

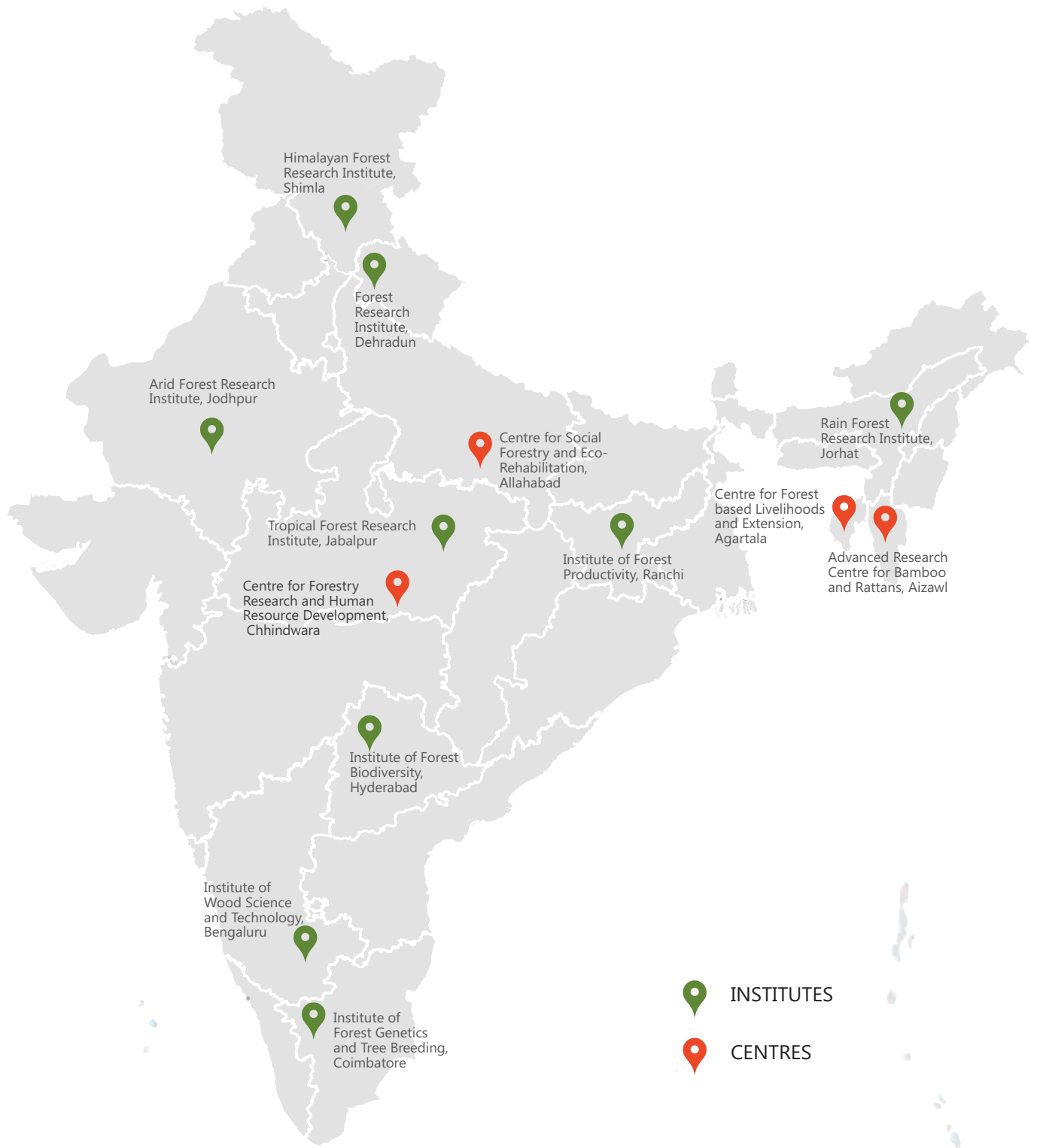
INDIAN COUNCIL OF FORESTRY RESEARCH AND EDUCATION

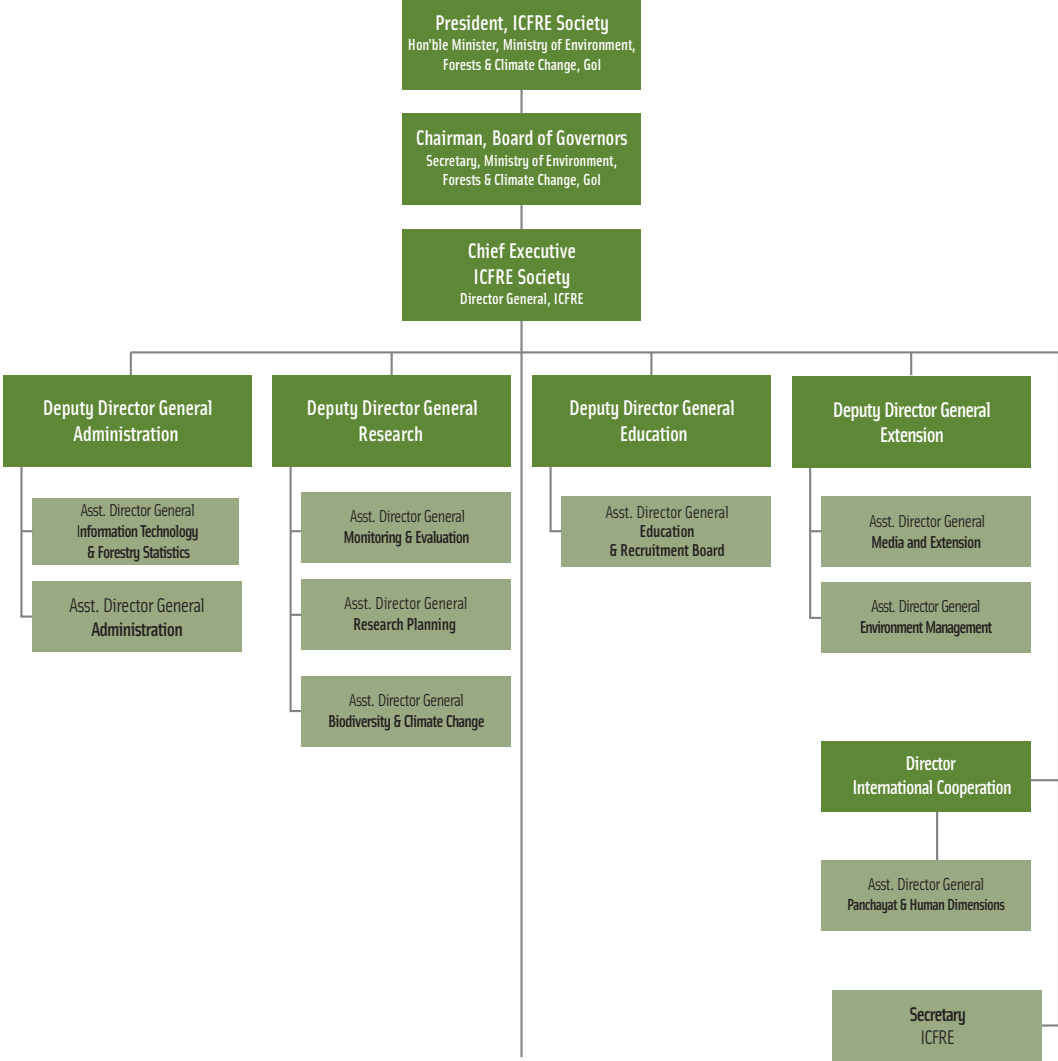
An autonomous body under the Ministry of Environment,
Forests & Climate Change, Government of India



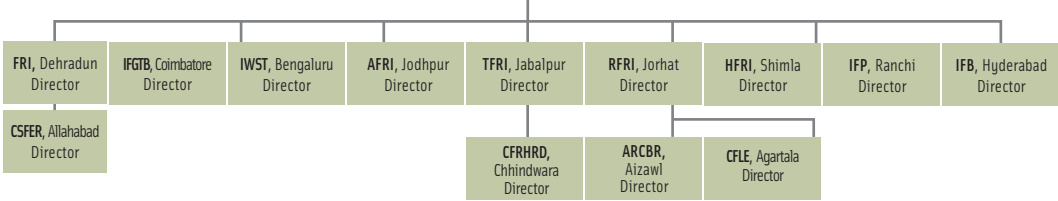
INFORMATION BROCHURE

INSTITUTES/CENTRES





ICFRE
INSTITUTES



ORGANISATIONAL
STRUCTURE



HISTORY & EVOLUTION

Scientific forestry in India started towards the end of nineteenth century with the establishment of Forest School in Dehradun in 1878. Subsequently, foundation of the Imperial Forest Research Institute was laid by a resolution of 5 June 1906 of the Government of India. This Institute is the fountain head of scientific forestry in India. Later, the Indian Council of Forestry, Research and Education or ICFRE was formed in 1986 as an umbrella organisation for taking care of forestry research, education and extension needs of the country and, it was granted autonomy in 1991.

At present, the research programmes at ICFRE are necessarily inter-disciplinary in nature with emphasis on non wood forest products and their sustainable extraction; watershed role of forests; economics of the intangibles; linkages with Panchayati Raj institutions, climate change & biodiversity conservation etc.



● **Sir Dietrich Brandis
(1824-1907)**
Founder of Scientific Forestry in India

In 1864, Dr. Brandis was appointed the first Inspector-General of Forests to the Government of India, a position he held with distinction for 19 years until his retirement. His monumental publications include "The Forest Flora of North-West and Central India" (1874) which earned him Fellow of Royal Society in 1875 and "Indian Trees" (1906) which was published after his retirement. He was awarded Knight Commandership in 1887 for his services in India.

ICFRE Hq. building





INTRODUCTION



THE ICFRE WITH ITS HEADQUARTERS IN THE PRISTINE CITY OF DEHRADUN, UTTARAKHAND IS AN APEX BODY IN THE NATIONAL FORESTRY RESEARCH SYSTEM. IT HAS BEEN UNDERTAKING HOLISTIC DEVELOPMENT OF FORESTRY RESEARCH THROUGH NEED BASED PLANNING, PROMOTION, CONDUCT AND COORDINATION OF RESEARCH, EDUCATION AND EXTENSION ACTIVITIES COVERING ALL ASPECTS OF FORESTRY. ITS NINE REGIONAL RESEARCH INSTITUTES AND FOUR RESEARCH CENTRES LOCATED IN DIFFERENT BIO-GEOGRAPHICAL REGIONS OF THE COUNTRY CATER TO THE FORESTRY RESEARCH NEEDS OF THE NATION THAT ARE TARGETED TOWARDS THE WELFARE OF THE SOCIETY AT LARGE.

OBJECTIVES



- To undertake, aid, promote and co-ordinate forestry education, research and its application
- To extend the research findings from lab to land
- To develop and maintain a National Forest Library and Information Centre
- To provide consultancy services in the field of forestry research, education and training and in all allied sciences.

MISSION STATEMENT

"To generate, preserve, disseminate and advance knowledge, technologies and solutions for addressing the issues related to forests and, promote linkages arising out of interactions between people, forests and environment on a sustained basis through research, education and extension."



VISION

INCREASING FOREST COVER
AND ENHANCING FOREST
PRODUCTIVITY THROUGH
OPERATIONALISATION OF
NATIONAL FORESTRY ACTION
PROGRAMME AND NATIONAL
FORESTRY RESEARCH PLAN.



INITIATIVES



ICFRE IS ENGAGED IN CARRYING OUT RESEARCH, PROMOTING EDUCATION AND DELIVERING SIMPLE INNOVATIVE TECHNOLOGIES IN FORESTRY SECTOR FOR USE OF STAKEHOLDERS. WITH A VIEW TO ADDRESS THE LIVELIHOOD ISSUES OF FARMERS, TRIBALS AND RURAL COMMUNITIES, THE COUNCIL REVISITED ITS THRUST AREAS TO MAKE RESEARCH PEOPLE-CENTRIC, PRIMARILY FOCUSING ON THE LIVELIHOODS OF THE RURAL TRIBAL POPULATION, ALONG WITH A FOCUS ON FOOD AND WATER SECURITY. ACCORDINGLY, SIX THRUST AREAS AND FORTY THREE THEMES HAVE BEEN IDENTIFIED AND, NATIONAL PROJECT DIRECTORS HAVE BEEN DESIGNATED IN ALL THE SIX THRUST AREAS.

- A new innovative scheme, "Direct to Consumer", for quick transfer of technologies to consumers/ stakeholders on completion of research projects has been launched in July 2011.
- ICFRE has prepared the HRD Plan for capacity building of scientific personnel.
- Taking further step in the direction of benefiting the farmers from simple technologies/processes evolved by the Council and with a specific aim of extension of agroforestry, the networking of Van Vigyan Kendras (VVKs) of ICFRE with Krishi Vigyan Kendras (KVKs) of ICAR is being done.
- Preparation of Reclamation and Rehabilitation Plans of the mined areas in Bellary, Tumkur and Chitradurga districts of Karnataka is being carried out for which ICFRE has been awarded consultancy by the Government of Karnataka as per directions of Hon'bl Supreme Court of India. ICFRE is also involved in other consultancy works pertaining to hydro-power, mining etc.
- The erstwhile Project Formulation Division has been restructured into the Panchayat and Human Dimensions Division for broadening its activities by having an interface with Panchayati Raj institutions with special focus on developing a baseline of forest and non-forest land use practices.
- The Forest Research Centre, Hyderabad has been upgraded to an Institute and renamed as Institute of Forest Bio-diversity. It will focus on the biodiversity of Andhra Pradesh, Maharashtra, Eastern Ghats and Goa.



THRUST AREAS

- Managing forests and forest products for livelihood support and economic growth
- Biodiversity conservation and ecological security
- Forests and climate change
- Forest genetic resource management and tree improvement
- Forestry education and policy research to meet emerging challenges
- Forestry extension for taking research to people

- ICFRE has worked for conservation of trees at Angkorwat temple at Cambodia and with Bodhgaya temple management committee for the maintenance of "Bodhi Vriksha". UNESCO praised the work done by ICFRE and Indian Embassy wants to further expand the work to other areas.
- Arid Forest Research Institute, Jodhpur has collaborated with Govt. of Australia in developing pest control measures for *Acacia* sp.
- IFGTB, Coimbatore has collaborated with CSIRO, Australia with regard to tree improvement of *Eucalyptus* and *Casuarina* sp.
- ICFRE Pensioners' Welfare Health Scheme (ICFREPHS) 2012 has been launched on 31 December 2012 to take care of the interests of the retired employees.
- ICFRE has come up with a novel concept for helping the tribals and forest based artisans through creation of PRERNA Souvenir Shop at ICFRE – by offering a platform for marketing their products.
- To encourage young Forestry Researchers from SAARC countries, 10 fellowships have been announced by Hon'ble Prime Minister. SAARC centre has proposed creation of SAARC research net work to be hosted by ICFRE.

INTERNATIONAL RESEARCH COOPERATION

Ta Prohm Temple, Cambodia



IMPORTANT EVENTS

*Inauguration of
International Conference*



- 13th Silviculture Conference organised at FRI, Dehradun from 24 to 28 November 2014 as part of the celebrations to commemorate 150 years of organised forestry in India.
- International Conference on 'Wood is Good' conducted by IWST from 21 to 23 November 2014 at Bengaluru as part of year-long celebration of the IWST's Platinum Jubilee year.
- World Day to Combat Desertification celebrated by ICFRE and Ministry of Environment, Forests and Climate Change (MoEF&CC) on 17 June 2014 at New Delhi.
- 24th Session of International Poplar Commission (IPC) convened by ICFRE and FRI, Dehradun along with 46th meeting of its Executive Committee in October 2012 at Dehradun being the first time that such a prestigious event of IPC was held in India.
- First Indian Forest Congress (IFC) organised by the ICFRE from 22 to 25 November 2011 in New Delhi.

SIGNIFICANT ICFRE PUBLICATIONS



- Coffee table book on, 'Biodiversity of India'- depicting diverse forest types, biodiversity hotspots, floral and faunal biodiversity, and conservation steps
- 'Forest Sector Report India 2010'- covering six important sub sectors associated with forestry
- 'Forestry Statistics India 2011' highlighting seven major sections of forestry i.e. forest resource, forest establishment, production, wildlife, socio-economic aspects, trade and silviculture
- Booklet on, 'Forestry Research: ICFRE Supporting Rural & Tribal Livelihoods' –showcasing work done towards integrating forestry with rural development
- 'Forest Types of India Revisited' – which will act as a baseline for monitoring climatic changes in the forests of the country.
- Book on 'Sustainable Land and Ecosystem Management: Some Best Practice from India'. The book documents some best practices with respect to land management, water conservation, livelihood generation, biodiversity conservation and climate change adaption.
- ICFRE State of Knowledge Series 1 - 'Advances in Forest Seed Science & Technology' the book presents a detailed coverage of the basic as well as applied aspects of seed science and technology.

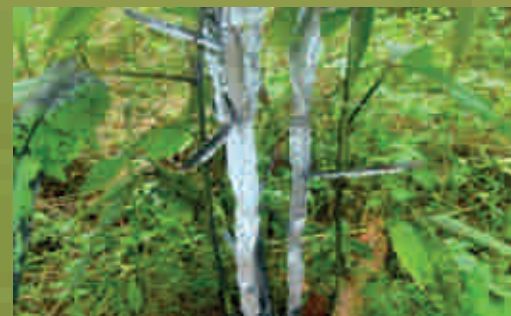
- Agroforestry models of Poplar-turmeric/sugarcane/ wheat developed for enhancing the productivity resulting in enhanced income for the farmers.
- Tested clones of Shisham (*Dalbergia sissoo*), *Eucalyptus* hybrid, *Eucalyptus camaldulensis* and *Casuarina equisetifolia* released for commercial use in both North & South India.
- A comprehensive agroforestry project, the Bihar Project, is being implemented by ICFRE in collaboration with Environment and Forest Department of Bihar aimed at increasing the income of farmers by introducing Poplar beyond its natural boundaries.
- 17 superior clones of *Eucalyptus* and *Casuarina* released for public use.
- Lac cultivation on *Flemingia semialata*, a new alternative host of lac insect, has been discovered which has provided enhanced income to the farmers.
- Treerich biobooster – organic based product has been developed and introduced to farmers and has received good response.
- A Biopesticide : Ento~fight Nasa- a mineral oil based preformulated endophytic fungal (*Nigrospora sphaerica*) insecticide for teak and *Ailanthus* defoliators and also against insect pests of important forestry species has been developed and released as foliar spray.

PEOPLE CENTRIC APPROACH

Poplar - turmeric - sugarcane
agroforestry model



Lac cultivation on *Flemingia* sp.





Bamboo Treatment Tank

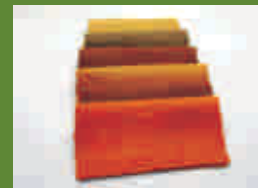
ASCU treated bamboo hut

TECHNOLOGIES TRANSFERRED FOR RURAL AREAS AND SMEs

- Improved planting and nursery techniques for Trees outside Forest (ToF)
- Production of natural dyes
- Organic and sustainable cultivation and harvesting of medicinal plants
- Reconstituted wood from weeds and wood waste
- Portable distillation units /portable wood and bamboo treatment apparatus ('Jagriti')
- Cultivation of mushrooms – *Ganoderma* etc.
- Composting techniques, VAM Fertilizer
- Bio-insecticides
- 'Samridhi'– for silk worm rearing
- Lac cultivation on *Flemingia* species in naxal affected areas of Jharkhand.



Bamboo treatment apparatus - Jagriti



Natural Dyes



Natural Dye Pilot Plant



Artisan making bamboo chair

DIRECTORATES

The Directorate of Administration is headed by Dy. Director General (Administration) who is assisted by Assist. Director General (Admin.). & Assistant Director General (IT & Forestry Statistics).

The Directorate of Administration undertakes preparation of budget estimates, allocation of budget and preparing annual mandatory financial statements; filing of mandatory financial and administrative returns of ICFRE; stores including inventory management and procurement. It also deals with disbursement of payments and TDS and maintains support services and official infrastructure. Besides handling general administration, the Directorate looks after civil and technical works of the Council and its Institutes.

The Directorate further liaises with the MoEF & CC on administrative and financial matters.

The Resident Director and, Asstt. Resident Director, Van Vigyan Bhawan, New Delhi under the control of Directorate of Administration, look after the regular upkeep, repairs, maintenance, and allotment of facilities at Van Vigyan Bhawan, New Delhi and they also liaise with MoEF&CC and other offices in New Delhi on various issues of urgent nature.

Information Technology Division, ICFRE caters to all the information technology needs of ICFRE and its regional Institutes / Centres. The Division is mandated to undertake network services management, development of software application, conducting IT training, providing IT support where required, implement E-Governance program, maintain consumable demand record, provide National Knowledge Network (NKN) connectivity at ICFRE and its Institutes and AMC management. Video conferencing services at ICFRE are widely used for interaction with Institutes and Centres.

Indian Forestry Research & Information System (IFRIS) managed by the Division was conceptualized with the aim to translate some of the present working manual systems into automated systems. An "Interactive Portal: Interface with stakeholders" has been developed to facilitate end-users to find quick and reliable solution of their problem by using internet environment.

The Division of Forestry Statistics is mandated to collect, process, collate and disseminate the statistics of forestry sector of India. It maintains the data bank on important parameters of forestry sector and also publishes the biennial Forestry Statistics India series. The Division also collects and publishes data on trade of forest products and has been mandated to bring out an annual Forest Products Trade Bulletin.

DIRECTORATE OF ADMINISTRATION





DIRECTORATE OF RESEARCH

The Directorate of Research works under the guidance of Dy. Director General (Research) assisted by Assist. Director General (Research Planning), Assist. Director General (Monitoring & Evaluation) and Assist. Director General (Biodiversity and Climate Change). The Directorate ensures that all the research projects taken up by ICFRE Institutes are need based and address the regional and national forestry research problems. The research prioritization by the Directorate is through participatory mechanism involving all the stakeholders and end users.

For holistic approach to address the research problems and to avoid duplication of work, ICFRE has initiated an all India coordinated research project on some emerging themes including important forestry species. This Directorate released a compendium “Changing Frontiers of Research Programs in ICFRE based on XIII Research Policy Committee (RPC) 2012 Meeting”.

The Monitoring and Evaluation Division deals with reviewing and evaluation of all the ongoing research projects of ICFRE Institutes and suggests corrective measures for timely completion & achievement of the objectives.

The Research Planning Division deals with the planning, formulation and finalization of ICFRE plan funded forestry research projects of nine research institutes and four research centre of ICFRE through the process of Research Advisory Group (RAG) meetings at Institute level and Research Policy Committee (RPC), an apex body at ICFRE level to address the forestry research needs of the country.

The Biodiversity and Climate Change Division is carrying out and coordinating basic and applied research on various aspects of climate change in India including *inter alia* vulnerability and adaptations of forest ecosystems, mitigation of climate change through forestry activities, greenhouse gas inventories in forestry sector, socio- economic influences of climate change on forest-based communities, policy research on UNFCCC and Kyoto processes and their implications for India and potential of CDM and REDD-Plus in the country.

Directorate of Education headed by Dy. Director General (Education) and supported by Assist. Director General (Education and Recruitment Board) aims at the promotion of forestry education at under-graduation and post graduation levels in the State Agricultural Universities by providing necessary infrastructural support to them. To ensure delivery of quality forestry education in these universities, a system of accreditation on the pattern of AICTE, has also been put in place. Further, up-gradation of forestry syllabus is also undertaken by this Directorate from time to time, in keeping with the latest trends in the forestry sector. It also undertakes policy research activities so as to focus on the issues related to policy reforms, government schemes and regulations for effective governance and enhanced performance of the sector.

The Directorate undertakes the Human Research Development Programme and Policy Research work, recruitment of scientists, Flexible Complimentary Scheme for *in-situ* up-gradation of scientists and grievance redressal of SC/STC/OBC

DIRECTORATE OF EDUCATION



DIRECTORATE OF EXTENSION

The Directorate of Extension is headed by Dy. Director General (Extension) and supported by Assist. Director General (Media & Extn.), Assist. Director General (EM), Project Director, and National Project Director, SLEM & UNCCD Project and a team of scientists. It has the mandate to evolve extension strategies, its periodic revision and issue guidelines for effective dissemination of technologies developed under the research projects to the stakeholders and the end users. It also provides consultancy services/ technical services in the field of environment impact assessment, forestry, environment and allied sciences.

Media and Extension Division undertakes regular ICFRE publications including Newsletters/ vaniki samachar, annual Hindi magazine of ICFRE and the ICFRE Annual Report and Audited Accounts among others.

Twenty six VVKs and nine Demo Villages established in different eco-climate zones of the country help in disseminating ICFRE technologies to the stakeholders. Schemes like the networking of VVKs with the Krishi Vigyan Kendras of ICAR and the Direct to Consumer scheme, Tree Growers Melas help in wider dissemination of ICFRE technologies. Intellectual Property Management and Technology transfer/commercialization is also being dealt with by the Division.

The Division is also rendering services to promote Rajbhasha Hindi and evaluating the progress in implementation of Rajbhasha in the Council and its Institutes.

Environment Management (EM) Division takes up environmental policy analysis and its advocacy, capacity building in Environmental Impact Assessment and Management through training, workshops, seminars and publication of relevant material and consultation services in the field of environment management including EIA studies, carrying capacity assessment, monitoring of green condition of environmental clearance, rehabilitation plans for closed mines, biodiversity assessment and socioeconomic studies.

Besides a number of consultancy project, the EM Division is currently undertaking a consultancy awarded by the Government of Karnataka for preparing 'Reclamation and Rehabilitation (R&R) Plan' for over 160 mines in Bellary, Chitradurga and Tumkur districts of Karnataka as per directions of Hon'ble Supreme Court.

This Directorate has also coordinated the Sustainable Land & Ecosystem Management (SLEM) project funded by GEF and is also involved in National Reporting for UNCCD and preparation of new National Action Plan (NAP) on behalf of MoEF&CC.

Headed by Director, IC this Directorate acts as a facilitator between ICFRE Institutes/ Centres and potential donor agencies for the formulation of research projects in the identified thrust areas and their submission to various national and international donor agencies for funding.

In addition to this, this Directorate facilitates the works of the Pilot project on 'Samuday Adharit Samanvit Van Prabandhan and Sanrakshan Yojana', a project sanctioned by the Planning Commission for Bihar.

The Directorate is mandated for coordination in formulation of research projects, their scrutiny and processing for external funding, compilation of status report of ongoing (approved), new (submitted), and completed projects of ICFRE Institutes/ Centres with regards to their suitability in the identified thrust areas.

The Panchayat and Human Dimensions Division under the Directorate deals with developing linkages with rural institutions and translating the research outputs to the stakeholders. It has also been entrusted the responsibility of developing project proposals under the thrust area "Managing forests and forest products for livelihood support and economic growth".

The Division also organises and coordinates national and international conferences and workshops on various aspects.

DIRECTOR - INTERNATIONAL COOPERATION



FOREST RESEARCH INSTITUTE, DEHRADUN

Forest Research Institute (FRI), Dehradun has its roots in the erstwhile Imperial Forest Research Institute established in 1906 to organize and lead forestry research activities in the country. In 1988, FRI and its research centres were brought under the Indian Council of Forestry Research & Education (ICFRE).

The Institute has a campus spread over about 500 hectares. The main building, completed in 1929, is an impressive edifice of the greco roman and oriental architecture having a plinth area of 2.5 hectares, with the outer Himalayas forming its backdrop.

The six F.R.I. Museums display exhibits related to social forestry, pathology, silviculture, timber, non wood forest products and entomology. Approximately 50,000 visitors come to see these museums every year. The Institute has a unique photo gallery at Shatabdi VanVigyan Kendra (City centre) that probably is the only gallery where the wholeness of Indian Forestry has been documented in photographs.

The National Forest Library and Information Centre (NFLIC) with the FRI, has an excellent Reference Section stocked with encyclopaedias, dictionaries, directories, handbooks and rare books, etc as well as vast grey literature collection on forestry. The MoEF & CC, Govt. of India has designated the NFLIC as ENVIS Centre on Forestry in the year 1997. The Centre regularly publishes ENVIS Forestry Bulletin, which is a half-yearly publication.

MANDATE

- To conduct need based research in core competence/thrust areas.
- To cater to forestry research needs of the states of Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh and Uttarakhand.
- To impart quality education and conduct doctorate research in forestry & allied sciences.

INSTITUTES



- P.O. New Forest, Dehradun – 248 006
Phone : 0135-2755277, 2224444
Fax No. : 0135-2756865
Website: <http://fri.icfre.gov.in>

1

HIGHLIGHTS

The Institute has developed a number of technologies including solar heated timber-seasoning kiln; Jigat substitute of agarbatti; hollowness detection in trees by ultrasonic technique; eco-friendly wood preservatives; eco-friendly hair dye; greening of barren sodic soils; a process for the preparation of katha from *Uncaria gambier* etc. Also, 26 patents on various technologies were obtained.

FRI was conferred with the status of a 'Deemed to be University' in December 1991 by the Government of India on recommendation of the UGC, subsequently, being the first and only University of the country administrating research dedicated exclusively to Forestry. The Director General of ICFRE is the Chancellor and Director FRI is Vice Chancellor of the University.

FRI University offers Master's Degree Programmes in Forestry, Environment Management, and Wood Science & Technology and Cellulose & Paper Technology besides Post Graduate Diploma in Aroma Technology. The University is also conducting Doctoral programmes in 20 disciplines.

The University provides 10 scholarships to the eligible students of SAARC Nations for undergoing post graduate and doctoral studies in any course in the University.

The modified design of Solar Kiln for drying timber and NWFPs



INSTITUTE OF FOREST GENETICS AND TREE BREEDING (IFGTB) COIMBATORE



- Forest Campus, PB. No- 1061
R.S. Puram HPO, Coimbatore – 641 002
Phone : 0422-2431540, 2435541
Fax No. : 0422-2430549
Website: <http://ifgtb.icfre.gov.in>

MANDATE

Identify and evolve varieties of species used in afforestation and social forestry that will contribute to the national goal of achieving a growth of 3 to 4 cubic meters of biomass per hectare per year within the ecological considerations applicable to the area.

Vilvekam - Aegle marmelos seed oil based biopesticide



The Institute was formed in April 1988 by up-gradation of the Forest Research Centre (FRC), Coimbatore under Forest Research Institute and Colleges, existing since late 1950s. IFGTB is located in the Forest Campus in Coimbatore city, spread over about 150 acres. It attends to the regional forestry research problems of Tamil Nadu, Kerala, Puducherry, Andaman & Nicobar Islands and Lakshadweep. IFGTB has field units in the states of Kerala and Tamil Nadu.

HIGHLIGHTS

- Genetically improved seeds which ensure increased wood production for *Eucalypts* and *Casuarina* are being supplied.
- In collaboration with International Neem Network (INN) international provenance trial has been established.
- Micropropagation protocol standardized for teak, eucalypts, acacia and bamboo species.
- Standardized seed handling techniques for teak, eucalypts, casuarinas, acacias, neem, jatropha, selected medicinal plants of commercial importance and rare, endangered and threatened (RET) species.
- Casuarina* and *Acacia* based agroforestry systems developed and demonstrated for higher economic returns.
- Developed guidelines for DUS (Distinctness, Uniformity and Stability) testing of *Casuarina* and *Eucalyptus*.
- Tree Growers' Melas organised since 2009.

The Government of Mysore had set up a Forest Research Laboratory (FRL) at Bengaluru in 1938. In 1988, it was upgraded and named as Institute of Wood Science and Technology (IWST). ICFRE has recognized IWST as centre for advanced studies in the area of improved utilization of wood, mangrove and coastal ecology, research on sandal and mining rehabilitation. In addition to this, the Institute has an Advanced Woodworking Training Centre (AWTC), a Wood Museum cum Interpretation Centre (WMIC) and a library cum documentation centre.

HIGHLIGHTS

- Around thirty lesser known/plantation grown timber species were studied for their anatomical, physical and mechanical properties and based on these properties, various end-use applications were recommended.
- A process of thermal modification of wood has been standardized. Thermally modified wood exhibits improved dimensional stability, decay resistance and aesthetic appeal of secondary timber species.
- IWST has developed a complete technology package for manufacture of wood and other natural fiber filled thermoplastic composites.
- Novel methods for chemical modification of wood were developed to prevent UV degradation and improve dimensional stability of wood and also to improve the service life of coating.
- A database on wood insects of India (IWID) covering details of important timber species and their associated wood feeding insects along with their taxonomic status, biological details, host range etc. has been developed.
- The concept of microwave technology in reducing the reaction time for trans-esterification of *Pongamia pinnata* seed oil from few hours (2 -3 hours) to few minutes (5-10 minutes) has been developed.
- Institute has standardized protocol for raising tissue culture plants of sandalwood and six varieties of bamboo species.

INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY (IWST) BENGALURU



- PO.- Malleswaram,
Bengaluru - 560 003
Phone: 080- 23347131,22190201,21190100
Fax No: 080- 23340529
Website: <http://iwst.icfre.gov.in>

MANDATE

- Conduct research on wood science and technology as a national objective
- Focus its research activities on important forestry research needs of the states of Karnataka and Goa.

Portable distillation unit



TROPICAL FOREST RESEARCH INSTITUTE (TFRI) JABALPUR



- P.O. – R.F.R.C, Mandla Road, Jabalpur – 482 021
Phone/Fax: 0761-4044002-2840483
Website: <http://tfri.icfre.gov.in>

The Tropical Forest Research Institute, Jabalpur came into existence in April 1988, although its origin goes back to 1973 when a Regional Centre of FRI, Dehradun was established at Jabalpur to provide research support to the problems of forest management in central India. TFRI is engaged with innovative research and technological advancement for improvement of productivity and quality of various forests of central Indian states viz., Chhattisgarh, Madhya Pradesh, Maharashtra and Orissa. During its existence of more than two decades, the Institute has contributed immensely towards diverse aspects of forestry research and the successful implementation of several technologies.

MANDATE

- Eco-restoration and rehabilitation of mined areas
- Development and demonstration of agroforestry models,
- Forest protection, biofertilizers and biopesticides,
- Non-wood forest products
- Planting stock improvement

Teak - turmeric agroforestry model



HIGHLIGHTS

- Reclamation package for iron ore and coal mines overburden, limestone mines, flyash dykes.
- Selection of suitable trees for bio-drainage.
- Site specific agroforestry models for medicinal plants, perennial pigeon pea, grasses and vegetable.
- Recording of 346 diseases including 32 new diseases from 118 hosts and 12 new species of fungi from the forests of Madhya Pradesh, Maharashtra, Chhattisgarh and Orissa.
- Developed biological control of defoliator using egg parasitoid, *Trichogramma raii*.
- Developed integrated pest management for white grub in forest nurseries.
- Developed an improved method for establishment of seed production areas.
- Identified carbonic anhydrase as biochemical marker for carbon sequestration in teak.
- Standardized pre-sowing treatment for control of seed borne diseases.
- Recorded traditional knowledge about various plant parts used by tribals for treating diseases.

RAIN FOREST RESEARCH INSTITUTE (RFRI) JORHAT

Rain Forest Research Institute (RFRI), Jorhat, Assam, came into being in 1988 to cater to the forestry related research & extension needs of the north eastern region of the country. The Institute is conducting research on various aspects of forestry in NE states of Assam, Arunachal Pradesh, Mizoram, Manipur, Meghalaya, Nagaland, Sikkim and Tripura.



- PB. No. 136, Deovan, Sotai, Jorhat- 785 001
Phone/Fax: 0376-2350273, 2350273
Website: <http://rfri.icfre.gov.in>

HIGHLIGHTS

- Organized 'hands on' training programmes for the local people for developing bamboo based entrepreneurship.
- Developed package of practices for broom grass based model under 'Direct to Consumer' scheme.
- Developed techniques for artificial inducement of agarwood in agar trees.
- Initiated introduction trials of poplars and willows at RFRI, Jorhat.
- Designed an advance boucherie machine for bamboo preservation (patented).
- Developed low cost nursery technology for *Gmelina arborea*.
- Standardized protocol for *in vitro* regeneration of *Calamus tenuis*.
- Estimating the economic value of the role of forests in providing water supply to the people of Kohima town
- Most of the technologies developed by the Institute are being disseminated free of cost. However, a patent was also obtained for an apparatus designed for preservation of bamboo

MANDATE

- Conservation of forest ecosystem with emphasis on natural regeneration.
- Management of shifting cultivation areas.
- Management of community forests.
- Planting practices for eco-restoration.
- Conservation and sustainable management of bamboos and rattans.

Rubberwood factory in Tripura



ARID FOREST RESEARCH INSTITUTE (AFRI) JODHPUR



- PO., Krishi Mandi, New Pali Road,
Jodhpur – 342 005
Phone : 0291-2722549, 2729101
Fax No.: 0291 -2722764
Website: <http://www.afri.res.in>

MANDATE

- Conduct forestry research for conservation of biodiversity and enhancement of bio-productivity in Rajasthan, Gujarat and Dadra & Nagar Haveli with special emphasis on arid and semi-arid region.

Commiphora wightii - Gum oozing



The Institute established in 1987 is located on New Pali road, Jodhpur in the sprawling campus of 20 ha. The Institute also has six experimental fields & a model nursery (34.41ha) in the vicinity.

HIGHLIGHTS

- Agroforestry models developed for hot arid region of Gujarat and Rajasthan with *Prosopis cineraria* and *Tecomella undulata*.
- Surface vegetation technology developed for effective control of sand drift and sand dune stabilization.
- Technology developed for enhancing productivity of arid salt affected soils through afforestation.
- In-situ* rain water harvesting techniques developed that enhanced survival & growth of tree seedlings.
- Spot method of irrigation produced the best initial growth in IGNP for *D. sissoo* with water use efficiency of 12.2 kg/mm.
- Developed grafting technique for clonal propagation of Ardu (*Ailanthus excelsa* Roxb.), an important fodder and timber species.
- Macro-propagation techniques have been developed for various arid zone species.
- Genetic fidelity testing using DNA markers has been standardized for *Commiphora wightii* and *Prosopis cineraria*.
- Growth & yield models developed.
- Non-destructive harvesting of guggul gum from *Commiphora wightii* developed using optimum ethephon concentration to induce production of gum with minimum injury to the tapped plants.

The Institute came into being on the foundation of the erstwhile Conifers Research Centre (CRC), which was established in May, 1977 primarily to develop the technologies related to regeneration of Silver fir and Spruce – conifer species of western Himalayas. At the time of re-organizing forestry research in Indian Council of Forestry Research & Education (ICFRE) the centre developed into a full-fledged research Institute with an area of responsibility extending to the states of Himachal Pradesh and Jammu & Kashmir. The Institute has also been declared as “Centre of Advance Studies for Cold Desert Afforestation and Pasture Management”

HIGHLIGHTS

- Developed eco-rehabilitation models for mined out and degraded areas.
- Established demo plantations of *Populus deltoides* in farmers' fields for upliftment of socio-economic status of the farmers.
- Seed Production Areas (SPAs) & Seed Orchards (SOs) of chir-pine and of shisham established.
- Institute has success stories pertaining to reducing mortality in *Cedrus deodara*, *Pinus roxburghii*, *P. wallichiana*, *Dalbergia sissoo*, *Quercus leucotrichophora*, *Juniperus macropoda*, *Albizia procera* and *Salix* sp.
- Improvement in agro-technologies for mass propagation of medicinal plants of temperate region like *Picrorhiza kurrooa* and *Valeriana jatamansi* done.
- Developed technology for breaking seed dormancy in *Juniperus polycarpus*.
- Developed technology for integrated pest management of deodar defoliator.

HIMALAYAN FOREST RESEARCH INSTITUTE (HFRI) SHIMLA



- “Conifer Campus” Panthaghathi
Shimla – 171 009
Phone/Fax: 0177-2626778, 2626779
Website: <http://hfri.icfre.gov.in>

MANDATE

- Eco-rehabilitation of cold deserts, rehabilitation of mined out areas, regeneration of coniferous and broad-leaved forests, insect-pests and disease management including studies on medicinal plants, besides activities on management practices in temperate forests and in alpine areas.
- Popularisation of agro-forestry and other related extension activities.

Saussurea obvallata



INSTITUTE OF FOREST PRODUCTIVITY (IFP) RANCHI



- Aranyodya, Ranchi- Gumla NH 23
P.O.- Lalgutwa, Ranchi – 835 303
Phone : 0651-2948505
Fax No. : 0651-2241457
Website: <http://www.ifpranchi.co.in>

MANDATE

- Research on the dynamics of tree growth for superior yield in important forestry species.
- Studies on development of propagation techniques and agro-silvicultural system for cultivation of important medicinal plants.
- Conservation of biological waste.
- Improvement and production of non wood forest products.
- Development of agroforestry models.

Lac cultivation on traditional host



IFP is a premier forestry research organization of eastern India created in 1993 with the objective to formulate, organize, direct, manage and carry out forestry research, education and extension in the states of Bihar, Jharkhand and West Bengal. The Institute has a legendary past being the successor of an organization called the Directorate of Lac Development (DLD), Ranchi which came into existence in 1966.

HIGHLIGHTS

- Developed Khunti model for lac cultivation – enterprise for forest fringe areas
- Developed species-specific molecular markers for eastern Indian bamboos.
- Standardised poplar-based agroforestry models for gangetic plains of north Bihar and devised extension methods for expansion of poplar cultivation in the region.
- *Ex situ* conservation and promotion of on farm cultivation of medicinal plants. 'Aus Upvan' Regional medicinal Plant Garden of Chotanagpur Region located at Institute has a collection of more than 350 species.
- Technological innovations for improved production of NWFPs, especially lac and tasar.
- Development of root trainer seedling production packages for *Buchanania lanzan*.
- Rehabilitation of mined areas and stressed sites.
- Micropropagation techniques of bamboos.
- Clonal propagation procedures for important trees, bamboo and medicinal plant species.
- Recycling of organic wastes by composting/vermi composting
- Production of quality planting material in hi-tech nurseries using root trainers.
- Poplar and bamboo-based agroforestry model for eastern India.
- Techniques for improved cultivation of lac on traditional and non-traditional host.

The Conference of the Parties is the governing body of Convention on Biological Diversity and, consequent on decision in its 11th meeting held during October 2012 at Hyderabad, FRC, Hyderabad working under IWS, Bengaluru was upgraded to Institute level and renamed as Institute of Forest Biodiversity, Hyderabad in December 2012.

The Institute is located at Dulapally, 23 kms away from Secunderabad Railway station and it has a field station spread over sixty acres at Mulugu, 45 kms from Hyderabad. The vision of Institute is to attain excellence especially in conservation of forests and wild agri-genetic resources and forest biodiversity including microbial populations using in situ and ex situ methods, facilitate sustainable utilization of resources by value addition wherever desirable and generate products and services, in a way that sustains diversity and productivity in an eco-friendly manner. The Institute is mandated to carry out research on forest biodiversity of Andhra Pradesh and Maharashtra.

MANDATE

- Quantitative ecological assessment and documentation of biodiversity of Eastern Ghats.
- Genetic resource assessment of endemic and rare plants of Eastern Ghats for conservation planning.
- In situ conservation of the RET and endemic species of Eastern Ghats.
- *Ex situ* conservation of the RET and endemic species of the region through germplasm banks, seed storage, tissue culture and also through the involvement of farmers in their fields.
- Protection from endemic and introduced insects and pathogens.
- Environmental impact assessment especially of mining and other mega projects on biodiversity and their eco-rehabilitation.

INSTITUTE OF FOREST BIODIVERSITY (IFB) HYDERABAD



● P.O. No. 2129, Dulapally,
Hakimpet (PO), Hyderabad- 500 014
Phone : 040-66309501
Website: <http://frc.icfre.gov.in>

Evergreen mixed forests of the Ghats



CENTRES

CENTRE FOR SOCIAL FORESTRY AND ECO-REHABILITATION (CSFER) ALLAHABAD



Centre for Social Forestry and Eco-Rehabilitation (CSFER), Allahabad was established in October 1992 as an advanced centre under Forest Research Institute (FRI), Dehradun. The Centre aims to nurture and cultivate professional excellence in the field of social forestry and eco-rehabilitation in Eastern Uttar Pradesh, North Bihar and Vindhyan Region of Uttar Pradesh and Madhya Pradesh. One Kisan Suchana Kendra has been established by the Centre for providing information related with agroforestry and farm forestry technologies. Centre has also introduced *Melia composita* in eastern U.P.

Centre for Forestry Research and Human Resource Development, Chhindwara came into existence on 30 March 1995. It was declared as a Satellite Centre of Tropical Forest Research Institute, Jabalpur on 3 January 1996. It is mandated with eco-restoration of Vindhyan, Satpura and Maikal hills and Western Ghats, research and demonstration of agroforestry models, research in non-wood forest products, identification of seed production areas and plus trees, establishment of seed orchards; and production of quality planting material of selected species for improving forest productivity. It also looks into provenance trials of teak, bamboo, neem, sissoo, safed siris etc., research on biofertilizers and biopesticides and conducts trainings for farmers/SFDs/NGOs/SHGs.

CENTRE FOR FORESTRY RESEARCH AND HUMAN RESOURCE DEVELOPMENT (CFRHRD) CHHINDWARA



ADVANCED RESEARCH CENTRE FOR BAMBOO AND RATTANS (ARCBR) AIZAWL



The Advanced Research Centre for Bamboo and Rattan (ARCBR) was established at Aizawl as a Centre of the Rain Forest Research Institute, Jorhat on 29 Nov. 2004 and shifted to present building inaugurated on 16 March, 2012. The ARCBR is mandated to conduct advance research on bamboo and rattans focusing on its conservation and sustainable utilization, establishment of germplasm bank/ bambusetum and canetum, nursery techniques, genetic improvement, value addition and extension activities.

The centre came into existence on 8 June 2012 subsequent to a tripartite MoU between the ICFRE, the Forest Department and Forest Corporation of Tripura. Initially 'Centre for Forestry Extension, Research & Ecotourism', the centre was renamed as "Centre for Forest based Livelihoods & Extension" on 20 December 2012. It is involved in securing sustainable livelihoods through forest based biodiversity and its documentation, bamboo research, human resource development for bamboo artisans and bamboo certification, study of watershed management on the issue of lowering of water table in reference to the catchment of Haora river, study on check dam/water bodies; ecosystem services; products and benefits thereof to stakeholders and training for capacity building and on-farm participatory research.

CENTRE FOR FOREST BASED LIVELIHOODS AND EXTENSION (CFLE) AGARTALA





CONTACTS

Director General, ICFRE

o.: 2759382, 2224333,
e.: dg@icfre.org

DDG (Research)

o.: 2757775, 2224836
e.: ddg_res@icfre.org

DDG (Administration)

o.: 2758295, 2224856
e.: ddg_admin@icfre.org

DDG (Extension)

o.: 2750693, 2224830
e.: ddg_extn@icfre.org

DDG (Education)

o.: 2758571, 2224832
e.: ddg_edu@icfre.org

Director (International Cooperation)

o.: 2756497
e.: dir_pic@icfre.org

ADG (IT and Forest Statistics)

o.: 2755221, 2224865
e.: adg_stat@icfre.org

Secretary

o.: 2758614, 2224867
e.: sec@icfre.org

ADG (Administration)

o.: 2750297
e.: adg_admin@icfre.org

ADG (Media & Extension)

o.: 2755221
e.: adg_mp@icfre.org

ADG (Biodiversity & Climate Change)

o.: 2750296
e.: adg_fcc@icfre.org

ADG (Education & Recruitment Board)

o.: 2224809
e.: adg_edu@icfre.org

ADG (Environment Management)

o.: 2753882, 2224813
e.: adg_eia@icfre.org

ADG (Research Planning.)


o.: 2753290
e.: adg_rp@icfre.org

ADG (Monitoring & Evaluation)

o.: 2757485, 2224810
e.: adg_me@icfre.org

ADG (Panchayat & Human Dimensions)

o.: 2224827
e.: adg_pf@icfre.org



THE FOREST IS A PECULIAR
ORGANISM OF UNLIMITED
KINDNESS AND BENEVOLENCE
THAT MAKES NO DEMANDS FOR
ITS SUSTENANCE AND EXTENDS
GENEROUSLY THE PRODUCTS OF
ITS LIFE AND ACTIVITY, IT AFFORDS
PROTECTION TO ALL BEINGS...

Gautama Buddha



Published By

Media and Extension Division

Directorate of Extension

INDIAN COUNCIL OF FORESTRY RESEARCH AND EDUCATION

P.O. New Forest, Dehradun - 248 006

Tel: +91 135 2224814 Email: adg_mp@icfre.org

Visit us @ www.icfre.org