

# Introduction

## MISSION

*To generate, preserve, disseminate and advance knowledge, technologies and solutions for addressing the issues related to forests and to 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.*

**The Indian Council of Forestry Research and Education (ICFRE) is an autonomous organization under the Ministry of Environment, Forest and Climate Change (MoEF & CC), Government of India. The Hon'ble Minister of Environment, Forest and Climate Change is the President of ICFRE society and the Director General is its Chief Executive. The General Body is the supreme authority of the ICFRE, headed by the Union Minister, Environment, Forest and Climate Change, Government of India. Its members consist of serving and retired Officers from various state governments, educational institutes, and scientific organizations.**



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## A. Structure

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The organizational chart is presented at Page IV. The Governing Body is headed by the Chief Executive i.e. the Director General (DG) who is the decision-making authority of the ICFRE. The DG is supported by four Deputy Director Generals (heading Administration, Research, Education and Extension Directorates); Director (International Cooperation); and Secretary ICFRE. Further, the Deputy Director Generals are assisted by Assistant Director Generals and scientists at the headquarters. Each Institute is headed by a Director and is supported by a Research Coordinator, scientists, officers and other staff.

### **Directorate of Research**

The Directorate is headed by a Deputy Director General and supported by three Assistant Director Generals. Research Planning Division is responsible for conducting Research Advisory Group (RAG) meetings at the Institute level, as per approved calendar at each Institute and Research Policy Committee (RPC) meeting at ICFRE level. It coordinates with all the Institutes of ICFRE to formulate national level coordinated projects. Also, as a part of Bamboo Technical Support Group (BTSG), it conducts training programmes for various target groups. The Monitoring and Evaluation Division regularly monitors and peer reviews various projects.

Biodiversity and Climate Change (BCC) Division is working on biodiversity, climate change related research and policy issues leading to international negotiations for United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The Division is also engaged in capacity building programmes of forest officers, scientists, technologists and other stakeholders in biodiversity and climate change through organizing various training programmes. ICFRE having with the status of an observer organization, participates in all the United Nations Framework Convention on Climate Change (UNFCCC) meetings.

### **Directorate of Education**

This Directorate is headed by a Deputy Director General who is supported by one Assistant Director General. It is responsible for capacity

building of the Council's scientific and managerial cadre, through various training programmes. Also, it enhances forestry education at national level through financial support to the state universities imparting forestry education. It also maintains the employees service matters and conducts regular Flexible Complementing Scheme and Department Promotion Committee activities. It also recruits human resources as and when required. This Directorate has also initiated accreditation process, in line with All India Council for Technical Education (AICTE) to improve the quality of forestry education and conducts national Policy Research reviews along with analysis of the existing forest policies, statutes and framework.

### **Directorate of Extension**

The Directorate is headed by a Deputy Director General and supported by two Assistant Director Generals. The Media & Extension Division facilitates various publications, such as, bulletins, brochures, pamphlets, newsletters and annual reports and undertakes activities to promote Rajbhasha Hindi. It also extends the technologies developed by the Council to various target groups, especially the farmers, through Van Vigyan Kendras (VVKs) and Demo Villages (DVs) through comprehensive extension strategies. The Environment Management Division extends scientific expertise in the field of environment and forestry to various agencies through consultancies.

### **Directorate of Administration**

The Directorate is headed by a Deputy Director General and supported by two Assistant Director Generals. Assistant Director General, Administration assists in general administrative and matters relating with the Budget of the Council.

The Information and Technology (IT) Division, under the Assistant Director General (IT&FS), caters to the needs on Information Communication to all Institutes and ICFRE Head Quarters. The ICFRE Server Farm hosts the IFRIS application and other allied key services. The Statistics Division under ADG (IT&FS) collects data from all the states,



pertaining to forestry to disseminate through publication of yearly Forestry Statistics Reports and Bulletins.

#### **Director (International Cooperation)**

The Director (International Cooperation) is supported by one Assistant Director General for Panchayat and Human Dimensions Division and one scientist to develop linkages with international and national organizations in respect of developing projects and processing of memorandum of understanding (MoU).

#### **Institutes and Centres of ICFRE**

ICFRE has nine Regional Research Institutes and four Research Centres located in different bio-geographical regions of the country catering to the forestry research needs of the nation.

**Forest Research Institute (FRI), Dehradun**, established in 1906, is a premier scientific research and ISO 9001:2000 certified Institute. It carries forward the rich tradition of forestry research, carried out by erstwhile Imperial Forest Research Institute to cater to the forestry research needs of the states of Uttarakhand, Uttar Pradesh, Haryana, Punjab and National Capital Territory of Delhi. The advanced Centre for Social Forestry and Eco-Rehabilitation (CSFER), Allahabad, under FRI focuses on social forestry and eco-rehabilitation, catering to the needs for Eastern Uttar Pradesh, North Bihar and Vindhya, Region of Uttar Pradesh.

FRI has been conferred with the status of "Deemed University" by the Ministry of Human Resource Development, Government of India, New Delhi to conduct M.Sc. in Forestry, Wood Science & Technology, Environment Management & Cellulose and Paper Technology disciplines programmes besides conducting Post Masters diploma in Natural Resource Management and Non-Wood Forest Products. It also runs Doctoral Programme leading to the award of Ph.D. degree.

**Tropical Forest Research Institute (TFRI), Jabalpur** focuses on research activities in the states of central India, viz., Madhya Pradesh, Chhattisgarh, Maharashtra and Odisha. It has a satellite Centre for Forestry Research and Human Resource Development (CFRHRD) at Chhindwara, which conducts research in the specialized areas of human resource development in forestry sector by imparting vocational training, leading to poverty alleviation

through self-employment.

**Arid Forest Research Institute (AFRI), Jodhpur** focuses on research activities in Rajasthan, Gujarat and Dadra & Nagar Haveli. The Institute carries out research in forestry and allied fields to enhance arid and semi-arid land productivity and vegetative cover to conserve biodiversity and to develop technologies for the end-users.

**Himalayan Forest Research Institute (HFRI), Shimla** was established in 1987 by upgradation of Conifer Regeneration Research Centre. The Institute caters to the research needs of the states of Jammu & Kashmir and Himachal Pradesh with focused research on Himalayan and cold desert areas. It has nine Field Research Stations for carrying out site-specific research, including the one located at Tabo and Lahaul-Spiti (HP) to address specific research needs of cold deserts. The Institute has also been declared as the "Advanced Centre for Cold Desert Afforestation and Pasture Management" for taking up advanced research.

**Rain Forest Research Institute (RFRI), Jorhat** was established in 1988 to support forestry research in North-Eastern states. The Institute focuses on conservation methods for restoration of degraded lands under shifting cultivation, management of community forests and multi-facet use of bamboo and cane. It has two Research Centres: Advanced Research Centre for Bamboo and Rattan (ARCBR) in Aizawl (Mizoram) & Centre for Forestry & Livelihood Extension (CFLE) Agartala (Tripura).

**Institute of Forest Productivity (IFP), Ranchi** was established in 1993 to look into the forestry research and education needs in eastern region i.e. the states of Bihar, Jharkhand and West Bengal. The Institute also has Forest Research Centre at Mandar (Ranchi), Environmental Research Station at Sukna (West Bengal) and Forest Research & Extension Centre at Patna (Bihar) to carry out research and extension activities.

**Institute of Forest Biodiversity (IFB), Hyderabad** was established in 2012 by upgradation of the erstwhile Forest Research Centre with the mandate to carry out research on forest biodiversity of Andhra Pradesh with special emphasis on the forest biodiversity of Eastern Ghats.



**Institute of Wood Science and Technology (IWST), Bengaluru** was established in 1988. The Institute caters to the forestry research needs of the states of Karnataka and Goa. The Institute has widened its research activities in the fields of tree improvement and wood energy in addition to conventional wood sciences. This Institute has also been widely recognized as the centre for advanced studies in areas of improved utilization of wood, Mangrove and coastal ecology and Sandal research of Western Ghats.

**Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore** was formed

during 1988 by upgradation of Forest Research Centre (FRC), working under the Forest Research Institute and Colleges since 1959. The Institute caters to the forestry research needs of the states of Tamil Nadu, Kerala, Andaman and Nicobar and Lakshadweep Islands. It maintains seed production areas and clonal orchards for important tree species, such as, teak, casuarinas, eucalypts, pongamia, jatropha and acacia. The Institute has field units in Kerala, Tamil Nadu and Andaman and Nicobar islands.

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## B. Research Management

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### Directorate of Research

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.

**Research Planning Division** deals with the planning, formulation and finalization of plan funded forestry projects of nine research institutes and four research centres of ICFRE by conducting Research Advisory Group (RAG) meetings at each institute and National level Research Policy Committee (RPC) meeting at ICFRE HQs under the chair of Director General, ICFRE. RPC also take into consideration the balance among international, national, regional and state research requirements and decide investment in high quality forestry research/emerging issues to meet the aspiration of the society with bottom-up, transparent and participatory approach. It also reviews the ongoing projects for continuation and change request, if any proposed by the institutes.

Research Advisory Group (RAG): The formal RAGs at Institute level except for RFRI, Jorhat and the Research Policy Committee Meeting (RPC) meeting at ICFRE level were not conducted during 2015-16 due to severe budget constraints.

In the absence of RAG meeting's at Institute level and RPC meeting at ICFRE level, it was

decided to conduct a review meeting of all ongoing projects at ICFRE headquarters under the chairmanship of DG ICFRE to assess the progress of ongoing projects and suggest changes/ modifications/ extension of ongoing projects, if required. The review meeting was held on 22 and 23 January 2016 with all the Directors, GCRs, DDGs, Director (IC), ADGs, Scientists of Research Directorate of ICFRE in the Board Room of ICFRE. With regard to new projects, the projects approved by XVI RPC 2015 that were on shelf due to budget constraints were recommended for initiation in 2016-17 after reviewing the budget position in March / April 2016. The ongoing and new projects of RFRI Jorhat that were approved by RAG held on 10 -11 March 2016 were approved through video conferencing held under the chairmanship of DG, ICFRE.

A total of 80 new proposals submitted by the institutes with the budget outlay of Rs. 3.42 crores were discussed and approved by the review committee to be taken up in 2016-17. A total of 121 ongoing projects were also reviewed by the committee out of which 64 projects with budget outlay of Rs. 2.91 crores were approved for continuation.

**Monitoring and Evaluation Division** under the Directorate of Research deals with the annual review and evaluation of all the ongoing research projects of ICFRE institutes. It suggests corrective measures for timely completion of the projects and achievements of





the objectives with perfection. Total 216 projects are being implemented that include 116 ICFRE plan projects and 100 externally aided projects during the year. Also, during the period, the annual review of 305 (181 ICFRE funded and 124 externally aided) ongoing and completed research projects of all ICFRE institutes was conducted.

**Biodiversity and Climate Change (BCC)**

**Division** is working on biodiversity and climate change related research and policy issues leading to international negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD) and Convention on Biological Diversity (CBD). The Division has undertaken several research projects as well as short and long term policy programmes to address the problems of biodiversity and climate change and is also engaged in capacity building programmes for forest officers, scientists, technologists and other stakeholders in biodiversity and climate change through organizing various training programmes.

- **Developing and using experience in implementing REDD-plus in the Himalayas:** This project on REDD-plus with active collaboration from ICIMOD with a regional mandate, is being implemented in Bhutan, India, Myanmar and Nepal. In India this partnership is for REDD-plus capacity building focusing on North East region. Two days project inception workshop on REDD-plus in Himalaya was organized on 28-29 January 2016 in Aizawl for kick start of the project in the state of Mizoram and REDD-plus capacity building for the officers of North Eastern States of India.
- **REDD-plus pilot project in the Van Panchayat (Village Community Forests) of Uttarakhand, India:** ICFRE has initiated a REDD-plus pilot project in the Van Panchayat (Village Community Forests) of Uttarakhand. Community managed forests like Van Panchayats (Community Forests) in Uttarakhand are example of community control over forests. REDD-plus actions are being initiated as demonstration activities in these forests. 123 sample plots have been

laid in the project area Kalsa Gola Subwatershed. Assessment of carbon stock in different carbon pool like aboveground tree, herbs, shrubs, soil organic carbon has been completed. Socio-economic survey was conducted in the project area Kalsa Gola to analyze the socio-economic profile of the households and the drivers of forest degradation. Preliminary analysis of the data collected has been done.

- **Study-cum-survey to assess the demand and supply of medicinal plants in India-in the national perspective, as well as in respect of the international market:** Collected information on consumption of medicinal plants by AYUSH industries, rural households and folk healers/ traditional practitioners throughout the country. Trade data from markets across the country was also collected. First and second progress report of the project were submitted to the National Medicinal Plants Board, Ministry of AYUSH, Government of India. National consultation meeting of the project regarding finalization of draft final report of the project was also organized.

**Director (International Cooperation)**

Director (International Cooperation) co-ordinates and liaisons with ICFRE institutes for processing and implementation of Externally Aided Projects from national and international funding agencies. It facilitates signing of MoUs of Externally Aided Projects of ICFRE institutes respectively from the Director General, ICFRE and the MoEF &CC.

- ◆ Following MoUs were processed/approved for the period 1 April 2015 to 31 March 2016:

**National**

- MoA between IWST and Central Institute of Plastic Engineering and Technology (CIPET), Chennai.
- MoU between FRI, Dehradun and Avantha Centre for Industrial Research and Development (ACIRD), Thapar technology Campus, Bhadson Road, Patiala for two research projects "Pre-treatment of lignocelluloses biomass for hemicelluloses extraction for bio-ethanol production" and "Preparation and applications of cationized



- nano- cellulosic strength agents for paper making".
- MoU between FRI, Dehradun and United Spirits Ltd. Bengaluru project entitled "Wine maturation using Indian woods".
- MoU between AFRI, Jodhpur and Rajasthan State Judicial Academy, Jodhpur for "Designing, Development and Performance of Urban Forestry Model for New Campus of Rajasthan High Court, Jodhpur".
- MoA of IFGTB, Coimbatore with M/s Varsha Bioscience and Technology India Private Limited (VBTIPL), Hyderabad for project entitled "Registration and Commercialization of the most effective bio-pesticide formulation using the seed extract of Hydnocarpus pentandra for the management of insect pests of Agriculture/forestry importance".
- MoU between Rain Forest Research Institute (RFRI), Jorhat and
  - GBPNIHESD (earlier GBPIHED), Kosi Katarmal Almora, Uttarakhand with Itanagar unit, Arunachal Pradesh and
  - NIRDPR-NERC having its office at Jawaharnagar, Khanapara, Guwahati for Research Partnership and Collaboration.
- MoU for the project proposal "Development of nursery manual for forest tree species of Rajasthan" between Arid Forest Research Institute (AFRI), Jodhpur with Rajasthan State Forest Department, Jaipur.
- MoU between the Indian Council of Forestry Research & Education (ICFRE), Dehradun and Green Initiatives Certification and Inspection Agency (GICIA), Noida (UP) in the field of forestry and environmental research, education and extension.

#### International

- MoU between ICFRE and Department of Forest and Park Services, Ministry of Agriculture and Forest Royal Government of Bhutan submitted to MoEF&CC for approval.
- MoU between ICFRE and Kasetsart University (KU), Bangkok has been submitted to MoEF&CC for approval for collaboration of KU and ICFRE in the field of biotechnology, tree improvement and conservation of forest genetic resources and value added forest products.

◆ Status of Externally Aided Projects (EAPs) of ICFRE institutes was compiled for the period 1 April 2015 to 31 March 2016. Summary of the same is given below;

Institutes	Ongoing (EAPs)		Submitted (EAPs)		Completed (EAPs)		Total No. of MoUs/ Consultancy Projects
	Total No. of Projects	Total Budget Outlay (Rs. in lakhs)	Total No. of Projects	Total Budget Outlay (Rs. in lakhs)	Total No. of Projects	Total Budget Sanctioned (Rs. in lakhs)	
AFRI, Jodhpur	16	268	7	139	3	26	6
FRI, Dehradun	39	2457	40	2889	5	166	5
HFRI, Shimla	10	198	20	773	3	41	3
IFGTB, Coimbatore	23	461	26	1225	8	324	-
IFP, Ranchi	5	1499	2	4002	3	115	1
IFB, Hyderabad	3	51	5	122	1	20	-
IWST, Bengaluru	24	388	19	309	3	62	-
RFRI, Jorhat	8	195	15	872	1	6	6
TFRI, Jabalpur	16	354	27	779	4	39	4
<b>TOAL</b>	<b>144</b>	<b>5871</b> <b>(58.71crore)</b>	<b>161</b>	<b>11110</b> <b>(111.10 crore)</b>	<b>31</b>	<b>798</b> <b>(7.98 crore)</b>	<b>25</b>