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Release of "HPCL Rajasthan Refinery Limited" HRRL Pachpadra Detailed Project Report (DPR) on Development of Green Belt

Detailed Project Report on "Development of Green Belt around HPCL Rajasthan Refinery Limited" HRRL Pachpadra was released by Shri A.S. Rawat, DG, ICFRE, Dehradun in the presence of Shri M.R. Baloch, Director, ICFRE-AFRI, Jodhpur and GCR, Dr. Tarun Kant on 9 April 2023 at ICFRE-AFRI, Jodhpur. Scientists, CTOs, ACTOs and STOs attended the programme.



ICFRE-AFRI, Jodhpur released "HPCL Rajasthan Refinery Limited" HRRL Pachpadra Detailed Project Report (DPR) on Development of Green Belt around refinery site



Azadi ka Amrit Mahotsav and LIFE



- ICFRE-HFRI, Shimla organized environmental cleanliness and save electricity programme on 11 April 2023 at Anandpur Panchayat Shimla. About 50 people including Panchayat Pradhan, Ward member, villagers and students of Government High School Anandpur participated in the programme.

- ICFRE-AFRI, Jodhpur organized a lecture on "Saving of Electricity" and "Saving of Water" on 11 April 2023. In this programme Sh. Manmohan Bairwa, AEn (Elec.) CPWD & Sh. Mahesh Kumar Meena, JEn (Civil) CPWD, Jodhpur explained about various ways to save electricity and water.



ICFRE-HFRI, Shimla organized environmental cleanliness and save electricity programme



ICFRE-AFRI, Jodhpur organized a lecture on "Saving of Electricity" and "Saving of Water"

- ICFRE-RFRI, Jorhat conducted a meeting on "Awareness making and Seedlings Plantation for Springshed Management" for the villagers of Lathao, Namsai, Arunachal Pradesh on 11 April 2023.
- ICFRE-FRI, Dehradun organized a orientation programme for the PG students and faculties of Department of Botany, Banaras Hindu University, Varanasi (Uttar Pradesh) on 17 April 2023. An exposure visit of the laboratory and analytical facility and research activities of C&BP Division for their capacity building on Bioprospecting was carried out. The students were also told about various products such as medicines, colorants, fatty oils, essential oils, fibres, fragrances, gums, insecticides, fungicides, biopolymers, etc. developed from the forests by the Division.

- ICFRE-AFRI, Jodhpur organized a programme on "Reduction of Single use, Plastic Promote circularity Campaign- Waste to Wealth e-waste and solid waste disposal" on 18 April 2023.
- ICFRE-IFGTB, Coimbatore organised a webinar on "Applications of Artificial Intelligence and Machine Learning in Forest Insect Pests Management" on 21 April 2023. A total of 170 participants (30 offline and 140 online) comprising officers, scientists, technical staff, research scholars, project students of IFGTB, ICFRE institutions, other research organisations and academic institutions at national and international level participated in the webinar.



ICFRE-AFRI, Jodhpur organized a programme on "Reduction of Single use, Plastic Promote circularity Campaign- Waste to Wealth e-waste and solid waste disposal"



ICFRE-IFGTB, Coimbatore organised a webinar on "Applications of Artificial Intelligence and Machine Learning in Forest Insect Pests Management"

- ICFRE-AFRI, Jodhpur celebrated “Poshan Pakhwada 2023” on 21 April 2023. An Essay Competition was organized for JPF, PA, FA and JRF under the theme “Importance of millets in human nutrition (Especially pearl millet)”. Sh. M.R. Baloch, Director, Smt. Bhawana Sharma, HoD Extension Division and Women Scientist, Officers, Technicians, Ministerial Staff, JRF, JPF, PA and FA attended the programme.
- ICFRE-RFRI, Jorhat organized Cleanliness Drive at Charingia Gaon under Bhogamukh PS of Jorhat on 23 April 2023. 100 people from Bhogamukh area of Jorhat participated in the programme.
- ICFRE-IFP, Ranchi organized a programme on “Forest Fire and Environment” on 24 April 2023. A total of 65 participants including Scientists, staff and research fellows of ICFRE-IFP, Ranchi attended the programme.
- ICFRE-FRI, Dehradun celebrated “Poshan Pakhwada 2023” on 25 April 2023 under the theme 'Millets for nutritional wellbeing'. The main aim of programme was to create awareness and increase consumption of the millets among the students and faculty of school. 75 students of New Forest Primary School, ICFRE-FRI, Dehradun participated in the programme.
- ICFRE-IFB, Hyderabad organized an awareness programme under the theme Tree Plantation & Biodiversity promotion drive on 25 April 2023. A total of 42 Forest Range Officers (FRO) from Telangana State Forest Academy (TSFA) attended the programme.
- ICFRE-FRC-SD, Chhindwara conducted Swachhata Abhiyan on 25 April 2023. All the scientists, staff and project staff contributed their services during the cleanliness campaign.



ICFRE-AFRI, Jodhpur celebrated “Poshan Pakhwada 2023”



ICFRE-IFP, Ranchi organized a programme on “Forest Fire and Environment”



ICFRE-FRI, Dehradun celebrated “Poshan Pakhwada 2023”

Celebration of Earth Day 2023

- ICFRE-FRI, Dehradun, IFGTB, Coimbatore, ICFRE-IFP, Ranchi, ICFRE-HFRI, Shimla, ICFRE-RFRI, Jorhat and ICFRE-TFRI, Jabalpur celebrated Earth Day 2023 on 22 April 2023.



ICFRE-FRI, Dehradun celebrated Earth Day 2023



ICFRE-IFGTB, Coimbatore celebrated Earth Day 2023



ICFRE-IFP, Ranchi celebrated Earth Day 2023



ICFRE-HFRI, Shimla celebrated Earth Day 2023



ICFRE-RFRI, Jorhat celebrated Earth Day 2023



ICFRE-TFRI, Jabalpur celebrated Earth Day 2023

Significant Research Findings

ICFRE-Forest Research Institute, Dehradun

- Sensory analysis of *Cupressus torulosa* needles essential oil obtained from chemically superior population located in Ogl (Uttarakhand) was carried out using Gas chromatography-Olfactometry and Aroma Extract Dilution Analysis. 22 odour-active components of the oil were identified. Values of odour activity and relative flavor activity revealed linalool (1225000, 1.12), α -pinene (432105, 0.62), limonene (392500, 0.53), α -terpinene (296250, 0.58), camphor (130379, 2.04), sabinene (114795, 0.23), α -terpinolene (80243, 1.14), citronellol (75806, 0.43), terpinen-4-ol (74250, 0.59), umbellulone (67466, 0.79), γ -terpinene (42100, 0.43), and β -pinene (28600, 1) as the major odorants of the oil. The essential oil also displayed excellent *in-vitro* insecticidal activity (LC₅₀ and LC₉₀ values, 0.229 and 0.580 ppm within 2 hrs of application) against stored grain pest *Sitophilus oryzae* (Rice weevil) and validated the traditional claim of the insecticidal property of the needles.
- Total 17 neem seed oil samples were analysed for their active triterpenoids namely azadirachtin and nimbin by HPLC. Maximum amount of azadirachtin and nimbin in oil samples were estimated to be 460 ppm and 2740 ppm, respectively. Six samples with high active ingredients were enriched through extraction by different solvents and the Azadirachtin content was found upto 24000 ppm in the enriched samples.

ICFRE-Institute of Forest Genetics and Tree Breeding, Coimbatore

The potential of leaf spectral signatures to distinguish the four *Pterocarpus* species (i.e., *P. santalinus*, *P. marsupium*, *P. indicus* and *P. dalbergioides*) was assessed and the results revealed that the red-edge region of the visible spectra showed the highest potential to discriminate the above species. The study substantiates the use of leaf spectral data in species discrimination and can be applied in mapping the species diversity using airborne high spatial resolution imaging spectroscopy.

Consultancies

Indian Council of Forestry Research and Education, Dehradun

Works on different scientific consultancy projects was undertaken and following reports were submitted to respective agencies during the period:

1. Draft Environmental Audit Report of Sasti OCP of WCL submitted to Coal India Limited (CIL), Kolkata.
2. Final Environmental Audit Report of Hingulnad Ananata OCPs of MCL submitted to Coal India Limited (CIL), Kolkata.
3. Final report on Environmental Audit of Dipka Expansion Project, Dipka Area, SECL, Korba, Chhattisgarh submitted to Dipka Area, SECL, Korba, Chhattisgarh.

Workshops/Seminars/Meetings

S.No.	Topic	Duration	Participants
Indian Council of Forestry Research and Education, Dehradun			
1.	Meeting on Detailed Project Report (DPR) on Rejuvenation of Damodar and Subarnarekha Rivers through Forestry Intervention	5 April 2023	Director, Secretary, CTO's, STO, ACTO and other staff of ICFRE-IFP, Ranchi
2.	Virtual meeting on ICFRE Plan Projects	20 April 2023	Directors and Scientists of ICFRE-IFP, Ranchi

ICFRE-Himalayan Forest Research Institute, Shimla

3.	One day Research Advisory Committee (RAC) meeting	26 April 2023	Scientists, Technical Officers and Research Scholars of ICFRE-HFRI, Shimla
4.	Monthly Research Seminar on “Microbial, Biopesticides: Opportunities and Challenges”	27 April 2023	57 participants including Scientists, Technical staff and Research staff

ICFRE-Rain Forest Research Institute, Jorhat

5.	Meeting on Time-line preparation and Village Mapping as a part of PRA exercise for establishment of Demonstration Village	10 April 2023	70 people from Bhogamukh area of Jorhat
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ICFRE-Tropical Forest Research Institute, Jabalpur

6.	Collaborative workshop on “Road Map on QPM delivery for TOF expansion in Haryana” under TREES OUTSIDE FORESTS IN INDIA (TOFI) PROGRAMME	13 April 2023	35 participants including State Consultant, State Forest Dept. officer, Nursery Growers, Wood based Industries, NGOs, Farmers and ICAR Scientists
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ICFRE-HFRI, Shimla organized Monthly Research Seminar on “Microbial, Biopesticides: Opportunities and Challenges”



ICFRE-RFRI, Jorhat organized Meeting on Time-line preparation and Village Mapping as a part of PRA exercise for establishment of Demonstration Village

Training Programmes

S.No.	Topic	Duration	Participants
ICFRE-Institute of Wood Science and Technology, Bengaluru			
1.	“Sandalwood farming and management of its health”	10 to 14 April 2023	70 participants including researcher, academicians, NGO's, Sandal wood tree growers and farmers from different states

2. Study and promote sandalwood farming for the benefit of farmers delegation of Maharashtra

25 April 2023

Officials and Scientist of ICFRE-IWST, Bengaluru



Training on "Sandalwood farming and management of its health"



Training on Study and promote sandalwood farming for the benefit of farmers delegation of Maharashtra

ICFRE-Institute of Forest Productivity, Ranchi

3. "Vacuum Pressure Impregnation Bamboo Treatment Plant"

28 April 2023

Director, ICFRE-IFP, Ranchi, Scientists, Officers and various staff members

ICFRE-Rain Forest Research Institute, Jorhat

4. "Collection of various socio-economic Data" as a part of PRA exercise for the establishment of 'Demonstration Village' at Charingia Gaon, Jorhat

7 April 2023

35 people from Bhogamukh area of Jorhat



Training on "Vacuum Pressure Impregnation Bamboo Treatment Plant"



Training on "Collection of various socio-economic Data"

Memorandum of Understanding/ Agreement

- An agreement made between ICFRE-IWST, Bengaluru and M/s Wipro Company Private Limited on 1 April 2023 for the consultancy project entitled “Development and standardization of non-destructive method for detection of internal defects and evaluation of strength of wooden utility poles and panels”.
- A MoU signed between ICFRE-IWST, Bengaluru and Kavery Fertilizer Industries for a consultancy project on Bamboo Plastic Composite (BPC) to manufacture Multi-layer HDPE flower/garden pots.



A talk on “Environment and its conservation” was delivered to students from Sri Chaitanya Techno School, Coimbatore and Isha vidhya Matriculation High Sec. School, Coimbatore

Prakriti Programme

ICFRE-Institute of Forest Genetics and Tree Breeding, Coimbatore

- 214 students from Sri Chaitanya Techno School, Coimbatore and Geedee Public School, Eachanari visited Gas Forest Museum of ICFRE-IFGTB, Coimbatore on 20 April 2023 and a talk was delivered to the students on “Pesticides and its effect on human beings”.



Students from Sri Chaitanya Techno School, Coimbatore and Geedee Public School, Eachanari visited Gas Forest Museum of ICFRE-IFGTB, Coimbatore

- A talk on “Environment and its conservation” was delivered to 270 students from Sri Chaitanya Techno School, Coimbatore and Isha vidhya Matriculation High Secondary School, Coimbatore on 20 and 24 April 2023.

Awareness and Demonstration Programme

ICFRE-Institute of Forest Genetics and Tree Breeding, Coimbatore

A talk on “Water resources and their importance for the environment” was delivered to 202 students of Government College of Technology, Coimbatore, Tamil Nadu Agricultural University, Coimbatore, Angappa Educational Trust and Ramakrishna Mission Vidhyalaya. During the talk various source of natural resources and its conservation measures were explained to the students.



A talk on “Water resources and their importance for the environment” was delivered to students of Government College of Technology, Coimbatore, Tamil Nadu Agricultural University, Coimbatore, Angappa Educational Trust and Ramakrishna Mission Vidhyalaya

ICFRE-Institute of Wood Science and Technology, Bengaluru

45 students of grade IX and X with 3 faculty from The Bangalore Science Forum, National College Campus, Basavanagudi, Bengaluru visited Nursery, Wood workshop, Advanced Woodworking Training Centre and Wood Museum at ICFRE-IWST Bengaluru on 27 April 2023.



Students of grade IX and X with faculty from The Bangalore Science Forum, National College Campus, Basavanagudi, Bengaluru visited ICFRE-IWST, Bengaluru

ICFRE-Arid Forest Research Institute, Jodhpur

34 Students of Department of Botany, MDS University, Ajmer visited ICFRE-AFRI, Jodhpur on 11 April 2023. Students also visited Interpretation centre and VMG Shisham clone of the institute. A short film on ICFRE-AFRI, Jodhpur was also shown to the students and various research activities carried out by ICFRE-AFRI, Jodhpur were explained.



Students of Department of Botany, MDS University, Ajmer visited ICFRE-AFRI, Jodhpur

ICFRE-Rain Forest Research Institute, Jorhat

ICFRE-RFRI, Jorhat conducted Research and development activities on Bamboo Cultivation, Propagation, Nursery Management, Value addition & Bamboo Preservation Techniques, Biotechnology and Tissue Culture, VPI Unit, Banh Bithika, Lac Cultivation, Botanical Garden, Orchidarium, Vermicomposting etc on 4 and 18 April 2023 for the group of Doctors of Jorhat Medical

College & Hospital, Assam and 40 Trainees of Assam Forest School, Jalukbari, Assam.



ICFRE-RFRI, Jorhat conducted various research and development activities for Trainees from Assam Forest School, Jalukbari, Assam

ICFRE-Tropical Forest Research Institute, Jabalpur

44 Forest Range Officer Trainees, Kundalpur Academy, Sangli, Maharashtra visited ICFRE-TFRI, Jabalpur on 19 April 2023.



Forest Range Officer Trainees, Kundalpur Academy, Sangli, Maharashtra visited ICFRE-TFRI, Jabalpur

Visit to Institutes

- Shri Antara Sarkar, MLA, Kamalagar constituency, Tripura visited ICFRE-LEC, Agartala along with a team on 12 April 2023.



Shri Antara Sarkar, MLA, Kamalagar constituency, Tripura visited ICFRE-LEC, Agartala

- Shri Vivek Khandekar, APCCF (Social Forestry), Pune accompanied by Shri Ramesh Kumar, CCF (Social Forestry), Nagpur, Maharashtra visited ICFRE-TFRI, Jabalpur on 18 April 2023 to discuss availability of quality planting material of different species of bamboos.



Shri Vivek Khandekar, APCCF (Social Forestry), Pune accompanied by Shri Ramesh Kumar, CCF (Social Forestry), Nagpur, Maharashtra visited ICFRE-TFRI, Jabalpur

- A team of delegates from Ministry of Forest and Environment, Government of Nepal consists of Dr. Sanjeev Kumar Rai, Province Secretary, (Joint Secretary) Ministry of Tourism, Forest & Environment Koshi Province, Biratnagar, Nepal; Dr. Jyoti Prasad Gajurel, Research Director, Golden Gate, International College (TU), Nepal; Mr. Dipak Lamichhane, Senior Garden Officer (Under Secretary), National Botanical Garden, Godawari, Lalitpur, Nepal; Mr. Rajesh Tamang, Assistant Scientific Officer, Ministry of Tourism, Forest & Environment, Koshi Province, Biratnagar, Nepal visited ICFRE-RFRI, Jorhat on 28 April 2023.



A team of delegates from Ministry of Forest and Environment, Government of Nepal

Miscellaneous

- ICFRE-RFRI, Jorhat conducted cleanliness drives in the Campus on 21 April 2023. 90 employees of the institute participated in the programme.

- ICFRE-TFRI, Jabalpur celebrated National Civil Service Day on 20 April 2023.



ICFRE-TFRI, Jabalpur celebrated National Civil Service Day

HR News

Retirements

Name of Officer	Date
Dr. R.Sundararaj, Scientist-'G', ICFRE-IWST, Bengaluru	30.04.2023
Shri Rama Kant Mishra, CTO, ICFRE (HQ)	30.04.2023
Shri Mala M. Massey, ACTO, ICFRE-FRI, Dehradun	30.04.2023
Shri Kartar Singh, FRO, ICFRE-HFRI, Shimla	30.04.2023

Deputation

Name of Officer	Date
Shri Rajesh S. Kallaje (CHH2001), CF, ICFRE-IWST, Bengaluru	24.04.2023

Patron:

Shri A.S. Rawat, IFS, Director General, ICFRE, Dehradun

Editorial Board:

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