeraj Scientist C	
65.	Attended the Half Yearly Review meeting of AICRP-14 research project and presented the achievements of the project for the period (Oct,2022 –March,2023)	1 day	19/07/2023	Smt. Mamta Meshram, Scientist-C of the Centre	1
66.	Attended sixth monthly PEG review meeting of AICRP-12 for October 2022 to March 2023	1 day	20/07/ 2023	DG (ICFRE) DDG (Research), ADG, NPC all Institute project PI	2
67.	Attended First SIU meeting for 2023-24 on implementation of “National Collaborative Scheme for Forest Fire Management” held at ICFRE-FRI under the chairmanship of DG, ICFRE through hybrid mode.	1 day	21/07/2023	Dr. Nitin Kulkarni, Director ICFRE-TFRI	1
68.	Attended inaugural and valedictory session of training program on “Bamboo Propagation and	1 day	24/07/23 & 28/07/23	CG Forest Department field	40

	Nursery Management” organized by GTI division, TFRI			staff	
69.	Attended the First Meeting of advisory committee of ICFRE-Wood Industries Committee of India (WINCOIN) under chairmanship of DG, ICFRE held at IWST, Bangalore in hybrid mode.	1 day	24/07/2023	Dr. Nitin Kulkarni, Director ICFRE-TFRI and Dr. Avinash Jain Scientist-F	2
70.	SSD 20 Biodiversity Sectional Committee’s Workshop on Understanding Standardisation organised by BIS, New Delhi.	1 days	24/07/2023	Rajkumar Scientist C	1
71.	First Meeting of ICFRE-Wood Industries Committee of India (ICFRE-WINCOIN) conducted by IWST, Bengaluru in hybrid mode.	1 day	24/07/2023	Scientists	10
72.	Participated and delivered an Invited talk on ‘Scope of project conceptualization under the theme of ecosystem conservation’ for 50 KV teachers of Jabalpur division to guide KV students for project science model preparation to participate in the 33 rd National Children Science Congress 2024.	1 day	24/07/2023	Dr. Nanita Berry, Scientist-F and Head, FE Division	1
73.	Delivered a lecture on 25.07.2023 on the topic “Insect Pests of Bamboos and their Eco friendly Management” in Training on Propagation and Nursery Management of Bamboos	5 day	24/07/2023 to 28/07/2023	Dr. Mohan C, Scientist -B	1
74.	Delivered a lecture (as resource person) on training titled "Bamboo propagation and nursery management."	1 day	26/07/2023	Dr. Darshan K., Scientist-B	1
75.	Virtual Technical lecture series in Hybrid mode, organized by ICFRE- IWST, Bengaluru.	2 days	26/07/2023 to 27/07/2023	Dr. Mohan C, Scientist -B	1
76.	Attended a review meeting for ‘filling of vacancy on Mission Mode’ chaired by Secretary, ICFRE	1 day	28/07/2023	Director TFRI and DCF (Admn)	2
77.	Biodiversity Sectional Committee, SSD 20 sixth meeting, Attended online, presented the points on requirement of WG for Restoration of Mangroves and WG for SLEM.	1 day	01/08/2023	Sh. Ajin Sekhar, Scientist B	1
78.	Attended the ICFRE-TFRI, ‘Rajbhasha Karyavanan committee’ meeting at TFRI, Jabalpur	1day	1/08/2023	Dr. Nitin Kulkarni Scientist - G & Director as Chairman and Heads of divisions alongwith ADG, Rajbhasha	10
79.	Attended a review meeting of bamboo-based activities under BTSG-ICFRE under the chairmanship of DDG (Res.)	1 day	2/08/2023	Dr. Nitin Kulkarni , Scientist - G & Director and Dr. Nanita Berry Scientist- F & Nodal officer, Demo plantation of Bamboo under BTSG-ICFRE	2
80.	Attended PIMC meeting and PI , presented	1 day	2/08/2023	Dr. Nitin	2

	progress of NABARD Project during PIMC meeting in presence of DDM, NABARD, Jabalpur (MP)			Kulkarni Scientist - G & Director and Dr. Nanita Berry Scientist- F	
81.	Chaired the Hindi workshop at TFRI	1 day	4/08/2023	Dr. Nitin Kulkarni , Scientist - G & Director	1
82.	Attended, Azadi ka Amrut Mahotsav on "Indian Forest Carbon Cycle: Challenges and Early Results" on as organized by IWST, Bengaluru(Karnataka)	1 day	7/08/2023	Smt. Mamta Meshram, Scientist-C	1
83.	Attended a meeting organized by ICFR Hq. for launching of ICFRE Pension Portal	1 day	7/08/2023	All scientists	10
84.	Delivered a lecture on the topic "Insect Pests of Bamboos and their Eco friendly Management" during the Training programme on 'Bamboo Propagation and Nursery Management' held from 07 th – 11 th August, 2023.	2 days	7/08/2023 to 11/08/2023	Dr. Mohan C, Sci-B and Sh. Nahar Singh Mawai (ACTO)	2
85.	Attended inaugural and valedictory session of training program on "Bamboo Propagation and Nursery Management" organized by GTI division, TFRI	1 day	7/08/23 & 11/08/23	CG Forest Department field staff	40
86.	Attended and presented six monthly progress of CAMPA Extension Project during a review meeting held under the Chairmanship of DDG , Media Extension, ICFRE (UK).	1 day	8/08/2023	Dr. Nanita Berry, Head, FE division and PI of CAMPA, Extension	1
87.	Delivered a lecture (as resource person) during training programme on "Bamboo propagation and nursery management."	1 day	9/08/2023	Shri A.J.K. Asaiya, Scientist 'C' and Dr. Darshan K., Scientist 'B'	2
88.	Attended Seminar on 'Agroforestry Extension-Issues and Challenges' as organized by ICFRE-Forest Research Institute, Dehradun.	1 day	11/08/2023	Dr. Nanita Berry, Scientist- F & Head, FE division, TFRI and Mamta Meshram, Scientist-C,SDC Centre, Chhindwara	2
89.	Conducted One-day training programme on 'Biodiversity & Conservation At ICFRE-SDC Chhindwara (M. P.).	1 day	11/08/2023	Dr. Vishakha Kumbhare, Scientist-E	1
90.	Regional Research Conference (Hybrid mode) on "Nursery technology and propagation of difficult tree species" organized by ICFRE-TFRI, Jabalpur.	1 day	18/08/2023	Scientists	5
91.	Delivered a lecture on the topic "Propagation of Haldu" to the frontline staff of Chhattisgarh Forest Department.	1 day	21/08/2023	Shri Nikhil Verma, Scientist-B	1
92.	Attended inaugural and valedictory session of training program on "Propagation and Hi-Tech Nursery Techniques" organized by GTI division,	1 day	21/08/23 & 25/08/23	CG Forest Department field staff	40

	TFRI				
93.	National webinar jointly organized by Zoological Survey of India (ZSI) Kolkata & National Academy of Sciences India (NASI).	1 day	21/08/2023	Dr. A J K Asaiya Dr. Mohan C Mr. Manish Vijay Dr. Darshan K	4
94.	Delivered lectures on the topic “Insect Pests of important forestry species under nursery and plantations and their Eco friendly Management” during one week Training Programme on ‘Propagation and Hi – Tech nursery techniques’	1 day	22/08/2023	Dr. Mohan C, Sci-B and Sh. Nahar Singh Mawai (ACTO)	2
95.	Delivered lectures on ‘dkf;d iztuu }kjk egRoiw.kZ o`{k iztkfr;ksa ds mUur xq.koRrk okys jksi.k LVkWd dks rS;kj djuk	1 day	22/08/2023	Dr. Pramod Kumar, Scientist –D	1
96.	“Tree Translocation in India”	1 day	24/08/2023	Dr. Vishakha Kumbhare, Scientist-E, Shri. N.D. Khobragade, Scientist-E, Dr. S. C. Biswas, Scientist-D, Mamta Meshram, Scientist-C and Dr. Mohan C, Sci-B, ICFRE- TFRI and ICFRE- SDC	5
97.	Participated in the meeting with officials of GIZ (German International Project, Indian region to explore the possibility of Agroforestry extension in Madhya Pradesh during their visit to TFRI, Jabalpur (M.P.).	1 day	24/08/2023	Dr. Nitin Kulkarni, Director alongwith Head of Divisions	10
98.	All Scientists of the Institute attended ‘Regional Research Conference’ on “Forest Bio-Resources-Scope and Challenges for valorization” as organized by ICFRE – IFGTB, Coimbatore (TamilNadu).	1 day	25/08/2023	Scientists, Scholars	40
99.	Attended and participated in a meeting with Smt. Suveena Thakur, APCCF (R & T) MoEF & CC, New Delhi to update the progress of CNA account (Central Nodal Agency) for organizing training programme funded by MOEF CC, new Delhi.	1 day	28/08/2023	Dr. Nanita Berry, Nodal officer, Extension & Scientist- F	1
100.	One-day National Webinar on “Biodiversity and Its Conservation” (Online) organized by Government Science College, Pandhurna and delivered oral presentation on “The Hidden Heroes: Microorganisms Role in Soil Carbon Sequestration to Mitigate Climate Change”.	1 day	29/08/2023	Scientist	1
101.	Attended NABARD Workshop & delivered lecture on Livelihood Opportunities through Value Addition of NTFPs	1 day	4/09/2023	Dr. Vishakha Kumbhare, Scientist-E, of the Centre	1
102.	Delivered lecture on the topic "Propagation of	1 day	4/09/2023	Shri. Nikhil	1

	Haldu" in the training program on "Propagation and High-Tech Nursery Techniques"			Verma, Scientist-B	
103.	Delivered a lecture on कायिक प्रजनन द्वारा महत्वपूर्ण प्रजातियों के उन्नत गुणवत्ता वाले रोपण स्टॉक को तैयार करना	1 day	4/09/2023	Dr. Pramod Kumar, Scientist -D	1
104.	Delivered a lecture बानिकी प्रजातियों का कायिक प्रजनन	1 day	5/09/2023	Dr. Fatima Shirin, Scientist- G	1
105.	Attended annual Scientific Meeting at JNKV, Chhindwara, as Committee Member.	1 day	5/09/2023	Dr. Vishakha Kumbhare, Scientist Incharge of the Centre	1
106.	Lecture delivered on मैदालिटसिया ग्लूटिनोसा के पौधे को उगाने की पद्धति	1 day	5/09/2023	Dr. Naseer Mohammad, Scientist- E	1
107.	Delivered a lecture on "Optimizing Nursery Operations: Current Practices and Future Visions for Input Management" in the training program on "Propagation and High-Tech Nursery Techniques.	1 day	6/09/2023	Shri. Manish Kumar Vijay, Scientist-B	1
108.	Attended a budget review meeting for the All India Coordinated Research Project (AICRP), which was chaired by the Director of ICFRE-TFRI, Jabalpur.	1 day	6/09/2023	ICFRE-TFRI AICRPs PISs	12
109.	Lecture delivered by "Propagation and Conservation of <i>D.latifolia</i> for the production of QPM.	1 day	7/09/2023	Dr. Kaushal Tripathi, Scientist-B	1
110.	Delivered a lecture on कायिक प्रजनन एवंउत्तकसंवर्धन द्वारा बास के पौधों का उत्पादन हाईटेक रोपणी तकनीकों द्वारा पौधों का उत्पादन एवं रोपणी प्रबंधन	1 day	8/09/2023	Dr. Fatima Shirin, Scientist- G	1
111.	Delivered an oral presentation on the topic "From Seeds to Sustainability: Ensuring <i>Semecarpus anacardium</i> and <i>Flacourtia indica</i> Survival through Propagation in central India" in the National conference on 'Medicinal Plants, Natural Products and the Indian System of Medicine (NCMP-2023)' organized at ICAR-CAFRI, Jhansi, during September 8–9, 2023, by the V Sivaram Research Foundation, Bengaluru, in collaboration with ICAR-CAFRI, Jhansi.	2 days	8/09/2023 to 9/09/2023	Sh. Manish K. Vijay, Sci-B	1
112.	Attended Training programme on "Climate risk management: policy and governance" conducted by LBSNAA, Massouri.	5 days	11/09/2023 to 15/09/2023	Shri M. Rajkumar, Scientist-D	1
113.	Lecture delivered "Forest Genetic Resources and Tree Improvement of <i>Buchnanialanjan</i> (Chironji)" "Training course for IFS officers on Forest Genetic Resource Management and Tree Improvement".	5 days	11/09/2023 to 15/09/2023	Dr. Naseer Mohammad, Scientist-E	1
114.	2 days sensitization workshop on SLM for combating degradation and collaboration development of training modules at CoE-SLM, ICFRE Dehradun.	2 days	11/09/2023 to 12/09/2023	Scientist	1
115.	Training programme on "Climate risk management: policy and governance" conducted by LBSNAA, Mussoorie	5 days	11/09/2023 to 15/09/2023	Scientist	1
116.	Attended a Divisional review meeting	1 day	12/09/2023	Director of ICFRE-	1

				TFRI, Jabalpur.	
117.	“Detection and diagnosis of Nursery diseases to forest staffs”	1 day	13/09/2023	dr. Mohan, Scientist and staff of entomo division	10
118.	Scientists and officers attended Forest Extension Divisional review meeting	1 day	13/09/2023	Director of ICFRE-TFRI, Jabalpur.	1
119.	“Agroforestry promotion- Present policies and changes in Forest Conservation Act”	1 day	15/09/2023	Dr. Nanita Berry	
120.	Attended a national level meeting to finalize the research outcome for the project completed in 2021-22	1 day	15/09/2023	DDG Extension, ICFRE, Dehradun	1
121.	“International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023)” in Hybrid Mode jointly organized by Raj Kumar Goel Institute of Technology, Ghaziabad, Uttar Pradesh and Save the Environment (STE), Kolkata and delivered oral presentation on “Comparative Analysis of Soil Properties and Soil Carbon Stock in different plantations Raised at Rourkela Steel Plant (RSP), Odisha”	1 day	16/09/2023 to 17/09/2023	Sh. M. Rajkumar, Scientist c	1
122.	Delivered an oral presentation on the topic "Unlocking the Secrets of Nyctanthesarbor-tristis Seeds: Insights into Maturity, Germination, and Storability for Successful Propagation and Conservation" in the International conference on Green Energy & Sustainable Environmental Technology (GESET-2023) organized at Raj Kumar Goel institute of Technology, Ghaziabad, organized by the RKGIT, Save the Environment in collaboration with CSIR.	2 days	16/09/2023 to 17/09/2023	Scientist	1
123.	Attended “Remote sensing and GIS training programme” conducted at CoE-SLM, ICFRE Dehradun	5 days	18/09/2023 to 22/09/2023	Shri Ajin Sekhar, Scientist-B	1
124.	Delivered an oral presentation on the topic "Harnessing seed science and technology for climate-resilient tropical forest conservation" in the 5th International conference on Sustainability Education (ICSE-2023) organized at Indian Habitat Center, New Delhi organized by the Mobius Foundation with, Bengaluru.	2 days	19/09/2023 to 20/09/2023	Sh. Manish K. Vijay, Sci-B	1
125.	Attended “One day training programme on preparation of vermin-compost and plantation of quality <i>Melia dubia</i> seedlings” organized by ICFRE-TFRI, Jabalpur at Demo village – Santhal, Banjari in Seoni Forest division, M.P.	1 day	20/09/2023	Dr. H.S. Ginwal, Director, ICFRE-TFRI Dr. Nanita Berry, Scientist-F, Dr. Fatima Shirin, Scientist-G, Dr. Avinash Jain, Scientist- F, Dr. Hariom Saxena Scientist-E, Dr. Naseer Mohammad, Scientist- E, Shri.	11

				Kandhi Singh, ACTO, Shri. A. J. K. Asaiya, Scientist- C, Shri. Alfred Francis, STO and Dr. Nidhi Mehta, Dr. C. Mohan, Scientist- B and Dr. Jangam Deepika, Scientist- B	
126.	“Role of Nano Technology in Plant Disease Management”	3 days	21/09/2023 to 23/09/2023	Shri A.J.K. Asaiya. Scientist-C, and Dr. Darshan K., Scienti	2
127.	“Biodiversity and its conservation”	3 days	21/09/2023 to 23/09/2023	Shri A.J.K. Asaiya. Scientist-C	
128.	Attended a meeting with HOFF and other PCCFs of MPSFD at Bhopal.	1 day	21/09/2023	Dr. H.S. Ginwal, Director, TFRI and Dr. Avinash Jain	2
129.	Assessing Impact of Landuse/ Landcover and Climate Change on Water Resources Using Soil Water Assessment Tool (SWAT)	5 days	24/09/2023 to 29/09/2023	Dr. Deepika Jangam, Scientist	1
130.	5 days’ workshop on “Assessing impact of landuse/landcover and climate change on water resources using soil water assessment tool (SWAT)” to be held at NIT, Tiruchirappali.	5 days	25/09/2023 to 29/09/2023	Dr. Deepika Jangam, Scientist	1
131.	Attended as External Member during ‘General Body meeting of the society of Tropical Forestry Scientists, Jabalpur of State Forest Research Institute, Jabalpur.(MP)	1 day	25/09/2023	Dr, Nanita Berry, Scientist- F	1
132.	Participated and made presentation in International Conference on “Recent Advances in Agricultural, Industrial Entomology, Environmental Sciences and their impact food and Environmental Security” at Entomology Research Institute, Loyola College, Chennai, Tamil Nadu.	3 days	28/09/2023 to 30/09/2023	Dr. C. Mohan, Scientist- B	1
133.	Environment Awareness & Biodiversity Conservation.	1 day	29/09/2023	Students &Teacher Navin Jawahar Boys Govt. Higher Secondary School, Chhindwara (M.P.)	10
134.	Myco India World Fungus Day	1 day	01/10/2023	Dr. Darshan K., Scien	1
135.	Review meeting of Special Swachhta Campaign 3.0 conducted by MoEFCC, New Delhi	30 days	2/10/2023 to 31/10/2023	Dr. Fatima Shirin	1
136.	Attended "Hands on training on MLT data analysis" organized by IFGTB, Coimbatore.	5 days	3/10/2023 to 8/10/2023	Dr. Nasir Mohammad, Scientist E	1
137.	Attended meeting MoEF &CC (online)	1 day	5/10/2023	Dr.Vishakha	1

				Kumbhare, Scientist Incharge of the Centre	
138.	Delivered a lecture on Sustainable harvesting and processing of NTFPs	1 day	10/10/2023	Dr. H.O Saxena, Scientist E	1
139.	Delivered an invited lecture on 'Sustainable development' to 10 th and 12 th Science Students , KV,1 STC, Jabalpur (MP)	1 day	11/10/2023	Dr. Nanita Berry, Scientist F	1
140.	"Soil nutrient depletion and its replenishment"	1 day	12/10/2023	Dr. A. Jain	
141.	Attended one day workshop on "AI and automation in MS Excel" conducted by Skill Nation	1 day	15/10/2023	Dr. Ajin	1
142.	attended and participated in one Day meeting with ADGF, MOEF & CC, New Delhi on 'organization of IFS training programme' as course director	1 day	16/10/2023	Dr. Nanita Berry	1
143.	FE&CC division conducted divisional orientation programme for newly scientists of ICFRE-TFRI, Jabalpur	5 days	16/10/2023 to 20/10/2023	Scientists	4
144.	Attended KVS Regional Level "National Childrens Science Congress, 2023" organized by PM shri Kendriya Vidyalaya 1 STC, Jabalpur as a Jury member to evaluate the 140 projects presented by students.	2 days	17/10/2023 to 18/10/2023	Dr. Jangam Deepika and Dr. Nidheesh T.D, Scientist B	2
145.	Attended and participated in one day 'Hindi Karyashala', as organized by ICFRE, Dehradun(Uttarakhand)	1 day	18/10/2023	Dr. Nanita Berry, Nodal officer, Rajbhasha Activity and Shri Vijay Kamble, Rajbhasha Adhikari	2
146.	"Bioinoculants for plant growth enhancement and disease resistance"	1 day	19/10/2023	Dr. Darshan, Scientist B	1
147.	Attended Special Campaign 3 meeting MoEF &CC (online)	1 day	26/10/2023	Dr. Vishakha Kumbhare, Scientist Incharge of the Centre	1
148.	Organized a session with the theme "Forest ecosystem services and climate change" during 7th India land and development conference.	1 day	1/11/2023	Scientist and technical officer	2
149.	5th International Conference on Sustainable Natural Resource Management under Global Climate Change and delivered oral presentation on "Forest Soil Health Cards: A pioneering tool for Sustainable Forest Management in Madhya Pradesh"	3 days	07/11/2023 to 09/11/2023	DR. Deepika Scientist	1
150.	Delivered an oral presentation on the topic "Adapting Forest Genetic Resource Conservation Strategies in the Era of Climate Change: Enhancing Resilience and Biodiversity. In the International Conference on Sustainable Natural Resource Management under Global Climate Change at New Delhi, India (virtual)	3 days	7/11/2023 to 10/11/2023		2

151.	Attended the Review Meeting and presented half yearly progress achievements under "Forest Fire Research & Knowledge Management" (AICRP-14) research project through online mode, organized by National Project Co-Ordinates, ICFRE, Dehradun.	1 day	9/11/2023	Smt. Mamta Meshram, Scientist-C of the centre	1
152.	Attended Pre-BoG Meeting under the chairmanship of DG ICFRE.	1 day	24/11/2023	Dr. H.S. Ginwal, Director, ICFRE-TFRI, Dr. A. Jain, Head, FE&CC and Dr. N. Berry Head Forest Extension Division	3
153.	"Role of Insect Pollinators and Indicator Species in Biodiversity Conservation and Management of Forest Ecosystems"	1 day	29/11/2023	Dr. Nidheesh T.D.	1
154.	A meeting with Shri Shailesh Tembhurnikar, PCCF and HOFF and other senior officers of Maharashtra Forest Department at Van Bhawan, Nagpur and discussed current research activities of the institute and potential research areas to be taken up with the department.	1 day	29/11/2023	Director and Scientist	2
155.	Held a meeting with the officers of Western Coalfields Limited at Tamia (M.P.) and selected sites in Patalkot area for conducting ethnobotanical survey.	1 day	30/11/2023	Dr. H.S. Ginwal, Director, ICFRE-TFRI, Dr. Avinash Jain, Head, FECC Division, Dr. Hariom Saxena, Dr. N. Khobragade and technical officers of the institute	8
156.	Participated in a "JSSC Inter- School Science Exhibition 2023" at Christ Church Co-Ed School Saliwada, Jabalpur, (M.P.) as a Judge for the competition in the theme of " Science for service of Humanity ".	1 day	2/12/2023	Dr. Hari Om Saxena, Scientist – E	1
157.	"Soil and Water: A Source of Life"	1 day	05/12/2023	Scientist & Research	10
158.	Attended a Webinar on World soil day organized by FSCC division ICFRE-TFRI, Jabalpur	1 day	5/12/2023	All Scientistys ICFRE-TFRI	50
159.	Delivered a lecture on 'Rejuvenation of River Narmada through forestry interventions' to the participants of 3-days Training of Management Development Program for Other Stakeholders on 'Science and Art of River Rejuvenation Through Forestry'.	1 day	06/12/2023	Scientist	1
160.	2 days National conference cum workshop on "Eco-physiological approaches for biodiversity conservation: current practices and challenges" organized by Indira Gandhi National Tribal University, Amarkantak and delivered key note address on "Impact of protection on biodiversity	2 days	12/12/ 2023 to 13/12/2023	Scientists	2

	conservation and carbon sequestration in natural forests of central India”.				
161.	जैवविविधता संरक्षण के लिए इकोफिजियोलॉजिकल दृष्टिकोण: वर्तमान प्रथाएं और चुनौतियां	2 days	12/12/2023 to 13/12/2023	Scientist	1
162.	Participated and delivered a talk as special guest in the ‘KVS regional level 51 st Rajyastariya Bal Vaigyanik Pradarshani-2023’ & seminar on ‘Millets for health and sustainable planet’ at KV-1 STC kendriya vidyalaya, Jabalpur (M.P.)	1 day	12/12/2023	Dr. Nanita Berry, Scientist-F	1
163.	Delivered a lecture on the topic “Safeguarding Central India's Forest Genetic Resources in the Era of Climate Change: A Comprehensive Initiative for Biodiversity Conservation” in one day National webinar on “Biodiversity and its conservation” organized by Govt. College, Garha, Jabalpur, Madhya Pradesh Sponsored by - Department of Higher Education, Govt. of M.P. Bhopal	1 day	14/12/2023	Scientist	1
164.	Attended the PEG Review meeting of AICRP-29 and presented ongoing research project achievements.	1 day	15/12/2023	Dr. Vishakha Kumbhare, Scientist –E/ Scientist Incharge of the ICFRE-SDC, Chhindwara	1
165.	Participated in the meeting for Screening of proposals submitted to ABG Programme as Experts at Botanical Garden of Indian Republic (BGIR), Noida. The proposal was submitted for upgrading the existing Botanical Garden into a Lead Botanic Garden.	1 day	19/12/2023	Sh. M. Rajkumar, Scientist D	1
166.	Attended the PEG Review meeting of AICRP-23 and presented ongoing research project achievements.	1 day	19/12/2023	Dr. Vishakha Kumbhare, Scientist –E/ Scientist Incharge of the ICFRE-SDC, Chhindwara	1
167.	Meeting for Screening of proposals submitted to ABG Programme at Experts at Botanic Garden of Indian Republic (BGIR), Noida. The proposal was submitted for upgrading the existing Botanical Garden into a Lead Botanic Garden.	1 day	19/12/2023	Scientist	1
168.	Presented progress of CAMPA, Extension component-6 during a review meeting chaired by ADG (Media & Extension), ICFRE.	1 day	20/12/2023	Dr. Nanita Berry, Scientist-F, & Head, Forest Extension division	1
169.	Attended the PEG Review meeting of CAMPA extension and presented the extension achievements under Van Vigyan Kendra (VVK) and Modified Direct to Consumers (MDTC) project	1 day	20/12/2023	Dr. Vishakha Kumbhare, Scientist –E / Scientist Incharge of the ICFRE-SDC, Chhindwara	1
170.	As an external expert for review and departmental promotion meeting of JNKVV for Agroforestry	1 day	20/12/2023	Dr. Nanita Berry, Scientist-F	1

	Discipline.				
171.	Organized RAC Meeting of PhD student	1 day	21/12/2023	Scientist, technical officers and project fellows	50
172.	Completed an iGoT module on “Cyber Security and Strategy” provided by Indian Institute of Public Administration	1 day	21/12/2023	Self-improvement	25
173.	Attended the preliminary Management Plan Report (PMPR) meeting of Management Plan for Bramhapuri and pranhita Forest divisions of FDCM Ltd, Maharastra	1 day	2/01/2024	Shri M Rajkumar, Scientist-D	1
174.	Delivered a talk on “Quantifying Carbon Capture Potential of TOF – Carbon Markets and Revenue Generation for Tree Growers – Role of TOF in Climate Change Mitigation Strategies” during Workshop on “TOF & its Role in Forest Based Industries” organized by Chandrapur Forest Academy, Maharashtra.	1 day	8/01/2024 to 10/01/2024	DR. Avinash Jain, Scientist-F	1
175.	Attended an online meeting related to sharing biodiversity data of India with GBIF organized by Statistics division, MoEF&CC, New Delhi	1 day	9/01/2024	Shri M Rajkumar, Scientist-D	1
176.	Delivered a talk on “Importance of Environment and Nature Conservation” under Prakriti program at Govt. Higher Secondary School, Sangda -Bargi	1 day	12/01/2024	M Rajkumar, Scientist-D	1
177.	Delivered a talk on मृदा का परीक्षण एवं विश्लेषण to the Forest officials of Seoni division under VVK program.	1 day	17/01/2024	Scientist	1
178.	Delivered lecture on “Utilization and Verification of Form Factors Developed by TFRI on Teak and Sal” to forest officials of CG SFD through online mode.	1 day	17/01/2024	Dr. Avinash Jain, Scientist-F	1
179.	Attended ICAR Sponsored training program on" Recent advances in Molecular diagnostics of insect species including invasive and thier natural enemies" Organized by ICAR-National Bureau of Agricultural Insect resources , Bengaluru, Karnataka.	21 days	18/01/2024 to 7/02/2024	Dr.Mohan C	1
180.	Presented a project proposal at MOEF & CC, New Delhi.	1 day	19/1/2024	Dr. Hari Om Saxena, Scientist – E	1
181.	Agenda meeting on Expenditure Review, pending C&A Audit Paras and GeM Procurement hosted by MOEF&CC, was attended by	1 day	23/01/2024	Dr. Vishakha Kumbhare Scientist-F, Shri. N.D.Khobragade, Scientist-E ,Shri. S.K.Mohane,UD C ,Shri.Majid Khan, LDC.	4
182.	Impact of lantana camara on forest ecosystem in central India in National seminar On Frontier areas of research in forest and Wildlife sciences 24th January, 2024 (forab20)	1 days	4/01/2024	Sh. Neeraj Prajapati	1
183.	Exploring traditional healing: a quantitative	1 days	24/01/2024	Sh. Neeraj	1

	analysis of ethnomedicine for chronic diseases in Chhattisgarh FORAB64.			Prajapati	
184.	Delivered an oral presentation on the topic "Seed Testing and Certification in the Indian Forestry Sector: Current Status, Challenges, and Pathways for Sustainable Growth." In Proceedings of the National Seminar on Frontier Areas of Research in Forest and Wildlife Sciences held at Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	1 day	24/01/ 2024	Sh. Manish Kumar Sh. Vijay, Scientist-B	1
185.	Attended the PEG Review meeting of AICRP-14 and presented ongoing research project achievements.	1day	25/01/2024	Smt. Mamta Meshram, Scientist –C of the ICFRE-SDC, Chhindwara	1
186.	Completed an iGoT module on “AI Using Google Bard and ChatGPT for Beginners” provided by Indian Institute of Public Administration	1 day	28/01/2024	Self-improvement	
187.	Two days training on Application of Advanced Remote Sensing Techniques	2 days	29/01/2024 to 30/01/2024	Scientist	1
188.	HRD Training on ‘Basic Techniques of Plant Molecular Biology’	5 days	29/01/2024 to 2/02/2024	Technical Staff	2
189.	Participating in one month training on Molecular taxonomy of insects at Bangaluru (K.A.)	30 days	January-February, 2024	Dr. Mohan C Scientist 'B'	1
190.	One week internship program for B.SC Biotechnology students of Govt. Science college, Jabalpur.	5 days	05/02/2024 to 09/02/2024	Scientists and technical officers	7
191.	Delivered a lecture on titled "Empowering enterprises based on agroforestry ventures' for farmers and forest officials during NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs ‘organized by FPD , TFRI .	3 days	5/02/2024 to 7/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division	1
192.	NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B and assisted by Mr. Anand Kumar, Technical Assistant and Shri Diwyansh Raj (SPF).	3 days	5/02/2024 to 7/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division.	1
193.	Delivered a lecture to the Forest Front line workers on the topic—वानिकी उद्यमों में बीज गुणवत्ता सुनिश्चित करने के लिए रणनीतियाँ पद जीम तीन दिवसीय (05.02.24.—07.02.24) प्रशिक्षण कार्यक्रम सतत कृषिवानिकी उद्यम : जैविक उर्वरकों, जैवउर्वरकों और जैवकीटनाशकों के माध्यम से उद्यमियों को सशक्त बनाने हेतु प्रशिक्षण (Online mode at Chhattisgarh)	1 day	6/02/2024	Forest Front line workers	-
194.	Attended the Research Policy Committee meeting .	2 days	8/02/2024	Dr. Vishakha Kumbhare,Scientist –F,Shri N.D. Khobragade, Scientist-E and Smt. Mamta Meshram, Scientist-C	03

195.	NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B and assisted by Mr. Anand Kumar, Technical Assistant and Shri Diwyansh Raj (SPF).	3 days	8/02/2024 to 10/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division	1
196.	Delivered a lecture on titled "Empowering enterprises based on agroforestry ventures" for farmers and forest officials during NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs” organized by FPD, TFRI	3 days	8/02/2024 to 10/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division	1
197.	Training programme on Sustainable agroforestry ventures: empowering entrepreneurs through organic fertilizers, biofertilizers and biopesticides	3 days	08/02/2024 to 10/02/2024	Scientist	1
198.	NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneurs through Organic Fertilizers, Biofertilizers and Biopesticides” was conducted by Dr. Darshan K, Scientist B and assisted by Mr. Anand Kumar, Technical Assistant and Shri Diwyansh Raj (SPF).	3 days	11/02/2024 to 13/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division	1
199.	Delivered a lecture on titled "Empowering enterprises based on agroforestry ventures" for farmers and forest officials during NIAM sponsored training program titled “Sustainable Agroforestry Ventures: Empowering Entrepreneur’ organized by FPD,TFRI to Local farmers of Kanker District, Chhattisgarh	3 days	11/02/2024 to 13/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division,	1
200.	Delivered a lecture on titled ‘Promising Agroforestry Models for Central India’ during three days IFS training programme on Agroforestry models and its management for livelihood security to the IFS Officers of UP. MS. Karnataka and Uttarakhand.	3 days	13/02/2024 to 15/02/2024	Dr. Nanita Berry, Scientist F and Head, Forest Extension Division	1
201.	International Conference on Traditional Medicine & Phytopharmaceuticals & 11 th International Congress of Society for Ethno pharmacology (ICTMP-SFEC 2024) organized by IIIM, Jammu.	3 days	16/02/2024 to 18/02/ 2024	Scientist	1
202.	Participated in National Workshop on “वन औषधि और देशज ज्ञान : स्थानीय सेवैश्विक” कार्यशाला में ऑनलाइन भाग लिया, and acted as resource person .Workshop was organized by Mahatma Gandhi International Hindi Vishwavidyalaya, Wardha(MH).	2 days	15/02/2024 to 16/02/2024	Dr. Vishakha Kumbhare,Scientist-Incharge	1
203.	Delivered a lecture on “Climate change and its impact on natural forest” in Refresher Course on Natural Farming for Environmental Sustainability and Development organized by Guru Ghasidas Vishwavidyalaya, Bilaspur.	1 day	19/02/2024	Dr. Avinash Jain, Sci-F	1
204.	Delivered a lecture in training program titled "Utilization of Flyash in Forestry Sector VIs-a-	1 day	20/02/2024	Shri AJK Asaiya, Scientist D and	1

	vis Climate Change and Land Degradation.			Head Forest Protection Division	
205.	Delivered a lecture on the topic “Forest restoration through innovative seed solutions” in the Training for officers of Aadani Power Ltd on Utilization of flyash in Forestry sector vis a vis Climate Change and Land Degradation from 21-23 Feb 2024	1 day	23/02/2024	Manish K Vijay For Officers of Aadani Power Ltd	1
206.	Participated and presented the Progress Report of AICRP-29 during a review meeting held under the chairmanship of DIG(RT) MoEF & CC, New Delhi.	1 day	23/02/2024	Smt. Neelu Singh, Scientist-G, NPCs of AICRP of ICFRE	1
207.	Participated and presented Progress Report of AICRP-30 during review meeting held under the chairmanship of DIG(RT) MoEF & CC, New Delhi	1 day	23/02/2024	Dr. Nanita Berry, Scientist-F and NPC- AICRP 30 NPCs of AICRP of ICFRE	1
208.	Participated and presented the Progress Report of AICRP-23 during a review meeting held under the chairmanship of DIG(RT) MoEF & CC, New Delhi.	1 day	23/02/2024	Dr. Fatima Shirin, Scientist-G, NPCs of AICRP of ICFRE	1
209.	Regional Consultation Meeting on the Updation of National Biodiversity Strategy and Action Plan (NBSAP) and Adoption of National Biodiversity Targets (NBTs) in alignment with the Kunming-Montreal Global Biodiversity Framework (KMGBF)	2 days	26/02/2024 to 27/02/2024	Scientist	1
210.	Attended Regional Consultation Meeting on updation of National Biodiversity Strategy and Action Plan (NBSAP) organized by NBA at IIFM, Bhopal	2 days .	26/02/2024 to 27/02/2024	Shri M. Rajkumar, Scientist D, Scientists,	1
211.	one week National Programme on Transformative Pathways of Science, Technology, and Innovation for attaining the Sustainable Development Goals	5 days	26/02/2024 to 1/03/2024	Shri Dheeraj Gupta	1
212.	Roorkee Water Conclave- 2024 on the theme Responsible water management and circular Economy	3 days	4/03/2024 to 6/03/2024	Scientist	1
213.	Presented a paper on the ‘Effect of Water Conservation Measures on Cropping Intensity and Groundwater Status in Drought-Affected District of Bundelkhand’ in the 3 rd Roorkee water conclave-2024 at IIT Roorkee, Roorkee.	3 days	04/03/2024 to 06/03/ 2024	Scientist	1
214.	Delivered a lecture to the Forest Front line workers on the topic—वार्निकी उद्यमों में बीज गुणवत्ता सुनिश्चित करने के लिए रणनीतियाँ पद जीम तीन दिवसीय (04.03.24.-06.03.24) प्रशिक्षण कार्यक्रम सतत कृषिवार्निकी उद्यम : जैविक उर्वरकों, जैवउर्वरकों और जैव कीटनाशकों के माध्यम से उद्यमियों को सक्षम बनाने हेतु प्रशिक्षण (Online mode at Jharkhand)	1 day	5/03/2024	Sh. Aviral Asaiya, Sci-D	1
215.	Delivered a lecture to the Forest Front line workers on the topic —वार्निकी उद्यमों में बीज गुणवत्ता सुनिश्चित करने के लिए रणनीतियाँ पद जीम तीन दिवसीय (07.03.24.-09.03.24) प्रशिक्षण कार्यक्रम सतत कृषि वार्निकी उद्यम : जैविक उर्वरकों, जैवउर्वरकों और जैव कीटनाशकों के माध्यम से उद्यमियों को सक्षम बनाने हेतु प्रशिक्षण (Online	1 day	8/03/2024	Sh. Aviral Asaiya, Sci-D	1

	mode at Jharkhand)				
216.	Delivered a lecture वन आनुवंशिक संसाधनों (एफजीआर) के संरक्षण की दिशा में एकीकृत दृष्टिकोण : वृक्ष संरक्षण के लिये एक कदम in National seminar on the theme "Biodiversity and its conservation" organized by Zoological Survey of India with collaboration of National Academy of Science, Bhopal	1 day	9/03/2024 to 10/03/2024	Shri Kaushal tripathi, Scientist B	1
217.	Delivered a lecture to the Forest Front line workers on the topic —वानिकी उद्यमों में बीज गुणवत्ता सुनिश्चित करने के लिए रणनीतियाँ पद जीम तीन दिवसीय (10.03.24.—12.03.24) प्रशिक्षण कार्यक्रम सतत कृषिवानिकी उद्यम : जैविक उर्वरकों, जैव उर्वरकों और जैव कीटनाशकों के माध्यम से उद्यमियों को सशक्त बनाने हेतु प्रशिक्षण (Online mode at Jharkhand)	1 day	10/03/2024	Sh. Aviral Asaiya, Sci-D	1
218.	Delivered two lecture as resource person in one day training programme on “Plantation and its Management techniques of commercially important tree species” for forest officials of Chhattisgarh forest department on “नर्सरी तकनीक के माध्यम से गुणवत्तापूर्ण रोपण सामग्री(QPM)का उत्पादन”	2 days	11/03/2024 to 12/03/2024	Sh. Rathod Digvijaysinh Sci-B	1
219.	HRD Training programme on MLT data Analysis.	5 days	11/03/2024 to 15/03/2024	Scientists	1
220.	HRD Training programme on MLT data analysis Organized by IFGTB-ICFRE at IFGTB Coimbatore	6 days	11/03/2024 to 16/03/2024	Dr. Naseer Mohammad,HOD and Scientist-E	1
221.	Delivered an oral presentation on the topic "Seeding tomorrow's forests: Harnessing machine vision for assessment of seed quality and diversity in Central India. In the National Conference on Current Trends in Agriculture, Applied and Life Sciences organized by PLANTICA, Dehradun, Uttarakhand	2 days	11/03/2024 to 12/03/2024	Manish k Vijay	1
222.	Delivered a lecture on the topic “वानिकी बीज प्रबंधन के मूलभूत सिद्धांत एवं मध्य भारत में विभिन्न वानिकी प्रजातियों के बीज प्रबंधन प्रोटोकॉल विकसित करने में आईसीएफआरई—टीएफआरआई की भूमिका” in the Training for Frontline staff of CGSFD on “Propagation of RET and Commercially important forestry species along with Hi-tech nursery techniques” from 11/03/24-15/03/24	1 day	12/03/2024	Sh. Rathod Digvijaysinh Sci-B	1
223.	Delivered four lectures as resource person in following training programmes: Forest Front line workers on the topic हरितभविष्य के लिए कृषिवानिकी आधारित उद्यमों को सशक्त बनाना ; in there दिवसीय (07. 03.24..08.03.24) प्रशिक्षण कार्यक्रम सतत कृषि वानिकी उद्यम : जैविक उर्वरकों, जैव उर्वरकों और जैव कीटनाशकों के माध्यम से उद्यमियों को सशक्त बनाने हेतु प्रशिक्षण (Online mode at Kanker, Chhattisgarh)	1 day	7/03/2024	Dr. Nanita Berry, Scientist F	1
224.	Forest Front line workers on the topic हरितभविष्य के लिए कृषिवानिकी आधारित उद्यमों को सशक्त बनाना in the तीन दिवसीय (010.03.24.—12.03.24) प्रशिक्षण कार्यक्रम सतत कृषि वानिकी उद्यम : जैविक उर्वरकों, जैव उर्वरकों और जैव कीटनाशकों के माध्यम से उद्यमियों को सशक्त बनाने हेतु प्रशिक्षण (Online mode at Jharkhand)	1 day	10/03/2024	Dr. Nanita Berry, Scientist sci - F	1

225.	Plantation and its Management techniques of commercially important tree species” for forest officials of Chhattisgarh forest department on Plantation of Sandalwood species and its host management and Melia dubia and Mahogany’ for SFDs of Bilaspur Forest Circle.	1 day	12/03/2024	Dr. Nanita Berry, Scientist and Rathod Digvijaysinh Sci-B	2
226.	Delivered lecture during Plantation and its Management techniques of commercially important tree species” for forest officials of Chhattisgarh forest department on Plantation of Sandalwood species and its host management and Melia dubia and Mahogany’ for SFDs of Durg Forest Circle	1 day	13/03/2024	Dr. Nanita Berry, Scientist sci - F	1
227.	Meeting of Standing Consultative Committee to approve the Draft Working Plan Reports (DWPRs) of Yavatmal, Wadsa and Dahanu Forest Divisions of Maharashtra Forest Department held at Van Bhawan, Nagpur.	1 day	13/03/2024	Sh. M. Rajkumar, Scientist D	1
228.	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi.	2 days	13/03/2024 to 14/03/2024	Scientist	1
229.	Presented an abstract in the title of “Chemical screening, identification of superior germplasm, nursery techniques and ex-situ conservation of some threatened medicinal plant species of central India” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.	1 day	13/03/2024	Dr. Hari Om Saxena, Scientist – E	1
230.	Presented abstract in the title of “Correlation study between different girth classes and conessine content in a commercially important medicinal plant species <i>Holarrhena antidysenterica</i> (L.)” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.	1 day	14/03/2024	Shri Ganesh Pawar Sr. Technician	1
231.	Presented abstract in the title of “Simultaneous Estimation of β - sitosterol and lupeol in different plant parts of <i>Cassia fistula</i> L. through a validated HPTLC method” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.	1 day	14/03/2024	Miss. Samiksha Parihar JPF	1
232.	Presented abstract in the title of “Effect of propagation materials on germination of <i>Curculigo orchoides</i> Gaertn. (Kali Musli)” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.	1 day	14/03/2024	Miss. Akanksha Jain PA	1
233.	Presented abstract in the title of “Effects of different pre-sowing seed treatments on the germination and growth performance of <i>Abutilon indicum</i> Linn” in National Seminar on	1 day	14/03/2024	Miss. Varsha Pandey Ph.D scholar	1

	Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.				
234.	Presented abstract in the title of “Effect of crop geometry and different organic manures on growth and yield performance of <i>Stevia rebaudiana</i> Bertoni under <i>Tectona grandis</i> based Silvi-medicinal system” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal Siliguri, West Bengal.	1 day	14/03/2024	Dheer Agnihotri Ph.D scholar	1
235.	Attended the PEG Review meeting of AICRP-14 and presented ongoing progress achievements.	1day	14/03/2024	Smt. Mamta Meshram, Scientist –C of the ICFRE-SDC, Chhindwara	1
236.	Participated as Chief Guest in the Inaugural Workshop on Sustainable Life Style and delivered a lecture titled "The Crucial Role of Forestry in Sustainable Living" at the Eco Club, Government College, Garha Jabalpur.	1 day	18/03/2024	Sh. Manish Kumar Vijay, Scientist-B.	1
237.	Meeting with Director Achanakmar Amarkantak Biosphere Reserve (AABR) Koni, Bilaspur to discuss and collect information required for filling 10 years Periodic Review of AABR	3 days	18/03/2024 to 20/03/2024	Scientists.	3
238.	“Bamboo Resurgence: Empowering Livelihoods and Shaping a Sustainable Future for Cellulose-Based Industries” -National Conference on Forests and Innovation: New Solutions for A Better World 9Jointly organised by: Uttarakhand Biodiversity Board, Government of Uttarakhand, Dehradun & Department of Biotechnology, Graphic Era Deemed to be University, Dehradun)- 21-22 march, 2024	2 days	21/03/2024 to 22/03/2024	Smt. Neelu Singh	1
239.	Delivered a presentation on ‘Achievements and Prospects of New Van Vigyan Kendra, Chandrapur (Maharashtra)	1 day	22/03/2024	Dr. Nanita Berry, Scientist F	1
240.	delivered a talk on “Forest Soil Health Cards of Forest Divisions of Maharastra”.	1 day	22/03/2024	Dr. Avinash Jain	1
241.	Meeting with Shri M. Srinivasa Rao, PCCF (Protection) and Member secretary Biodiversity Boad at Van Bhavan, Nagpur.	1 day	22/3/2024	Director and Scientists	2
242.	Online Meeting of Management Plan for West Chanda Forest Project Divisions of FDCM Ltd.	1 day	23/03/2024	Scientists	1

Category =Scientists, TOs, Forest Officers, etc.

Details of Workshops/symposia etc. organized- Annexure-8

Workshops/seminars/symposia/meetings etc. organized						
SN	Topic	Duration and period		Participants		Overall feedback Participants
		Days	Date	Category	Nos.	
1.	Organised “State level workshop on Road Map on QPM delivery for TOF expansion in Haryana” under TREES OUTSIDE FORESTS IN INDIA (TOFI) PROGRAM	1 day	13/04/2023	State Consultant, State Forest Department officer, Nursery Growers, Wood based Industries, NGOs, Farmers, ICAR Scientist	35	Very Good
2.	Nature and Natural Sciences	2 days	5/05/2023 to 6/05/2023	Professors, Scientists, Students	500	Satisfactory
3.	Worked as a Mentor for Short term courses for four students of Aloysius Institute of Technology, Gaur, Jabalpur on herbarium preparation.	10 days	/05/2023 to /06/2023	Student	3	Very good
4.	Worked as a Mentor for Short term courses for three students of Aloysius Institute of Technology, Gaur, Jabalpur on Ethnomedicinal knowledge	10 days	/05/2023 to /06/2023	Students	4	Very good
5.	Provided demonstration to the students of St. Aloysius School on seed and vegetative propagation of medicinal plants under LiFE	30 days	/05/2023 to /06/2023	Students	40	Very good
6.	VALUE ADDITION AND MARKETING OF NTFPs/ MAPs FOR LIVELIHOOD SECURITY (NCVAM - 2023)	2 days	2/05/2023 to 3/05/2023	Researchers, Academicians, Foresters,	200	Participants appreciated the themes, contents of the conference. Such conferences should be continued in future also.
7.	Organised “State level workshop on Road Map on QPM delivery for TOF expansion in Andhra Pradesh” under TREES OUTSIDE FORESTS IN INDIA (TOFI) PROGRAM	1 day	16/05/2023	State Forest Department officer, Nursery Growers, Wood based Industries, NGOs, Farmers, ICAR Scientist	42	Very Good
8.	Mission Life Activity on Energy saving at Gram Panchayat Guraiya, Chhindwara	1 day	23/05/2023	Farmers, SHGs and various Stakeholders	13	Stakeholders found the information to be useful.

9.	Mission Life Activity on Energy saving at Manegaon, Mohdeivillage, Chhindwara	1day	24/05/2023	Farmers SHGs and various Stakeholders	19	
10.	Mission Life Activity on Single use Plastic reduced at Munga, Baranga, Barganga Khurd village, Chhindwara	1day	25/05/2023	Farmers SHGs and various Stakeholders	24	
11.	Mission life Activity on Water conservation at Umariya Ishra village, Chhindwara	1day	26/05/2023	Farmers SHGs and various Stakeholders	35	
12.	Mission Life Activity on E - Waste reduction at Guraiya village, Chhindwara	1day	2/06/2023	Farmers SHGs and various Stakeholders	13	
13.	Mission Life Activity on Healthy life style adoption at Bhaisadand village, Chhindwara	1day	5/06/2023	Farmers Bhaisadand village, Chhindwara	26	
14.	Value Addition of NTFPs	1day	25/07/2023	Women SHGs	22	Women were found interested and expressed their interest in enrolling in such training programmes.
15.	Nursery Techniques of Important Forestry/Organic Manure preparation (For Farmers)	1day	25/07/2023	Farmers	22	The information on Nursery Techniques of Forestry species was found useful .
16.	Organized one day 'Regional Research Conference', 2023 on "Nursery Technology for Propagation of Difficult Tree Species", all Head of divisions were participated as drafting committee, Dr. HO Saxena, Shri AJK Asaiya, Shri. Manish Kumar Vijay Scientist- B as a rapporteur of technical sessions.	1day	18/08/2023	Forestry professionals	50	
17.	National Bank for Agriculture & Rural Development	1day	6/09/2023	NABARD officers from Head quarter (Mumbai), South & Central Indian states visited the Centre	26	DGM NABARD Expressed that the Centre is doing a great job as for NTFPs
18.	Provided a demonstration of seed Laboratory and seed research field to the newly	1day	27/10/2023	ICFRE-TFRI, Jabalpu	4	Very good

	recruited scientist at ICFRE-TFRI, Jabalpur under Orientation Program- 2023					
19.	Under Rural Agriculture Work Experience (RAWI), exposure visit of 32 students of JNKVV, Jabalpur was conducted at the centre and organized by KVK, Chhindwara on 07.11.2023. Technologies developed by the centre were displayed to the group through VVK.	1day	7/11/2023	Students of JNKVV, Jabalpur	32	Students were interested to enroll in skill development trainings on the NTFPs value addition
20.	ICFRE-TFRI Organized 'Hindi Karyashala'	1 day	15/12/2023	All Staff	19	
21.	Organic farming and their uses	1day	31/01/2024	Farmers	30	
22.	Demonstrated the forest seed technology activities to the Frontline staff of CGSFD	2 hrs	11/03/24	Frontline staff of CGSFD	25	Very good

Category = Students, farmers, ladies, officers from SFDs, Members of JFMCs etc.

Details of Awareness/ Demonstration programmes organized- Annexure -9

Awareness/ Demonstration programmes organized						
S.N.	Topic	Duration and period		Participants		Overall feedback Participants
		Days	Date	Category	Nos.	
1.	Portable Photosynthesis system to Ph.D scholars of GGU, Bilaspur.	2days	5/04/2023 to 6/04/2023	Ph.D scholars	02	Highly satisfactory
2.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1day	19/04/2023	Forest Range Officer Trainees 2022 to 2024 session, Kundalpur Academy, Sangli, Maharashtra	44	
3.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1day	22/04/2023	Students of Army Public School 2, Jabalpu	36	
4.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1day	12/05/2023	Students of Gyan Ganga Institute of Technology & Science ,Jabalpur (MP)	35	
5.	Worked as a Mentor for Short term courses for four students of Aloysius Institute of Technology, Gaur, Jabalpur on herbarium preparation.	10 days	/05/2023 to /06/2023	Student	3	Very good
6.	Worked as a Mentor for Short term courses for three students of Aloysius Institute of Technology, Gaur, Jabalpuron Ethnomedicinal knowledge	10 days	/05/2023 to /06/2023	Student	4	Very good
7.	Provided demonstration to the students of St. Aloysius School on seed and vegetative propagation of medicinal plants under LiFE	30 days	/05/2023 to /06/2023	Student	40	Very good
8.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1day	6/06/2023	Students of Shri Rawatpura Sarkar Institute of Pharmacy Jabalpur (MP)	50	
9.	Value addition of NTFPs(Moringa papads)	1day	4/07/2023	Jai Ambe Maa Women SHGs,Munga village, Chhindwara(MP)	32	Women from different SHGs were interested to take this

						value added training on NTFP as their income & employment generating source.
10.	Value addition of NTFPs(Mosquito repellent)	1 day	4/07/2023	Anmol, Pragati & Jai Sewa, Women SHGs, Guraiya, Chhindwara(MP)	39	
11.	Value addition of NTFPs(Agarbatti Sticks)	1 day	5/07/2023	Pragati, Shiva & Lucky Women SHGs Bhaiband, Chhindwara(MP)	24	
12.	Value addition of NTFPs(Agarbatti sticks making)	1 day	8/07/2023	Women SHGs, Singodi(MP)	28	
13.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	10/07/2023	Students of M.Sc. Forestry, 4 th Semester, JNKVV, Jabalpur (MP)	15	
14.	Nursery Techniques of medicinal plants/Value addition of NTFPs/Organic Manure preparation	1 day	25/07/2023	Farmers/Women SHGs	22	Farmers were updated on Agroforestry techniques and were ready to implement in their fields.
15.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	2 days	7/08/2023 & 25/08/2023	Two Group Frontline staff of Chhattisgarh State Forest Department	15	
16.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	30/08/2023	A group of B.Sc. Agriculture 3 rd year students alongwith 10 teachers of College of Agriculture, PDKV, Akola (Maharashtra)	170	
17.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	8/09/2023	Frontline staff of Chhattisgarh State Forest Department	14	
18.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the	1 day	29/09/2023	Student of J. N. V. Singodi, Chhindwara		

	Institute					
19.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	10/10/2023	Forest school, Pachmarhi forest guard, Madhya Pradesh	47	
20.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	11/10/2023	Govt SSA PG College sihora students	43	
21.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	12/10/2023	KV1, G.C.F. branch, Jabalpur (MP)	110	
22.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	13/10/2023	St. Joseph convent school, TFRI branch, Jabalpur(MP)	100	
23.	Provided a demonstration of seed Laboratory and seed research field to the newly recruited scientist at ICFRE-TFRI, Jabalpur under Orientation Program-2023		27/10/2023	ICFRE-TFRI, Jabalpur	4	Very good
24.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	3/11/2023	Forest Guard, Forest Ranger college Balaghat (M.P.)	49	
25.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	3/11/2023	Students, PM Shree Kendriya Vidhyalaya Jabalpur	77	
26.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	8/11/2023	Students, Gyan Ganga Institute of Technology & Science, Jabalpur (M.P.)	45	
27.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	8/11/2023	Students, Hitkarini College of Pharmacy, Jabalpur	52	
28.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	9/11/2023	Students, PM Shree Kendriya Vidhyalaya Jabalpur Visit at TFRI 09-11-2023	70	
29.	Demonstrated TFRI	1 day	9/11/2023	Students, Gyan Ganga	22	

	technologies displayed in the museum cum interpretation centre of the Institute			Institute of Technology & Science, Jabalpur (M.P.)		
30.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	28/11/2023	PM Shree Kendriya Vidhyalaya, COD, Jabalpur (M.P.)	52	
31.	Educational visit, students visited lab and were informed about the use of various scientific instruments. Visit was conducted in VVK Hall	1 day	21/12/2023	PM Shree Kendriya Vidhyalaya, Chhindwara	51	
32.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	4/12/2023	Students of Govt. Shramodaya residential School Mangali Jabalpur	312	
33.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	8/12/2023	Students of PM Shree Kendriya Vidhyalaya Katni.	41	
34.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	13/12/2023	NCC Cadets along with NCC officers of 2 MP Girls BN NCC, Jabalpur	67	
35.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	20/12/2023	PM Shree Kendriya Vidhyalaya Mandla.	97	
36.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	29/12/2023	Govt H. School Ghunsoor, Jabalpur (M.P.)	66	
37.	Azadi Ka Amrit Mahotsav Under this planted 75 plant species of medicinal, horticulture and forestry species	1 day	1/01/2024	Scientist, officers and staff	50	Satisfactory
38.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	5/01/2024	PM Shree Kendriya Vidhyalaya Narshinghpur	116	
39.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the	1 day	16/01/2024	Govt. Girls Higher Secondary School Barela	103	

	Institute					
40.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	23/01/2024	PM Shree Kendriya Vidyalaya, Pandhurna, Chhindwara	32	
41.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	25/01/2024	Govt. Science College Jabalpur	93	
42.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	31/01/2024	Gyan Ganga college of Science & Technology	32	
43.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre field visit including insectary and GTI of the Institute	1 day	7/02/2024	Shri Ram college students	60	
44.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre field visit including insectary and herbal garden of the Institute	1 day	9/02/2024	KV Dindori students	90	
45.	Demonstration of Essential Oil Distillation from various essential oil yielding species.	1 day	15/02/2024	Students Shri Shivaji Science College Nagpur (M.S.)	90	Women were interested to learn Value Added NTFPs products. Farmers showed their interest in applying the Organic Farming Techniques in their Agriculture fields.
46.	Demonstration on Fatty Oil Extraction	1 day	15/02/2024	Students PM.Shri Kendriya Vidyalaya Pandhurna (MP).	43	Through the Demonstrations, Students were found encouraged about the potential of

						Distillation unit as a Startup.
47.	Demonstrated TFRI Trichocard and Mycorhiza work displayed in the museum cum interpretation centre of the Institute	1 day	15/02/2024	Students of Bsc & Msc (Microbiology) Educational Visit, Shir Shivaji Science College, Nagpur (M.S.)	90	
48.	Sustainable Harvesting Techniques of Medicinal Plants	1 day	20/02/2024	Students PM.Shri Kendriya Vidyalaya Pandhurna (MP).	33	
49.	Value addition of NTFPs(Moringa papads)	1 day	22/02/2024	Durga, Kali & Mata Mai women SHGs, Partala, Chhindwara(MP)	18	
50.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre and bambusetum of the Institute	1 day	22/02/2024	KV OF Jabalpur Students	320	
51.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute. Dr. Nanita Berry, PI of AICRP 3 on sandalwood, demonstrated Sandalwood based agroforestry model established at TFRI campus to the officials of Adani Power Ltd.	1 day	22/02/2024	Adani group Employees	20	
52.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre of the Institute	1 day	26/02/2024	Sau Vasudhatai Deshmukh College of Agriculture Students	49	
53.	Value addition of NTFPs(Mosquito repellent)	1 day	27/02/2024	Women SHGs (Rukhmini, Farishta,Dharohar) Chhindwara (MP)	23	
54.	Organic farming based Agroforestry	1 day	29/02/2024	Farmers, (Manegaon, Chorai, Kundalikala, Khari, Junnardev, Amarwada, Umreth,Aamta,Karabd ol,Saliwada) Chhindwara(MP)	21	
55.	Live demonstrations on mushroom cultivation and charcoal making from weed waste were organized	1 day	29/02/2024	forest officials and women SHGs	50	

	for forest officials and women SHGs of Banjari village, Seoni district (M.P.) under Demo village CAMPA Extension programme					
56.	Demonstration on functioning of pH Meter, Centrifuge, Spectrophotometer, Distillation Unit.	1 day	4/03/2024	Students Rajmata Scindia Govt.P.G.Girls College, Chhindwara (MP).	26	Information provided was found useful.
57.	Demonstrated the forest seed technology activities to the Frontline staff of CGSFD	2 hrs	11/03/24	Frontline staff of CGSFD	25	Very good
58.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre field visit including insectary, herbal garden and GTI of the Institute.	1 day	12/03/2024	RFO Chandrapur forest academy	41	
59.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre Institute	1 day	21/03/2024	Shramoday vidhyalay Jabalpur	50	
60.	Demonstrated TFRI technologies displayed in the museum cum interpretation centre field visit and GTI of the Institute.	1 day	21/03/2024	Students of Higher Secondary School of Silwa and Sagada Village	50	

Details on License/ Material Transfer agreements annexure -10

S. N.	Name of Technology/ package of practices	Name of species	Name of the party	Revenue details including revenue generated and mode of payment, if any
1.	Mass multiplication through tissue culture	<i>Tectona grandis</i>	Shri Mukund Biotech, Jabalpur	Rs. 5,00,000
2.	Mass multiplication through tissue culture	<i>Bambusa balcooa</i>	Shri Mukund Biotech, Jabalpur	Rs. 5,00,000

List of publications - annexure -11 (publications) - Please prepare the list in the following order: Books :-

S. No.	Authors	Year	Title	Journal/publisher name	Volume, Issue and page no
1.	Manoranjan Biswal, Vishal Verma, Kaushal Tripathi, Sanjay Hingve and Niraj Kumar Yadav	2023	Plant Genetic Resources: Conservation and sustainable use	ELPHINSTONE, New Delhi	ISBN 978-81-19776-54-B
2.	Mr. Vishal Verma, Dr. Manoranjan Biswal, Mr. Sanjay Hingve, Mr. Ashish Tiwari, Dr. Kaushal Tripathi	2023	The Nutritional Frontier: Biofertilization Strategies in Cereal Grains	ELPHINSTONE, New Delhi	ISBN 978-81-19776-99-7
3.	Nidhi Mehta, Jyothi Desai, Amrutha Balakrishnan and Ayushi Tiwari	2023	Floral diversity of Kanha Tiger Reserve (Sarhi Range)	Anjali printers, Sadar Bazar, Jabalpur	ISBN9788196373436
4.	Saxena HO, Kulkarni N, Singh N, Parihar S and Pawar G(Eds.)	2023	Value addition and Marketing of NTFPs/ MAPs for livelihood security.	Souvenir and Compendium of abstracts	-

● **Booklets/Brochures/Bulletins/Pamphlets etc.: -**

1.	Dr. Pramod Kumar Dr. PK Rana Dr. Nasir Mohammad Dr. Fatima Shirin Dr. Yogeshwar Mishra	2023	Candidate Plus Trees of Teak (<i>Tectona grandis</i> Linn.f.) Selected in Central India	Technical Bulletin	TFRI/Tech./Bull/03/2023/40
2.	Naseer Mohammad And ND Khobragade	2023	"Chironji" Details of the Chironji plus trees (<i>Buchnanania cochinchinensis</i> (Lour)MR Almeida) Marked from Madhya Pradesh	Technical Bulletin	TFRI/Tech Bull/10/2023/47
3.	Naseer Mohammad, ND Khobragade, Fatima shirin, Yogesh Pardhi and Ankur Dahatyat	2023	"Chironji" A Socio-Economically important non-timber forest tree of deciduous forest of central and eastern India	Technical Bulletin	TFRI/Tech Bull/08/2023/45
4.	Fatima Shirin	2023	Indigenous Traditional Knowledge in <i>Madhuca longifolia</i> (Mahua) prevalent in India	Technical Bulletin	TFRI/Tech. Bull./12-2023-49
5.	Fatima Shirin	2024	Propagation of RET and Economically Important Forestry	Training Manual	

			Species along with Hi-Tech Nursery Techniques.		
6.	Fatima Shirin	2023	Propagation and Hi-Tech Nursery Techniques	Training Manual	
7.	Fatima Shirin	2023	Bamboo Propagation and Nursery Management	Training Manual	
8.	दर्शनके, एजेकेअसैया, राठोडदिग्विसिंहयू, रंजीतपीसी	2023	जैविक उर्वरकों, जैवउर्वरकों और जैवकीटनाशकों के माध्यम से छत्तीसगढ़ के उद्यमियों को सशक्त बनाने हेतु प्रशिक्षण	<u>सततकृषिवानिकी</u> <u>उद्यम:</u>	
9.	दर्शनके, एजेकेअसैया, राठोडदिग्विसिंहयू, रंजीतपीसी	2023	जैविकउर्वरकों, जैवउर्वरकोंऔरजैवकीटनाशकोंकेमाध्यमसेझारखंडकेउद्यमियोंकोसशक्तबनानेहेतुप्रशिक्षण	<u>सततकृषिवानिकी</u> <u>उद्यम:</u>	
10.	Dr. Hari Om Saxena	2024	Nursery technique for raising seedlings of <i>Desmodium gangeticum</i> (L.) DC. (Salparni) डेस्मोडियमगैंगेटिकम (सालपर्णी) के पौधे उत्पादन हेतु नर्सरी तकनीक	Pamphlet	TFRI/LEAFLE T/08/2023/4508/2023/45
11.	Dr. Hari Om Saxena	2024	Nursery technique for raising seedlings of <i>Embelia sjeriam-cottam</i> (Viavidang) एम्बेलियाजेरियम-कोटम (वायविडंग) के पौधे उगाने की नर्सरी तकनीक	Pamphlet	TFRI/LEAFLE T/09/2023/46
12.	Dr. Hari Om Saxena	2024	Vegetative propagation of <i>Dillenia pentagyna</i> Roxb. (Vankela/ Karmal/ Suarukh)	Pamphlet	TFRI/LEAFLE T/07/2023/44
13.	Dr. Hari Om Saxena	2024	डिलेनियापेंटागायना ; करमलध्व वनकेलाध्व सुआरुखध्व का कायिक प्रजनन	Pamphlet	TFRI/LEAFLE T/07/2023/44
14.	Dr. Hari Om Saxena	2024	Nursery techniques for raising seedlings of <i>Stereospermum suaveolens</i> (Padar/Patala)	Pamphlet	TFRI/LEAFLE T/06/2023/43
15.	Dr. Hari Om Saxena	2024	स्टीरियोस्पर्ममसुवेओलेंस (पाडर/ पटाला) की पौधे उगाने की नर्सरी तकनीक	Pamphlet	TFRI/LEAFLE T/06/2023/43
16.	Dr. Hari Om Saxena, Dr.	2024	डिलेनियापेंटागायना (करमलध्व)	Bulletin	TFRI/TECH.BU

	Pramod Kumar, Ganesh Pawar and Pranav Kumar Dhar		नकेलाधसुआरुखद्वएक संकटापन्न प्रजाति) <i>Dilleniapentagyna</i> Roxb. (Vankela/ Karmal/ Suarukh) - An endangered species		LLETIN/07/2023/44
17.	Dr. Hari Om Saxena, Ganesh Pawar and Samiksha Parihar	2024	स्टीरियोस्पर्मसुअवोलेस (रॉक्सब.) डीसी.(पाडर/पटाला) – एक संवेदनशील प्रजाति <i>Stereospermum suaveolens</i> (Roxb.) DC.(Padar/Patala)- a vulnerable species	Bulletin	TFRI/TECH.BU LLETIN/07/2023/43
18.	नीरजप्रजापति, पंकजकुमार	2024	अकाष्ठ वन उत्पादों में उद्यमिता अवसर एवं रणनीतियां	प्रशिक्षण मैनुअल	53-57
19.	Sh. Rathod Digvijaysinh Umedsinh Smt. Neelu Singh Dr.Nitin Kulkarni (Ed.)	2023	A Manual for Miyawaki Plantation	Manual	94
20.	Vijay, M. K., Singh, N., & Kulkarni, N.	2023	Turning Challenges into Triumphs: Strategies to Conquer Difficult Tree Species.	ICFRE-TFRI publication	TFRI/Tech. Bull. /05/2023/42.
21.	Naseer Mohammad, N.D. Khobragade	2023	Details of the Chironji plus trees(<i>Buchanania cochinchinensis</i> (Lour) M.R. Almeida) Marked From Madhya Pradesh	Bulletin	TFRI/TECH/BU LL/08/2023/45
22.	Nanita Berry	2023	Paan with Khamer Krishi vaniki Model.	Technical Bulletin	TFRI/Tech Bull/09/2023/46
23.	GauravChand Ramola, LekhandraSahu, DigvijayRathod, AkshitKukreti and Surjeet S Rawat	2023	Published book chapter on “ Soil Degradation and Deterioration: Causes, Effect and Case Studies” Soil Degradation and Deterioration: Causes, Effects and Case Studies, In: AkshatUniyal, Isha Sharma and InduTiwari, (eds) Soil Restoration: Assessment and Reclamation. Contributed for ICFRE-TFRI,2023. A Manual for Miyawaki Plantation,	TFRI/Tech.Bulletin/04/2023/41, ICFRE – Tropical Forest Research Institute, Jabalpur	pp 91–104 ISBN: 978-93-94380-21-9
24.	Vishal Verma,	2023	The Nutritional	ELPHINSTON	Technical

	Manoranjan Vishwash, Sanjay Hingve, Ashish Tiwari, Kaushal Tripathi		Frontier Biofortification Strategies in Cenral grains "	Publiction New Delhi,	Bulletin No. epd/2/2023/03/11
25.	Dr. Nanita Berry	2024	Bahumulya vriksh prajati ke vriksharopan evam iska prabandhan vishay par prashikshan	Booklet prepared for Forest officials of Bilaspur and Durg forest circles on "Bahumulya vriksh prajati ke vriksharopan evam iska prabandhan vishay par prashikshan organized on 12/03/24 and 13/03/24 respectively	1-59

2. Article in Seminars/Conferences/Workshops etc. Articles (Review Paper-2)

S. No.	Authors	Year	Title	Journal/publ isher name	Volume, Issue and page no	Thompson, Reuters Impact factors & NAAS
1	Vijay, M. K., Singh, N., Chauhan, S., Joshi, M., Tiwari, S., & Kahar, L.	2023	Insights into Pterospermum acerifolium (L) Willd: A Rare Gem of Central Indian Flora.	European Journal of Medicinal Plants	34(11-12), 92-103.	NAAS rating: 4.89
2	Vijay, M. K., Tiwari, S., Kahar, L., Malwiya, D., & Singh, N.	2023	Exploring the Versatility of Kydia calycina Roxb.: A Comprehensive Review on Utility, Botany, Conservation, and Cultivation Aspects.	Biological Forum – An International Journal	16(3): 14-21.	NAAS rating: 4.96.

S. N.	Authors	Year	Abstract title	Conference	Page no
1	अमन कुमार कुशवाहा एवं फातिमा शिरीन	2023	कृषि वानिकी में औषधीय पौधों का आर्थिक महत्व एवं पारिस्थितिक दृष्टि	राष्ट्रीय वैज्ञानिक संगोष्ठी औषधीय पादपों की खेती, उत्पाद निर्माण एवं मूल्य संवर्धन 25 सितम्बर, 2023	भा.वा.अ.शि.प. – पारिस्थितिक पुनर्स्थापन केन्द्र, प्रयागराज
2	इरशाद अली सौदागर, राज सिंह यादव, रविशंकर हरगडे, कौशल त्रिपाठी एवं फातिमा शिरीन	2023	डलब जियालैटीफोलिया (काला शीशम) के गुणवत्ता पूर्ण रोपण सामग्री का उत्पादन	-do-	-do-
3	शर्मिष्ठा गंगोपाध्याय, हरिओम बरमैया, इरशाद अली सौदागर,	2023	महत्वपूर्ण वृक्ष मेलाइना अरबोरिया (खमेर) का कायिक प्रजनन द्वारा गुणन	-do-	-do-

	हरेकृष्ण पाण्डेय एवं फातिमा शिरीन				
4	इरशादअली सौदागर, विवेक वर्मा, त्रिलोक गुप्ता, सुषमा मरावी एवं फातिमा शिरीन	2023	बीजों द्वारा सेलेस्ट्रस पैनिकुलेटस (मालकांगनी) का संरक्षण	-do-	-do-
5	फरहतजहान, गुलशनकुमार, श्रुतिठाकरे, इरशादअली सौदागर एवं फातिमा शिरीन	2023	मध्य भारत में मधुकालौंगिफोलिया (महुआ) के चयनित उत्कृष्ट वृक्षों से डीएनए का एक्सट्रैक्शन	-do-	-do-
6	इरशादअली सौदागर, उपासना नामदेव, रविप्रभात कुजूर, मुकेशकुमार सोनकर, पी. के. राना एवं फातिमा शिरीन	2023	औषधीय पौधेप्लम्बागोजेलानिका (चित्रक) का संवर्धन एवं संरक्षण	-do-	-do-
7	विवेक वर्मा, इरशादअली सौदागर, मनोजपूसा, सुषमा मरावी, हरे कृष्ण पांडे, व फातिमा शिरीन	2023	महत्वपूर्ण औषधीय वृक्ष प्रजातिहलदीनाकर्डिफोलिया (हलदू) का संरक्षण	-do-	-do-
8	विवेकवर्मा, त्रिलोकगुप्ता, मुकेशसोनकर, और फातिमा शिरीन	2023	बहु-उपयोगी व तेजी से बढ़ने वाला वृक्ष-एजाडिरेक्टाइडिका (नीम)	-do-	-do-
9	Irshad Ali Saudagar, Rama Soni, SushmaMaravi, KaushalTripathi and Fatima Shirin.	2024	"Assessment, exploration of status, diversity and conservation of vulnerable medicinal plant <i>Oroxylum indicum</i> Linn."	International Conference on Climate Action, Ecology & Environment organized by the Department of Environmental Studies, MIT-WPU Pune.	46
10	Irshad Ali Saudagar, P.K.Rana, SushmaMaravi, Nikhil Verma and Fatima Shirin.	2024	A step towards social, economic and environmental sustainability through genetic improvement of <i>Madhuca longifolia</i> (Mahua)	International Conference on Climate Action, Ecology & Environment organized by the Department of Environmental Studies, MIT-WPU Pune.	15
11	Raj Singh Yadav, Fatima Shirin, AnkurDahayat and Naseer Mohammad.		"Development of microsatellites markers for investigation in <i>Hardwickia binata</i> Roxb. in Central India".	-do--	48
12	VivekVerma, Trilok Gupta, MukeshSonkar and Fatima Shirin.		"Genetic Improvement of Neem (<i>Azadirachta indica</i>) Through Selection of Superior Trees in Agroclimatic Zone Eight"	-do-	98
13	VivekVerma, Naseer Mohammad, and Fatima Shirin.		"Standardization and comparative evaluation of the five different DNA extraction protocols from leaves of near-threatened medicinally important <i>Halimolobos cordifolia</i>	National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North	73

			(Roxb.) Ridsdale (Haldu)"	Bengal March 13-14, 2024, Siliguri, West Bengal	
14	Fatima Shirin, Irshad Ali Saudagar, Trilok Gupta, Mukesh Kumar Sonkar and SushmaMaravi.		"Conservation and production of quality planting material of <i>Celastruspaniculatus</i> (Mal kangani) and <i>Plumbagozeylanica</i> (Chit rak) from identified sources of Chhattisgarh "	National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal March 13-14, 2024, Siliguri, West Bengal	77
15	Fatima Shirin.	2024	" Implications for conservation of Forest Genetic Resources (FGR): A steppingstone for tree conservation through Sustainable Forestry Practices."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)	1-2
16	Irshad Ali Saudagar, Farhat Jahan, SushmaMaravi, Mukesh Kumar Sonkar Fatima Shirin.	2024	Abstract on " Genetic improvement and domestication: initiatives in <i>Madhuca longifolia</i> (Mahua), a significant NTFP species."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)	03
17	SharmishthaGangopadhyay, Niraj Yadav, Hare Krishna Pandey and Fatima Shirin.	2024	" Genetic improvement of <i>Gmelina arborea</i> Roxb. (Khamer) using sustainable practices."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)	35
18	VivekVerma, Nikhil Verma, Naseer Mohammad and Fatima Shirin*.	2024	Abstract on " Vegetative propagation of the near threatened medicinal tree, <i>Haldu</i> (<i>cordifolia</i>), through innovative propagation techniques."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru Ghasidasvishwavidyalaya, Bilaspur (C.G.)	36
19	Irshad Ali Saudagar, Vineet Kumar Mehra, Hari Om Barmaiya, Trilok Gupta, ManojPoosam and Fatima Shirin*.	2024	Vegetative propagation of an economically important Bamboo species: <i>Pseudoxytenanthera stocksii</i> ."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru GhasidasVishwavidyalaya, Bilaspur	45

				(C.G.)	
20	ShaluPanika, Priyanka Hardaha, Kavita Patel, PK Rana and Fatima Shirin*.	2024	Effect of thidiazuron on axillary bud proliferation and shoot multiplication in <i>Pseudoxystenanthus stocksii</i> "	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	49
21	Raj Singh Yadav, Naseer Mohammad, Fatima Shirin, AnkurDahayat and HarshitaAgrahari.	2024	Optimization of high-quality DNA extraction protocol amiable for PCR amplification through SSR marker in <i>Hardwickia binata</i> Roxb.	NATIONAL National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	53
22	AnkurDahayat*, Naseer Mohammad, Raj Singh Yadav and HarshitaAgrahari.	2024	Genome skimming in chironji [<i>Buchanania cochinchinensis</i> (Lour.) M.R. Almeida.] for discovery of microsatellite markers."	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	77
23	HarshitaAgrahari*, AnkurDahayat, Raj SinghYadav and Naseer Mohammad.	2024	Abstract on " A Comparative evaluation of four DNA extraction protocols from leaves of <i>Aegle marmelos</i> (L.) Correa – A valuable medicinal tree. "	National Seminar on Frontier Areas of Research In Forest And Wildlife Sciences Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	82
24	Tripathi K, Mishra M, Kumar P, Varma N, Shirin F	2023	Sketch of "Genetic Variation in Tropical Forest Tree species: An Overview."	International conference on Nature and Natural Sciences.	222
25	Naseer Mohammad, Ankur Dahayt, Lalchand Chouhan, Yogesh Pardhi and Yogeshwar Mishra	2024	Preserving the Future: Conservation and Recovery Efforts for <i>Litsea glutinosa</i> (Lour.)	National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants in North Bengal March 13-14, 2024, Siliguri, West Bengal	96
26	Naseer Mohammad, Muthu Rajkumar and Yogeshwar	2024	Natural regeneration of <i>Pterocarpus marsupium</i> Roxb. in Madhya Pradesh	National Seminar on Cultivation,	94

	Mishra		- a near threatened antidiabetic forestry species of sub-tropical forest	Conservation and Sustainable Utilization of Medicinal Plants in North Bengal March 13-14, 2024, Siliguri, West Bengal	
27	Samiksha Parihar, Hari Om Saxena, Fatima Shirin, Vivek Dev Verma and Tarun Kant	2023	Screening of Azadirachta indica seeds for oil content	National Conference on “Value Addition And Marketing of NTFPS/ MAPs For Livelihood Security”, 2nd – 3rd, May, 2023	12
28	Vivek Verma* and Fatima Shirin	2023	<i>Haldina cordifolia</i> , A near-threatened, difficult-to-root species	National Conference on “Value Addition And Marketing of NTFPS/ MAPs For	15
29	Irshad Ali Saudagar*, Sangeeta Singh, Ravishankar Hargade, Kaushal Tripathi and Fatima Shirin	2023	Evaluation of biochemicals in candidate plus trees of <i>Dalbergia latifolia</i> Roxb., a vulnerable tree species of central India	National Conference on “Value Addition And Marketing of NTFPS/ MAPs For	116
30	Jangam Deepika, Avinash Jain, Chandralekha Taksande, Sanjay Komra, Pooja singh	2023	Comparative Analysis of Soil Properties and Soil Carbon Stock in different plantations Raised at Rourkela Steel Plant (RSP), Odisha	“International Conference on Green Energy& Sustainable Environmental Technology (GESET-2023)” jointly organized by Raj Kumar Goel Institute of Technology, Ghaziabad, Uttar Pradesh and Save the Environment (STE), Kolkata.	321-322
31	Jangam Deepika and Avinash Jain	2023	Forest Soil Health Cards: A pioneering tool for Sustainable Forest Management in Madhya Pradesh”	“International Conferences on Sustainable Natural Resource Management under Global Climate Change” organized by Soil Conservation Society of India, New Delhi during November 7-10,	263-264

				2023.	
32	Gupta, D., Guru, N., Das, P., Patidar., N.	2024	Effect of Water Conservation Measures on Cropping Intensity and Groundwater Status in Drought-Affected District of Bundelkhand”.	3rd Roorkee Water Conclave. Paper ID- RWC/2024/105	116
33	Darshan K, Manjuprakash and AJK Asaiya	2023	Wild Edible Mushrooms of Forest Ecosystem: Untapped Resource for Forest Dwellers.	nd National conference (Virtual Mode) On Value Addition and Marketing Of NTFPS/ Maps For Livelihood Security	81
34	Darshan K, AJK Asaiya and Avinash Jain	2023	Macrofungal Diversity of Kanha National Park and Its Ecosystem Services.	st International Conference on Nature and Natural Sciences	163
35	Mohan C and Elumalai	2023	Potential use of sericultural by products.	National conference n Value addition and marketing of NTFPS/ MAPS for livelihood security	89
36	Mohan C, Nitinkulkarni, Sakshi Dwivedi, Jyoti Ranjan Mishra and Nahar Singh Mawai	2023	Larvicidal effect of <i>Jatropha</i> (<i>Jatropha curcas</i>) seed oil against key defoliator pests of teak (<i>Tectona grandis</i>).	International Conference on Recent Advances in Agricultural, Industrial Entomology, Environmental Sciences and their impact food and Environmental security	20
37	Hari Om Saxena, Samiksha Parihar, Ganesh Pawar, Sant Kumar and Neelu Singh	2023	Chemical screening of germplasm of <i>Oroxylum indicum</i> from different locations of central India for identification of superior germplasm & conservation.	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	3
38	Samiksha Parihar, Hari Om Saxena, Fatima Shirin, Vivek Dev Verma and Tarun Kant	2023	Screening of <i>Azadirachta indica</i> seeds for oil content	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY	12

				(NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	
39	Anil Kumar Yadav and Hari Om Saxena	2023	Optimization of natural dye extraction protocol from <i>Woodfordiafruticosa</i> flowers.	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	29
40	Dheer Agnihotri and Hari Om Saxena	2023	Collection, harvesting, processing, value addition & bioprospecting of <i>Stevia</i> (<i>Stevia rebaudiana</i> Bertoni)	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	39
41	Varsha Pandey and Hari Om Saxena	2023	A potential medicinal plant species for value addition	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	74
42	Sant Kumar and Hari Om Saxena	2023	Indigenous traditional knowledge on underutilized medicinal plants in Madhya Pradesh and benefits to tribal livelihoods	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI,	105

				Jabalpur	
43	Hari Om Saxena, Samiksha Parihar, Ganesh Pawar and Sant Kumar	2023	Development and validation of HPTLC method for simultaneous determination of β -sitosterol and lupeol in different plant parts of <i>Urariapicta</i> (JACQ.) desv. ex dc. – a species of dashmool formulation	Conference on VALUE ADDITION AND MARKETING OF NTFPS/ MAPS FOR LIVELIHOOD SECURITY (NCVAM - 2023) organized by ICFRE-TFRI, Jabalpur	122
44	Hari Om Saxena, Samiksha Parihar and Ganesh Pawar	2024	Simultaneous densitometric determination of betulinic acid, β -sitosterol and lupeol in different plant parts of <i>Dillenia indica</i> Linn. through a validated HPTLC method	International Conference on Traditional Medicine & Phytopharmaceuticals & 11 th International Congress of Society for Ethnopharmacology (ICTMP-SFEC 2024) organized by IIIM, Jammu	67
45	Samiksha Parihar, Hari Om Saxena, Shivom Singh and Ashish Kumar	2024	Morpho-molecular Characterization, Diversity Analysis and Antagonistic Activity of <i>Trichoderma</i> spp. isolated from Forest Soils of Central India against <i>Macrophomina phaseolina</i> .	International Conference on Traditional Medicine & Phytopharmaceuticals & 11 th International Congress of Society for Ethnopharmacology (ICTMP-SFEC 2024) organized by IIIM, Jammu	106
46	Hari Om Saxena*, Ganesh Pawar, Sant Kumar, Dheer Agnihotri and Neelu Singh	2024	Chemical screening, identification of superior germplasm, nursery technique and ex-situ conservation of <i>Embelia jorjiam-cottam</i> (Roem. & Schult.) A. DC	National Seminar on “Frontier Areas of Research in Forest and Wildlife Sciences” organized by GGU, Bilaspur	Paper ID: FORAB29, 31
47	Varsha Pandey and Hari Om Saxena	2024	<i>Sida cordifolia</i> (Bala): A potential medicinal plant species for conservation in forest ecosystem	National Seminar on “Frontier Areas of Research in Forest and Wildlife	Paper ID: FORAB31, 33

				Sciences” organized by GGU, Bilaspur	
48	Hari Om Saxena, Samiksha Parihar, Ganesh Pawar, Sant Kumar and Dheer Agnihotri	2024	Chemical screening, identification of superior germplasm, nursery techniques and ex-situ conservation of some threatened medicinal plant species of central India.	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	44
49	Ganesh Pawar, Hari Om Saxena and Samiksha Parihar	2024	Correlation study between different girth classes and conessine content in a commercially important medicinal plant species <i>Holarrrhenaantidysenterica</i> (L.).	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	72
50	Samiksha Parihar, Hari Om Saxena and Iramnaaz Bee	2024	Morpho-Chemical Variations and Ex-situ Conservation of <i>Stereospermum suaveolens</i> (Roxb.) DC. – a RET Species.	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	74
51	Mohd Farooque and Hari Om Saxena	2024	Variation in Gallic acid content in fruits of <i>Terminalia chebula</i> Retz. from different agroclimatic regions of Madhya Pradesh for prominent location	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	75
52	Samiksha Parihar, Hari Om Saxena and Shivom Singh	2024	Morpho-molecular Characterization, Diversity Analysis and Antagonistic Activity of <i>Trichoderma</i> spp. isolated from Forest Soils of Central India against <i>Rhizoctonia solani</i>	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	76
53	Samiksha Parihar and Hari Om Saxena	2024	Simultaneous Estimation of β - sitosterol and lupeol in different plant parts of <i>Cassia fistula</i> L. through a validated HPTLC method	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	78
54	Dheer Agnihotri, Hari Om Saxena and Pramod Kumar	2024	Effect of crop geometry and different organic manures on growth and yield	National Seminar on “Cultivation, Conservation and	79

			performance of <i>Stevia rebaudiana</i> Bertoni under <i>Tectona grandis</i> based Silvimedical system	Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	
55	Akanksha Jain and Hari Om Saxena	2024	Effect of propagation materials on germination of <i>Curculigoorchioides</i> Gaertn. (Kali Musli).	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	95
56	Varsha Pandey and Hari Om Saxena	2024	Effects of different pre-sowing seed treatments on the germination and growth performance of <i>Abutilon indicum</i> Linn.	National Seminar on “Cultivation, Conservation and Utilization of Medicinal Plants” organized by ICFRE-IFP, Ranchi	97
57	Manish Vijay, Neeraj Prajapati	22-23 April, 2023	Efforts of tropical forest research institute, Jabalpur for the conservation of diminishing medicinal tree species of central India	National conference on Scientific advancement for sustainable environment, herbal medicines and impact on health: An earth day celebration (SASE)- BHU, Varanasi	73
58	Neeraj Prajapati, BPTamta, Aman Kumar	02-03 My, 2023	Quantitative ethnobotanical assessment of medicinal plants used by forest fringe inhabitants of Pali tehsil, Umaria District, Madhya Pradesh.	“2nd national conference on “value addition and marketing of ntfps/ maps for livelihood security (ncvam – 2023)”.	93
59	Aman Kumar, Neeraj Prajapati	02-03 My, 2023	Species distribution modeling and assessment of environmental drivers responsible for distribution and preferred niche of endangered species <i>taxus baccata</i> . In himachal Pradesh.	2nd national conference on “value addition and marketing of ntfps/ maps for livelihood security (ncvam – 2023).	18
60	Neelu Singh, Digvijaysinh Rathod, Neeraj Prajapati Nikita Rai, Shashank Gupta	24th January, 2024	Impact of <i>lantana camara</i> on forest ecosystem in central India.	“National seminar On Frontier areas of research in forest and Wildlife sciences 24th January, 2024.”	22
61	Neeraj Prajapati,	24th	Exploring traditional healing:	Central India in	67

	Hariom Saxena, Neelu Singh	January, 2024	a quantitative analysis of ethnomedicine for chronic diseases in Chhattisgarh.	National seminar On Frontier areas of research in forest and Wildlife sciences	
62	Shivani Rohilla, Neeraj Prajapati, H. S. Ginwal, Vikas Rana	21-22 march, 2024	“Bamboo Resurgence: Empowering Livelihoods and Shaping a Sustainable Future for Cellulose-Based Industries”	National Conference on Forests and Innovation: New Solutions for A Better World Jointly organised by: Uttarakhand Biodiversity Board, Government of Uttarakhand, Dehradun & Department of Biotechnology, Graphic Era Deemed to be University, Dehradun)	
63	Vijay, M. K., & Prajapati, N.	2023	Efforts of Tropical Forest Research Institute, Jabalpur for the conservation of diminishing medicinal tree species of Central India.	In Proceedings of the National Conference on Scientific Advancement for Sustainable Environment, Herbal Medicines and Impact on Health: An Earth Day Celebration (SASE), 2023, held at Institute of Medical Sciences, BHU, Varanasi from 22nd to 23rd April 2023, organized by Banaras Hindu University, Varanasi, and National Environmental Science Academy, New Delhi.	73
64	Vijay, M. K.	2023	Conservation and domestication of Semecarpus anacardium to ensure nutritional security and	In Proceedings of the 2nd National Conference on “Value addition	06

			livelihood of forest dwellers.	and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023)” Virtual mode TFRI, Jabalpur.	
65	Vijay, M. K.	2023	Conservation and domestication of Medicinal Plants: Seed Technological Perspectives.	In Proceedings of the 2nd National Conference on “Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023)” Virtual mode TFRI, Jabalpur.	07
66	Vijay, M. K., & Singh, N.		Conservation, domestication and cultivation of <i>Flacourtia indica</i> : A valuable underutilized fruit species to ensure nutritional security and livelihood of forest dwellers	In Proceedings of the 1st International Conference on Nature and Natural Sciences (ICNS 2023). Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur (M.P.).	65
67	Vijay, M. K.	2023	From Seeds to Sustainability: Ensuring Semecarpus anacardium and <i>Flacourtia indica</i> Survival through Propagation in central India	Abstract published in the Medicinal Plants (Special issue) Journal for the National conference on 'Medicinal Plants, Natural Products and the Indian System of Medicine (NCMP-2023)' organized at ICAR-CAFRI, Jhansi, during September 8–9, 2023, by the V Sivaram Research Foundation, Bengaluru, in collaboration with ICAR-CAFRI, Jhansi.	Medicinal Plants (Special issue) Page No. 23 NAAS rating: 5.14.

68	Vijay, M. K.	2023	Unlocking the Secrets of <i>Nyctanthes arbor-tristis</i> Seeds: Insights into Maturity, Germination, and Storability for Successful Propagation and Conservation	Abstract published in the Abstract book & Souvenir for the International conference on Green Energy & Sustainable Environmental Technology (GESET-2023) organized at Raj Kumar Goel institute of Technology, Ghaziabad, during September 16–17, 2023, by the RKGIT, Save the Environment in collaboration with CSIR.	51 Abstract ID 38.
69	Vijay, M. K.	2023	Harnessing seed science and technology for climate-resilient tropical forest conservation.	Abstract published in the Souvenir for the 5th International conference on Sustainability Education (ICSE-2023) organized at Indian Habitat Center, New Delhi during September 19-20, 2023 by the Mobius Foundation.	53 Abstract ID 14
70	Vijay, M. K.	2023	Seed Testing and Certification in the Indian Forestry Sector: Current Status, Challenges, and Pathways for Sustainable Growth	In Proceedings of the National Seminar on Frontier Areas of Research in Forest and Wildlife Sciences held at Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	83 (FORAB80).
71	Vijay, M. K., Shirin, F., Berry, N., Singh, N., & Kulkarni, N.	2023	Adapting Forest Genetic Resource Conservation Strategies in the Era of Climate Change: Enhancing Resilience and Biodiversity.	In Abstract Book of the International Conference on Sustainable Natural Resource Management	14-15

				under Global Climate Change (November 7-10, 2023) New Delhi, India	
72	Vijay, M. K., Malwiya, D., Shirin, F., & Singh, N.	2023	Seeding tomorrow's forests: Harnessing machine vision for assessment of seed quality and diversity in Central India	In Abstracts and Souvenir of National Conference on Current Trends in Agriculture, Applied and Life Sciences.	55 [Abstract ID: 6054/PSR M/2023-24].
73	Vijay, M. K., Tiwari, S., Kahar, L., & Singh, N.		Exploring wild fruits: A strategy for combating malnutrition and supporting tribal livelihoods in Central India.	In Abstracts and Souvenir of National Conference on Current Trends in Agriculture, Applied and Life Sciences	56-57 (Abstract ID: 6055/PSR M/2023-24).
74	Rai, N., Beery, N. and Singh, N.	2023	Status of Agroforestry system adopted by farmers of Narsinghpur district under Central Narmada Valley Agro-climatic region of Madhya Pradesh	In abstract book NACETER-2023 National Conference on Emerging trends in Environmental Research 14th – 15th December, 2023,	75
75	Rai, N. and Berry, N	2024	Status of tree-based farming in Narmadapuram under Central Narmada valley Zone of Madhya Pradesh	In Conference proceedings International conference on Climate Change and Agriculture: Impacts, Mitigation and Adaptation for sustainable food security and livelihood improvement (ICCA-2024) organized by Department of Agroforestry, College of Horticulture & Forestry, Acharya Narendra Deva University of Agriculture & Technology, Kumarganj,	168

				Ayodhya, 1 st to 2 nd March, 2024,	
76	Rai, N. and Berry, N.	2024	Status of Agroforestry system in Central Narmada valley and Bundelkhand region of Madhya Pradesh	In Abstract book of National Seminar on Frontier Areas of Research in Forests and Wildlife Sciences, Department of Forestry, Wildlife & Environmental Sciences (ICFRE A++ Grade) Guru Ghasidas Vishwavidyalaya (A Central University) Bilaspur, C.G. (India), 24 th January, 2024	30
77	Khobragade N.D., Kanojiya P.	2023	Variation in Morphological Traits and Germination attributes in candidate plus trees of <i>Terminalia bellirica</i> (GAERTN) ROXB.	2 nd National Conference	08
78	JangamDeepika, Avinash Jain, ChandralekhaTaksand e, Sanjay Komra, Poojasingh	2023	Comparative Analysis of Soil Properties and Soil Carbon Stock in different plantations raised at Rourkela Steel Plant (RSP), Odisha.	Abstract published in the Proceedings of “International Conference on Green Energy & Sustainable Environmental Technology (GESET-2023)” jointly organized by Raj Kumar Goel Institute of Technology, Ghaziabad, Uttar Pradesh and Save the Environment (STE), Kolkata	36
79	Dr. Kaushal Tripathi, Scientist B	2023	"Cyto-phenological Variability in <i>Dalbergia latifolia</i> Roxb.: A vulnerable Tree Species" in 109 Th Indian Science Congress under agriculture and forestry stream.	Abstract submitted	-
80	Parul Sharga and Nanita Berry	2023	Quantification of Carbon Footprint in plantations of clonal eucalyptus with	Abstract in Souvenir of 8 th International	44

			special reference to Madhya Pradesh	Conference on 'Recent Advances in Agriculture, Animal Husbandry, Sciences & Technology for sustainable Entrepreneurship (RAAAHSTSE-2023), eds. Bhaduria, Singh, Jha and karanjalker, Pub. RVSKVV, Gwalior (MP)	
81	Vijay, M. K., Shirin, F., Berry, N., Singh, N., & Kulkarni, N.	2023	Adapting Forest Genetic Resource Conservation Strategies in the Era of Climate Change: Enhancing Resilience and Biodiversity.	In Abstract Book of the International Conference on Sustainable Natural Resource Management under Global Climate Change (November 7-10 2023) (p. 14-15). New Delhi, India.	
82	Darshan K, AJK Asaiya and Avinash Jain		A Macrofungal Exploration in Sarhi range of Kanha Tiger Reserve, India	Abstract submitted for international conference: From Diversity to Ecosystem function: A Macrofungal Exploration in Sarhi range of Kanha Tiger Reserve, India	
83	Shukla A., Berry N. and Sharma P.	2023	Abstract of research paper published titled 'Significance of NTFPS for Livelihood.	Proceedings of the 2 nd National Conference on "Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023) (02-03 May, 2023 Virtual mode TFRI, Jabalpur)	76
84	Shukla A., Sharma P. and Berry N.	2023	Abstract of research paper published titled Possibilities	Proceedings of the 2 nd National	77

			for Bringing the unseen into light: A Better understanding of the economic benefits of NTFPS	Conference on “Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023) (02-03 May, 2023 Virtual mode TFRI, Jabalpur)	
85	Biswas S. C., Patle Nikhil, Mishra S. N. and Berry N.	2023	Value added products of cranberry : A Source of income for tribals.	Proceedings of the 2 nd National Conference on “Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023) (02-03 May, 2023 Virtual mode TFRI, Jabalpur)	62
86	Nanita Berry	2024	Abstract on “Bamboo based enterprises: Way towards income generation for tribal women community”	National Seminar on Frontier areas of research in Forest and Wildlife Sciences held at Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)	95 (FORAB95)
87	Vijay, M. K., Malwiya, D., Shirin, F., & Singh, N. (2024).	2024	Seeding tomorrow's forests: Harnessing machine vision for assessment of seed quality and diversity in Central India.	In Abstracts and Souvenir of National Conference on Current Trends in Agriculture, Applied and Life Sciences	55 [Abstract ID: 6054/PSR M/2023-24].
88	Vijay, M. K., Tiwari, S., Kahar, L., & Singh, N. (2024).	2024	Exploring wild fruits: A strategy for combating malnutrition and supporting tribal livelihoods in Central India.	In Abstracts and Souvenir of National Conference on Current Trends in Agriculture, Applied and Life Sciences	56-57 (Abstract ID: 6055/PSR M/2023-24).
89	Darshan, K., Aggarwal and R., Bashyal	2023	B.M. <i>et al.</i> Characterization and development of transcriptome-derived novel EST-SSR markers to assess genetic diversity in <i>Chaetomium globosum</i>	<i>Biotech</i>	3 (13), 379 IF .2.93/ NAAS 8.93

Popular Articles

Sl no.	Authors	Year	Title	Magazine	Page no
1.	Fatima Shirin,	2023	टीएफआर आई: तैयार होते हैं बॉस के पौधे City Bhaskar News, Jabalpur	Dainink Bhaskar, Jabalpur	-
2.	Digvijay Sing Rathore, Sourabh Dubey, Nanita Berry, Kaushal Tripathi, Darshan K	2023	उत्तर बस्तर की अमूल्य वन विरासत: एक परिदृश	Paryavaran	93-96
3.	Irshad Ali Saudagar and Fatima Shirin	2023	“ <i>Gmelina arborea</i> -The Multipurpose Forest Tree of India”,	Newsletter of the International Society of Tropical Foresters, April 2023, 12:1	10-17
4.	Vivek Verma, Irshad Ali Saudagar and Fatima Shirin	2023	Pharmacological studies and phytochemical screening of near threatened <i>Haldina cordifolia</i> (Haldu)	Newsletter of the International Society of Tropical Foresters, August 2023, 12:3	24-29
5.	Nidhi Mehta and Avinash Jain	2023	Management of flyash through forestry interventions	Van Sangyan.	10 (4):41-43.
6.	Ajin Sekhar and M. Rajkumar	2023	Understanding LiFE movement	Van Sangyan.	10 (6):44-46.
7.	Sekhar, A., Rajkumar, M. and Deepika, J.	2023	Why is conservation of grasslands in protected landscapes imperative?	SNHC Journal.	11(01): 8-11.
8.	Saikat Banerjee, M. Rajkumar and K.S. Sengar	2023	Vulnerability of forest ecosystem to climate change	Van Sangyan.	10 (6):47-54..
9.	Jangam Deepika	2023	Unlocking the potential of nanogypsum for sodic soil reclamation	Harit Dhara e-magazine.	Vol: 6, Issue 1 (January – June), Pg. No: 2-6.
10.	Jangam Deepika	2023	From waste to fertilizer: Utilizing waste mica with potassium solubilizing bacteria for improved soil health	Van Sangyan.	Vol. 10, No. 7, Issue: July.
11.	M. Rajkumar and Avinash Jain	2023	The Loss and Damage Fund: Implications for India.	Van sangyan.	10(12):51-52. 2023
12.	Saikat Banerjee, and Avinash Jain	2024	Global Warming and climate change: A looming crisis for humanity	Van sangyan.	1(1):30-32. 2024
13.	Darshan K, AJK Asaiya and S N Mishra	2023	Green Technologies for sustainable disease managements in forest ecosystems.	Krishi Science e-Magazine for agriculture sciences.	45-47
14.	Darshan et al.	2023	Boosting the efficacy of plant extract as a novel chemotherapeutants for plant disease management.	e-Krishi Science – Management for agriculture sciences.	22-24

15.	Santhoshini E, Darshan K*, Vivek Verma and Rathod Digviaysinh U	2023	Forest litter degradation and it's drivers	e-Krishi Science – Management for agriculture sciences.	23-26
16.	सौरभदुबे	2023	नारायनपुर का साप्ताहिक बाजार : भोजन योग्य वन्यवकम प्रचलित वनस्पतियों का अनूठा संग्रह.	Van Sangyan	55-57
17.	Mohan C.	2023	Insect pests of Teak and Bamboo and their Integrated Management.	<i>KaalnadaiVelanma i Magazine in Tamil Language.</i>	15-19
18.	Mohan C, Sourabh dubey, Anand Kumar, Ramkishore mahobe and Gulshan Chakravarty	2023	RNA Interference : Next generation pest control Technology.	<i>Vansangyan</i>	44-47
19.	Darshan K, Shreedevasena S and Harshita K N	2023	Multiple roles of Melatonin in forest tree.	E-Krishi science Magazine.	10-12
20.	दिग्विजयसिंहराठौड, सौरभदुबे*,डॉननिताबेरी, कौशलत्रिपाठीएवंदर्शनके.यू.	2023	उत्तर बस्तरकी अमूल्यवन विरासत:एक परिदृश्य	पर्यावरणपत्रिका	93-96
21.	नीरजप्रजापति, नीलू सिंह, पंकजकुमार, निकिताराय	2024	दशमूला: महत्वपूर्ण औषधीय जड़ें	वनदर्पण , भारतीयवनसर्वेक्षणदेहरादून	
22.	Rathod Digvijay Umedsinh, Nanita Berry, Neeraj Prajapati, Darshan K. and Kaushal Tripathi (2021).	2023	A single Peepal tree acting as a building foundation stone for constructing multiple houses to Honeybees.	SNHC JOURNAL	Vol 8, issue 3 Sep- Nov, 2021: 30-32 (backlog of 2021).
23.	Santhoshini E., Darshan K, Vivek Verma and Rathod Digvijaysinh .U.	2023	Forest litter degradation and its drivers	KrishiScience	04 (03)
24.	Vijay, M. K. (2023	2023	Image analysis: A Modern Approach for Seed quality testing.	ICFRE-TFRI Newsletter,	10(April-June)
25.	Vijay, M. K.	2023	Forest trees seed certification: Need of the hour.	Van Sangyan,	10(7)
26.	Vijay, M. K.	2023	Preservation of forest resources: An important lifestyle for environment (LiFE) activity since time immemorial in India.	Van Sangyan,	10(8)
27.	मनीषकुमारविजय, नीलू सिंह, नितिनकुलकर्णी	2023	बीज जीन बैंक स्थापना के माध्यम से मध्य भारत के वन आनुवंशिक संसाधनों का संरक्षण	मध्य प्रदेशवनांछलसंदेश	, विशेषसंस्करण 25, पृ. 111–112।
28.	मनीषकुमारविजय एवंननीताबेरी	2023	वन रोपणी मेंप्लास्टिक का उपयोग : महत्व, समस्याएंऔरविकल्प	पर्यावरण	71 वांसंस्करणपृ. सं. 16
29.	मनीषकुमारविजय	2023	सेमीकार्पसएनाकार्डियम	पर्यावरण	71 वांसंस्करणपृ.

			(भिलवाँ) और फ्लैकोर्टियाइंडिका (कंटायी): मध्य भारतकी औषधीयरूपसे महत्वपूर्ण जंगलीफल प्रजातियाँ.		सं. 35
30.	DP Jhariya & Nanita Berry	2022	Maida lakdi (Litsea): agarbatti udhog ke lye mahatpurna prajati	Taru Chintan, 2022	49-50
31.	Manish Kumar Vijay & Nanita Berry	2022	Sthaniya vriksha prajati: van utpadkta me aham yogdaan	Taru Chintan, 2022	46-48
32.	श्रीमति नीलू सिंह	2022	प्लास्टिक का विकल्प: समय की मांग	तरुचिन्तन 2022	-
33.	Kumar Pramod, Bhargav Ragni, Patel Pawan K. and Rana P.K.	2023	Amended soil nutrients enhance the Seed-bearing potential of clones in a clonal seed orchard of Teak (<i>Tectona grandis</i>)	Indian Forester	149(4):446-451
34.	Dr. S. C. Biswas	2023	करोंदाफलकेउपयोगऔरलाभ	magazine-Taruchintan	
35.	JangamDeepika	2023	Unlocking the potential of nanogypsum for sodic soil reclamation	HaritDhara e-magazine	Vol: 6, Issue 1 (January – June), Pg. No: 2-6.
36.	C. Mohan, Anand Kumar, M.C. Borkar, Rajkumar Mishra & Nahar Singh Mawai	2023	Vermi-compost Preparation An- Overview	Van Sangyan	Vol. 10 No. 9 Page. No. 45
37.	N. Roy choudhary and Rajesh Kumar Mishra	2023	Occurrence of larval parasitoids, Apanteles species in sal defoliator <i>Lymentria mathura</i>	Van Sangyan	Vol. 10 No. 9 Page. No. 49
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1	Vijay, M. K., & Sharma, R.	2023	Carbon Nano Tubes (CNTs) as a Tool of Seed Quality Enhancement Using Nanopriming Approach: A Review	In A. Singh, V. Rajput, K. Ghazaryan, S. Gupta, & T. Minkina (Eds.), Nanopriming Approach to Sustainable Agriculture	pp. 90-109. IGI Global. https://doi.org/10.4018/978-1-6684-7232-3.ch004	

2	Vijay, M. K.	2023	Optimizing Nursery Operations: Current Practices and Future Visions for Input Management.	In the training manual on "Propagation and High-Tech Nursery Techniques" organized by GTI division, TFRI from September 4 to September 8, 2023.	P. No. 78-91	
3	मनीषकुमारविजय	2024	वानिकीबीजप्रबंधन के मूलभूतसिद्धांत एवंमध्य भारतमेंविभिन्नवानिकीप्रजातियों के बीजप्रबंधनप्रोटोकॉलविकसितकरनेमें आईसीएफआरई-टीएफआरआई की भूमिका	प्रशिक्षणकार्यक्रमसततकृषिवानिकी उद्यम : जैविकउर्वरकों, जैवउर्वरकोंऔरजैवकीटनाशकों के माध्यम से उध्यमियोंकोसषक्तबनानेहेतुप्रशिक्षण	44-50 (Chhatigarh Training Manual)	
4	मनीषकुमारविजय	2024	वानिकीबीजप्रबंधन के मूलभूतसिद्धांत एवंमध्य भारतमेंविभिन्नवानिकीप्रजातियों के बीजप्रबंधनप्रोटोकॉलविकसितकरनेमें आईसीएफआरई-टीएफआरआई की भूमिका	प्रशिक्षणकार्यक्रम सततकृषिवानिकी उद्यम: : जैविकउर्वरकों, जैव उर्वरकों और जैवकीटनाशकों के माध्यम से उध्यमियों को सषक्त बनाने हेतु प्रशिक्षण	44-50 (Jharkhand Training Manual)	
5	नीलू सिंह	2024	स्वदेशी औषधीय पौधों की व्यावसायिक संभावनाएं और इसका मूल्य संवर्धन	प्रशिक्षणकार्यक्रम सततकृषिवानिकी उद्यम: : जैविक उर्वरकों, जैव उर्वरकों और जैव कीटनाशकों के माध्यम से उध्यमियों को सषक्त बनाने हेतु प्रशिक्षण	P. No. 58-67 Chhatigarh Training Manual	
6	नीलू सिंह	2024	स्वदेशी औषधीय पौधों की व्यावसायिक संभावनाएं और इसका मूल्य संवर्धन	प्रशिक्षणकार्यक्रम सततकृषिवानिकी उद्यम: : जैविक उर्वरकों, जैव उर्वरकों और जैव कीटनाशकों के माध्यम से उध्यमियों को सषक्त बनाने हेतु प्रशिक्षण	P. No. 58-67 (Jharkhand Training Manual)	

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1.	Pramod Kumar, Ragni Bhargav, Pawan Kumar Patel and P.K.Rana	June 2023	Amended soil nutrients enhance the Seed-bearing potential of clones in a clonal seed orchard of Teak (<i>Tectonagrandis</i>)	Indian Forester	149(4):446-451	5.1
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4.	Dhonde S., Neetha P., Mohammad N. and Shirin F.	2023	Evaluation of <i>Gmelinaarborea</i> (Roxb.) Germplasm for Qualitative Traits and Insect Pest Resistance in Natural and Planted Populations of Madhya Pradesh, India.	International Journal For Multidisciplinary Research, November-December 2023	5(6):1-8.	-
5.	Shirin F., Kumar G., Saudagar I. A., Jahan F., Maravi S., Verma N. and Mohammad N.	2023	Phytochemical potential of flowers collected from Candidate Plus Trees of <i>Mdhucalongifolia</i> in populations of Madhya Pradesh.	Indian Journal of Tropical Biodiversity	31 (2): 164-175.	NAAS Rating: 2.79
6.	Nidhi Mehta, Avinash Jain, Muthu Rajkumar, Sanjay Komra, Pooja Singh, Ramu Naik, Raghvendra Singh and Partha Banerjee	2023	Assessing carbon stock and annual sequestration potential of plantations raised at Rourkela steel plant, Odisha.	Sustainable lifestyle approaches towards environment and climate change : EIACP(PC-RP).	Special issue: 18-27.	--

7.	Jangam Deepika	2023	Quantification of Biochar-induced changes on soil properties and microbial diversity: A meta-analysis.	Indian J Trop Biodiv..	31(2): 136-149	2.79 (NAAS)
8.	S.K. Banerjee, Saikat Banerjee, Avinash Jain and P.K. Shukla.	2023	Soil organic matter – Its significance towards soil quality and soil health.	Journal of Tropical Forestry.	Jan -Dec. 39(1-4): 48-64.	3.48 (NAAS)
9.	S.K. Banerjee, Saikat Banerjee, Avinash Jain and P.K. Shukla.	2023	Sustainable forestry with special reference to management of non-timber forest products for livelihood security of forest dependent communities in tropical region.	Journal of Tropical Forestry.	Jan -Dec. 39(1-4): 65-81.	3.48 (NAAS)
10.	Aviral Asaiy et al	2023	Evaluation of different substrate for economical mass multiplication of <i>Trichoderma</i> , a biological fungal agent	Indian Journal of Tropical Biodiversity.	31(1) PP 37- 44.	NAAS:2.79
11.	Mohan C, Nitin Kulkarni, Sowmya Priya S, Sourabhdubey and Anand Kumar	2023	Role of Biorational Insecticides in Resistance Management of insect Pests- A Review.	Indian Journal of Tropical Biodiversity.	31 (1):1-13.	NAAS:2.79
12.	Ganesh Pawar, Samiksha Parihar, Hari Om Saxena	2024	Evaluation of secondary metabolites and chromatographic fingerprint profiling of stem bark of <i>Holarrhena antidysenterica</i> L.	The Journal of Phytopharmacology	13(1): 4-11	NAAS rating 5.16
13.	Sekhar A., Rajkumar M. and J. Deepika,.	2023	Why is conservation of grasslands in protected landscapes imperative?	SNHC Journal	11(01): 8-11	-
14.	Jangam, Deepika; Naga, Venkata Krishna Vara	2023	Conjunctive and concentration dependent effects of nanoscale zinc and	Journal of Plant Nutrition	DOI: 10.1080/01904167.2023.2233566	2.277 Impact Factor

	Prasad ; Tollamadugu, Sujani Rao Challa, Martin Luther Manchala &Vatluri Srinivasa Rao		boron on the physiological, biochemical, nutrient uptake, and translocation processes in peanut (<i>Arachis hypogaea</i> L.)			
15.	Mukul Ray and Nanita Berry	2023- 24	Effect of seed treatments on germination and growth of seedlings in <i>Aegle marmelos</i>	<i>J of Tropical Forestry</i> vo 1.39 (1-4)	15-20	4.16

b. Published in Foreign Journals

S. No.	Authors	Year	Title	Journal/publisher name	Volume, Issue and page no	Thompson, Reuters Impact factors & NAAS
1.	Bano N, Naseer Mohammad, Ansari MI, Ansari SA.	2024	Genotyping SNPs in lignin biosynthesis gene (CAD1) and transcription factors (MYB1 and MYB2) exhibits association with wood density in teak (<i>Tectonagrandis</i> L.f.).	Molecular Biology Reports	51(1):169 https://doi.org/10.1007/s11033-023-09006-y .	Thompson, Reuters Impact factors: 2.8 NAAS rating: 8.74
2.	Kumar G, Mishra M and Tripathi K	2024	Consequence of Gamma Radiation Induced Cytomixis during Microsporogenesis in Fennel Plant (<i>Foeniculumvulgar e</i> Mill.)	Cytology and Genetics	Vol. 58, No. 1, pp. 46–52.	Thompson, Reuters Impact factors: 0.5 NAAS rating :6.5
3.	Muthu Rajkumar, Poorna Bhat, Naseer Mohammad, Gudasalamani Ravikanth and Mohammed Latif Khan	2023	Climate refugia for <i>Buchanania cochinchinensis</i> (Lour.) M.R.Almeida, an important non-timber forest tree species, declining from its natural range in India	Forests, Trees and Livelihoods	Vol. 32 (2)	Thompson, Reuters Impact factors: 1.0
4.	Darshan, K., Aggarwal, R., Bashyal, B.M.	2023	Characterization and development of transcriptome-derived novel EST-SSR markers to	3 Biotech.	13, 379	IF .2.93/ NAAS 8.93

			assess genetic diversity in <i>Chaetomium globosum</i>			
5.	Samiksha Parihar, Hari Om Saxena, Shivom Singh and Ashish Kumar	2024	Characterisation and antagonistic potential of <i>Trichoderma</i> species isolated from forest soils of central India against <i>Rhizoctonia solani</i>	<i>Tropical Agriculture</i>	101 (2)	Scopus indexed
6.	Selvan T, Panmei L, Murasing KK, Guleria V, Ramesh KR, Bhardwaj DR, Thakur CL, Kumar D, Sharma P, Digvijaysinh Umedsinh R, Kayalvizhi D and Deshmukh HK	2023	Circular economy in agriculture: unleashing the potential of integrated organic farming for food security and sustainable development.	Journal of Forest Research,		1
7.	Pravin Rawat, Ombir Singh, Manisha Thapliyal, K R Ramesh, Rathod Digvijaysinh, Sneha Dobhal, Indra Singh, Raj Kumar, Ravindra Singh, Thiru Selvan & Ranjeet Kumar	2024	Seed dormancy and after-ripening requirements of Indian lac tree (<i>Schleichera oleosa</i> Lour. Oken),	Journal of Forest Research		1.5
8.	Singh, N. and Gupta, V.	2023	Impact of biopolymer <i>Commiphora wightii</i> (guggul) oleo gum resin fumes on indoor environment	Bulgarian Chemical Communications	Volume 55, Special Issue-A, 2023, Pages 85 – 89.	
9.	Singh, N., Rai, N. and Gupta, V.	2023	Evaluation of properties of native and modified phyto-polymer, starches of <i>Curcuma</i>	Bulgarian Chemical Communications	Volume 55, Special Issue-2023A, Pages 261-266.	

			<i>angustifolia</i> and development of polymeric films			
10.	Berry, Nanita and Shukla, Akash	2023	Assessment of Growth Performance of <i>Casurina equisetifolia</i> clones in Tropical Region of Jabalpur district of Madhya Pradesh.:	<i>International Journal of Environment and Climate Change</i>	13 (11) : 266 - 271	NAAS- 5.13
11.	Darshan K <i>et al.</i>	2023	Medicinal Potential of Turkey Tail Mushroom (<i>Trametes versicolor</i>): A Comprehensive Review	<i>South African Journal of Botany</i>	-	(IF: 3.1/ NAAS 9.11))

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