



# ICFRE NEWSLETTER

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## Significant Research Findings

### Forest Research Institute, Dehradun

- *Fusarium* sp., which was consistently isolated from the roots of symptomatic *Pinus wallichiana* trees, is identified as *F. solani* following sequence analysis of internal transcribed spacer (ITS) region of ribosomal DNA (rDNA) under the project "Mortality of *Pinus wallichiana* in Nandadevi Biosphere Reserve".
- The vegetation study conducted to assess post-fire impact on soil properties and vegetation revealed that the vegetation density was higher (950 tree ha<sup>-1</sup>) in Ban oak (*Quercus leucotrichophora*) forest in Bhatiya Beat, Mungersanti Range, Upper Yamuna Forest Division and lower (250 tree ha<sup>-1</sup>) in Chirpine Forest, Binai Beat, Purola Range, Tons forest Division in Un-burnt forests. Under burnt forest, the higher tree density (900 tree ha<sup>-1</sup>) was found in Ban Oak (*Quercus leucotrichophora*) Forest of Bhatiya Beat, Mungersanti Range, Upper Yamuna Forest Division and lower (260 tree ha<sup>-1</sup>) in Chirpine (*Pinus roxburghii*) forest, Binai beat,

Purola Range, Tons Forest Division. Overall, it was noticed that vegetation density decreased significantly in burnt forests compared to un-burnt forests in both the forests types i.e. in Ban oak (*Quercus leucotrichophora*) forests and Chirpine (*Pinus roxburghii*) forests.

- Vegetation study was also conducted in different forest types of Uttarakhand to evaluate the soil nutrient pool and microbial biomass. The vegetation analysis exhibited maximum tree density (1000 trees ha<sup>-1</sup>) in Ban oak (*Quercus leucotrichophora*) (Ban oak mixed) forest of Sankari Village Civil Soyam forests, Guptkashi Range, Rudraprayag Forest Division followed by 950 trees ha<sup>-1</sup> in Ban oak (*Quercus leucotrichophora*) forest in Himalayan Moist Temperate Forest of Bhatiya Beat, Mungersanti Range, Upper Yamuna Forest Division; 680 trees ha<sup>-1</sup> in Moist Temperate Deciduous mixed Forests, Pothibasa, Ukhimath Forest Range, Gopeswar Forest Division; 570 trees ha<sup>-1</sup> in Moist Temperate Kharsu Oak (*Quercus semecarpifolia*) Forests in Bhatiya Beat, Mungersanti Range, Upper Yamuna Forest Division and 530 trees ha<sup>-1</sup> in Sub-alpine Fir- Rhododendron forests at Tungnath, Ukhimath Forest Range, Gopeshwar Forest Division of Uttarakhand.

- Meteorological parameters were monitored in the Kempty watershed area. The maximum (1249 mm) rainfall was recorded during August which was 50% of average total rainfall. Besides this, the maximum air temperature was 20.54 °C and soil moisture content was 16.6% during the month of August. Soil organic content was 2.98 % at 0-50cm soil depth. Sediment concentration in the stream water at Kempty watershed was 220 mg/l during the period which was the maximum limit for this year.
- A field survey was carried out in 4 sites in and along the boundary of Nandhaur Wildlife Sanctuary, Nanital district, Uttarakhand, during post monsoon/autumn season. Sampling was carried out on 12 transects in 2 forest sub-types namely (3C/C2a Moist Siwalik Sal Forest; 5B/C1a Dry Siwalik Sal Forest). A total of 72 species were sampled and 11 specimens of uncommon butterfly species were collected and preserved. Herbarium specimens of 8 species of tree and shrubs were also collected from different forest sub-types for identification from these sites. Larval host plant database was updated and 13 herbarium specimens were prepared and identified for the database GIS Based False colour composite maps of sampled points and Forest Sub-types were prepared

for the lower Kumaon region Nanital district. Sampling was also carried out in Laksar range of Haridwar district on one transect in 5/1S2 Khair-Sissoo Forest Sub-type where 19 species were sampled.

- Experiments on biology of the cerambycid borer *Xylotrechus basifuliginosus* on Kharsu oak logs brought from the Deoban RF, Chakrata earlier & cerambycid borer *Aphrodisium hardwickianum* Ban oak logs brought from Devli village in Thano range, Dehradun district, were continued in the laboratory. Database on insects attacking Western Himalayan oaks was updated by adding & updating information for 50 species of Coleoptera. Experiments on life cycle of 2 species of lepidoptera (Lymantridae & Tortricidae) brought from the field were carried out in the laboratory.
- Digitized 81 types with about 592 photos. Edited 171 species with about 1800 photographs. Verified names of 2865 number of species in cabinets 103-128. Checked cabinets 83-88, 95-109 and 111 for final storage of images in three formats, JPEG, Tiff and reduced under the project “Digitization and enrichment of National Forest Insect Collection (NFIC) of Forest Research Institute, Phase-II (minute insects)”.
- Collection, drying and grinding of leaf samples of 53 different poplar clones has been done. Leaf area feeding by insect was measured in 10 different clones of poplar by graph paper counting method. Leaf sample extraction of 10 different poplar clones has been done.

- Yield data of kharif crop has been taken from all the sites and compilation is in progress. Second year data of soil analysis and compilation from all the sites at Dhaluwala majbata (Haridwar), Fatehpur Pelio (Saharanpur) and Kodapur (Prayagraj) has been completed. Available phosphorus was found in medium ranges at all sites. Available nitrogen and potassium were found in low ranges at Dhaluwala than the sites at Fatehpur Pelio and Kodapur. Sowing of Rabi crop has been done at all the sites Fatehpur Pelio, Dhaluwala majbata and Kodapur. One more site planting of *G. arborea* and *E. officinalis* has also been completed in Prayagraj district. Maintenance and monitoring of plantation of *G. arborea* and *E. officinalis* at above sites is in progress.
- Extraction of fibre from *Grewia optiva* has been tried with cow dung @ 2gm, 4 gm, 6 gm and 10 gm per litre in fresh water in four replication with control to develop eco-friendly method. The process of determination of saponin from *G. optiva* has been started by taking various samples which were put for oven drying. Multiplication of fungus i.e. *Aspergillus niger* are under progress for development of eco-friendly method to extract the fibre from *G. optiva*.

**Arid Forest Research Institute, Jodhpur**

- Plant diversity assessment of Rajbhavan campus of Rajasthan showed presence of 60 trees, 60 shrubs, 7 climbers and 35 numbers of herbaceous species at Jaipur; and 35 tree, 50 shrubs, 6 climbers and 50 herbaceous species at Mt. Abu.

**Exhibition/ Kisan Mela**

Institute	Participated	Duration	Place
RFRI, Jorhat	Farmers Fair	7 November 2019	Regional Agricultural Research Station, Titabar
TFRI, Jabalpur and FRC-SD	Agrovision Exhibition	22 to 25 November 2019	Reshim Bag Ground, Nagpur
FRI, Dehradun	Exhibition	28 November to 1 December 2019	Swadeshi Jagran evam Vikas Sansthan, Premnagar Ashram



Exhibition at Swadeshi Jagran Evam Vikas Sansthan, Premnagar Ashram



Farmers Fair at Regional Agricultural Research Station, Titabar

## Consultancy

- ICFRE presently works on eleven consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; MoEF&CC GoI, New Delhi; Coal India Limited, Kolkata; NTPC Ltd Noida; NMDC Ltd, Hyderabad; Singreni Collieries Company Ltd., Kothagudem; Chhattisgarh Forest Department, Raipur; Deptt. of Forest and Environment, Bhubaneswar and Khairaha UG Coal Mine of SECL M.P.

## Visit Abroad

Name of Personnel	Institute	Purpose of Visit	Duration	Place
Dr. M.P. Singh, Director, IWST, Dr. V. P. Tewari, GCR and Dr. B. N. Diwakara, Scientist- E	IWST, Bengaluru	To discuss with Wood Science and Technology Division, Georg-August University on works related to wood science and to explore possible collaborations	25 to 29 November 2019	Georg-August University, Goettingen, Germany

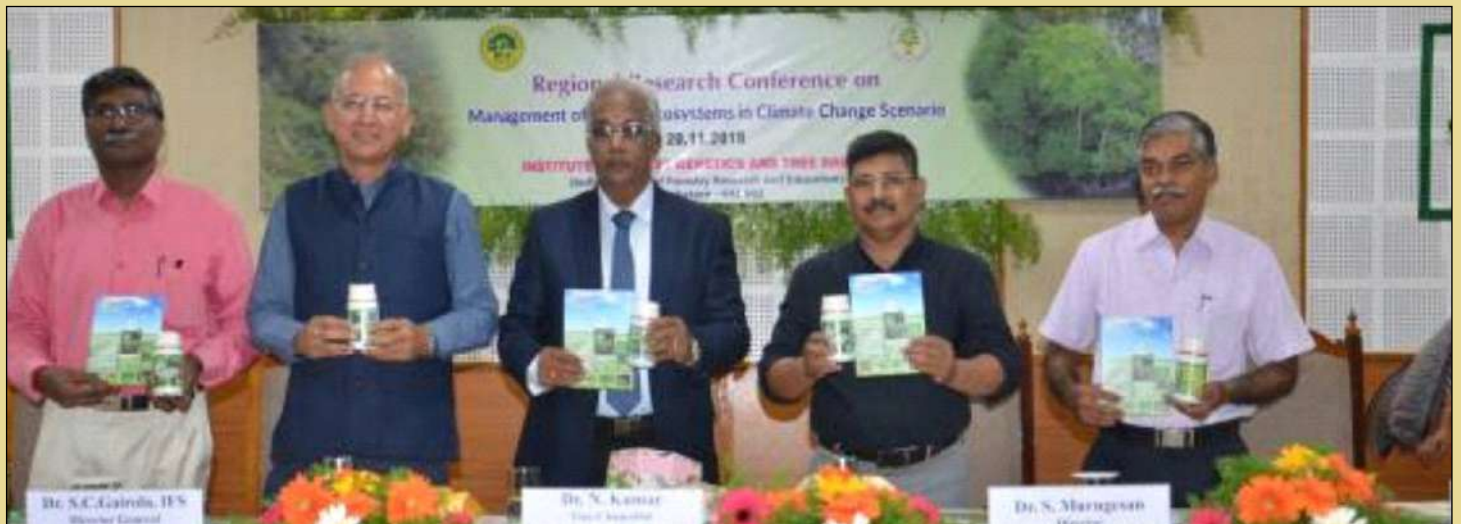
## Workshops/ Seminars/ Meetings

S.No.	Topic	Duration	Beneficiaries
<b>Forest Research Institute, Dehradun</b>			
1.	Forestry interventions in catchment area of Chambal river	11 November 2019	Scientists of FRI, Dehradun & Senior Forest Officers of Rajasthan Forest Department
<b>Institute of Forest Genetics and Tree Breeding, Coimbatore</b>			
2.	Intellectual Property Rights – Prospects & Challenges for IFGTB	5 November 2019	88 Staffs and students of IFGTB



Workshop on Intellectual Property Rights – Prospects & Challenges for IFGTB

- |  |                  |  |
|--|------------------|--|
| 3. Regional Research Conference on Management of fragile ecosystems in climate change scenario | 20 November 2019 | Senior officials from 4 different State Forest Departments, Deans and Professors from Forest Colleges, scientists from IWST Bengaluru, and scientists / professors from universities and other institutions, NGOs and Tree Growers |
|--|------------------|--|



Regional Research Conference

**Tropical Forest Research Institute, Jabalpur**

- |  |                             |   |
|--|-----------------------------|---|
| 4. RAG meeting   | 5 November 2019             | Scientists and researchers  |
| 5. Biological control of sal borer and teak skeletonizer/ defoliator insects | 21, 23 and 25 November 2019 | Participants from Durga circle, Raipur circle and Bilaspur circle |
| 6. सतपुड़ा पठार की जैवविविधता एवं ग्रामीण जन जातियों की निर्भरता             | 21 and 22 November 2019     | Participants from Batkakhapa; Khutamba, Chhindwara                |

**Arid Forest Research Institute, Jodhpur**

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|--|------------------|--|
| 7. Meeting on scope of work and progress related to Rejuvenation of Luni River | 15 November 2019 | Forest officers, Scientists, and Technical staff etc.                                |
| 8. Role of Mycorrhiza in Forestry  | 28 November 2019 | Forest officers, Scientists, Academician, Research scholars and Technical staff etc. |

**Rain Forest Research Institute, Jorhat**

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|-----|--|--------------------|--|
| 9.  | Regional Research Conference for the Northeastern region                                 | 4 November 2019    | -  |
| 10. | Documentation and Preservation of Healers' Knowledge on Traditional Medicines            | 8-12 November 2019 | -  |
| 11. | Meeting on select the site for brick kiln for Bamboo Charcoal Production and Briquetting | 19 November 2019   | Selected villages of Karbi Anglong district of Assam |



Regional Research Conference for the Northeastern region

**Himalayan Forest Research Institute, Shimla**

- |     |   |                  |  |
|-----|---|------------------|--|
| 12. | First Consultative Meeting for preparation of Detailed Project Report (DPR) for Rejuvenation of Sutlej and Beas river basin through forestry intervention | 14 November 2019 | DFO, Range Officers and other officials from State Forest Department, distt. Una, Himachal Pradesh |
| 13. | Valuation of Ecosystem Services   | 28 November 2019 | Officers, Scientists, Technical Staff and Researchers  |



Consultative meeting for stakeholders of Himachal Pradesh

Institute of Forest Productivity, Ranchi

14. Bamboo Propagation & Cultivation Technique 15 November 2019 SFD, Bihar and other stakeholders



Workshop on Bamboo Propagation & Cultivation Technique

Training Programmes

S.No.	Topic	Duration	Beneficiaries
<b>Indian Council of Forestry Research and Education, Dehradun</b>			
1.	Integrated farm development for sustainable and productivity for the local communities	15 and 19 November 2019	Local communities of Marwahi Forest Range and Pali Forest Range Chhattisgarh members of SHG, Van Samiti and farmers of Chhattisgarh
2.	Measurement of Forest Carbon stocks in Pali Forest Range, Chattisgarh	23 to 27 November 2019	Frontline forest staff and forest officers of Pali forest range, Chhattisgarh
3.	REDD+ Measurement, Reporting and Verification	25 and 29 November 2019	Members of Van Panchayat of Patlot region and Karail region
<b>Forest Research Institute, Dehradun</b>			
4.	Forest Fire Risk Management & Emergency Response	4 to 8 November 2019	Forest Officers of states, Officers of SDMA of states, DDA & other stakeholders

5.	Bamboo Technology for Value Addition	4 to 9 November 2019	-
6.	Medicinal plants based agroforestry under traditional orchards	13 to 15 November, 2019	-
7.	Silviculture & Forestry	18 to 22 November 2019	Personnel of Eco task force
8.	Classification & Grading of Timber	18 to 22 November 2019	-
9.	Capacity Building in Herbarium Techniques	20 to 22 November 2019	Trainees from Ayurvedic & Unani, District Horticulture Office, Senior Police Superintendent Office, Animal Husbandry, Veterinary Department, Sheep and Wool Board, NGO etc.



Participants of Silviculture & Forestry training



Training on Capacity Building in Herbarium Techniques

### Institute of Forest Genetics and Tree Breeding, Coimbatore

10.	Plant Tissue Culture Techniques and its Applications	4 November 2019	Selected students and entrepreneurs from different states of India
11.	Forest Entomology and Pest Control	22 Nov to 23 Dec 2019	Selected students and entrepreneurs from different states of India

### Institute of Wood Science and Technology, Bengaluru

12.	Bamboo Nursery and Plantation Management	1 November 2019	Farmers and other stakeholders
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13.	Sandalwood farming and management of its health	5 to 7 November 2019	Farmers and sandal tree growers
14.	Timber Identification	18 to 22 November 2019	Karnataka State Forest Academy, Dharwad, RFO Traniees and 1 from Private company

**Rain Forest Research Institute, Jorhat**

15.	General aspect of Forest and Forestry to the trainees of SFS of 2019 from CASFOS, Byrnihat (Assam)	7 to 9 November 2019	Trainees of SFS of 2019
16.	Forestry in addressing livelihood issues of people of North Eastern States	12 to 14 November 2019	-
17.	Bamboo Architecture and Structural Components for House Construction	25 to 29 November 2019	-
18.	Bamboo Resource Development for addressing livelihood concerns of communities	25 to 29 November 2019	IFS officers of different states of India

**Himalayan Forest Research Institute, Shimla**

19.	Capacity Building on Various Aspects of Forestry	26 & 27 November 2019	Forest officials
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Training on Capacity Building on Various Aspects of Forestry

**Institute of Forest Productivity, Ranchi**

20.	DPR preparation of Mahanadi river for demonstrating field data collection	5 to 30 November 2019	SFD, NGOs, stakeholders, & Local people
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## Prakriti Programmes

- Three groups of 133 students of JNV, Shankerpur, Sahaspur, Dehradun on 22, 25 & 26 November 2019 led by their teachers were visited FRI, Dehradun under 'Prakriti' programme.
- Two groups of 101 students of KV Adampur, Jalandhar & Amritsar (Punjab) on 26 & 29 November 2019 led by their teachers were visited FRI, Dehradun under 'Prakriti' programme.
- IFGTB, Coimbatore conducted 'Prakriti' training programme in the Gass Forest Museum during November 2019. The students were given introductory talk on the 'environment'. A training activity on environment was carried out for students. The main aim of the training was to provide hands on training to the students to get exposed with nature and its conservation. 1411 School students and 272 college students from Coimbatore district, Pollachi and Kerala participated in the activity.
- Under 'Prakriti' programme 110 students of Grade 5 to 7 from St. John's High School Bangalore visited IWST, Bengaluru on 13 November 2019.
- Under 'Prakriti' programme an awareness programme for students of class 9 and 10 from St. Joseph Convent School, Jabalpur on 14 November 2019 at TFRI, Jabalpur. 450 students and 10 teachers participated in the programme.
- FRC-SD, Chhindwara organized awareness programme on 'Environment Awareness and Biodiversity Conservation' on 29 November 2019 under Prakriti at Govt. Higher Secondary School, Rani Kamath (Guraiya) Chhindwara for students of 9<sup>th</sup> standard. Students were also updated about the importance of cleanliness and air, water & plastic pollution.
- AFRI, Jodhpur organized the plantation and lecture programme under the 'Prakriti' programme at Kendriya Vidyalaya No.1 and No.2 Ajmer on 28 and 29 November 2019.
- RFRI, Jorhat conducted 'Prakriti' programme at Jawahar Navodaya Vidyalaya, Gomati, Tripura on 13 November 2019. Around 50 students and teachers participated in the programme.
- छात्र-वैज्ञानिक मिलन कार्यक्रम के अंतर्गत हिमालयन वन अनुसंधान संस्थान, शिमला ने जवाहर नवोदय विद्यालय, कुल्लू के 10वीं, 11वीं और 12वीं के 52 विद्यार्थियों के लिए वानिकी तथा पर्यावरण के बारे में जागरूक करने के उद्देश्य से दिनांक 11 नवंबर 2019 को एक जागरूकता कार्यक्रम का आयोजन किया।



Students of JNV, Shankerpur, Sahaspur, Dehradun visited FRI



Students of JNV, Kullu, HP



Students of JNV, Gomati, Tripura

## Awareness and Demonstration Programmes

- FRI, Dehradun organized three days training programme on "Sustainable management of NTFPs including medicinal plants" for farmers, frontline staff of state forest department, entrepreneurs, students, NGOs and other stake holders at Van Chetna Kendra, Almora (Uttarakhand) from 13 to 15 November 2019 under VVK. 43 participants including farmers, forest officials and other stakeholders from different part of the Uttarakhand state were participated.
- Research and development activities of RFRI, Jorhat, bamboo cultivation, propagation, nursery management, value addition & bamboo preservation techniques, biotechnology and tissue culture, identification of wild edible mushroom and vermicomposting from 1 to 22 November 2019. 588 students in various school of Jorhat and trainees attended the programme.
- AFRI, Jodhpur organized training-cum-demonstration programmes in Jamboori and Surpagla villages from 3 to 8 November 2019 in tribal dominated area of Abu Road (Sirohi district, Rajasthan) on value addition of *Feronia limonia* fruits for VFPC/SHG members. Total 40 members including

SHG/VFPC members, representatives of Hand in Hand NGO, Rajasthan State Forest Department officials participated in the programme. Pickle and Murabba were prepared and distributed among VFPC/SHG members.



Training-cum-demonstration programmes in Jamboori and Surpagla villages

### Visit of Dignitaries

- Mr. Zhang Xinsheng President of International Union for Conservation of Nature (IUCN) visited FRI on 14 November 2019.
- H.H. Sultan of Kedah, Malaysia visited FRI on 19 November 2019.
- Shri Rames Bais, Hon'ble Governor of Tripura visited FRCLE, Agartala and inaugurated the operationalization of VPI plant for Bamboo treatments on 11 November 2019.



Mr. Zhang Xinsheng President of International Union for Conservation of Nature (IUCN) visited FRI



H.H. Sultan of Kedah, Malaysia visited FRI

### Director General Visit

- Director General, ICFRE visited IWST, Bengaluru from 16 to 19 November 2019. A press meet was held on 19 November 2019 to appraise the media on the work being carried out and important activities undertaken by the Council.

### Publication

- The book "Insect pests of trees outside forests and their management" was released during the Regional Research Conference on Management of Fragile Ecosystems in Climate Change Scenario on 20 November 2019 at IFGTB, Coimbatore.

## Miscellaneous

Institute	Special Day	Duration
ICFRE and its Institutes	Constitutional Day	26 November 2019

## HR News

### Appointment

Name of Officer	Date
Shri E. Vikram, IFS ADG (M&E), ICFRE	14.11.2019

### Promotion

Name of Officer	Date
Shri Netrapal Singh Section Officer, FRI	14.11.2019

### Repatriation

Name of Officer	Date
Shri Anil V. John, DCF IFGTB, Coimbatore	11.11.2019
Shri Vipin Chaudhary, IFS DDG (Extension), ICFRE	22.11.2019
Dr. Rajeev Kumar Tiwari, IFS Secretary, ICFRE	29.11.2019

### Retirement/ VRS

Name of Officer	Date
Dr. Dharendra Kumar SAO, ICFRE	30.11.2019
Shri Rajendra Kumar Sharma Private Secretary, HFRI, Shimla	30.11.2019

### Patron:

Dr. Suresh Gairola, Director General, ICFRE, Dehradun

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