



EXTENSION PANORAMA



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Introduction

The Directorate of Extension endeavors to transfer simple technological packages including appropriate models to the intended target groups especially the farmers. It coordinates various extension activities of ICFRE Institutes and centres and evolves comprehensive extension strategies. It also provides consultancy services in the field of Environment Impact Assessment and other related areas.

Directorate of Extension aims at dissemination of useful research findings to various stakeholders through its nationwide network, different publications, workshops and training programmes. It also provides consultancies in EIA and related subjects.

The Directorate having Media & Publication, Statistics and Environmental Impact Assessment Divisions has the mandate of Forestry Extension through various publications like bulletins, brochures, pamphlets, newsletters, forest statistics and annual report, network of Van Vigyan Kendras and Demo Villages.

Media and Publication Division looks into the extension activities and strategies being adopted by the institutes of ICFRE for the dissemination of research findings in forestry sector. This division maintains the monthly account of various R & D activities of ICFRE institutes and keeps MoEF apprised of them. The division publishes the Newsletters of ICFRE and the ICFRE Brochure. The reports of ICFRE and its institutes are collected, compiled, edited and published as the Annual Report of ICFRE, which is tabled in Parliament. Work on establishment of Van Vigyan Kendras (VVKs) in collaboration with SFDs and selections of Demo Villages for adoption by ICFRE institutes have progressed considerably. Twenty six VVKs have been

established in different states. Eight Demo Villages have been established in different eco-climate zones of the country. The division is also rendering services to promote Rajbhasha Hindi and evaluating the progress in implementation of Rajbhasha in the Council and its institutes. Quarterly progress report on the progress of Rajbhasha Hindi is collected from all the eight institutes and headquarters, compiled and submitted to the Rajbhasha Vibhag of MoEF. Division conducts trainings and workshops on the implementation of Rajbhasha Hindi.

Environmental Impact Assessment (EIA) Division established in 2003 under the Directorate of Extension, ICFRE acts as a nodal point to extend environmental expertise available in ICFRE to various stakeholders in the form of scientific services related to environmental protection and management. The Division carries out Environmental Impact Assessment (EIA) studies for a variety of developmental projects. It also prepares Environmental Management Plan (EMP) for the developmental projects with an aim to ameliorate the likely adverse impacts of development on local environment.

The EIA Division coordinates with the EIA Cells in the institutes of ICFRE and also collaborates with other institutions to render best services related to preparation of EIA and EMP for various development projects under different sectors including hydropower, mining and infrastructure development. The strength of EIA Division for extending best scientific services relies on the following:

- Availability of multidisciplinary expertise in the organization.
- Qualified and experienced human resource in forestry and environment related fields.



- More than 100 years rich knowledge base in the organization.
- Commitment to timelines of project related targets.
- Learning from best practices evolved in the past and innovation with new techniques.
- Emphasis on traditional knowledge, for human rights and encouraging stakeholders participation.
- Quality certified organization and procedures (ISO: 9001:2000).
- International experience.

Till date, the EIA Division has extended scientific services to the following sectors:

- River Valley Projects
- Mining Projects
- Seismic Survey for Oil Exploration Projects
- Industrial/Infrastructure Development Projects
- Monitoring & Evaluation/Post Development Auditing of Forestry Related Projects.

Till March 2010, the Division has undertaken 35 EIA/EMP studies worth ` 1440.10 Lakh.

Statistics Division is mandated to collect, process and disseminate information pertaining to the forestry sector of India. This mandate is fulfilled by bringing out the Biennial Forestry Statistics India and Aquarterly Timber/Bamboo Trade Bulletin. The division also undertakes research projects with a statistical base to add to the existing information on various forestry parameters. The division has expertise to deal with huge amounts of data using advanced analytical software like STSTIATICA and SPSS. It handles the various courses of the FRI Deemed University

and also provides expert advice to the various research projects being implemented in ICFRE and its institutes.

The Sustainable Land and Ecosystem Management–Country Partnership Programme (SLEM-CPP) is a joint initiative of the MoEF, GoI and the Global Environment Facility (GEF) and consists of seven projects being implemented in ten states in India with assistance from UNDP, FAO and the World Bank.

Technical coordination to the SLEM Programme is being provided through a Technical Facilitation Organisation (TFO) anchored at the Indian Council of Forestry Research and Education (ICFRE). The TFO has been instituted at the ICFRE under the World Bank led Medium Scale Project (MSP) entitled “Policy and Institutional Reform for Mainstreaming and Up-scaling Sustainable Land and Ecosystem Management in India”. Various Divisions at the ICFRE Headquarters and its research institutes provide the requisite technical support as and when required to SLEM projects located in different parts of the country. The SLEM Project Implementation Unit at the ICFRE is headed by a Project Director under the Directorate of Extension at ICFRE Headquarters. The project became formally operational on 10th August 2010 and will end on 9th August 2012.

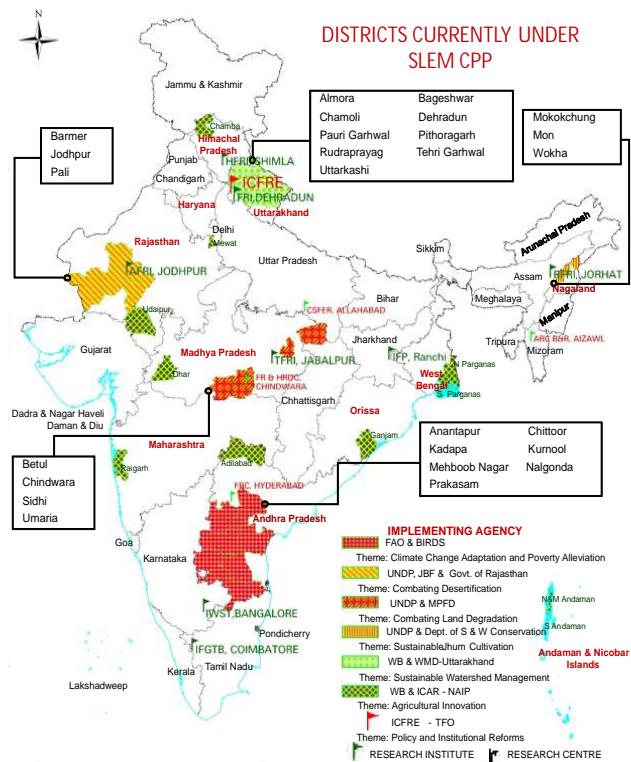
The project sites under SLEM-CPP cover diverse ecological zones including arid, coastal and mountainous ecosystems and address diverse aspects of land and ecosystem management including coastal agriculture, shifting cultivation, watershed management and groundwater management.

Objectives and Responsibilities of the TFO

The project aims at the harmonisation of institutional and policy framework, coordinating and monitoring interventions related to



agriculture and natural resource management that promote sustainable land management and enhance agricultural productivity while minimising environmental impacts and take account of climate variability and change. The



Location of SLEM Partners and ICFRE Institutes

overall objective of the SLEM Programme is to contribute to poverty alleviation in India by promoting enhanced efficiency of natural resource use, improved land and ecosystem productivity and reduced vulnerability to extreme weather events, including the effect of climate change. The SLEM partnership seeks to create synergy among the various SLEM project partners through sharing best practices/lessons learnt and by providing policy recommendations to scale-up the SLEM approach in India.

The responsibility of TFO is to support the realisation of the vision of SLEM at national and state levels. The TFO will ensure the collection of

knowledge and learning of experiences from all of India and on that basis formulate recommendations for policy, strategy and approaches for sustainable land and ecosystem management for each sector. The TFO will also disseminate the learning to other agencies including the civil society in order to benefit them from the knowledge and incorporate them into their programs. The TFO derives lessons learnt from the projects participating in SLEM-CPP and provides the projects with technical backstopping when requested.

Activities of the TFO

The Project Implementation Unit (PIU) at the TFO has become fully operational. A number of activities have been carried out by the TFO to fulfill the mandate assigned to it. One of the first major activity carried out by the TFO was organising the Launch Workshop of the project under SLEM-CPP. The launch workshop was held in New Delhi on 8th and 9th February 2010 at



Launch Workshop SLEM-CPP

the National Agricultural Science Complex, New Delhi. The workshop was organised by the ICFRE in collaboration with the Ministry of Environment and Forests. Shri R.H. Khwaja, Special Secretary, MoEF was the Chief Guest on the inaugural day of the workshop. The two days workshop brought together the SLEM-CPP project partners, experts on the thematic areas of



SLEM, scientists from the ICFRE Institutes and the funding agencies. A detailed brochure on the SLEM-CPP which included information on SLEM objectives, policy coordination, technical coordination, project partners, activities of the programme and districts covered under SLEM-CPP was also released. Copies of the "Project Operation Manual" of SLEM-TFO were also shared with partners in the workshop.

Another mandated tasks of the TFO is to carry out a comprehensive baseline analysis to analyse the underlying causes of land degradation, its impact on biodiversity and how land management is impacted by climate variability and change. The baseline study through secondary sources of information will seek to indicate the present status of land degradation, analyze the drivers, and provide an account of measures being taken to address the same. Through secondary sources of information and series of consultations, the study may reveal the impact of climate variability/change on land management practices, especially in vulnerable ecosystems. The draft "Terms of Reference (ToR) of the 'Baseline Study'" has been finalized and follow up action initiated.

One of the mandated activities of the TFO was the development of an inter-institutional mechanism. To achieve the same, a National Steering Committee (NSC) for SLEM-CPP has been established. The MoEF vide its office memorandum 12/2009 BV (CD) dated 31st March 2010, has constituted the NSC with the Special Secretary, MoEF as the Chairperson. Director General, ICFRE is one of the members and DDG (Extn.) is the Member Secretary of the NSC.

Financials

The total approved cost of the project is US \$1,985,267, of which GEF financing accounts for US \$981,412, and the balance amount of US \$1,003,855 is by way of co-finance by the

ICFRE. The TFO has incurred an expenditure of ` 33.37 lakh up to 31st March 2010.

National Forest Library and Information Centre (NFLIC)

The National Forest Library and Information Centre (NFLIC) is richest in document collection on forestry and allied subjects in South and South-east Asia. The NFLIC has been providing all types of library and information services viz. reference, referral, lending, reprography, current awareness, inter-library loan, retrieval of information from machine readable database, etc. to its users. During the year, a total of 29,339 books were loaned to the users for outside reading. Besides, 53,915 documents were consulted inside the library.

The document collection was enriched by the addition of 2,018 books and other documents out of which 654 books were purchased at a cost of ` 11.64 lakhs and 364 books were received gratis. The NFLIC subscribed to 99 Indian, 118 foreign periodical titles. Besides, 14 E-journals were subscribed for all the institutes under ICFRE. A sum of ` 94 lakhs was spent on the subscription. It also received 265 periodical titles gratis.

The NFLIC has been selling ICFRE publication through its Book Depot. During the year 509 books and 19 VCDs were sold to the State Forest Departments, universities, etc.

Environmental Information System (ENVIS)

The Ministry of Environment and Forests, Government of India established an ENVIS Centre on Forestry at the NFLIC. The Centre, during the year enriched the following database by the addition to new references, which have internet accessibility through the website of the Centre having URL: www.frienvis.nic.in: Indian Forestry Abstracts, Participatory Forest Management, *Prosopis juliflora*, Poplars, Forests



and Environment in Press, Current Forestry Literature. Besides, the contents pages of journals, forest cover of India, state wise and then district wise, announcement of forthcoming national and international conferences, seminars, symposia, training courses were also put up on the website.

Publications: The ENVIS Centre on Forestry published two thematic issues of ENVIS Forestry Bulletin on Forest Insect Pests and Diseases and Climate Change and Forests. The Centre also published a bimonthly serial publications: Environment and Forests News Digest during the year.

4.1 Report on Van Vigyan Kendra (VVK) and Demo Village (DV)

Van Vigyan Kendras

The Indian Council of Forestry Research and Education (ICFRE) through its eight institutes with the active cooperation of State Forest Departments has established 26 Van Vigyan Kendras in different States/UTs. The basic objective of VVKs is dissemination of various technologies developed by the Council and its institutes and State Forest Departments (SFDs) to the user groups including farmers and forest based industries.

The Forest Research Institute, Dehradun has established 6 Van Vigyan Kendras at Hoshiarpur (Punjab), Pinjore (Haryana), Haldwani (Uttarakhand), Chandigarh (UT Chandigarh), NCT Delhi and Kanpur.

A total of 11 trainings were conducted during 2009-2010 under the VVK Programme on “Importance, Propagation and Utilisation of NTFP sp.” and “Nursery and Plantation Techniques” to the farmers and foresters.

As for the model nursery under the VVK, the work on establishment at UT Chandigarh and

Pinjore(Haryana) is in progress. The site at NCT Delhi is in progress of finalisation and the work will start after the codal formalities.

IFGTB, Coimbatore has established 03 VVKs one each at Coimbatore (Tamil Nadu), Kuthiran (Kerala), and Port Blair (A&N Islands). A Tree Information Centre has been established at Coimbatore as part of the VVK, Tamil Nadu. A model nursery has been established at VVK



Dr. G.S. Rawat, DG, ICFRE, Dehradun Inaugurating Model Nursery at VVK Coimbatore

Coimbatore, organised training programmes to farmers and forest officials. A total of 150 farmers and 30 Forest Extension Officers were trained through VVK on cultivation and management of



Tree Information Centre IFGTB, Coimbatore

important tree species used in tree cultivation in private land programme, quality planting stock production, bio-fertilizers, biomanures and clonal technology, etc.

Established the VVK at the Information and Extension Centre, Kuthiran. Organised the Karshaka Mela (Farmers Mela) in association with KFRI and Kerala Forest Department at Peechi in which 200 farmers participated. Organised a training workshop on cultivation and management of important tree species of Kerala.



A model nursery was established at VVK, Port Blair. Activities for raising of 15,000 seedlings for distribution in 2010-11 were initiated.

IWST, Bangalore has established 03 VVKs- one each in Karnataka, Andhra Pradesh and Goa. The institute designed and fabricated a portable distillation unit for extraction of essential oils from leaves of several aromatic plants. The unit is very easy to handle and can be operated at the plantation site instead of transporting bulky raw material. This reduces both time and cost. Three such units have been fabricated and supplied to VVKs of Karnataka, Andhra Pradesh and Goa for demonstration. Other items like ammonia fumigation chamber, audio-visual equipments, furniture, publicity material like posters and handouts in local language have been provided to VVKs. A nursery has been established and a poly house, shade net house, root trainers, waterline, watch and ward etc have been facilitated. A number of trainings and demonstration programmes were organized during the period. Seedlings were also distributed to the farmers of Demo Village.

Altogether, 12 training programmes were conducted under "Van Vigyan Kendra", FRC, Hyderabad. A total of 416 participants received training on topics covering Forest Nursery, Tree improvement, Wood science, Biodiversity and environment related issues, Disaster management, etc.

TFRI, Jabalpur has established 4 VVKs one each at Raipur (Chhattisgarh), Nara Depot (Maharashtra), Jabalpur (Madhya Pradesh) and Koraput (Orissa). A number of trainings and demonstrations were organised at various places under VVKs.

RFRI, Jorhat has established 5 VVKs- one each in Assam, Arunachal Pradesh, Mizoram, Nagaland and Tripura. The institute organized

Nodal Officers' Meet of Van Vigyan Kendras and Demo Village on 29th January 2010 for better coordination among the Nodal Officers of VVKs and for effective implementation of the various activities of VVKs. The Nodal Officers/ their representatives of all the five Van Vigyan Kendras attended the Meet and presented the progress of their respective Kendras.

A Model Nursery at Chessa was raised for development of seedlings of different forest trees, medicinal plants, bamboo and cane at Arunachal Pradesh. A small vermicomposting chamber has been constructed near the Modern Nursery, Chessa for production of organic manure. Training and demonstrations were held as per schedule.

A Model Nursery was established at VVK, Nagaland. Trials were conducted to raise seedlings of local firewood species Extensive training and demonstrations were imparted to Forest Department staff, Farmers, JFMC, NGOs at the different places.

A Model Nursery was established at Van Vigyan Kendra, Mizoram. Various facilities such as Shade House, Mist Chamber, Fencing, Irrigation system, Open shade with Store House, Permanent Cemented Beds, Sump and Composting unit were created in the Model Nursery. A number of training programmes were conducted for capacity building of stakeholders.

Dissemination of technology information through extension literature was done at Van Vigyan Kendra, Tripura. Trainings and Demonstrations were conducted as per schedule. A Model Nursery was established at Hatipara.

Various facilities such as Shade House, Permanent Cemented Beds, Nursery of important plant species of NER were created in the Model Nursery at Van Vigyan Kendra, Assam. Training and demonstration on various subjects were imparted to the stakeholders at different places.



AFRI, Jodhpur has established 3 VVKs in the states of Rajasthan, Gujarat, and at Dadra and Nagar Havelli, Daman & Diu (UT). At VVK Bikaner, Rajasthan, upgradation/renovation works were taken up at Hi-Tech Nursery Bichhiwal, Bikaner & Satellite Nursery, Mohangarh, Jaisalmer. Old Agroshed house was renewed at Bicchiwal nursery, Bikaner (2 Nos.) and Satellite Nursery Mohangarh, Jaisalmer



Training of Farmers & Field Functionaries at Kisan Bhawan, Bikaner



Renovated Polyhouse at Hi-Tech Nursery Bikaner

(2 Nos.). Polyhouse (mist chamber) was renewed at the nursery of Bicchwal, Bikaner (01set) and Mohangarh, Jaisalmer (01 set). Old root trainer stands (1200 nos) were repaired (cleaning, welding and painting). One compost chamber (permanent structure) was constructed at Bichhwal, Bikaner. Training was organized for farmers and field functionaries. High quality seedlings (10,000 nos) of *Prosopis cineraria* (khejri) were raised at Hi-Tech nursery, Bichhiwal, Bikaner for farmers/stakeholders.



Agronet House after Renovation at VVK Satellite Nursery, Mohangarh

Hi-Tech nursery upgradation/renovation works under VVK were taken up at R & D Centre of GFD, Gujarat, Rajkot. Complete sprinkler system set, four way fogger (24 Nos.) etc. were fixed and the Agroshed house and mist chamber



Fitting & Fixing of Micro-fogger in Hi-Tech Nursery at R&D Centre, Rajkot (Gujarat)



High Quality Seedlings Raised at Hi-Tech Nursery, Rajkot

were strengthened. UV Film of germination chamber was replaced and green net cover (300 sq. metres) also provided for repairing/strengthening. Root traines, micro-fogger, iron root trainer stands, germination chamber stand, garden nylon pipe and nursery tools kit etc. were procured & supplied to strengthen the Hi-Tech nursery, VVK Rajkot.



Training of Farmers & Field Functionaries at GFRI, Gandhinagar

Training was organized for Farmers and field functionaries. Five Thousand nos. of high quality seedling of ten tree species raised at the Hi-Tech Nursery, VVK Rajkot for stakeholders.

VVK at Khanwel, Silvasa (Dadra & Nagar Haveli, UT) was under process Establishment.

HFRI, Shimla has established 2 VVKs, one at Sundernagar, Himachal Pradesh and another at Janipur, Jammu, J&K. The institute published the following literature- News letter, Edited book on 'Forestry Extension Strategy' and Pamphlets (3 Nos) on 'Chilgoza'; 'Beal' and 'Kashmal' respectively in simple Hindi vernacular language. Organized and imparted training on "Inter-cultivation of Medicinal Plants for Sustainability and Livelihood Options" and Awareness Programme on "Non-Timber Forest Products: Options and awareness". Similarly another exposure visit on "Agroforestry: Options and awareness amongst the stakeholders" was organised to the farmers from the state of Jammu & Kashmir from 27th to 30th March 2010. Farmers of the above state were taken to the States of Uttarakhand and Haryana. A total of seventeen farmers participated in the exposure visit. The farmers visited the famous agroforestry "Hara Farms" near Yamunanagar in Haryana and agroforestry systems near Haridwar for visualizing latest agroforestry technologies and interventions. The farmers also visited Model Village Shyampur, Van Vigyan Kendra, Dehradun

and Museums of Forest Research Institute, Dehradun.

Establishment and Upgradation of the facilities of demonstration nursery at Field Research Station, Brundhar Jagatsukh (Manali). Organized and imparted training on "Application of Technological and Research Interventions for Enhancing Forest Productivity" at VVK, Jammu (Jammu & Kashmir)'. Established the nursery at Nagbani, Jammu under VVK Janipur, Jammu (J&K), in an area of 2250 m².

Demo Villages (DVs):

The proposal of establishment of demonstration village was conceptualized with an objective to transfer technologies developed by various ICFRE Institutes /Centres.

Demo Village, Shyampur, Dehradun

The Village Shyampur has been developed as Demo Village near Dehradun by FRI, Dehradun. In the village, a Model Nursery has also been developed in collaboration with Bagwan Gramodyog Samiti, Shyampur Village. The following structures are maintained and are being used for different silvicultural activities and are also being demonstrated to the people of nearby area:

- Low Cost Mist Chamber – One
- Propagation Unit – One
- Water Tank with Complete Pipe Fittings – One
- Motor House with 0.5 HP Motor – One
- Mounted Angle Iron Beds – Eight
- Shade House – One
- Seed Drying Platform – One
- Vermicompost Unit – One
- Root Trainers – 95 Blocks

Activities Conducted During the Period Under Report

- Supply of medicinal and forestry plants by Silviculture and NWFP Division of FRI to model village.



- Maintenance of medicinal and forestry origin species.
- Raising seedlings of various species of medicinal and forestry importance.
- Distribution of seedlings mostly *Aloe vera* and *Asparagus recemosus* to the farmers of Baniawala, Nayagaon, Ganeshpur, Selaquie, Ambiawala, Suklapar, Shyampur of Dehradun district for growing in their fields.
- Two Trainings on Forestry and Plantation technique of Medicinal plants have been done in the village as annual plan.

Demo Village, Kandiyur, Coimbatore

A status survey on the village to assess the demography, socioeconomic conditions, scope for plantation based economy, etc. was raising of a nursery initiated. Commissioned a bore well in the nursery for the use of nursery. Identified farm lands from 12 farmers for establishment of successful agroforestry models and model plantations. The Demo Village nursery formally inaugurated by the DG, ICFRE. Organized an interactive meeting of the villagers and farmers with DG, ICFRE. Conducted training programme on quality planting stock production, plantation management, production and use of biomanures and biofertilizers. Distributed seedlings to farmers for raising the same on field bunds. Commissioned a borewell in the tribal hamlet Irularpathi of Kandiyur Village and used the same for raising of tree crops in tribal lands.



Dr. G.S. Rawat, DG, ICFRE, Dehradun Distributing Quality Seedlings to the Farmers



Dr. G.S. Rawat, DG, ICFRE, Dehradun
Inaugurating the Demo Village Nursery

Tree Growers Mela 2010

IFGTB, Coimbatore organised a Tree Growers' Mela on 18th and 19th February 2010 at Coimbatore. It was inaugurated by Shri Jairam Ramesh, Hon'ble Minister of State (Independent charge), Ministry of Environment and Forests, Government of India. During the function, he released four clones of Eucalyptus and four clones of *Casuarina equisetifolia*, that have been developed for dryland conditions.



Shri Jairam Ramesh, Hon'ble Minister of State, MoEF and Dr. G.S. Rawat, DG, ICFRE Releasing Quarterly Newsletter (above) and Clones of *Casuarina*



Demo Village, Byranahalli, Bangalore

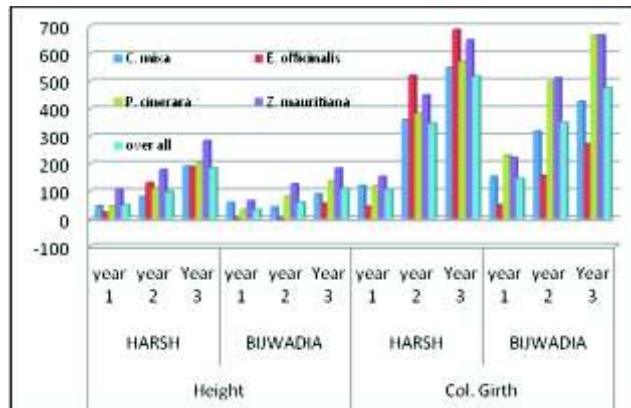
IWST, Bangalore organized training cum-demo programme at Byranahalli (Demo Village) on plantation technique. A total of 2000 seedlings of Silver oak were distributed to farmers. A total of 26 farmers participated in the training programme on 1st July 2009.

Demo Village, Meleng Grant, Jorhat

Meleng Grant, Jorhat, Assam was selected as the RFRI Demo Village. The village comprises of three hamlets viz. Bhogpur, Madhupur and Govindpur with a total of 220 households.

Demo Village, Harsh, Jodhpur

During 2007, two farmers namely Mrs. Sita Chaudhary, Bijwadia village and Mr. Rajendra Singh Chaudhary, Harsh village were identified and, accordingly, MoUs were signed and preparation of land for plantation and other formalities were initiated. Trials were established in August 2007. Four tree species namely *Prosopis cineraria*, *Emblica officinalis*, *Zizyphus mauritiana* and *Cordia mixa* were planted individually and in combination with each



second year. In both the trials, *Zizyphus mauritiana* and *Prosopis cineraria* showed better growth as indicated by percent increase in height and collar diameter over initial level (Fig 1). *Zizyphus mauritiana* and *Prosopis cineraria*



Overview of Model Plantation after One Year
Showing Cultivation of Crop

maintained better growth. The overall survival was 40% and 30%, respectively followed by *Cordia mixa* and *Emblica officinalis*. *Emblica officinalis* also exhibited poorest survival.

Demo Village, Lanabaka, Sirmour

Organized Camp workshop-cum-villagers meeting on "Bee Keeping and Integrated Pest Management (IPM)" at Lanabaka-Model Village. Also disseminated information on Bamboo Nursery Techniques and its Management, Eco rehabilitation of degraded sites /various nursery techniques on propagation of medicinal plants etc.

For promotion of medicinal and aromatic plants cultivation, processing and marketing on Exposure visit was organised to the farmers of



Overview of Model Plantation after Planting

other. The demonstration was laid in randomized block design in three replications. Data on survival and growth were recorded every six months interval. Crop yield was also recorded. Initial survival at both the sites at three month was 90%. After one year, the survival was 55% and 58%, respectively, but it was 30 and 41% at



Model Village (Lanabaka) from 25th to 27th March 2010. A total of twenty farmers including four women of the Model Village participated in the exposure visit.

Established the demonstration plantation of *Dendrocalamus hamiltonii* in the area of about 1.5 ha. About 665 no of plants were planted at the spacing of 4m x4m.

On the demand of farmers of Model Village, saplings of *Dendrocalamus hamiltonii* (835 no.) have been distributed amongst the farmers to plant this species in their suitable field bunds/lands.

Operationalised the Polyhouse for demonstration to the various end users. Established the Vermicomposting unit to showcase the technology. Strengthened the irrigation facilities by preparation of storage tank and laying out poly pipes.

Raised the important medicinal plants species viz. Mushkbala, Gritkumari, Damabuti, Nimbu Ghas, Stevia, Harad, Beheda, Anola, Akarkara, Patterchata, Bach, Brahmi and Tulsi etc. in the nursery for demonstration and their subsequent adoption for cultivation to augment rural income. Raised important agroforestry species viz., Beul, Paulownia and Bamboo spp. etc., in the nursery for integration in the agroforestry systems.

4.2 Technology Transferred

An MoU between FRI and State Forest Department (SFD), Punjab was signed and technology for production of compost from water hyacinth (*Eichhornia crassipes*), commonly known as Jal Khumbe, was transferred to SFD, Punjab on 15th and 16th February 2010. The technology was demonstrated before the forest officials in presence of Shri R.C. Nayyar, IAS,

Finance Commissioner and Principal Secretary, Forests and Wildlife, Punjab, Shri B.C. Bala, IFS, PCCF, Punjab, Shri Jitendra Sharma, IFS, CCF (Hills), Punjab and the devotees of environmentalist Baba Balbir Singh Seechewal, Punjab.

Cultivation techniques of *Ocimum sanctum*, *Rauvolfia serpentina* and *Asparagus racemosus* have been developed using organic composts and manures for farmers.

Acacia mangium based agroforestry system has been developed and transferred to farmers of Tamil Nadu.

Agroforestry systems using tree crops of Casuarina, Teak, Mahogany, *Melia* and *Gmelina* with Agriculture crops like cowpea and ground nut were developed.

Plantation technologies for dryland farming were developed.

The package of practices developed on integrated methods for management of important nursery and plantation pests of indigenous tree species like Pongamia, Neem, Aegle, *Ailanthus excelsa*, *Melia dubia*, *Gmelina arborea*, *Thespesia populnea*, *Morus alba*, *Bombax ceiba* and *Dalbergia sissoo* were demonstrated to farmers and Forest Department employees.

IWST, Bangalore transferred technology on “Bamboo fibre filled thermoplastics composite” to M/S Konkan Specialty Polyproducts, Mangalore.

TFRI, Jabalpur organised a one-day demonstration programme for transferring of technology on silvi- medicinal system to the 50 farmers of four villages namely Padariya, Khamariya, Neemkheda and Saliwada of Jabalpur district on 1st December 2010 at TFRI, Jabalpur.



RFRI, Jorhat transferred following technologies to the Demo Village.

- **Establishment of Patchouli Nurseries**

Two Patchouli Nurseries have been established in the village to fulfill the requirements for commercial cultivation.

- **Establishment of Bamboo Treatment Tanks**

Two numbers of Bamboo Treatment Tanks have been installed and brought under operation. The bamboo culms are being treated with the techniques developed by RFRI. Performance of the treated bamboos



A Bamboo Treatment Tank

has been found very encouraging to the farmers by using it as fencing on the periphery of their household and homestead boundaries.

- **Establishment of Bamboo Nurseries**

Two Bamboo Nurseries have been established with an expectation to fulfill the high demand of healthy and reliable quality of planting stock to the agencies in the region.



A Bamboo Nursery

- **Establishment of Vermicompost Units**

A total of 21 Vermicompost Units have been constructed and operationalized. The villagers have been made technically capable so as to produce vermicompost by themselves. Participatory approach in execution of the programme has resulted in considerable production cost reduction and better quality of vermicompost achieved through.



A Vermicompost Unit



A Low Cost Vermicompost Unit

- **Establishment of Low Cost Vermicompost Units**

Twenty number of Low Cost Vermicompost Units have also been established in the village.

- **Standardization of AF Practices**

Established an agroforestry trial of patchouli by intercropping with three months old saplings of *Acacia mangium*. The performance of both the plants is found to be very much encouraging among the farmers and researchers.



- Propagation and Multiplication Techniques of Commercially Important Species.**

Established a Modern Nursery at RFRI Campus to facilitate Demo and Participatory Research on Nursery Techniques of various species with maintaining replications in the Nurseries established in the village.



Demonstration of Propagation and Multiplication Techniques of Commercially Important Species

Distribution of Beehives

With a basic aim to provide additional income to the families engaged in wood charcoal business, a total of 56 beehives have been distributed after giving them proper training and demonstration of the practice.

Annual litter production in *Eucalyptus* plantation along Indira Gandhi Nahar Pariyojana (IGNP) was modeled by AFRI, Jodhpur against plantation age and GBH using linear and non-linear procedures and best models for estimation of litter production developed.

Soil and water conservation technology developed to restore degraded hills of Aravalli by adapting and evaluating different gradient based rain water harvesting structures and tree plantation.

HFRI, Shimla imparted various trainings with respect to the already standardized technologies to the farmers, field functionaries of

the state forest department and other stakeholders.

4.3 Research Publications

Researchers at ICFRE have published 305 research papers in various reputed journals including 78 research papers in foreign journals. One hundred ninety two research papers were published in proceedings of various symposia, seminars etc. while over 80 research articles appeared in the form of books/booklets/brochures and chapters in books etc.

Genes of Internal transcribed spacer of two isolates of fungus *Ganoderma weberianum* were assigned accession numbers by National Centre for Biotechnology Information (NCBI), USA.

Genes of Internal transcribed spacer of forty seven isolates of fungus *Ganoderma lucidum* were assigned accession numbers by NCBI, USA.

4.4 Seminar/Symposia/Conference/Workshop Organized

Seminars

IFGTB, Coimbatore, Tamil Nadu Forest Department and Tamil Nadu State Planning Commission jointly organised, a Seminar on “Role of Carbon Management and Afforestation in Climate Change Mitigation in Tamil Nadu” at Chennai on 6th August 2009.

IFGTB, Coimbatore organized a Seminar on “IPR, PPV&FR and Biological Diversity Acts towards Conservation, Innovation, Protection, Management and Commercialization” at the Institute on 4th September 2009.

IFP, Ranchi organized National Seminar on “Productivity Enhancement & Value Addition of Bamboo”. Ranchi with the collaboration of JSFDCL on 9th and 10th March 2010 at Ranchi.



Conference/Symposium

FRI, Dehradun organized IV National Forestry Conference from 9th to 11th November 2009. The Conference was inaugurated by Shri Harbans Kapoor, Hon'ble Speaker, Uttarakhand Legislative Assembly. Over 250 delegates consisting of researchers and scientists from various research institutes, forests officers from SFDs, Research Institutes and students from academic institutions actively participated in the conference.

Second International Conference on Bio-Wealth Management for Sustainable Livelihood (ICBMS-2009) held from 20th to 22nd November 2009 organized at IFP Campus under aegis of Madhwai Shyam Educational Trust, Ranchi.

FRI, Dehradun organized International symposium on "Multipurpose Forestry" from 9th to 13th November 2009.

Workshops

Forest Research Institute, Dehradun organized two days workshop titled "Strengthening Institutional Capacity and Stakeholder Partnership for Implementation of Monitoring Assessment and Reporting on Sustainable Forest Management" on 22nd and 23rd April 2009. This workshop was organized under United Nation's FAO sponsored programme on strengthening Monitoring Assessment and Reporting on Sustainable Forest Management (MAR-SFM) in India.

Indian Council of Forestry Research and Education (ICFRE) in association with Coalition for Rain Forest Nations (CfRN) organized International workshop on "National Forest Inventory: The experience of Non-annex 1 countries" from 27th to 29th April 2009 at Forest Research Institute, Dehradun. The basic objective of the workshop was to discuss issues pertaining to Reducing Emissions from Deforestation and

Degradation (REDD). On the final day, representatives proposed that ICFRE has the potential to train scientists so that Reducing Emissions from Deforestation and Degradation (REDD) could be checked in countries deficient in this technology. About 80 delegates from 34 developing countries and 6 international organizations like World Bank, FAO, GTZ, JICA were attending the workshop.

FRI, Dehradun in association with association of Universities organized the Northern Zone Vice chancellors conference from 22nd to 24th September 2009. The main theme of the conference was "Environmental Education: Issues & Challenges Before Higher Education." The conference was attended by the vice chancellors from the states of Himachal Pradesh, Uttar Pradesh, Punjab, Haryana, Uttarakhand, Chandigarh and J&K. The conference was inaugurated by Dr. Ramesh Pokhriyal Nishank, Hon'ble Chief Minister of Uttarakhand.

FRI, Dehradun and Hindi Vigyan Sahitya parisad, BhaBha Parmanu Anusandhan Kendra, Mumbai organized in Hindi two days' scientific seminar on "Industrial Development and Environmental Conservation in Hill Regions" on 4th and 5th November 2009.

Centre for Social Forestry and Eco-Rehabilitation (CSFER), Allahabad a research centre under FRI, Dehradun organized a National Workshop on "Rehabilitation of Degraded Lands" on 6th and 7th October 2009.

IFGTB, Coimbatore organized one day workshop on "Demonstration and Handing over of IFTGB Herbarium Database" on 23rd April 2009.

IFGTB, Coimbatore organized an Interactive workshop on 19th June 2009 with all its stakeholders to priorities and finalize the new research projects and programmes of the institute.



IFGTB, Coimbatore organized a Workshop on “Role of Women in Environment Protection” in association with Tamil Nadu State Commission for women on 24th July 2009.



Release of a Book on Two Decades of Research in IFGTB by Smt. Ramathal, Chairperson Tamil Nadu State Commission for Women

IFGTB, Coimbatore Organized a Workshop on Cultivation and management of Tree Crops as part of the Krishaka Mela in collaboration with Kerala Forest Department and Kerala Forest Research Institute on 3rd and 4th November 2009 at KFRI, Peechi.

IFGTB, Coimbatore in collaboration with TNFD organized a seminar on “Role of Carbon Management and Afforestation in Climate Change Mitigation in Tamil Nadu”, in Chennai on 6th August 2009.

IFGTB, Coimbatore organized National Workshop to Formulate an All India Coordinated projects on Fast Growing Native Tree species on 10th February 2010 and on Improvement of Fast Growing Phyllodinous Acacia on 11th February 2010.

IFGTB, Coimbatore organized Workshop on Plantation Technologies for Dryland Farming as part of Tree Growers Mela on 18th and 19th February 2010.

IWST, Bangalore organized Wood Industry Meet on 15th April 2009. A total of 40 participants attended the meeting.

IWST, Bangalore organized Stakeholders liaison meet on 27th May 2009. Mr. B.K. Singh, IFS, Additional PCCF (EWPR& T) was the Chief Guest. A total of 58 participants ranging from Forest Department officials, wood industries, farmers, plantation companies participated in the meet.

IWST, Bangalore conducted Compulsory Training Course for IFS officers on “Advancements in Wood Production and Utilization with Special Focus on Climate Change Mitigation” from 17th to 21st August 2009. A total of 14 participants participated in the programme.

IWST, Bangalore organized one day Indo-Italian Seminar on “Use of Modern Technologies in Forestry and Advancements in Wood Science” on 19th November 2009. A total of 32 delegates from outside and 25 in-house delegates participated in the seminar. The seminar was inaugurated by Mr. S. Nagaraja, PCCF, Karnataka Forest Department. Dr. Lidia, Scientific Counsellor, Embassy of Italy; Mr. I.B. Srivastava, PCCF (EWPR&T); Mr. C.S. Vedant, PCCF & MD, KFDC; Mr. S.C. Joshi, Director, IWST were the Chief Guests. A total of 7 papers were presented in the seminar.

IWST, Bangalore organized brainstorming session of ICFRE on 9th December 2009. The session was chaired by Dr P. J. Dilip Kumar DG (F), MoEF. Dr P. B. Gangopadhyaya, ADG (MoEF), Dr. G. S. Rawat, DG (ICFRE) and Director (IWST) participated in the brainstorming session.

FRC, Hyderabad organized one day stake-holders' meeting on 24th June 2009 to prioritize research needs of the centre and finalize research proposals for 2009-10.



TFRI, Jabalpur organized one day workshop on "Traditional Knowledge of Medicinal Plants of Patalkot" on 30th June 2009 for traditional healers and Vaidyas of Chhindwara District.

TFRI, Jabalpur organized a one-day consultative workshop on development of criteria and indicators for sustainable NTFP management in association with IIFM, Bhopal on 12th October 2009.

AFRI, Jodhpur and Indian Institute of Forest Management, Bhopal jointly organized a one-day Consultative Workshop on "Development of Criteria & Indicators for Sustainable NTFP Management" on 29th August 2009. The main objective of the workshop was to provide a forum for linking various agencies, institutions and stakeholders dealing with dry and arid NTFP species and their ecological systems and to share experiences and knowledge, related to the development of C & I. The meeting was presided by the Chief Guest Mr. A.K. Singh, PCCF, MD, CGMFP Federation, Raipur, Chhattisgarh, and the Distinguished Guest, Dr. Ram Prasad, Chairman of steering committee and former PCCF, M.P.

AFRI, Jodhpur organized a one-day brainstorming workshop on Khejari (*Prosopis cineraria*) mortality on 16th November 2009. Dr A.S. Faroda, Ex Vice Chancellor Maharana Pratap Agriculture and Technical University, Udaipur chaired the one day workshop. Scientists/Officers from scientific institutes like; AFRI, CAZRI, Jodhpur, Agricultural research stations at Mandore, Fatehpur and Jalore, ZSI, Jodhpur, Ground water board, Jodhpur, Forest Department, Jodhpur and progressive farmers Sikar, Nagure and Barmer attended the workshop. A coordinated research project on integrated approach to tackle the problem of Khejari mortality in Rajasthan was prepared based on inputs received from this workshop.

HFRI, Shimla organized a stakeholder workshop for Identification and Prioritization of Research Needs for the state of Jammu & Kashmir at State Forest Research Institute, Janipur, Jammu on 29th June 2009. This workshop was attended by the forest officers, officers from the Pollution Control Board, Professors from the Universities and other stakeholders from the State of Jammu & Kashmir. This day long workshop was chaired by Sh S. Chug, IFS, Conservator of Forests (Research) J&K.



Stakeholders Meeting at SFRI, Jammu for Identification and Prioritization of Research Needs in the State of Jammu & Kashmir

HFRI, Shimla organized workshop on "Challenges & Opportunities for growth of Medicinal Plants Sector in North-West Himalayas" on 18th and 19th March 2010. Total 62 delegates participated actively in the workshop.

HFRI, Shimla organized a one-day workshop on "Network project on *Picrorhiza kurrooa* and *Valeriana jatamansi*" on 10th September 2009. During this workshop, details of the work done in the past and future strategies related to implementation of the project activities by the participating institutes were presented and discussed.



HFRI, Shimla organized one day interactive workshop-cum-training programme titled "Ecological and Socio-economic Significance of some Important Species of the Cold Deserts" on 25th September, 2009 at Field Research Station (FRS), TABO (L&S), Himachal Pradesh.

HFRI, Shimla organized one day interactive workshop-cum-training on "Wild edible and Medicinal Plants of Kinnaur District, Himachal Pradesh" on 5th November 2009 at Chhikul, Kinnaur District. About 65 villagers, field staffs and other stakeholders participated in the workshop.

IFP, Ranchi organised a workshop on "Stress site Reclamation" under ongoing research project on 30th June 2009 with the participation of Progressive farmers, field functionaries of SFDs & NGOs and experts from BAU, DVC & other personnel.

IFP, Ranchi conducted a workshop on vermicompost on 8th September 2009 at Forest Research Centre, Mandar, Ranchi, Jharkhand.

Second meeting of State Level Monitoring Committee (SLMC) constituted to review and monitor the progress of the GoI-UNDP CCF-II project on "Biodiversity Conservation through Community based Natural Resource Management" in the State of Jharkhand was held at IFP, Ranchi on 16th January 2010.



Second Meeting of SLMC Chaired by Sri S. K. Sharma, IFS, Chief Conservator of Forests (Wild Life), Govt. of Jharkhand.

IFP, Ranchi organized fourth Meeting of the Empowered Project Steering Committee (EPSC) constituted to coordinate implementation of the GOI-UNDP CCF-II project on "Biodiversity Conservation through Community based Natural Resource Management" at Ranchi on 28th January 2010. The meeting was chaired by Shri Hem Pandey, Joint Secretary to the Govt. of India, Ministry of Environment and Forest, New Delhi and was attended by Shri R. Krishnamurty, Director, IFP and Shri Rameshwar Das, CF, IFP, Ranchi. The steering committee reviewed the physical and financial progress of unit wise project work being implemented in the states of Arunachal Pradesh, Orissa, Jharkhand and Chhattisgarh. A field visit to Khunti project site under Jharkhand State (Village: Janumpiri, Bari, Kotna) was also conducted on 29th January 2010.

Two days Inception Training Workshop was conducted at IFP, Ranchi under the consultancy project titled "Estimates of Kendu



Training Workshop under Project "Estimates of Kendu Leaves Production in Jharkhand"

Leaves production in Jharkhand" on 26th and 27th February 2010 wherein 85 Officers/ Personnel of JSFDCL and IFP, Ranchi participated.

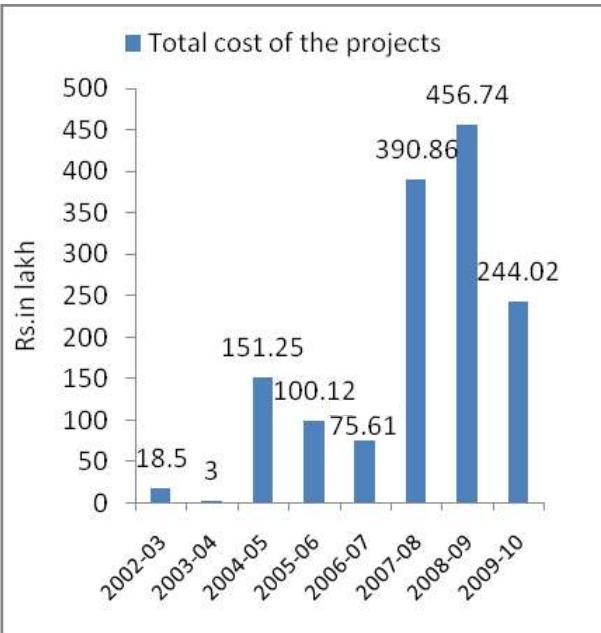
4.5 Consultancies

Environmental Impact Assessment (EIA) Division under the Directorate of Extension, ICFRE carries out EIA studies in various sectors like hydropower, mining, infrastructure etc. It



also prepares Environmental Management Plan (EMP) for mitigating the adverse environmental effects of the developmental projects.

The Division was established in 2003 at ICFRE headquarters and grown in work and expertise over the years. Recently, EIA Cell has



Year wise outlay of the projects undertaken

also been constituted in all the eight institutes of the ICFRE located in different parts of the country to provide interface with region based development agencies for carrying out EIA studies. The EIA Division coordinates with the EIA Cells in the institutes of ICFRE and also collaborates with project proponents for preparation of EIA and EMP for various developmental projects. Till March 2010, the Division has undertaken 35 EIA/ EMP studies worth ` 1440.10 Lakhs.

EIA Division has extended its services to a number of leading and established project proponents including: Jindal South-West Group of Companies, Reliance India Limited, Singareni Collieries Company Limited, Tehri Hydro Development Corporation Ltd., New Delhi



Public Hearing of Ankua Mining Project, Jharkhand

Municipal Council, Himachal Pradesh Power Corporation Ltd., National Thermal Power Corporation, Chandigarh Administration, National Medicinal Plants Board Ministry of Health & Family Welfare, GoI, Chhattisgarh State Electricity Board, National Hydro power Corporation, Andhra Pradesh Tourism Development Corporation, Andhra Pradesh Mineral Development Corporation Ltd., ESSAR Power Ltd., Jaiprakash Associates Ltd., National Afforestation and Eco-development Board, MoEF.

The list of clientele suggests that both public and private sector bodies have been utilizing the environmental consultancy services being provided by the Division. The team of officials looking after EIA related consultancies has been instrumental in evolving new standards in EIA studies and has contributed in setting up of good work ethics and environmental forecasting and suggesting mitigation measures.

During 2009-2010, EIA Division has completed 04 consultancy studies worth ` 239.13 Lakhs in the Hydropower and Mining sectors and received the following consultancies worth ` 244.02 Lakhs.



- Comprehensive Environmental Impact Assessment and Environmental Management Plan studies of Reservoir portion of Sankosh Multipurpose Project in Bhutan awarded by Tehri Hydro Development Corporation Ltd.
- Rapid Environmental Impact Assessment study for one season data for Bunakha Hydroelectric Project (180 MW), Bhutan awarded by Tehri Hydro Development Corporation Ltd.



Bunakha Project Site, Bhutan

- Biodiversity Assessment for Ganga Expressway from Greater Noida to Balia Project awarded by Jaypee Venture Pvt. Ltd., NOIDA.
- Preparation of Biodiversity Assessment study for Unnao Land parcel, Unchahar Land Parcel and Wetland study of Patiyali Land Parcel for infrastructural improvement awarded by M/s Jaypee Ventures Pvt. Ltd., NOIDA.
- Biodiversity Impact Assessment study for Kanera lift irrigation scheme in Bhind district of Madhya Pradesh awarded by Water Resources Department, Gwalior.
- Environmental Impact Assessment and Environmental Management Plan for Tosh Parvati (400 MW) Hydroelectric Project, District Lahul Spiti, Himachal Pradesh awarded by Himachal Pradesh Power Corporation Ltd.

During the year, following projects were accorded Environmental Clearance by Ministry of Environments and Forests:

- Environmental Impact Assessment and Environmental Management Plan (EMP) for Renuka Dam Project in Sirmour district of Himachal Pradesh Power Corporation Ltd., Shimla.
- EIA studies and formation of EMP for integrated Kashang Hydroelectric Project (243MW) in Himachal Pradesh Power Corporation Ltd., Shimla.

The EIA team of ICFRE has also participated in public hearing meetings



Public Hearing of Kuther HEP,
Himachal Pradesh

conducted by State Pollution Control Board (SPCB) for the following projects and replied to queries raised by the public representatives, local villagers and civil authorities for the purpose of Environmental Clearance: EIA and EMP report for Kuther Hydroelectric Project (KHEP) (260 MW) Chamba districts, Himachal Pradesh for JSW Pvt. Ltd. EIA & EMP with Catchment Area Treatment Plan (CATP), Hydrology and Drainage Studies for Ankua Iron Ore deposits in Jharkhand for JSW Pvt. Ltd.

FRI, Dehradun provided the following consultancies

Evaluation of X and XI five years plan of Central Pulp and Paper Research Institute, Saharanpur (Uttar Pradesh). Provided natural



dyes to Uttarakhand Khadi and Village Industries Board under a consultancy project on “Use of Natural Dyes”.

To Bodhgaya Temple Management Committee, Bodhgaya for the maintenance and preservation of sacred Bodhivriksha.

To APSARA National Authority, Cambodia through Archaeological Survey of India at Cambodia.

Advisory Consultancy to M/s Ashok Timbers, Yamuna Nagar on “Expert Advice on Information regarding Fungus Problem on Wood”.

To M/s Max Speciality Products, Max India Ltd., Railmajra (Ropar), regarding use of timber in wooden pallets on 22nd May 2009.

To M/s Hindustan Petroleum Co. Ltd., Mumbai regarding timber utilization for cooling tower during the period from 1st to 3rd December 2009.

To M/s India Tourism Development Corporation Ltd. (Common Wealth Games), New Delhi regarding inspection of quality timbers for furniture. Amount: ` 165000/-.

(Total revenue generated through consultancies: ` 3,71,061/-)

For preparation of “Forest Works Manual and Schedule of rates for Forestry related works in Uttarakhand under Mahatma Gandhi National Rural Employment Guarantee Act funded by UNDP through Ministry of Rural Development, Government of India.

To Govt. of Delhi for raising and supplying 3 lakhs potted plants for forthcoming Commonwealth Games to be held in Delhi.

To Govt. of Delhi for establishment of Bambusetum at Yamuna Bank, Delhi.

To Himachal Pradesh Power Corporation for Socio-economic baseline survey and impact assessment of Renuka Dam Project, Himachal Pradesh.

IFGTB, Coimbatore completed the consultancy project on “DNA Profiling of Eucalyptus and Acacia hybrids” for the Mysore Paper Mills, Bhadravathi, Karnataka.

IWST, Bangalore provided the following consultancies

Preparation of EIA/EMP for diversion of forest land for conveyer belt corridor for Iron Ore Deposits, Jharkhand in favour of M/s JSW Ltd., Jharkhand.

EIA/EMP studies of Sankosh Multipurpose Hydro Project, Bhutan (RHDC) in favour of M/s Tehri Hydro electric Development Corporation Ltd.

Updation of DPR of Bhunakha EIA and EMP studies of Hydro electric Project, Bhutan.

Biodiversity assessment for 2000 MW Pit Head thermal power station by M/s ESSAR Power Jharkhand Ltd. (EPJL) and Chakla Coal Mine of ESSAR power Jharkhand.

Biodiversity assessment report for Ganga Expressway from Greater NOIDA to Balia in favour of M/s Jaypee Ventures Pvt. Ltd., NOIDA.

EIA/EMP studies for Bodghat Hydro electric Project in favour of Chhattisgarh State Electricity Board, Chhattisgarh.

Advisory Consultancy to Bamboo Peckers, Bangalore regarding bamboo preservation.

FRC, Hyderabad provided the following consultancies

Consultancy to Andhra Pradesh Forest Department for evaluation of National Afforestation Programme implemented by Nandyal Forest Development Agency and Atmakur Forest Development Agency.

Consultancy to ITC, Bhadrachalam for “Estimation of Biomass from Agriculture and Pulpwood Plantations in Khammam”.



TFRI, Jabalpur provided the following consultancies

Conducted survey of flora and fauna in Maihar (Dist. - Satna) for Reliance Cementation Pvt. Ltd.

TFRI, Jabalpur conducted assessment of green cover and its tangible and intangible benefits and tree cover management plan for NCPP-Dadri awarded by National Thermal Power Corporation, Dadri.

AFRI, Jodhpur

AFRI, Jodhpur Under the consultancy project entitled “Identification of Mycorrhizal and Rhizobial Association, Establishing Gene Bank and Technology Transfer to Farmers in Field” supported by the SFD Gujarat, imparted training to SFD Gujarat, established biofertilizer laboratory and trained manpower for isolation, multiplication and identification of biofertilizer strains.

HFRI, Shimla provided following consultancy services

Studies on Environment Impact Assessment (EIA) and Preparation of Environment Management Plan (EMP) for Integrated Kashang Hydroelectric Project (243 MW) in District Kinnaur, Himachal Pradesh to M/S Himachal Pradesh Power Corporation Ltd., Shimla.

Preparation of Catchment Area Treatment Plan from Upstream Pandoh Dam to Largi Dam to BSL, Sundernagar, Himachal Pradesh.

Monitoring of Stipulations of Environmental Clearance Conditions in respect of Chamera-III (231 MW) Hydroelectric Project, District Chamba, Himachal Pradesh.

4.6 Technical Services

The Council through its institutes provide technical services in relation to identification of wood samples, insect pests, diseases and management of insect pests and diseases. The Council and its institutes also provide EIA consultancies and related services. The institutes

issue phytosanitary certificates for import/export of plant material and also the quarantine reports for insect import. Besides IWST, Bangalore provides technical services in identification of adulteration in a number of commercial products specially the sandal wood oil. IFGTB, Coimbatore provides technical services in Eucalyptus gall problem and various afforestation activities and clonal varieties of Eucalyptus and Casuarina. FRI, Dehradun is providing technical services in essential oils, fragrance and flavor materials, conservation of trees, natural dyes, *Cordyceps sinensis*.

Ten numbers of steam-heated type kilns were modernized and re-installed at the premises of the U.P. Export Corporation Ltd., Saharanpur under the technical supervision of scientist of the Wood Seasoning Discipline. These kilns are being used commercially for timber seasoning by the Corporation.

FRI, Dehradun

The institute examined and identified about 160 wood samples (received from various Govt. departments like Railway, Defence, Bureau of Indian Standards, NTPC, Telecommunications, C.P.W.D., Punjab Police Housing Corporation, ONGC, also from Vigilance, Anti Corruption Bureau, Police/CBI and private timber merchants) and earned ` 8,00,000/- (approx.) during the period.

- Provided technical services to Centre for Cooperation in Science and Technology among Developing Societies (CCSTDs), Chennai through imparting three months (July-September 2009) training on “Essential Oils, Fragrance and Flavor Materials” to Mr. M.N.I. Bhuiyan, Scientific Officer, Bangladesh, Council of Scientific and Industrial Research (BCSIR) under RTFDCS Fellowship of the CCSTDs.
- Demonstration of “Isolation of Natural Dyes” to participants of training programme



“Capacity Building Communities Involved in sustainable forest management” on 25th June 2009 under DEFRA project.

- Eight Samples of *Cordyceps sinensis* sent by the Superintendent of Police, District Leh Ladakh (J&K) in December 2009 were identified.
- One sample of *Cordyceps sinensis* received from Chief Judicial Magistrate, Champawat, Uttarakhand was identified in February 2010.
- Identification of fungal degradation in wood samples for industry, Melfrank Engineers, Mumbai (12 samples, January, February and March 2010).
- For Plant Protection & Quarantine Department, Ministry of Agriculture, Govt. of India for eligibility of import of materials (5cases).
- Import of *Cordyceps japonica* by the Director, Central Sericultural Research & Training Institute, Srirampura, Mysore.
- Import of *Anagyrus loecki*, *Acerophagous papaya* and *Pseudoleptomastix mexicana* by the Director, National Bureau of Agriculturally Important Insects, Bangalore.
- Import of insect, *Plutella xylostella* by the Director, Central Institute of Cotton Research, Nagpur.
- Import of cultures of *Azospirillum* sp. by M/s Punjab Chemicals & Crop Protection Ltd., Mumbai.
- Import of cultures of mites—*Amnlyseius swirskii* and *A. californicus* by M/s Namdhari Farm Fresh Pvt. Ltd., Bangalore.
- For issuance of Phytosanitary Certificates (06 certificates) – Exporters of seeds/planting material.

IFGTB, Coimbatore

- Provided Plant identification and plant referencing services to the Tamil Nadu and Kerala Forest Department, College and University students, researchers and farmers

through Fischer Herbarium maintained by the institute.

- Provided advisory services on management measures for Eucalyptus Gall problem to KFDC, Kottayam.
- Provided advisory services on management measures for Teak pink disease problem to Kerala Forest Department.
- Provided technical services on mortality of a coppiced Eucalyptus clonal plantation at Satyavedu, Andhra Pradesh and Tirkukoilur, Tamil Nadu.
- Ninety kg of improved seeds of Eucalyptus and Casuarina from seed orchards established by IFGTB in different locations in Southern India were collected and supplied to the industries, farmers and State Forest Departments for raising plantation. The seed orchard seeds showed outstanding growth performance compared to local seed source.

IWST, Bangalore

- During the year, 102 enquiries for identification (231 samples) were attended. A number of technical inquiries on utilization of various Non-Wood Forest Products from Government Departments and public were attended to and advice given.
- Analytical services were rendered to Wildlife Crime Control Bureau, Southern Region, Chennai, Commissioner (customs), Chennai, Forest Department and public in analysis of essential oils from sandalwood samples, *Pterocarpus marsupium* extracts and *Pterocarpus santalinus* samples, other wood powders etc.
- Several enquiries were attended from Forest Department officials and NGO's with respect to entomological and pathological problems in nursery and plantations & timber-in-service and suitable remedial measures were suggested.



AFRI, Jodhpur

- Seed Certification and Testing.
- Soil and Water Analysis.
- Advisory Services to Stakeholders
- Urban Greening and Landscaping.

4.7 Activities of Rajbhasha

ICFRE and its institutes are continuously working in the direction of implementation of Rajbhasha rules and regulations in its day to day functioning with a view to promoting the use of Rajbhasha to the maximum. ICFRE, Dehradun organized a training workshop on Rajbhasha on



Training Workshop on Rajbhasha

26th March 2010. Over 250 Officers, Scientists and Staff of ICFRE and FRI attended the training workshop. The workshop was addressed by Shri S.P. Choubey, Director Rajbhasha, MoEF and Shri M.R. Saklani, Deputy Director Rajbhasha and Secretary NARAKAS, Dehradun. To ease the work in Rajbhasha, a new software 'Saransh' is being tried with. We are conducting Rajbhasha Karyavayan Meetings on regular interval at the institutes and the headquarters. Quarterly Progress report is being compiled and sent to the Official Langugae Depatement of the MoEF. We are also observing Hindi Divas on 14th September and regularly organizing Hindi Week/Fortnight.

With a view to promoting the Rajbhasha Hindi, ICFRE is regularly publishing its in-house magazine Taruchintan and Biannual Newsletter and Vaniki Samachar in Hindi.

IFGTB, Coimbatore nominated 27 employees (Group A, B and C) for the hindi training during the year 2009-2010. Shri V.K.W.Bachpai Nodal Officer (official language) attended a special training programme from 25th to 26th May 2009 at Kanyakumari (Tamil Nadu) conducted by Centre for Training and Development (CENTAD) Bangalore. Hindi week was celebrated in the Institute from 14th to 19th September 2009. Competitions were organized for all the staff of the Institute. A meeting was organized on 17th September 2009 which was chaired by Shri A.S. Jafry, IFS, Director, TNFA, and attended by Dr. C. Jay Shankar Babu, Member Secretary of Town Official Language Implementation Committee (TOLIC) in which prizes were distributed.

IWST, Bangalore conducted the Hindi Workshop for Ministerial Staff of the IWST on 12th August 2009 attended by 21 employees. The Hindi fortnight and Hindi Day celebrations were organized in the Institute in the month of September 2009. Various Hindi competitions were conducted during the Hindi fortnight celebrations and prizes were distributed to the respective winners. One of the English Stenographer was nominated for Hindi Stenography training course conducted by Hindi Teaching Scheme, Bangalore during the session of August-December 2009. A Workshop on Hindi Saransh Software was conducted in the Institute on 12th March 2010 for Ministerial Staff in which 17 employees participated. The inspection of the Implementation of Official Language of the Institute was carried out by the Joint Secretary (In-charge, Official Language), Ministry of Environment and Forests, Govt. of



India, New Delhi on 5th March 2010 at FRLHT, Bangalore. During inspection the In-charge officer (Hindi Cell), IWST, Bangalore presented the activities and progress of the official language implementation work done by the institute as under:

- All the Name Plates and Notice Boards have been made in Trilingual Language.
- All Rubber Stamps have been made in Bilingual.
- Subjects on all Files are being written in Bilingual i.e. Hindi & English.
- Reply to the Letters received in Hindi are being given in Hindi only.
- Position with regard to Notings in Hindi on files is 85%.
- Percentage of Letters sent in Hindi by the Office in Region A is 69%, Region B is 73% & Region C is 72%.
- Saransh Hindi Software has been loaded in all the computers available in the Institute.
- All Formats/Forms are Translated in Hindi & are available as bilingual.

FRC, Hyderabad, organized a one day Workshop on "Implementation of Hindi as an Official Language", on 29th January 2010 .The centre organized and celebrated "Hindi Divas" on 12th October 2009.

TFRI, Jabalpur along with regular activites in the direction of implementation of Rajbhasha Hindi organized Hindi week and also organized training/workshop in Hindi for the ministerial and technical staff of the institute.

RFRI, Jorhat organized various activities like Hindi week (September 2009) and A Workshop (8th January 2010) at RFRI, Jorhat. Total 14 no. of Officials from the Institute appeared & passed with good marks in the Hindi

Examination Prabodh/Praveen/Pragya conducted by the Hindi Teaching Scheme, Department of Official Language, Govt. of India.

AFRI, Jodhpur along with regular activites in the direction of implementation of Rajbhasha Hindi organized quarterly meetings, Hindi week, annual workshop and invited lectures.

Many activities were organized by HFRI, Shimla for the publicity and expansion of official language Hindi. Hindi Review Committee of the institute has encouraged the scientists and staff members for working in Hindi. Regular training has been imparted by the scientists in the institute and training material was also provided in Hindi. A meeting was conducted by the Review Committee under the chairmanship of Shri Manoj Bhaik, IFS, head of office on 12th January 2009. Another meeting was conducted under the chairmanship of Chief Income tax Commissioner and Chairperson of Town Official Language Implementation Committee on 11th June 2010. Hindi Officer, Shri R. K. Sharma, and Dr. Rajesh Sharma-Scientist of participated in the meeting. In order to promote Hindi as an official language, a seminar on Hindi was conducted in office on 3rd November 2009, in which emphasis was given on different issues related to promotion of Hindi.

On behalf of Town Official Language Implementation Committees (Nagar Rajbhasha Karyanvayan Samiti, Shimla) "Prashna Manch" was conducted by HFRI, Shimla on 25th August in which officers and staff members of the institute and representatives from various Departments of Central Government, Nigams, Banks of Shimla etc. participated. The team of the HFRI got first prize.

"Hindi Divas" was celebrated by the institute on 14th September 2009. On this occasion, Dr. Vijayendra Panwar read the message issued by Hon'ble Union Home Minister



Shri P. Chidambaram. "Hindi Pakhwara" was celebrated by the institute from 14th to 26th September 2009.

During this year, for promotion and extension of science, pamphlets on Kashmal, Bil, Chilgouza, Attish and Choura were printed in Hindi only.

4.8 Award and Honours

FRI, Dehradun

- Dr. Rashmi, Scientist C, Chemistry Division, FRI, Dehradun was awarded "Young Women Scientist Award" for best oral presentation on the topic 'Phytoecdysteroids and their effect on Economic Traits of *Bombyx mori* L. in 2nd Rashtriya Yuva Vaigyanik Sammelan 2010 held at Doon University, Dehradun.
- Madhusudan Chamoli, Research Scholar, Chemistry Division, FRI, Dehradun was awarded 3rd Prize in Poster Presentation category for the paper titled "Estimation of Andrographolide Content in *Andrographis paniculata* intercropped with *Morus alba*" by Madhusudan Chamoli, V.K. Varshney and P.K. Srivastava in National Forestry Conference held at FRI, Dehradun from 9th to 11th November 2009.
- Ms. Anita Tomar was awarded "Women Scientist Award" for best Oral Presentation on topic A Rhizomatus Study of *Gentiana Kuroo*-Endangered Medicinal Plant Paper Presented by Anita Tomar in 2nd Rashtriya Yuva Vaigyanik Sammelan 2010 on 6th and 7th February 2010 under theme Basic Science.
- Dr. Deepti Verma, FRI, Dehradun was awarded "Women Scientist Award" for the best Oral Presentation 2009 on the title "Carpinus Viminea: an Important Component of Oak Forests Struggling for its Existence in Western Himalayas" under the discipline

Environment Science and Forestry in 4th Uttarakhand State Science and Technology Congress 2009 conducted at G. B. Pant University of Agriculture and Technology, Pantnagar.

- The Research Paper on "Allelopathic Influences of Litter and Humus on the seed Germination of *Abies pindrow*" by Vidya Rattan, Ombir Singh and S.C. Biswas has been awarded 2nd prize in Poster Presentations in IV National Forestry Conference from 9th to 11th November 2009 held at FRI, Dehradun.
- Young Scientist Award in Basic Science and Cutting Edge Technology was received by Research Scholar Mr. Kshitij Malhotra who carried out work on "A New Technique for Vegetative Propagation of *Jatropha curcas* Linn.: A Promising Plant for Biodiesel Production and Sustainable Development".
- Shri A.K. Pandey, IFS, Head, CSFER, Allahabad received "Bioved Fellow Award 2010" at Ishwar Saran Degree Collage, University of Allahabad. Award on 20th February 2010.
- Dr. B.K. Pandey, Scientist C, CSFER, Allahabad received "Bioved Distinguished Service Award 2010" on 20th February 2010 at Ishwar Saran Degree Collage, University of Allahabad.

IFGTB, Coimbatore

- Shri R.S.C. Jayaraj, IFS, Head, FLUCC Division, Dr. B. Gurudev Singh, Head, GTB Division, Dr. K. Palanisamy, Head, Seed Technology Division, Dr. A. Balu, Head, Forest Protection Division, Dr. B. Nagarajan, Head, PBT Division, Dr. K.R. Sasidharan, Scientist D, Dr. A. Nicodemus, Scientist D, Dr. V. Sivakumar, Scientist D, Shri Maria Dominic Savio, Scientist C,



- Shri D.R.S. Sekar, Scientist C, Shri V.K.W. Bachpai, Scientist B, Dr. N. Ravi, Scientist B RFRI Jorhat, Shri. C. K. Jayachandran (Retired RAI), Shri. M. Salarkhan (Retired RO), Shri G. Ponraj, R.A. (SG), Shri A. Durai, R.A. I, Shri B. Deeparaj, R.A. I, Shri Arumugam, Forester, Shri T. Anthoni amy, R.A. II, Shri M. Ganesan, R.A. II, Shri S. Shanmugam, T.A. III and Shri K.T. Murthy, Forest Guard received an award from the Hon'ble Minister for Environment and Forests, Shri Jairam Ramesh, for their contribution towards tree improvement programme and development and release of clones of *Eucalyptus* and *Casuarina*.
- Shri S. Saravanan, Scientist C, and Dr. Rekha Warrier, Scientist C received an award from the Hon'ble Minister for Environment and Forests, Shri Jairam Ramesh, for extension of agroforestry technologies to farmers of Tamil Nadu and in the Demo Village and outreach activities respectively.
 - Karpaga Raja Sundari, Scientist B and Modhumita Dasgupta obtained "Best Poster Award" in the National Seminar on frontiers in Biotechnology held at Bharathiar University, Coimbatore from 22nd to 24th July 2009 for the poster titled "Differential Expression of Cellulose Synthase Genes in Secondary Xylem Tissues of *Eucalyptus tereticornis*".
 - Radha Veluthakkal, Yasodha R., Mohan V. and Modhumita Dasgupta was awarded third prize under poster category for the poster titled "Expression Profiling *Casuarina equisetifolia* response to *Trichosporium vesiculosum* toxin Reveals up- Regulation of Defense- Related and Signaling Genes in Pathogen Defense" in the National Forestry Conference held at FRI, Dehradun from 9th to 11th November 2009.

TFRI, Jabalpur

- P. B. Meshram awarded Applied Zoological Research Association (AZRA) Award 2009 for outstanding research contribution in the field of plant protection on 28th October 2009 at Department of Zoology, Andhra University, Visakhapatnam.
- Dr. R.K. Verma, Scientist D, Dr. V.S. Dadwal, Scientist C and Shri A.K. Thakur, RA-II received BRANDIS PRIZE in the field of Silviculture for the year 2008 from the Indian Forester for the research paper entitled "Economics of Biofertilizer Application on Production of Planting Propagules of Teak in a Commercial Nursery" Indian Forester Vol.134(7):923-931, July 2008.
- Shri Suneesh Buxy, Deputy Conservator of Forests was awarded "Certificate of Excellence" for his contribution on ecotourism and documentation of medicinal plants of Tamia and Patalkot, Madhya Pradesh.
- Dr. D.K. Mishra of AFRI, Jodhpur was awarded Brandis Prize for his best paper published in Indian Forester.
- Dr. Sanjay Singh, Scientist D, IFP, Ranchi received "Prof. K. K. Nag Foundation Chair Young Scientist Gold Medal" for contributions in the field of Physiology and Molecular Biology by International Consortium of Contemporary Biologists on 20th November 2009 at Ranchi.

4.9 Special Activities (Such as Van Mahotsava, Forestry Day and Other occasions)

Forest Research Institute, Dehradun established the Photo Gallery at Shatabdi Van Vigyan Kendra Dehradun on 10th January 2010. The photo Gallery was inaugurated by Shri Jairam Ramesh, Hon'ble Union



Minister(I/C) for Environment & Forests. Dr. Ramesh Pokhriyal Nishank Hon'ble chief Minister of Uttrakhand graced the occasion alongwith Shri P.J.Dilip Kumar, Principal Secretary, Environment and Forests Minister, Dr. G.S.Rawat Director General, ICFRE, Dr.S.S.Negi, Director, FRI, CCF, Dr.R.B.S.Rawat, Principal Secretary Anup Wadhawan and other dignitaries, VIPs, students and other respectable citizens.

The Union Minister for Environment and Forests, Shri Jairam Ramesh inaugurated on INSAT unlinked Micro Meteorological Tower in Forest Research Institute Campus on 10th January 2010. The Tower 13 metre high, part of FRI-ISRO climate change study programme, will gauge and model the physical and biological process controlling mass and energy exchange between tree canopy and the atmosphere.

During the visit of the Hon'ble Minister of Environment & Forests & Deputy Chairman Planning Commission to Forest Research Institute, Dehradun i.e. 10th August 2009 a ceremonial Tree Plantation was done. Shri Jairam Ramesh Hon'ble Minister of Environment & Forests, GoI had planted the sapling of *Elaeocarpus sphaericus* (Gaertn.) K.Schum (Rudraksh) in the Mango groove area of the institute. Dr. Montek Singh Ahluwalia,



Dr. Montek Singh Ahluwalia, Deputy Chairman, Planning Commision, GoI Planted a Seedling of "Kadam" at FRI, Dehradun. Shri Jairam Ramesh Hon'ble MoS, EdF and other High Rank Officers were Present on the Occassion

Deputy Chairman, Planning Commission planted the sapling of *Anthocephalus cadamba* (Roxb.) Miq (Kadam) in the Mango groove area of the Institute. This Ceremonial Function was attended by Shri Vijay Kumar, IAS, Secretary, MoEF Govt. of India, Dr. P.J. Dilip Kumar, Director General (F) and Special Secretary, MoEF, Shri Jagdish Kishwan, DG, ICFRE, Dr.S.S.Negi, Director, FRI, Dehradun and Officers of ICFRE and FRI.

Director General ICFRE, Dehradun, Dr. G.S. Rawat, visited AFRI, Jodhpur from 13th to 15th January 2010. He visited the Labs and experimental areas of the Institute. The Director General also inaugurated the Bio-control laboratory-cum-culture room of the Forest Protection Division on 13th January 2010.



Dr. G.S. Rawat, DG, ICFRE, Dehradun Inaugurated the Biocontrol-cum-Culture Laboratory

Indian Science Congress 2010

Institute participated in the Indian Science Congress 2010 held at Tiruvananthapuram from 3rd to 7th January 2010 and participated in the Pride of Hall Exhibition organised as part of the congress. Institute put up the stall of ICFRE.



Indian Science Congress 2010 Trivandrum- Exhibits of ICFRE



Vaniki Mela

Forest Research Institute organized a "Vaniki Mela" on 12th October 2009 at Shatabdi Van Vigyan Kendra, Dehradun. The Mela also aimed at providing information to the public, so that they could help themselves in becoming self-reliant and self employed through these technologies. The Mela also exhibited activities and research work of various Departments of the FRI, Handicraft products of various government and non-government organizations, farmers from Malhan, Ratanpur, Ganeshpur participated in the Mela organized as a joint venture of FRI and Bagwan Gramodhyog Samiti. The Herbal and Medicinal Plants produced by the farmers of Adarsh Gaon at Ambiwala, established by the institution and the Samiti were also exhibited. The participant included Nandadevi Biosphere Reserve, Navadanya, Mamta Nari Uthan, STEP, Mahila Vikas Samiti, Aranya, Uttarakhand Khadi and Village Industries Board and Uttarakhand Bamboo Fibre Development Board Sea Rock Samaj Sevi Sanstha, Eco Tourism Uttarakhand.

Farmers Mela at Tamil Nadu News Print Ltd., Karur

IFGTB, Coimbatore participated in the farmers mela organised at Tamil Nadu News Print Ltd. (TNNPL) on captive plantations and participated in the exhibition organised at TNNPL.



Participation of IFGTB in Farmers Mela Organized by Tamil Nadu News Print Ltd.

IFP, Ranchi participated in the Regional Agriculture Fair 2010 sponsored by Directorate of

Extension, Department of Agriculture & Cooperation, Ministry of Agriculture, GOI and organized by Indian Institute of Natural Resins and Gum (ICAR), Namkum, Ranchi (IINRG), Ranchi during the period 22nd to 24th February 2010. The IFP's stall was adjudged the best and was awarded 1st Prize.



IFP, Ranchi Participating in Regional Agriculture Fair 2010 at Ranchi

RFRI, Jorhat Participated in Kaziranga Elephant Festival held from 3rd to 6th January 2010 at Kohora, Golaghat. The institute also participated in the "Farmers Fair" at Regional Agricultural Research Station, Titabar under Assam Agricultural University, Jorhat on 3rd November 2009.

RFRI, Jorhat participated in the "State Level Agri-Horti Show" jointly organized by Department of Agriculture, Govt. of Assam and Assam Agricultural University, Jorhat from 25th to 27th February 2010 at Golaghat, Assam. RFRI Stall was adjudged 3rd position amongst 58 participants.



RFRI, Jorhat participated in the Exhibition for Technology Demonstration for Entrepreneurs organized by Assam Science Technology & Environment Council, Guwahati (Assam) from 3rd to 7th February 2010 at the Assam Engineering Institute's Play Ground, Chanmari, Guwahati.

AFRI, Jodhpur participated in one day Kisan Mela organized by Agricultural Technology Management Authority (ATMA), Jodhpur in collaboration of Shri Marudhar Bagwani Krishi Utpadan Vikas Samiti on 22nd February 2010 at Beraie, Bhopalgarh, Rajasthan.

International Biodiversity Day (IBD)

FRI, Dehradun observed the IBD on 22nd May 2009. More than 500 visitors from the India and foreign countries visited FRI on this International Biodiversity Day.

IWST, Bangalore observed IBD on 22nd May 2009. Prof. Balakrishna Gowda, UAS, Bangalore delivered a talk on "Biodiversity and Alien Species.

AFRI, Jodhpur observed IBD on 22nd May 2009. Neem trees were planted by Director, AFRI.

HFRI, Shimla observed IBD 2009 on 22nd May 2009. The event was organized with the view to make the students aware of the Invasive Alien Species and the Biodiversity of Himachal Pradesh.

IFP, Ranchi observed IBD on 22nd May 2009. A workshop was organized on the occasion.

World Environment Day

All ICFRE institutes observed World Environment Day on 5th June 2009 by organizing a number of different activities. The theme of the celebration was "Your Planet Needs You- Unite to Combat Climate Change".

FRI, Dehradun organized Forestry & Environmental Awareness programmes on the World Environment Day & FRI Day. A move was organized to keep the institute free from polybags. All the officers, employees and students of FRI University took part to keep the FRI surrounding free from polybags/plastic. Chief Guest of the programme Dr. S.S. Negi, Director, FRI, Dehradun appealed to clean the surroundings and make it free from plastic and polythene. During this programme an exhibition was also organised in the information centre of FRI.

IFGTB, Coimbatore observed the World Environment Day through a commemorative tree planting programme. Dr. N. Krishnakumar, Director, welcomed the gathering and underlined the role of citizens in keeping the environment clean. Shri Anshul Mishra, IAS, Commissioner, Coimbatore Corporation was the Chief Guest.

AFRI, Jodhpur observed World Environment Day on 5th June 2009. Plantation activity of Neem (*Azadirachta indica*) was undertaken on the occasion. A leaflet containing research highlights of the institute in Hindi was also released.

IFP, Ranchi observed World Environment Day on 5th June 2009 by organizing a plantation programme. During the day, about 200 plants of different species viz. *Cycas* sp., *Elaeocarpus sphaericus* (Rudraksh), *Mimosops elengi* and *Saraca indica*, etc. were planted in the surrounding of the Institute's campus.

World Forestry Day

FRI, Dehradun observed the World Forestry Day on 21st March 2010 with an exhibition organized in the information centre of the institute. The technologies displayed were explained to the visitors.



HFRI, Shimla observed World Forestry Day on 22nd March 2010. VVK, Sundernagar organized an Environmental Awareness programme for school children of Model Senior Secondary School, BBMB, Sundernagar (H.P.). TFRI, Jabalpur also observed World Forestry Day.



HFRI, Shimla Observed the World Forestry Day

Vigilance Awareness week

The Council and its institutes observed Vigilance Awareness week from 3rd to 7th November 2009.

National Technology Day

FRI, Dehradun observed the National Technology Day on 11th May 2009.

World Day to Combat Desertification

AFRI, Jodhpur observed World Day to Combat Desertification on 17th June 2009. Plantation of *Commiphora wightii* (Guggul) was undertaken in the institute. Hon'ble Shri Malkhan Singh, MLA, Luni constituency was the Chief Guest. Leaflets and pamphlets on "Desertification: Challenges and Strategies for Control" were released by the dignitaries on the occasion.

AFRI, Jodhpur observed 60th Van Mahotsava on 30th July 2009. On this occasion, Neem trees were planted in the campus.



AFRI, Jodhpur Observed World Day to Combat Desertification

Establishment of Advanced Wood Working Training Centre at IWST (Funding Agency: Italian Trade Commission/ACIMALL)

Advanced Woodworking Training Centre, an Indo-Italian joint project by IWST-ICE-ACIMALL entered into the eighth years of operation. The centre is equipped with 21 advanced wood working machines including one CNC machine, which was installed during the year 2008-09. During the year 2009-10, the centre has imparted training to 78 trainees for conventional course and 39 trainees for CNC course. So far, 1003 persons (batch wise) have been trained by the centre since 2003. More than 110 Industries (Solid Wood & Panel Materials Processing) in India offered jobs for the unemployed students joined in the Institute through Campus interview/Direct interview. About 98% of the unemployed trainees have been benefited for employment with this training. The AWTC also participated in "India Wood 2010" which was held at Bangalore.