1. Introduction

The Indian Council of Forestry Research and Education is an autonomous organization under the Ministry of Environment Forests and Climate Change (MoEFCC), Government of India. The Minister of Environment, Forests and Climate Change is the President of ICFRE and the Director General is its Chief Executive. The General Body is the supreme authority of the ICFRE, headed by the Union Minister, Environment, Forests and Climate Change, Government of India. Its members consist of serving and retried Officers from various state governments, educational institutes, and scientific organizations.

A. Structure

The organizational chart is presented at page IV. The Governing Body is headed by the Chief Executive i.e. the Director General 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); Assistant Director General Information and Technology and Forestry Statistics 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 Deputy Director General and supported with 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

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.

Monitoring and Evaluation Division regularly monitored and peer reviewed completion of 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 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 the 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. 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 the 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. The SLEM Project Unit acts as the Technical Facilitation Organization (TFO) to implement Global Environment Facility (GEF) and World Bank (WB) supported medium size projects on policy and institutional reforms for mainstreaming and up scaling sustainable land and ecosystem management in India.

Directorate of Administration

The Directorate is headed by the Deputy Director General and supported by two Assistant Director Generals. For general administration this Directorate is supported by Assistant Director General, Administration. Assistant Director General Recruitment Division looks into the employees service matters and conducts regular Flexible Complementing Scheme and Department Promotion Committee activities. It also recruits human resources as and when required.

The Information and Technology (IT) Division, under the direct control of Director

General, is headed by Assistant Director General, caters to the needs on Information Communication of all Institutes and ICFRE Head Quarter. The ICFRE Server Farm hosts the IFRIS Application and other allied key services. The Statistics Division 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 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), Dehra Dun, 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 ecorehabilitation 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. Forestry, M.Sc. Wood Science & Technology and M.Sc. Environment Management programmes besides conducting Post Masters diploma in Natural Resource Management and Non-Wood Forest

Products, and Post Graduate Diploma in Pulp & Paper Technology. It also runs Doctoral Programme leading to the award of Ph.D. degree.

The National Forest Library and Information Centre (NFLIC) of the Institute is the richest centre of forestry and allied sciences document collection in South and South-East Asia.

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 Havelli. 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 from 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. Advanced Research Centre for Bamboo and Rattan (ARCBR) has also been established in Aizawl (Mizoram) as its unit in 2004, which conducts research for socio-economic upliftment of North-Eastern people, which revolve around bamboos and rattans.

Institute of Forest Productivity (IFP), Ranchi 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 during December 2012 by up gradation 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), Bangalore 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 coastal ecology and sandal research of Western Ghats.

Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore was formed during 1988 by up gradation 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.

B. Research Management

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 under the Directorate of Research deals with the planning, formulation and finalization of plan funded forestry projects of nine research institutes and four research centers of ICFRE. The process involves stakeholders meets, Research Advisory Group (RAG) meetings at each Institute and national level Research Policy Committee (RPC) meeting at ICFRE HQ under the chair of Director General, ICFRE keeping in view the balance among international, national, regional and state research requirements and decides on investment in high quality forestry research/emerging issues to meet the aspiration of the society with transparent and participatory approach.

Research Advisory Group (RAG) meetings of each of the nine ICFRE institute for 2013-14 were convened as per approved calendar at Institutes/ by circulation of the proposals to the RAG members.

XIV Research Policy Committee Meeting (RPC) for the year 2013-14 was convened under the Chairmanship of Director General, ICFRE from 30th to 31st May, 2013 at Dehra Dun. A total of 76 new projects with a budget of Rs 631.23 lakhs were approved.

The Council is implementing 125 projects funded by agencies, such as, Ministry of

Environment Forests & Climate Change (MoEFCC), Protection of Plant Varieties and Farmers' Right Act (PPV&FRA) Authority, Compensatory Afforestation Fund Management and Planning Authority (CAMPA), state forest departments (SFD), Uttarakhand State Council for Science and Technology (UCOST), Bamboo Technical Support Group (BTSG), National Medicinal Plants Board (NMPB), State Medicinal Plants Boards (SMPB), Department of Biotechnology (DBT), Department of Science & Technology (DST), National Seeds Corporation (NSC), IITs, ITC Bhadrachalam, Hill Area Development Programme (HADP), National Rain fed Area Authority (NRAA) and so on, with total budget outlay of Rs. 48.52 crore. Under the Bamboo Technical Support Group, eight trainings were conducted at various ICFRE institutes.

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 293 projects are being implemented that include 228 ICFRE plan projects and 65 externally aided projects during the current year. During the annual review, ongoing and completed ICFRE plans and externally aided projects were reviewed. A peer review of Project Completion Reports (PCRs) process at ICFRE level has been initiated to maintain the quality of the project completion report.

Forests Biodiversity and Climate Change Division provides advisory and consultancy services for conceptualizing, implementing, monitoring and evaluating the Clean Development Mechanism (CDM) and Reduced Emissions from Deforestation and Degradation (REDD-Plus) projects in the country. The Division Participated in the Conference of the Parties (COP); Subsidiary Body for Scientific and Technological Advice which focuses on setting policy as an observer organization of United Nations Framework Convention on

Climate Change (UNFCCC). It also conducted national level training programme for Indian Forest Services, researchers and academicians. The *Reassignment of Forest Types of India* conducted by ICFRE has been published in the form of a book titled "Forest Types of India: Revisited" and released on 17 May 2013.

Director (International Cooperation)

The Director (International Cooperation) facilitates in implementation of externally aided

research projects for processing approvals and clearances from the Director General, ICFRE or MoEF & CC. The Division organizes seminars, meetings and conferences, especially pertaining to forestry research and livelihoods. A coffee—table book has been published highlighting the success stories of Bihar project on prosperity of farmers through poplar based agroforesty models. The Hindi version of this book is also prepared.