

Extension Panorama



4. Extension Panorama

Introduction

Directorate of Extension aims at dissemination of useful research findings to various stakeholders through its nationwide network, different publications, workshops and training programmes. It coordinates various extension activities of ICFRE institutes and centres and evolves comprehensive extension strategies. It also provides consultancies in EIA and related subjects.

The Directorate is having Media & Publication (now has been redesignated as Media and Extension Division), Statistics Division and Environment Management Division to expedite the mandate of Forestry Extension through various activities, such as, publications like bulletins, brochures, pamphlets, newsletters, forest statistics and annual reports, and workshops, trainings etc. through the country wide network of Van Vigyan Kendras and Demo Villages.

Media and Extension Division looks into the extension activities and strategies being adopted by the Institutes of ICFRE for dissemination of research findings in forestry sector. This division maintains the monthly account of various R&D activities of ICFRE Institutes and keep MoEF apprised of them. The division publishes the Newsletters of ICFRE which is disseminated to ICFRE institutes and State Forest Departments. The reports of ICFRE and its Institutes are collected, compiled, edited and published as the Annual Report of ICFRE, tabled in Parliament. Other publications include Annual Hindi Magazine '*Taruchintan*' and bi-annuals ICFRE Newsletter and Vaniki Samachar. The division has also published a monumental volume on ICFRE Technologies and Processes under the title "Forestry in the Service of Nation : ICFRE Technologies". "Extension Strategies in Forestry Research for ICFRE", "Agroforestry Research at ICFRE",

"Information Booklet of ICFRE" and ICFRE Desk Calender for 2012 were brought out by the division during the period under report.

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/UTs. Eight Demo Villages have also been established and maintained 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. The division conducts trainings and workshops on the implementation of Rajbhasha Hindi to facilitate greater use of Hindi in official works.

Statistics Division

1. The work on Forestry Sector Report India 2010, sponsored by Ministry of Environment & Forests, Government of India, was completed.
2. The ICFRE-ITTO project 'A sample survey of pulp, paper and hardboard Industry of India' was completed and the report was submitted to ITTO.
3. Two half-yearly issues of Timber Bamboo Trade Bulletin were published.
4. The draft document on the status of survey undertaken under the NOVOD Board sponsored project 'Development of a database on tree borne oilseeds in India' was submitted to the NOVOD Board.
5. Statistical inputs were given to the research scholars of FRI (Deemed) University through consultations.



The compulsory course on Research Methodology and statistical analysis for the PhD scholars of FRI (Deemed) University) was coordinated.

6. Forestry Statistics India 2009 was prepared and submitted. As per directions, the scope of the publication was increased to include data up to March 2010. The publication is now under expansion to include the data as directed.

Environment Management Division undertakes consultancies in the area of environment and forest for sectors like hydropower, mining, infrastructure, roadways and evaluation of natural resources based schemes. Also, coordinates with the EIA Cells established in the sister institutes for undertaking consultancies regionally. The Division has completed - 30 scientific services worth Rs.1147.60 lakhs as on March, 2012 and 16 projects worth Rs. 2232.10 lakhs are underway.

Sustainable Land and Ecosystem Management Project (SLEM)

The World Bank funded project 'Policy and Institutional Reform for Mainstreaming and up-scaling Sustainable land and Ecosystem Management (SLEM) in India' anchored at the Ministry of Environment and Forests, Government of India, and being implemented by the ICFRE, started functioning since August 2009. The implementation period is three years.

SLEM Programme is a joint initiative between the Government of India (GOI) and the GLOBAL Environment Facility (GEF), under the latter's Country Partnership Programme (CPP). The GEF partners associated with the SLEM-CPP include the World Bank, the Food and Agricultural Organization (FAO) and the United Nations Development Programme (UNDP).

The Sustainable Land and Ecosystem Management - Country Partnership Programme (SLEM-CPP) is a joint initiative of the Ministry of Environment and Forests, Govt. of India and the Global Environment Facility (GEF) and consists of seven projects, being

implemented in different states in India with assistance from the World Bank as the lead agency and the UNDP and FAO. The Desertification Cell, MoEF is the national executing agency for the SLEM programmatic approach. ICFRE, Dehradun has been designated as the Technical Facilitation organization for the SLEM programme. All the 7 sub projects have a full fledged Project Management Unit with a Project Manager, Project Director (a senior government officer) and Project Steering Committee (chaired by a senior government officer). However, the responsibility of coordinating the SLEM programmatic approach as a whole and, to ensure SLEM principles are appropriately integrated into our national/ state level policies and programs lies with MoEF. SLEM-CPP is a multi-sectoral approach to land management, biodiversity conservation and climate change adaptation. The genesis of Sustainable Land and Ecosystem Management (SLEM) Program is rooted in the rationale that food security through enhanced agricultural productivity cannot be achieved by further increase in cultivated area. Appropriate land use and sustainable management of the country's natural resources and agro-ecosystems are the avenues to meet the challenges and sustain environmental services.

The objective of the SLEM Programmatic approach is to promote sustainable land management and use of biodiversity as well as maintain the capacity of ecosystems to deliver goods and services while taking into account climate change.

The key achievements under the project during 2011-12 are as follows

1. Workshop/Seminar/Trainings

- Organization of consultative meeting-cum-workshop to discuss on the baseline study with participants of all key stakeholders including project partners.
- Organization of SLEM Role of Forests in Dryland Areas with participants of all key stakeholders including project partners.



- Brainstorming Workshop on Desertification Mapping and Reporting on Impact Indicators on 27 July, 2011.
- Three days training programme on Shifting Cultivation at Rain Forests Research Institute, Jorhat.
- Two days Training Program on Conserving Natural Resources for Sustainable Development in Dry Areas at Arid Forest Research Institute.
- Three days Training Programme on Soil and Water Conservation for Frontline Staff of Forest Department & other beneficiaries at Tropical Forest Research Institute, Jabalpur.

2. Finalization of Baseline Study

The key outcomes/emerging trends of the study will serve as a benchmark of assessments of the status in future. The baseline study conducted by thematic experts through a careful choice of indicators of SLEM components viz. land degradation, biodiversity, impact of climatic change/variability on land use practices as well as policy and institutional framework and monitoring and evaluation framework across the country.

Land Degradation

The water erosion is the most predominant degradation process affecting large number of states. Uttar Pradesh is the worst affected, covering 54% of the TGA, followed by Madhya Pradesh, Karnataka, Jharkhand, Arunachal Pradesh and Meghalaya, covering 44%, 41%, 40%, 32% and 31% of the TGA. Assam with 30% affected area ranks seventh and Maharashtra with 29% degradation ranks eighth.

Soil salinity is another major cause of degradation affecting mainly coastal states. Excessive irrigation in command areas is major cause of secondary salinization in some of the states leading in food grain production. Salinity is highest in Andaman and Nicobar Islands, covering 9% of TGA, followed by Gujarat (8%) and West Bengal (5%). Odisha, Rajasthan, Maharashtra and Haryana each have 1% salinity affected area.

Soil sodicity has been found to affect physical and nutritional characteristics of the lands and ultimately rendering them partially or fully non-productive. Sodic problem is very intensive in Uttar Pradesh, affecting 6% of the TGA, followed by Haryana (4%) and Punjab, Gujarat and Tamil Nadu (3% each). Other states of the country are not much affected by sodicity.

Biodiversity Conservation

Threats to gharial in unprotected areas are due to the factors such as fishing, sand mining, river side cultivation and industrial pollution. Loss of habitat owing to construction of reservoirs and dams, lack of stringent laws, trapping in fishing nets and erroneous superstitions have made them one of the most vulnerable reptiles.

Retention of tropical forest bird communities within human-dominated landscapes critically depends on the maintenance of nearby intact forest. Human Wildlife Conflict in Nanda Devi Biosphere Reserve (NDBR) : Losses to crops from areas near the forest contributed to more than 50% of total losses for each crop in all villages along the PA. Due to existing conservation policies and laxity in implementation of preventive measures, the problems for local inhabitants are on increase. Change in cropping and crop composition, particularly cultivation of medicinal plants (high value low volume crops) are suggested. This is the matter of PAME (Protected Area Management Effectiveness) concern for further integrated study.

Climate Change Adaptation

According to Forest Survey of India (SFR, 2009), tropical moist deciduous forest (33.92%) and tropical dry deciduous forest (30.16%) forms the major part of the forest cover of India. The area and spatial status of 16 Forest Type Group categories spread across the country is considered of which division's upto the order of sub types and its variations along with illustrations, locality factors and floristics will also be available in the near future. In the recent survey, it is observed that Chandar Sal, 8A/C3 Central India, Subtropical Hill Forest, 6/DS1 Cassia auriculata



(pure) Scrub, 5/1S3 Inundation Babul Forest (pure forest) as described by Champion and Seth (1968) is more or less absent as forest type. Climate change can be one of the factors responsible for this.

Policy and Institutional Framework and Socio-Economic Aspects

Budgetary subsidies to agriculture have increased from around 3% of agriculture GDP in 1976–80 to about 7% in 2001–03. During the same period, public investment in agriculture declined from over 4% of agriculture GDP to 2%. Most of the subsidies are on fertilizer, power, and irrigation water and these have actually contributed to the degradation of natural resources.

Though the percentage of population dependent on agriculture has gone down from 77% in 1950 to 67% in 2004, the absolute numbers dependent on agriculture, have increased by 2.44 times between 1950-51 and 2003-04. The States with high levels of degradation also show low Agriculture GDP, even though the population dependence on agriculture is high.

3. National Steering Committee

- The second meeting of the National Steering Committee (NSC) held on 18th April, 2011
- The third meeting of the National Steering Committee (NSC) held on 28th February, 2012

4. Publications/Website

- Published newsletter (Vol.1 No.1 & Vol.2 No.1), Annual Report and Proceeding of the Workshop on SLEM Role of Forests in Dryland Areas.
- Developed SLEM-CPP Website i.e, slem-cpp.icfre.gov.in
- Published proceedings of the Workshop on SLEM: Role of Forests in Dryland Areas.
- Published Annual Report for the period of 1st April 2010 to 31st March, 2011.

National Forest Library and Information Centre (NFLIC)

- The National Forest Library and Information centre (NFLIC) is richest in document collection

on forestry and allied sciences in South and Southeast 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 databases, etc. to its users. During the year, 29,324 books were loaned to the users for outside reading. Besides, 62,523 documents were consulted inside the library.

- The document collection of the NFLIC was enriched by the addition of 1,330 books and

other documents, out of which 691 books were purchased at a cost of Rs.12.59 lakh. The NFLIC subscribed to 83 Indian and 78 foreign periodical titles at a cost of Rs. 71.05 lakh. It also received 425 periodical titles gratis. The NFLIC also provided online accessibility to 47 most useful journals to the regional institutes of ICFRE at a cost of Rs. 58.67 lakh.

A bibliographical database-Forest Science Database was also subscribed for providing access to research articles on forestry from 1939 to up-to-date to the regional institutes and centres of ICFRE at a cost of Rs. 14.59 lakh.

In order to track, analyze, and visualize research on different aspects of forestry and environment science, the NFLIC subscribed Scopus, which is the largest abstract and citation database of peer-reviewed literature and quality web sources with smart tools, at a cost of Rs. 8.49 lakh.

The NFLIC has been selling ICFRE publication through its Book Depot. During the year, 777 books and 13 VCDs were sold to the state forest departments, universities, etc. and a revenue of Rs. 170,846/- earned.

Environmental Information System (ENVIS)

The Ministry of Environment and Forests, Govt. of India established ENVIS Centre on Forestry at the NFLIC. The Centre, during the year, enriched the following six databases by the addition of new references: Indian Forestry Abstracts, Participatory



Forest Management, *Prosopis juliflora*, Poplars, Environment and Forest in Press, Current Forestry Literature, which are accessible through the website of the Centre having URL: www.frienviis.nic.in. Besides, the contents pages of journals, forest cover of India, announcements of forthcoming national and international conferences, seminars, symposia, training courses, etc. were also put up on the website.

Publication: The ENVIS Centre on Forestry published a special issue of ENVIS Forestry Bulletin on Non-Wood Forest Products and five issues of *Environment and Forests News Digest*.

4.1 Report on Van Vigyan Kendras (VVKs) and Demo Village (DV)

FRI, Dehradun

VVKs

Forest Research Institute, Dehradun till date has established six Van Vigyan Kendras (VVKs) in the States and UTs of its working jurisdiction.

At each of the established VVKs, space has been allocated for the trainings and displaying of information in the forms of posters and display boards. Printed copies of handouts and information brochures have also been kept for distribution to the farmers and visitors. Annual training calendars of FRI has also been kept for providing information on different trainings to be conducted at FRI, Dehradun on different issues in a year.

The following trainings were organized during the period under report:

- *Aushadhiya poudhoun kee kheti, upyogita, vyavsayikaran mein smasyaien va samadhan* at VVK Haldwani from 13 to 15 March 2012
- *Sahari Vaniki, Aushadhiya Puodhoun ka sahari parivesh mai sthaapan evam holi kai prayavaran hiteshi rang* at VVK UT Chandigarh from 8 to 10 February 2012

- Eco restoration of Wastelands at Bulloval Shankari, Punjab from 14 to 16 December 2011 and at VVK Pinjore from 4 to 6 January 2012
- Extraction technology of natural dye and aroma therapy and cultivation value addition of medicinal plants for teachers of Chandigarh UT at FRI, Dehradun from 2 to 4 November 2011



Participants at VVK, Pinjore



Training on Nursery Techniques under Demo Village



Training on GPS under VVK Training Programme



- Forest Mensuration at VVK Pinjore from 6 to 8 September 2011
- Urban Plantation: Choice of tree species, Techniques & Specification at VVK, UT Chandigarh from 17 to 19 August 2011
- Land Reclamation through plantation at VVK, NCT Delhi from 29 to 31 August 2011
- Agroforestry – Scope for Livelihood Security at VVK Haldwani from 9 to 11 August 2011
- Dissemination of information & Innovation of FRI technologies: at VVK, Pinjore from 24 to 25 March 2011
- “Mensuration and pruning of Tree” at VVK, Hoshiyarpur from 1 to 3 February 2011



Field Visit under Demo Training



Model Nursery under VVK

- Dissemination of information & Innovation of FRI technologies: at VVK, UT Chandigarh from 22 to 24 February 2011
- Forest Mensuration and tree pruning technique at VVK Haldwani from 8 to 10 February 2011

Demo Village, Shyampur

A model nursery has been developed at Shyampur village near Dehradun during March 2008. This nursery was developed in collaboration with Bagwan Gramodyog Samiti, Shyampur Village. Farmers of adjoining villages of Dehradun, NGOs associated with forestry produces, People of Small scale industries and Students are the beneficiaries.

Trainings on "Nursery and Plantation Technique of Medicinal Plants & Utilization" from 19 to 21 October 2011 and on "Medicinal plants and cultivation of mushroom & utilization" from 27 to 29 March 2012 were conducted at Shyampur, Dehradun.

Model Nursery

- (i) Model nursery at Pinjore and Chandigarh have been established.

Trainings under VVK Capacity Building/Training Programme

Various themes covered in the trainings were:

- Awareness programme on Forestry Research and its utilization



- Propagation, utilization and protection of bamboos
- Importance, utilization and protection of NTFP
- Nursery and plantation techniques
- Collection, storage and protection of seeds
- Forest mensuration and tree pruning techniques.
- Eco restoration of wasteland
- Agroforestry practices

Van Vigyan Kendra, Kanpur Established by CSFER, Allahabad

A training on “Exposure Tour cum Training on Bamboo for Prosperity” was organised at Dehradun, Uttarakhand from 13-17 June, 2011. Training was funded by U.P. Forest Department under NBM programme.

A training and demonstration programme on “Planting Stock Improvement” was organized from 19 March to 21 March, 2012 at Van Vigyan Kendra, Kanpur by CSFER, Allahabad.

Demo Village (DV) Established by CSFER:

The main objective of establishment of demo village is to develop low cost model nursery for demonstration purpose. The vermi-composting unit, training shade, Bamboo treatment tank, hand pump for nursery had been developed on the site. The nursery works are in progress for raising seedlings of Satawar, Kalmegh, Chitrak, Kalabansa, Aonla, Imli, Bel, Teak, Jatropha were maintained in the nursery. The seedlings were distributed to the farmers as per requirement. Bio-fencing of the plot with Jatropha has been also done. The training programmes were conducted in the Demo village (Saidupur) to create awareness for forestry programmes :

A one-day farmers' training-cum-demonstration programme was organized on 19.10.11 at demonstration village, Saidupur of CSFER, Allahabad. The topic of the programme was – *Satawar (Asparagus racemosus) ki Kheti, Upyog evam Prayog Vidhi.*



View of Training Programme in Demo Village

- A one-day farmers' training-cum-demonstration programme was organized on 31.03.12 at demonstration village, Saidupur of CSFER, Allahabad. The topic of the programme was – **Role of Bamboos in Socio-economic Development.** A large number of participants including farmers and women participated in the programme.

IFG TB, Coimbatore

VVK Coimbatore, Tamil Nadu

Skill Upgradation Training Programme on Nursery and Plantation Techniques of Fast Growing Tree Species for Staff and Personnel of Department of Forests and Wildlife, Puducherry was organised on 28.4.2011. A total of 65 persons from the department participated in the training programme.



Annual Report 2011-12

Training programme on Plantation Technologies was organised to the Foresters' Trainees of Tamil Nadu Forest Academy on 16.06.11 and 17.6.2011. About 50 foresters participated in the training programme.

Training was imparted to farmers on 21-23 June, 2011 at Karaikal on Pest and their management in forest trees organized by Govt of Pondicherry, Department of Forests & Wild life.

16,069 ramets comprising 35 clones of *Casuarina equisetifolia* of IFGTB, produced through VVK with identity was provided to Social Forestry Division, Surat, Gujarat Forest Department along with technology required for establishment of Clonal Seed Orchard (CSO) of *Casuarina*

equisetifolia. IFGTB developed the design of CSO using 35 clones and provided to the Gujarat Forest Department. The department was also supplied with the improved seeds of *Casuarina jhunghuniana* collected from the Seed Orchards managed by the institute for plantation programmes undertaken by the social forestry division.

Published the Book on Biofertilizers and Biomanures in Tamil, cultivation guide on *Gmelina arborea* in Tamil, Frankia, Vana Ariviyal a Tamil quarterly newsletter, Brochure on IFGTB in Hindi and an yield table for *Casuarina*. The same were released by the Hon'ble Minister for Environment and Forests, Govt. of India during Tree Growers Mela 2012.



Training Programme under VVK



VVK, Kuthiran, Kerala

Organised a training Programme for Forest Guard Trainees of Walayar Forest Training School, Kerala on Micro and Macropropagation techniques for quality planting stock production on 26 and 27 March, 2012. 35 Forest Guards participated in the said training programme.



Field Training Programmes under VVK, Port Blair, Andaman and Nicobar Islands

Kandiyr Demo Village

An awareness training programme on "Environment Protection" was organised in April 2011 for the school children of Primary School, Kandiyr Demo Village. A total of 36 students participated in the training programme. A training programme on



Training Programme for Forest Guard Trainees of Walayar Forest Training School, Kerala



VVK, Port Blair, Andaman and Nicobar Islands

Organised field training programmes on vegetation survey for a select front line staff and workers of Diglipur, Mayabunder, Middle Andaman, Baratang and South Andaman Divisions of the Department of Environment and Forests, A&N Islands. Also, organised training programmes to Field Forest Officers on climate change and Forestry, and plantation technologies.



Field Training Programmes under Kandiyr, Demo Village



Biofertilizer production and application, Insect pests and disease management in plantations and nursery was organised to the farmers, women self help group members on 6 January, 2012.

An exposure visit was organised to Erode and Karur for the farmers of Kandiyur on industrial agroforestry. They were shown the plantations taken up by the Tamil Nadu News Print Limited, Karur and Seshasayee Paper Boards, Erode through captive plantations and contract farming on 26 March 2012.

Supply of Improved Seeds

About 14 Kg of improved seeds of Eucalyptus, Casuarinas and Acacias collected from seed orchards of IFGTB, were supplied to farmers, Forest Departments and industries in different states.

Supply of Seeds and Seedlings

Collected about 28 kg of improved seeds of Eucalyptus and Casuarina from seed orchards established by IFGTB in different locations in Southern India and supplied to the industries, farmers and State Forest Departments for raising plantation. The seed orchard seeds showed outstanding growth performance as compared to the local seed source. Earned a revenue of Rs. 2, 21,000.00 during the fiscal year 2011-2012 through seed sale.

IWST, Bangalore

- One day training under VVK, Karnataka was conducted at Kadugodi, Bangalore on 18 August 2011. 23 Deputy Range Forest Officers were trained during the training.
- Under VVK Extension activity, Goa Forest Department Officers/ Farmers/ NGOs/Saw millers/ Wood working industries were given training on the following topics from 23 to 25 February 2012.
 - (i) Field demonstration of preparation of nursery bed for sandal and bamboo propagation
 - (ii) Training on nursery practices, propagation and cultivation for bamboo technique, composting, biofertilizer and nursery pest management

- (iii) Wood processing (Seasoning, Preservation and Protection) – with especial emphasis on Acacia auriculiformis and other secondary species and small girth timber for value addition
- (iv) Field demonstration of bamboo preservation using sap displacement and boucherie unit
- (v) Demonstration of portable distillation unit

TFRI, Jabalpur

Teak of Madhya Pradesh origin was planted in Demo Village, Moiyana for demonstrating existence of relative resistance against teak defoliator and leaf skeletonizer.

Three VVK and one demo village were maintained by the institute, which carried out various activities viz. training, development and maintenance of model nursery and publication of publicity material on various forestry activities. During the period under consideration, Van Vigyan Kendras of the respective states organized training programmes for the farmers, frontline forest officials, NGOs and other stakeholders. Besides, a Demo Village was maintained at Moiyana with the purpose of demonstrating the technologies developed on use of VAM fungi and resistant teak clones, by the institute. The institute also took up extension activities at nearby villages, Jamtara and Barha, for promoting the use of vermicompost and other technologies in the field of NWFP and Agroforestry, under the model developed in the Workshop on **ग्रहियों का उत्थान**, organized on 6th October 2010 by short-listing 10 farmers from selected villages after detailed socio-economic surveys conducted for the purpose.

RFRI, Jorhat

Van Vigyan Kendra (VVK)

Five numbers of Van Vigyan Kendra are operational in five North Eastern States: Assam, Arunachal Pradesh, Mizoram, Nagaland and Tripura. Different activities were performed during the financial year 2011-12 as per ICFRE guidelines.



Van Vigyan Kendra, Tripura

Training programmes conducted by the VVK, Tripura are as follows:

- Trainings on Capacity Building/ Extension of Forestry for JFMC members/ Stake Holders at Van Vigyan Kendra, Agartala from 3-7 January 2012, from 10-14 January 2012, from 17-21 January 2012 and from 30 January to 03 February 2012.
- During the trainings the farmers were informed about the concept and purpose behind the activities of VVK. The topics which were emphasized during the training were:
 - (i) Concept of a business plan, and importance of raw materials identification and sustainable management of NTFPs
 - (ii) Importance of local medicinal plants for healthcare
 - (iii) Capacity building of JFMC members through value addition of Cane and Bamboo



Trainees Visiting Kalibazar Bamboo Furniture Making Unit

- (iv) Capacity building of JFMC members through value addition of local medicinal plants
- (v) Vermi-composting techniques
- (vi) Besides this, visit to various industries like Agarbatti, furniture etc. and research centre were also organized under the programme
 - 1 Bhubanban Agarbatti sticks preparation unit
 - 2 Bamboo sticks making unit, TRIBAC, Gandhigram, Hatipara

- 3 Panchakarma Research Centre
- 4 Vermicompost preparation unit at Research Division, Hatipara
- 5 Kalibazar bamboo furniture making industries
- 6 Tilla Medicinal Nursery, Nehru Park



Visit at Bamboo Stick Making Unit , TRIBAC, Gandhigram, Hatipara.



Visit of Agarbatti Stick Preparation Unit, TRIBC Gandhigram, Hatipara

Maintenance of VVK Nursery:

Following works were done out of the fund released:

- (I) Maintenance of vermicomposting unit
- (II) Maintenance of Bamboo fencing
- (III) Creation of power supply connection of 200 m length
- (IV) Creation of 7 Nos. water supply lifting pump
- (V) Purchase of 1.5 HP water lifting pump
- (VI) Washing of exiting 200 m length water pipe



Van Vigyan Kendra, Nagaland

Training programmes conducted by the VVK, Nagaland are as follows:

1. Training-cum-workshop programme of sustainable management, product diversification and value addition of bamboo and wildlife management on 24-28 February, 2012 at SEFTI, Dimapur, Nagaland.
2. Training-cum-workshop programme of sustainable management, product diversification and value addition of bamboo and wildlife management on 12-16 March, 2012 at Sainik School Punglwa, Peren, Nagaland.

Maintenance of VVK Nursery:

Following works were done out of the fund released:

- i. Raising of fuel wood species
- ii. Soil working, procurement seeds
- iii. Labour charge
- iv. Cost of Manure etc

Demo Village (DV)

Establishment of Extension Camp and Shade house:

A facility as RFRI Extension Camp has been established through participatory initiatives with the people of Demo village. The setup is now fully used for various extension activities under Demo village programme. A Shade house (21m X 10m) has also been constructed with nursery beds supported with vermicompost units. The shade house is being used for various technical activities like bamboo propagation and raising of other quality stock.

Extension of Chilli based Agroforestry Model:

A total of 10,000 plantlets which were raised in RFRI and Demo village nurseries and distributed to all the willing families for cultivation in their home garden under various tree canopies in view of on-farm agroforestry research. The two Agroforestry model were selected for chilli viz. *Mangiun*-King chilli Agroforestry model and *Areca nut*- King chilli

Agroforestry model were promoted. The farmers have been benefited from cultivation of the crop to a great extent.

Raising of Agar (*Aquilaria malaccensis*) Plantations and Cultivation of Muskdana:

Looking into the success of the plantations of 2000 Agar seedlings in different farmers' fields last year, another 2000 seedlings have been planted in July 2011. Agar plants are preferred by almost all the farmers. Some farmers were motivated for cultivation of Muskdana. It is an aromatic plant used in various chemical formulations.

Organizing Liaison Meetings with Visiting Entrepreneurs

A liaison meeting was also held at Demo Village with the leading entrepreneur Shri Raj Singh who visited from Kolkata, West Bengal who later purchased the harvested products from the farmers by way of on spot payments.

Visits:

- Director General ICFRE, Dr. V. K. Bahuguna and several other dignitaries visited Demo village and interacted with the farmers and the local forest officials while inspecting various ongoing demo activities in Demo village.
- Dr. K. von Gadow. Retired Professor, Georg-August-Universität Gottingen, Germany visited Demo village and interacted with the beneficiaries.



Dr. V. K. Bahuguna, Director General, ICFRE visited Demo village



Organizing Training Programme for Technology Transfer:

Training on Low-cost Vermicompost by the Master Trainers from Demo Village:

Two Nos. of demonstration cum training were organized at Borkhaigia and Borchungi village in Jorhat district. The Master Trainers from the demo village demonstrate the process of vermi-composting. The trainings were organized in association with the local NGOs. The Master Trainers from the Demo Village are regularly being invited as a Resource Persons by various Govt. and Non-Govt. Organizations.



RFRI- Demo Village Extension Camp

Training on Air layering of various economic important tree species using *Sphagnum*:

A training was organized in Demo village on January 23, 2012 with field demonstration, More than 20 villagers were actively participated in the training. After training and field demonstration, more than 20 farmers adopted the techniques to multiply the site specific rare but the local trees and shrubs super specialties. The process was applied in more than 200 branches of plants like *Cinnamomum zeylanicum*, *C. tamala*, *Litchi chinensis* and in different species of *Citrus* using *Sphagnum*.



1. Cultivation Bhootjoolakia under Areca nut, 2. Distribution of *Acacia mangium* Seedlings, 3. Cultivation of Muskdana, 4. Demonstration of Vermicomposting to Eco – Task Force of Indian Army



AFRI, Jodhpur

(A) VVK at Bichhawal Nursery, Bikaner (Rajasthan)

Various meetings were conducted with Rajasthan Forest officials regarding VVK works. Under Rajasthan VVK, one hi-tech nursery at Bichhawal, Bikaner (along with a satellite nursery Mohangarh) of SFD Rajasthan were upgraded/renovated in 2009-10.

Maintenance of Hi-Tech Nursery Bichhawal, Bikaner: Maintenance of Hi –Tech nursery Bichhawal, Bikaner has been executed and rice husk, insecticide, seed and PVC pipe were procured for the Hi-Tech nursery.

(i) **Raising of Seedlings:** 3000 quality seedlings of *Prosopis cineraria* and *Dalbergia sissoo* have been raised in Hi-Tech nursery Bichhawal, Bikaner under VVK.

(ii) Extension activities: VVK and Demo activities were published in 'AFRI Darpan' (Special issue on VVK/DV), Year 9 Volume 4, Oct–Dec, 2011 and provided to the various stakeholders for wide publicity. Twelve display boards were handed over to ACF, WFP, Jaisalmer to display at the satellite nursery Mohangarh, Jaisalmer for farmers/ stakeholders under VVK, Bikaner.

(iii) **VVK Training:** Three days VVK training was organized at Kishan Bhawan, Srianganagar (Rajasthan) from 14 to 16 Nov, 2011. The total 67 participants (51 forest staffs and 16 farmers) attended training.

(B) VVK at Chhipardi Beedi, Rajkot (Gujarat)

(i) **Maintenance of Hi-Tech Nursery:** Maintenance works of Hi –Tech nursery, Chhipardi Beedi, Rajkot have been executed. Garden pipe, fogger and accessories, fertilizer and insecticide were procured for the Hi-Tech nursery.

(ii) **VVK Training:** Three days VVK training was organized at Sinh Sadan, Sasan Gir, Junagadh (Gujarat) from 17-19 Oct, 2011. The total 65 person (30 forest staffs and 35 farmers) attended the training.

(iii) **Raising of High Quality Seedling:** 2500 high quality seedlings of grafted viz; *Zizyphus mauritiana*, *Embelica officinalis* and *Cordia mixa* and *Casuarina equisetifolia* from seeds/cutting and of each species. Minimum 500 seedlings were raised in the Hi-Tech nursery at Research and Development Centre, Rajkot for farmers/ stakeholders under VVK.

(iv) **Extension Material:** VVK and Demo activities were published in 'AFRI Darpan' (Special issue on VVK/DV), Year 9 Volume 4, Oct – Dec, 2011 and displayed at VVK Rajkot for wide publicity.

(C) Khanwel (Dadra & Nagar Haveli and Daman)

(i) **Establishment of VVK:** MoU was signed between AFRI and Forest Department, Dadra & Nagar Haveli and Daman, UT on 24 Jan, 2012. Van Vighyan Kendra was inaugurated by Shri S. K. Agarwal, CCF, Forest Department, Dadra & Nagar Haveli, and Daman, UT.

(ii) Two days VVK training was organized at Khanvel, Silvassa, UT, DNH from 24 - 25 Jan, 2012. The total 30 participants (15 forest staffs and 15 farmers) attended the training programme.

(iii) **Extension Activities:** Already prepared display boards (Hindi and Gujarati languages) of research findings and technologies developed were displayed at the Rudhana nursery, Khanwel, Silvassa, (DNH) for farmers/stakeholders. Various literature viz; leaflet, pamphlets, brochures and AFRI Darpan were displayed at Rudhana nursery.



VVK trainees at Rudhana Nursery, Khanvel, Silvassa



Demo Village, Salawas, (Jodhpur)

- 1. Establishment and Strengthening:** MoU was signed between Director, AFRI and Sarpanch, Salawas village, Jodhpur for additional land adjoining to the forest nursery (FD), Salawas, Jodhpur on 30 May, 2011. Panchyat land of 1.5 ha was allowed by Salawas Gram Panchayat (GP) for Demo Village (DV) activities. Thus, total 8.68 ha GP & FD land is available for Salawas DV activities.
- 2. Extension Activities:** Van Mahotsav 2011 was observed at the site of Demo Village, Salawas, Jodhpur on 28 July, 2011 with involvement of Salawas Gram Panchyat and SFD Jodhpur. Sh. Malakhan Singh Bisnoi, MLA Luni was the chief guest at the function. Sh. I. A. Mugal CF, Jodhpur and Mrs. Akanksha Choudhry, DFO (WL), Jodhpur were invited as special guests. The programme was organized at demo-village site, Salawas for sensitizing the people about demo village activities carried out by AFRI at Salawas Gram Panchyat. Hundred quality seedlings of *Prosopis cineraria* and *Azadirachta indica* were distributed among the farmers to promote agroforestry and enhance land productivity.
- 3. Demonstration of Developed Technologies/ Models at Demo Site:** The model nursery was constructed. The agroshed, vermi compost, Ditch cum mound as Cattle Proof Trench and live hedge fencing were constructed near SFD nursery, Salawas, Jodhpur for demonstration purposes as well as high quality seedling production for farmer/stakeholders.

The soil and water conservation measures viz.; rubble stone check dam and V-ditches were constructed for demonstrated *In-situ* water conservation and its impact on recharge of ground water and biodiversity. Silvopastoral model of *Cenchrus ciliaris* grass along with *Cordia gharafa* and *Zizyphus numularia* planted with intervention of *in-situ* water conservation were developed for demonstration purposes.

Two day Demo village training was organized at Arid Forest Research Institute, Jodhpur during 26 – 27 Dec, 2011. The total 43 participants (22 forest staffs and 20 farmers) attended the training.

Mass Communication Material and Media

- Information booklets of AFRI published and provided for wider publicity to farmers/ stakeholders.

'AFRI Darpan' – Quarterly Hindi magazine was published. One combined issue (600 copies Jan2011-June, 2011) and two separate issues (600 copies) were published and provided to various stake holders.

Training programmes organized under VVK and Demo Village were published in many daily local news papers (Hindi and Gujarati) for wide publicity among the public.

On the occasion of Van Mahotsav, 500 pamphlets were printed and distributed to the stakeholders.

Brochure (5000) on Khejari mortality problem and its management were also printed for publicity under dissemination of information.

AFRI pamphlet/folder (9000) consists of details of the mandate, thrust area of Institute and technologies/ package, developed by the AFRI were published under VVK/DV scheme for wider extension activities.

Participation in Kisan Mela/Exhibition/Trade Fair etc:

Participated in melas held at Jodhpur and other places in Rajasthan for dissemination of research results and developed technologies of various research activities of the Institute using display material like; posters, panels, books, brochures/leaflets/information booklet etc. to the people, at large, especially the farmers and other end users:

- (a) Participated in the Western Rajasthan Hastshilp Utsav, held at Rawan Ka Chabootra, Jodhpur from 5-15 January, 2012.
- (b) Participated in Science Technology Day celebration at Jhunjhunu on May, 13, 2011, organized by the State DST, Rajasthan.



(c) Participation in 19 National Children Congress held at Jaipur from 26-31 December, 2011.

HFRI, Shimla

HFRI, Shimla is implementing and undertaking extension activities through two VVK's one at Sundernagar, Himachal Pradesh and another at Janipur, Jammu, J&K. The Institute has published the pamphlets 1000 no. each of *Prunus ceresoides* (Pajja), Indian Gypsy Moth-Ek Shatru Keet and *Hippophae ramnoides* (Charma) for the benefit of different stakeholders. Organized a workshop on 'Issues and concerns in forestry: Awareness amongst school children' on 5 June, 2011 and 'Modern Trends in Production of Quality Planting Stock' on 24.06.2011. Also organized and imparted training on 'Sustainable utilization, conservation and cultivation of medicinal plants' to the field functionaries of HPSFD and local farmers at VVK, Sundernagar on 28.03.2012. In an endeavor to augment the rural income and crop diversification, raised the high temperate medicinal plants species viz. *Picrorhiza kurroa*, *Valeriana jatamansi*, *Angelica gluaca* and *Podophyllum hexandrum* at FRS, Bundhar, Kullu (H.P.) and to promote the organic farming established and demonstrated the vermi-compost unit to showcase the different stakeholders. At FRS Tabo, Kaza; through seeds and cuttings raised about 21,000 no. seedlings of different plant species like *Elaeagnus angustifolia*, *Hippophae rahmnoides*, *Collutea neplensis*, *Ribes oriental*, *Rosa webbiana* etc. In addition to this, general maintenance of the nursery activities like watering of the field plantation, fixing up of tullu pumps in the polyhouses in the initial year etc. were also carried out. Established the Poplar Germplasm Bank of Poplar clones (16 No.) and further multiplied for the various end users at VVK, Janipur (J&K). Also raised and maintained the various medicinal and forestry species in the demonstration nursery.

Demo Village, Lanabaka, Himachal Pradesh:

The institute organized a workshop cum villagers meeting at DV Lanabanka, Sirmour (H.P.) on

25.09.2011. During the programme, outside experts were also invited to demonstrate maize silage making and organic farming. On the specific request of villagers, established a mixed plantation of Bamboo sp. and *Paulownia* in the area of 1 ha. in different spacing for checking soil erosion and established a strip plantation of *Valeriana jatamansi* and *Aloe vera* as intercropping with Bamboo and Paulownia in the area of 0.5 ha. as showcase model for checking soil erosion. Maintained the demonstration nursery and plantation by carrying out regular weeding, hoeing and watering etc. Production and maintenance of Vermi-compost unit for showcase to the various stakeholder.

4.2 Technologies Transferred

FRI, Dehradun

FRI, Dehradun transferred the technical know-how for 'An improved binding material for incense stick (Agarbatti)' developed in the laboratory to M/s Anand Agarbatties, Nagpur by charging license fees of Rs. 2.5 lakhs on 29 June 2011.

Bamboo propagation technique was transferred to the farmers of Saidupur (Demo village) during training programme on Bamboos on 31 March 2012 by Scientists of CSFER, Allahabad.

Application of ZiBOC in block boards was initiated at industrial level.



Dr. S.S. Negi, Director, FRI Handing Over the Certificate of Transfer of Technology to M/s Anand Agarbatties, Nagpur



Technology of cultivation of a nutraceutical mushroom *Ganoderma lucidum* transferred to farmers, mushroom growers, NGO and industry (71 No.)

IFGTB, Coimbatore

A product named “**IFGTB – Tree Growth Booster (VAM Biofertilizer)**” was developed and it was released by the Hon'ble Minister for Environment and Forests, Govt. of India during “Tree Growers Mela-2012” organized at IFGTB on 23-02-2012. The product was supplied to various stake holders particularly the SFDs, Farmers and Tree growers.

Sandal + Lemon tree based Silvi-horti Agroforestry system was assessed and transferred.

Transferred seed handling techniques of forestry species to farmers and foresters through posters and trainings during various training programs.

IWST, Bangalore

Standardized technology on 'Arbuscular Mycorrhizal (AM) fungi as bio-fertilizer in Forestry' was given to foresters and NGO's.

TFRI, Jabalpur

Technologies developed in the institute were demonstrated to the farmers, frontline forest officials, NGOs and other stakeholders, by the institute, VVKs and Demo Villages under it. Besides the above, the technologies were also transferred through participation in Kissan Mela, Science Mela and at other allied forums, organized by other agencies, time to time. The activities of the institute were also demonstrated to the distinguished visitors, trainee foresters of different states, University, College and school students and other visiting groups foresters and others from different places. In all, eleven demonstration programmes were organized by the institute during the current year.

Package of practices of turmeric with high yielding variety transferred through demonstration and training programme to the farmers of Jamtara-Paraswara village and Barha village of Jabalpur on 5 July, 2011 during training programme at their field only.



Transfer of Technology through Field Demonstration at Demo Village - Barha of Jabalpur District (M.P.)

Farmers were motivated through training and demonstrations to adopt the bamboo based Silvi-Agri, *Sissoo-mays* Silvi-Agri system and teak-turmeric Silvi-Medicinal.

RFRI, Jorhat

The technologies were transferred to the fields as follows –

- PRA techniques and microplanning
- Bamboo Treatment
- Vermicompost
- Apiculture
- Patchouli agrotechniques
- Trichoderma production and field application
- Mycorrhizal Technology
- Biopesticide production and field application
- Seed handling-grading and sowing techniques
- Technology on Chili based agroforestry model
- Technology on Air layering of various economic important tree species using *Sphagnum*
- Technology on low-cost vermicompost
- Technology on raising of Agar (*Aquilaria malaccensis*) plantations and Cultivation of Muskdana



AFRI, Jodhpur

Developed regression to estimate above ($\sqrt{W} = a + bD$) and below ground ($W = a + bD^2$) biomass of *Prosopis juliflora*. Here D is collar diameter of *P. juliflora* tree and a & b are regression constants.

Package of the practices developed in rain water harvesting in Aravalli has been extended under demo village activities at Salawas for wider publicity and replication by the stake holders.

4.3 Research Publications

Researchers at ICFRE have published 318 research articles in various journals, including 115 articles in the foreign journals. Three hundred seventeen research papers were presented/ published in the proceedings of the conferences/symposia/seminars/workshops. Besides, 17 books/manuals/pamphlets/booklets were published and 54 chapters were contributed in composite books.

The National Centre for Biotechnology Information, USA assigned accession numbers to 26 fungal r-DNA gene-isolates of *Cylindrocladium quinquesepatum*.

4.4 Seminars/Symposia/Workshops

Organized

Seminars

FRI, Dehradun organized National Seminar on recent Advances in Fungal Biotechnology on 22 and 23 September 2011.

IFGTB, Coimbatore organised a National Seminar on Forest Health Management FHM-2012 on 21 and 22 March 2012.

IWST, Bangalore organized one day seminar on "Design Sensitizing Programme" under MSME-DCS for wood based industries at IWST in association with National Institute of Design (NID), Bangalore on 13 September 2011.

HFRI, Shimla organized two day's Seminar on "Insect-Pests and Diseases: Their Incidences and Management in Forest Ecosystem", on 25 and 26 May 2011. The Seminar was attended by about 40 eminent participants and leading experts in the field of Forest Pathology and Forest Entomology from all across India. The Seminar was inaugurated by Sh. Vinay Tandan, IFS, PCCF Himachal Pradesh Forest Department.

Workshops

ICFRE-IDS collaborative workshop on "Strengthening knowledge sharing for effective development in Uttarakhand" was organized at ICFRE, Dehradun from 9 to 12 October 2011.

FRI, Dehradun organized Workshop cum Meeting on Revision of National Working Plan Code on 2 and 3 March 2012.

FRI, Dehradun organized one day National Consultative Workshop on "National Study on Commercial Production of Non Timber Forest Products for Ensuring Fair Economic Returns to Primary Collectors" on 18 July 2011 at Ministry of Environment & Forests, New Delhi.

FRI, Dehradun organized workshop on Climate Change & Forestry Research Needs in Himalayas on 24-25 October 2011.

IFGTB, Coimbatore conducted one day workshop on "Non Detrimental Findings (NDF) study on *Pterocarpus santalinus*" on 29 July 2011.

IFGTB, Coimbatore organised workshop on 'Assessment of Forest Types of India' on 2 February 2012.

IFGTB, Coimbatore organised workshop to prepare the country Report on Forest Genetic Resources for SOW-FGR on 7-8 February 2012.

IFGTB, Coimbatore organised workshop on 'Tree Farming for Sustainable Livelihood' on 23 - 24 February 2012 as part of the Tree Growers Mela 2012.

IWST, Bangalore organized a workshop-cum-interactive-meet with wood sectors of Andhra Pradesh on 29 July 2011 at Andhra Pradesh Forest Academy.



About 70 participants from wood sectors like carpentry, saw mill, artisans, charcoal sectors participated. The workshop was organized by IWST and APFA.

TFRI, Jabalpur organized one workshop-cum-training programme on "Sal heart borer and its management" on 30 November 2011 at Raipur and on 24 February 2012 at Jagadapur.

TFRI, Jabalpur organized one day workshop on "Achanakmar-Amarkantak Biosphere Reserve" on 3 March 2012 at Bilaspur.

TFRI, Jabalpur organized workshop on "*Satat Ajiwika Ke liye Unnatsheel Krishiwaniki Padhatti*" held on 28th September 2011 and Total 13 papers were presented and discussed on the various agroforestry models suitable for different agroclimatic and land conditions. A booklet released during this occasion on the "*Satat Ajiwika Ke liye Unnatsheel Krishiwaniki Padhatti*", eds. Berry, Nanita and Negi, M.S., A TFRI publication. pp1-100.

TFRI, Jabalpur organized two training-cum-workshops of two days duration each on "Development of Value added food products and processing of Mahua flowers" on 2-3 March 2012 and 22-23 March 2012. Target groups were women self help groups from different Van Samitis of Chhindwara District.

TFRI, Jabalpur organized a workshop on "Energy-Mass exchange in vegetative systems" for scientists of ISRO, MPCST, CAZRI, FRI, and TFRI and officers from SFDs and national parks of M.P" on 9-10 June 2011 at TFRI Jabalpur.

RFRI, Jorhat organized a District Level Workshop on 'Bamboo, sponsored by National Bamboo Mission' on 4-5 November 2011.

RFRI, Jorhat organized a Workshop cum Training on Global Positioning System, application in Forest and Land Resource Survey. Sponsored by State Environment & Forestry Training Institute, Dimapur, Govt. of Nagaland from 13-16 February 2012 at RFRI, Jorhat.

RFRI organized the workshop on 'Patch vegetation, Phyto-diversity and Livelihood Security' at Jhanjimukh Jatiya Vidyalaya, Jorhat on 13 February 2011.

AFRI, Jodhpur organized one day workshop on IPR in collaboration with Rajasthan State DST, Jaipur and AFRI, Jodhpur on 25 May 2011.

AFRI, Jodhpur organized a Brainstorming workshop for the formulation of All India Coordinated Programme on Arid and Semi Arid Regions (CP-ASAR) on 4 and 5 August 2011 at AFRI, Jodhpur.

AFRI, Jodhpur organized two days workshop on 'Sustainable Land Ecosystem Management-Country Partnership Programme in India & 3 National Steering Committee (NSC) Meeting 2012 on 27-28 February 2012 at AFRI, Jodhpur.

HFRI, Shimla organized a one day workshop on "Modern Trends in Nursery Techniques" for the field staff of State Forest Department of Himachal Pradesh on 24 June 2011. About 35 field staffs from Shimla, Rampur, Nahan and Bilaspur circle participated in the training programme.

HFRI, Shimla organized a workshop on "Sustainable utilization, conservation and cultivation of important medicinal plants" on 27 July 2011 at DFO Office, Keylong for farmers and field staff of State Forest Department of Himachal Pradesh. About 50 people participated in the programme.

HFRI, Shimla at the behest of ICFRE, Dehradun, hosted a one day Pre-Congress workshop on 17 August, 2011 at Shimla on the specific theme "Forest and Climate Change". This main theme also included sub-themes like Green India Mission: Opportunities and Challenges; Mitigation / Adaptation and Challenges; Eco-system Resilience and Forest Biodiversity; Climate Change Models / Forests and Carbon Fluxes; Carbon Balances: Policy Instruments and India & REDD. The delegates/ participants of the workshop included Officers from Forest Departments of Himachal Pradesh and Jammu & Kashmir, Scientists from Universities, Central Research Organizations, including representatives of Non-governmental Organizations from various parts of the country.

At the end of the workshop, a booklet on "Kalatop Khajjiar Wildlife Sanctuary Chamba, Himachal



Pradesh: An Appraisal to its Plant Diversity" by Dr. RK Verma and Dr. KS Kapoor was released by Sh. Vinay Tandon, Advisor (Forestry) Govt. of Himachal Pradesh.

HFRI, Shimla organized Workshop-cum-Villagers Meeting" with stakeholders of Demo Village Lanabanka on 25 September 2011 at Panchayat Hall of Village Lanabanka, district Sirmour (H.P.). 45 no. of participants took active part in the event.

HFRI, Shimla organized a workshop / meeting on 2 September 2011 for the Network Partners implementing the Network project on "Population Assessment and Identification of Superior Genetic Stock of *Picrorhiza kurroa* Royle ex Benth and *Valeriana jatamansi* Jones by Screening Different Populations from North-Western Himalayas (H.P. and Uttarakhand)".

IFP, Ranchi organized a workshop on "Cultivation of Bamboos for Edible Shoot Production and Processing" on 30 August 2011 for celebrating the 'International Year of Forests- 2011'.

IFP, Ranchi organized workshop on "CPT's Selection of Phasi (*Anogeissus acuminata*)" under the project titled "Silvicultural studies of Phasi (*Anogeissus acuminata*) (Roxb. ex DC.) Guill. & Perr.) in Odisha" funded by Odisha Forestry Sector Development Project, Bhubaneswar, Odisha on 11 January 2012 at OFSDP, Bhubaneswar.



Workshop on "Cultivation of Bamboos for Edible Shoot Production and Processing" in Progress

Symposium

IFP, Ranchi organized a National Symposium on "Assessment and Conservation of Forest Genetic Resources through Biotechnological Interventions" on 19 - 20 December 2011. More than 100 delegates from all over the country participated and presented their papers in the symposium.



Delegates during the Symposium

Conference

An International conference and exhibition on "Art and Joy of Wood-Rediscovering Wood: The key to a sustainable future" was organized by FAO and MoEF from 19 - 22 Oct, 2011 at J.N Tata Auditorium Complex of Indian Institute of Science (IISc), Bangalore. The conference and exhibition was one of the global events to celebrate International Year of Forests with an aim to emphasize the need for greater use of wood for a sustainable future. Local organizers of the conference and exhibition were Institute of Wood Science and Technology and Indian Plywood Industries Research and Training Institute respectively. International Wood Culture Society and International Union of Forest Research Organizations were the other organizations who supported the conference. The Conference was organized with an aim to explore socioeconomic trends affecting use of wood products, challenges and opportunities arising due to immense wood use. The Conference brought together over 270 delegates from 31 different countries that deliberated on social, aesthetic cultural and traditional aspects of wood use focusing on how linkage between wood and society could be used for future development of wood sector.

The conference was inaugurated by Sh. S. Suresh Kumar, Hon'ble Law, Urban Development,



Parliamentary Affairs & BWSSB Minister, Govt. of Karnataka, Sh. Jitendra Choudhury, Hon'ble, Forest and Industry Minister, Govt. of Tripura, presided over the function. Dr. P.J. Dilip Kumar, DG&SS, MoEF, Govt. of India, Dr. V.K. Bahuguna, DG, ICFRE, Dr. R. Michael Martin, Director, FAO, Rome and Dr Howard Rosen IWCS, China, Mr. S.C. Joshi and Dr. C.N. Pandey were other dignitaries during the inaugural function. Number of senior policy makers, researchers, representatives of wood industry from India and world over participated in the conference. A total of 70 oral presentations and 30 poster presentations were made in the conference.

4.5 Consultancies

Environment Management Division has extended consultancy to neighboring country, Royal Government of Bhutan for hydroelectric projects during the said period. Considering the vast experience and quality of expertise available in the council, Honorable Supreme Court of India directed Indian Council of Forestry Research and Education to conduct Macro level EIA for Bellary, Tumkur and Chitradurga for Iron Ore Mine affected districts of Karnataka. The study report was submitted to the Honorable Supreme Court of India within the stipulated time frame and the recommendations framed were implemented *in toto* by Honorable Supreme Court of India. Government of Karnataka has awarded the study of Reclamation and Rehabilitation Plan for the mine affected districts of Bellary, Chitradurga and Tumkur to the Council. Odisha Mining Corporation Limited has signed MoU with ICFRE for undertaking carrying capacity study in Jajpur District of Odisha. ICFRE will conduct Cumulative Environmental Impact Assessment of Hydropower Projects on Sutlej River Basin in Himachal Pradesh based on the MoU signed with Directorate of Energy, Government of Himachal Pradesh. Indian Institute of Technology (IIT), Roorkee, Salim Ali Centre for Ornithology and Natural History, Coimbatore and Directorate of Coldwater Fisheries Research, Bhimtal, Uttarakhand will be the partner organization for the

cumulative impact assessment study on Satluj river basin.

Following are consultancies completed during the current financial year:

A. Completed Consultancies:

1. Comprehensive EIA-EMP for Sankosh Hydroelectric Project (4060 MW), Dagana Dzongkhag (District), Bhutan. THDC India Limited, Rishikesh.
2. Catchment Area Treatment Plan for Kuther HEP (240 MW) in Chamba district, Himachal Pradesh. Jindal South West Energy Limited, Bombay.
3. Macro Level EIA study of the mine affected districts Bellary, Chitradurga and Tumkur of Karnataka, Government of Karnataka.



EIA Team Interacting with Mine Owners in Bellary District



Unmanaged Over Burden Dumps in Bellary District



Catchment Area of River Ravi, Himachal Pradesh

FRI, Dehradun

Demographic and Socio Economic Survey of Jakhol-Sankri HEP (51MW), Mori, Uttarkashi, Uttarakhand

The Jakhol-Sankri Hydroelectric Project (JSHEP) is located in Uttarkashi district of Uttarakhand and envisages utilization of water from river Supin, which is a tributary of river Tons, for power generation on a run of the river type project. The division has undertaken a study on demographic and socio-economic survey of 7 villages falling in the proposed project area covering about 525 households to document a baseline data.



Villagers at Pautalla Village



Sunkundi Village

EIA, EMP and SIA studies of Chirgaon-Majhgaon HEP (60MW), Rohru, Himachal Pradesh

Impact studies for EIA, EMP and SIA for Chirgaon–Majhgaon (60 MW) HEP, Rohru for Himachal Pradesh Power Corporation LTD (HPPCL) have been undertaken by HFRI, Shimla. The Chirgaon-Majhgaon HEP has been contemplated as a power generation development on Pabbar River located in Chirgaon/ Rohru Tehsil, About 110 km from Shimla, in Himachal Pradesh. Physical and biological study has been almost completed and the socio-economic survey has been initiated.



The Site for the Barrage and Reservoir



Pabbar River Near Village Shaktinagar (Rohru)

Baseline Survey and SIA of Renuka Dam project, Himachal Pradesh

A total of 3666 households falling in 77 villages in 17 panchayats were surveyed. Out of the total households, 987 households come under Main Project



Affected Families (MPAFs), 1232 households come under Project Affected Families (PAFs) and 1447 were placed under Other Resident Families. The baseline survey report and SIA report have already been submitted to the project authority.



Site for the Renuka Dam

- The officers/ scientists worked in consultancy of “Sal-ANR” awarded by Uttarakhand Forest Department.
- M/s Sunora Tiles Pvt Ltd, Morbi (Gujrat) sponsored research work to evaluate *Prosopis juliflora* for paper making.
- XI and XII Five Year plans of Central Pulp and Paper Research Institute (CPPRI), Saharanpur (U.P.) was evaluated as a part of consultancy and report submitted.
- Ten numbers of steam-heated type kilns were modernized and re-installed at the premises of the U.P. Export Corporation Limited, Saharanpur last year. One year technical service after the completion of the consultancy was done during the year.
- Consultancy on, “Laboratory Testing of Bio-Pesticide *Photobacterium limnescens* Akhurstii Strain K1-52% v/v E.C.” for 10 months (October 2010 to July 2011), from Nirmal Seeds Pvt. Ltd, Pachora-Jalgaon. Maharashtra India.
- Advisory to APSARA Authority, Cambodia and ASI for conservation of trees at Ta Prohm temple, Cambodia.
- Advisory to Bodhgaya Temple Management Committee for maintenance and conservation of Bodhivriksha at Bodhgaya.



Trainees of APSARA Authority, Cambodia in a Workshop for the Treatment of Trees with the Project Team at Siem Reap, Cambodia



Treatment of Wounds in a Tree of *Irvingia malayana* at Ta Prohm Temple, Cambodia

- Advisory for eucalyptus plantations of Birla Lao Pulp & Paper Co., Laos in field May 22 – 27, 2011
- Advisory to Tollygunge Club, Kolkata for status of health of trees and management, Nov. 26-28, 2011.
- Efficacy Testing of Commercialized Biofertilizer and Biopesticides in Growth of *Dendrocalamus strictus* and Management of Diseases of Poplar (International Panacea Ltd., Delhi)
- Consultancy on Mrikula Devi Temple, Udaipur, Lahaul and Spiti district, Himachal Pradesh (ASI, Shimla).

IFGTB, Coimbatore

Assessment of yield of Casuarina plantations raised in Arulmigu Nithyakalyani Perumal Temple Land in Thiruvandhanthai for Tamil Nadu Papers and Newsprints Ltd.



IWST, Bangalore

- Dr. O.K. Remadevi and Dr.R. Sundararaj visited Natural Remedy, Bangalore regarding discussions on formulation of biopesticides on 2.8.2011.
- Dr. S.K. Sharma, Head and Scientist-F and Dr. S.R. Shukla, Scientist-E visited office of the the Divisional Forest Officer, T.T. Devasthanam, Tirumala from 17.9.2011 to 18.9.2011 in connection with the inspection of Thandlu to establish their durability and strength.

TFRI, Jabalpur

The institute has been extending services in the form of consultancies to its stakeholders. During the period the services have been provided to NTPC on their request on formulation of Environment policy, strategy and guidelines.

Conducting studies on 'Assessment of green cover and its tangible and intangible benefits and tree cover management plan for NCPP-Dadri Project'.

Conducting studies on 'Assessment of green cover and its tangible and intangible benefits and tree cover management plan for STPP-Korba Project'.

Consultancy was taken from Department of Food Technology, Rashtra Sant Tukdoji Maharaj Nagpur University, Nagpur for development of three value added food products of dried *Madhuca indica* flowers.

RFRI, Jorhat

A consultancy project entitled "Biodiversity Impact Assessment study for the strategic road Flaghill-Dokala, Pangolakha Wildlife Sanctuary in Sikkim State" was awarded to RFRI, Jorhat by BRTF-Ministry of Road Transport and Highways, Government of India.

AFRI, Jodhpur

- Consultancy project on Survey and characterization of soils and vegetation in the proposed land of IIT Rajasthan was carried out of amounting Rs. 2.93 lakh (sponsored by the IIT, Rajasthan, Jodhpur).
- Consultancy for the preparation of project on developing mega shelterbelt in Western Rajasthan amounting Rs. 4.8 lakh was carried out (sponsored by Rajasthan Pollution Control Board.

- Technical consultancy to grow *Jatropha curcus* genotypes in Rajasthan amounting Rs. 8.1 lakh (sponsored Rajasthan State Biofuel Authority).

HFRI, Shimla

A consultancy titled "Preparation of Catchment Area & Treatment Plan for Phina singh Medium Irrigation Project, Nurpur, Distt. Kangra (HP)" to the tune of Rs. 15.00 lakh only was finalized and submitted to the consulting Organization i.e. Executive Engineer, IPH Division, Nurpur, Distt. Kangra (HP).

IFP, Ranchi

- An MoU was signed between IFP, Ranchi and OSFDP, Bhubaneshwar on 15 Nov, 2011 for the consultancy project titled "Silvicultural studies of Phasi (*Anogeissus acuminata*) (Roxb. ex DC.) Guill. & Perr.) in Odisha".
- A project entitled "Identification of Extent of Forest Lands in Forest Fringe villages" funded by National Rainfed Area Authority of India (NRAA) was taken up.
- An European Union Inter-parliamentary delegate visited on 13 April, 2011, the village Sheetal Bhakurar, Lalganj of Vaishali district of Bihar and interacted with farmers who have planted Poplar on their fields under the Planning Commission, Govt. of India sponsored project titled "Integrated Community based Forest Management Project in Bihar".



An European Union Inter-parliamentary Delegation visited the Village Sheetal Bhakurar, Lalganj of Vaishali District



4.6 Technical Services

FRI, Dehradun

- Identification of fungal deterioration in wood for wood based industries
- Phytosanitary certificate issuance
- Identification of diseases
- Identification of fungi
- Supply of fungal cultures
- Rendered various technical services to Indian Pulp and Paper Industries and research organizations.
- 105 number of paper samples received from Employment News New Delhi, NCERT New Delhi, Indian Railways Varanasi, ISRO Ahmedabad, Radex Stationary New Delhi, Rama News Print Bijnor, Sri Krishna Paper New Delhi, Army New Delhi, State Printing
- Roorkee, and Directorate of Education Dehradun were tested for physical and optical properties.
- Revenue generated: Rs. 6.95 lakhs by Wood Processing Division through testing training and drying treatment.
- Medicinal plants seedlings production for distribution as per demand by NWFP Division, FRI.
- "Baseline survey and SIA of Renuka Dam project, Himachal Pradesh" and completed Consultancy of Silviculture Division.
- Rendered various technical services to Indian Pulp and Paper Industries.
- One sample of derivatized starch received from M/s DAVAR Additives, Gwalior was analyzed.
- Ten samples of starch received from M/s Anil products Limited, Ahmadabad were analyzed to ascertain their modification.
- Total 53 samples of 39 clients were tested for moisture contents during the year
- About 950 cft of timber was seasoned for 6 clients during the year

- Mechanical Testing of 62 wood samples from 17 firms were done during the year
- Preservative testing of wood samples were extended to several firms during the year
- Adhesive testing on plywood were carried out for several firms during the year
- Soil samples were analyzed for various divisions of FRI

Technical services provided through the testing of wood and wood products to the firms/ organizations as given below:

1. M/s Rashtriya Chemicals and Fertilizers Ltd., Thal Unit, Raigad, Maharashtra.
2. M/s Common Wealth Games Div. V C.P.W.D. MDC National Stadium New Delhi.
3. M/s HPCL (Lube refinery Mumbai).
4. M/s Polyplex Ltd., Noida.
5. M/s Southern Cooling Tower Pvt. Ltd., Kolkata.
6. M/s Paltech Cooling Towers & Equipments Ltd., Gurgaon.
7. M/s Hindustan Petroleum Corp. Ltd., Mumbai.
8. M/s Sub Divisional Engineer Provl. Sub Div No.1 PWD B & R Panipat.
9. M/s Sterlite Industries (I) Ltd., Tuticorin.
10. M/s North Street Cooling Towers Private Ltd., Ghaziabad.
11. M/s Central Sub Div.-IV C-85 HIG Colony Bhubneshwar ODISHA.
12. M/s Melfrank Engineers, Mumbai.
13. M/s Koolaquo Towers Private Ltd., Kolkata.

- Identification of fungal deterioration in wood for wood based industries
- Phytosanitary certificate issuance
- Mortality in deodar trees at Pithoragrh to DFO, Pithoragarh Forest Division
- Shisham mortality in Hoshiyarpur Forest Division for CF (Research), Punjab Forest Department



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- For advisory role in Haryana Forest Department activities like nurseries and plantations
- For teak mortality in Saharanpur for Shiv Shakti Plantations Ltd., Bareilly
- Quarantine Clearance to Bo Tree from Shri Lanka at Gaya Airport
- Disease inquiry of dying poplar trees at Vaishali, Bihar

IFGTB, Coimbatore

IFGTB provided technical advice to Kerala Forest Department in establishment of seed production areas. The team identified 1492 ha of teak plantations out of the 3143 ha area surveyed for conversion into Teak Seed Production Areas

Plant Identification Services Rendered in the Fischer Herbarium

Plant identification services were rendered to the Tamil Nadu Forest Department, various research divisions of IFGTB, College and University students, and farmers as and when requested. About 600 students, scholars and researchers visited the Herbarium for their study / research purpose, during the period under report.

IWST, Bangalore

- Services, such as, wood identification, determination of moisture content, density and strength properties were rendered to various organizations (Govt/No-Govt/PSU/Private 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.
- The WBD division of the Institute tested the samples received from Pidilite Industries Ltd., Mumbai for testing of wood preservatives. Test report for one year has been sent on 24.8.11. Suggested control measures for the disease problem of neem tree as per the request from FRO, Bangalore. Testing wood for the presence of fungi to Professional surveyors

Pvt-22.9.11. Supplied cultures for Rubber Board, Kottayam, Kerala- 16.2.12

- Thirteen wood samples received from end users were analyzed for their preservative content and reports were sent.
- A Woods Museum-cum-Interpretation Centre (WMIC) was inaugurated at the Institute of Wood Science and Technology, Bangalore on 4 January 2012 by Dr P.J. Dilip Kumar, IFS, Director General (Forests), Government of India in presence of Dr. V.K. Bahuguna, IFS, Director General, Indian Council of Forestry Research and Education, Dehradun.

TFRI, Jabalpur

The institute has been providing technical services to various stakeholder, viz., state forest departments, forest development corporations and others of Madhya Pradesh, Chhattisgarh and Maharashtra, relating to the technical advisory services required. During the period, advisory services were provided to Madhya Pradesh and Chhattisgarh State Forest Departments on monitoring and management of Sal Borer and sal mortality in general, as per their request, time to time.

RFRI, Jorhat

Generated revenue by analyzing soil sample of 134 Inf. Btn., ECO (TA), Assam.

AFRI, Jodhpur

- Demonstration of promising genotypes of Jatropha in Rajasthan state and training to farmers and stake holders, State Biofuel Authority, Rajasthan.
- Prepared display materials and demonstrated research findings on forest soils, Biodrainage, rain water harvesting for increasing productivity of degraded Aravalli hills at Van Vigyan Kendra and Kisan mela.
- Disseminated research findings to farmers through lectures organized at different institutions.
- As and when required, provided technical services to SFD, Rajasthan, Gujrat, Ministry of Environment and Forest, New Delhi, Farmers and NGO's in the forestry and allied aspect with particular emphasis



on combating desertification, rehabilitation of degraded land, silviculture, modern nursery, forest protection and tree improvement.

HFRI, Shimla

As per the request made by Sh. Anil Kumar Sharma, Divisional Forest Officer, Kullu, Dr Sumit Chakrabarti, Scientist-E was deputed by the Director of the Institute to study the details on the White grub attack on deodar in Forest Nursery at Mohal (Kullu Forest Division). A report to this effect was submitted for the revival and replanting technique of the affected plants by providing all the silvicultural techniques for replanting technique.

4.7 Activities of Rajbhasha

With a view to promoting the use of Rajbhasha Hindi, ICFRE and its institutes are continuously working in the direction of implementation of Rajbhasha rules and regulations in its day to day functioning. At Headquarters workshops and trainings are organized regularly. ICFRE, Dehradun organized training on Hindi Software "Saransh" on 24 August 2011. Over 70 personnel's of ICFRE attended the training. "Hindi Week" was celebrated from 14 - 20 September 2011. During this event various competitions like "Essay writing, Noting and "Sawarachit kavya Paath" were organized. In the closing ceremony prizes and certificate were distributed to the winners by Dr. V.K.



Hindi Saptah at ICFRE

Bahuguna, DG, ICFRE. Also conducted Rajbhasha Karyanvayan Samiti meetings on regular intervals at the Institutes and at the headquarters. Quarterly Progress Report is being compiled and sent regularly to the Official Language Department of the Ministry of Environment and Forests. To promote the Rajbhasha Hindi, ICFRE is regularly publishing its in-house magazine 'Taruchintan' and Biannual Newsletter 'Vaniki Samachar' in Hindi.

FRI, Dehradun

- Regular reports on Hindi work were submitted in the prescribed format.
- The scientists and staff of the Pathology Division participated in *Hindi Goshti* on Oct. 3, 2010. Hindi Diwas was organized on 14 .09.11. A Hindi Essay competition was also organized for the officials of CSFER. Dr. V.P. Pandey, Research Assistant I and Dr. Anubha Srivastav Research Officer were awarded with First and Second prizes respectively.
- The *Nagar Rajbhasha samiti* meetings were attended by official representative of CSFER as per schedule.
- Quarterly meetings regarding improvement in Hindi works were also organized regularly in the office.
- Scientific trainings/literature (Pamphlets, brochures handouts etc.) were also developed in Hindi for different target groups.
- The officials of the Division participated in *Hindi Divas*, meeting on 'Rajbhasha Pragiti', on 22.03.2012 and training on Hindi software 'Saransh' on 25.08.2011.

IFGTB, Coimbatore

1. Hindi software "Saransh" typing training was conducted
2. Hindi Day was celebrated and competitions for all employees was conducted in connection with Hindi Day celebration
3. Bilingual Name Boards were prepared



4. Bilingual Rubber stamps were prepared for Director, GCR, HO, Stenographer etc
5. Hindi newspaper "Rajasthan Patrika" was purchased and kept in library
6. All the staffs were nominated for Hindi Prabodh, Praveen, Pragma Classes
7. IFGTB Hindi Brochure was prepared
8. Familiarizing the staff with a Hindi Word Daily
9. All the Town Official Language Implementing Committee meeting was attended
10. Official Language Implementing Committee meeting was conducted in every quarter

Hindi Day was celebrated at IFGTB, Coimbatore on 4.11.2011. Competitions were held on Hindi translation, essay writing, Hindi typing, etc and prizes were distributed to the winners.

IWST, Bangalore

IWST, Bangalore organized Hindi Fortnight and Hindi Day Celebration in the Month of September 2011. Written and Oral Competition were organized for the contractual Staff and Shri Rupak Kumar Dutta, IPS Police Headquarters, Bangalore Distributed the Prizes who was the chief guest on the occasion. The meetings of Rajbhasha Karyanvayan Samiti were organized accordingly. Hindi Typing and Stenography trainings were given to Ministerial Staff. This institute is the member office of Nagar Rajbhasha Karyanvayan Samiti, Bangalore and had participated in the meetings



Hindi Day at IFGTB, Coimbatore

from time to time. Workshops were also organized for senior officers.

TFRI, Jabalpur

TFRI, Jabalpur celebrated Hindi Fortnight from 5 September 2011 to 19 September 2011, in which various competitions like *Hindi Prashn Manch*, *Prasashnik Hindi Bhasha Gyan*, *Vaigainik tatha takniki Shabdavali*, Hindi typing, Hindi Debate, Hindi Essay writing etc. were organized. To promote Hindi in official work 10 Personnel's were given First, Second, Third and five Consolation Prize for working in Hindi. A workshop on "*Shodh Patron mein Hindi Takniki Shabdawali ki Aane Wali Kathinaiyan Evam Unka Samadhan*" was organized in the institute on 15 March 2012. The Speaker answered the questions asked by the personnel's related to the Technical works.

RFRI, Jorhat

The Institute organized a workshop on Hindi software Saransh on 15 -16 June 2011. On the first Day training was given to officers and Scientists and on the second day training was given to all other personnel's. This software is unicode based and it has no font problem. The Institute organized a Hindi Workshop on 12 September 2011 in which Dr. Vijay Kumar, HOD, Hindi Department, Jagannath Barua Mahavidhyalaya was invited as guest-speaker. Scientists, Officers and Research personnel's were also present there. A Hindi workshop was conducted in the institute on 22 December 2011. A workshop on Hindi software "*Saransh*" was conducted in the institute on 22 March 2012. Workshop was hosted by Shri Shankar Sharma, Hindi Translator. In this workshop training on the installation of the software was also given to the officers and staff. 22nd Meeting of Narakas was organized at NEIST, Jorhat on 7 March 2011. Office /Representatives and National Bureau of Soil Survey, Life Insurance of India, Indian Overseas Bank, Central Bank, Vijaya Bank, Indian Bank, Uco Bank, National Insurance, Punjab sindh Bank, Rubber Board were present there. Hindi Saptah and Hindi Divas was also celebrated in the



Institute. During the Hindi Saptah various competitions like Dictation, Essay writing, General Knowledge, Slogen were organized. On this occasion Shri, N.K.Vasu, Director, RFRI, Mrs. Emitula Aao, Group Co-ordinator, All the Scientist, Staff and research personnel's were present.

AFRI, Jodhpur

During the year 2011-12 Hindi Correspondence was 75.22 per cent and the noting on the files in Hindi was 84.09 per cent. Total 04 workshops were organized. Head of the Institute attended regular meetings of the Narakas. Website of the Institute was partly made bilingual. Hindi fortnight was celebrated during 14 - 28 September 2011. During this period various competitions were organized to promote Hindi.

Rajbhasha prizes were given to the personnel's for working in Hindi. For the library books worth Rs. 8774 were purchased. Staff of the Institute participated in Workshop/Symposium.

HFRI, Shimla

Keeping in view the Importance of Hindi Divas, Himalayan Forest Research Institute, Shimla celebrated Hindi Divas on 14.09.2011 to promote Hindi in Official Work. All the Scientists, Officers and other Staff were present there. Institute celebrated Hindi Fortnight from 12 September to 25 September. During this Hindi Essay Writing Competition was organized on 25 September 2011. On this occasion the whole staff of the Institute attended the celebration and prizes distributed to first three participants.

IFP, Ranchi

- Shri Binay Kumar Mishra, Dy.C.F. and Shri Ashutosh Kumar Pandey, UDC attended the Hindi Meeting at CIP, Kanke, Ranchi on 29 August, 2011 conducted by Town Official Hindi Language Implementation Committee, Central Office, Ranchi.
- *Hindi Pakhwara* was conducted by the Institute from Sept. 1 - 14, 2011. A meeting of the *Rajbhasha Karyanvayan Samiti* was also held on 15 Sept, 2011

in which emphasis was laid on the usage of Hindi in day - to - day official works.

- Shri Rameshwar Das, Director and Shri A.K. Pandey, UDC attended the Hindi meeting at Town Official Hindi Language Implementation Committee, Central Office, Ranchi at CIP, Kanke on 13 Dec, 2011.
- Shri A. K. Pandey, UDC attended the Hindi meeting at Town Official Hindi Language Implementation Committee, Central Office, Ranchi at CIP, Kanke on 20 Dec, 2011.
- Director, Rajbhasha and his Senior P.A. visited IFP, Ranchi on 22 - 23 Dec, 2011 for supervision of implementation of Hindi Language in official works.

4.8 Awards and Honours

FRI, Dehradun

- Research Paper entitled " Modeling the safe harvest limits and regeneration rate of *Andrographis paniculata*, *Evolvulus alsinoides*, *Phyllanthus urinaria* and *Rauvolfia spentina* under Sal forests of Doon Valley, Uttarakhand" has been awarded Third Prize under Poster Competitive presentations by Neeta Gera & Avinash K.Sharma.
- Paper entitled "Green approaches towards characterization of *Tinospora sinensis*" by V. Kumar, S. Nagar and Y.C. Tripathi, received first Prize for best presentation in Conference on Environmental Conservation, Sustainable Natural Resource Management and Strategies for Regional Development with reference to Uttarakhand, May 01-02, 2011 at Dehradun.
- Paper entitled "Quality, Safety and Efficacy of Herbal Medicines – Phytochemical Approach" by Y.C. Tripathi and Shipra Nagar was awarded first Prize for Best Oral Presentation in the 10th *Symposium on Phytochemistry and Ayurveda: Potential and Prospects* organized by the management of Universities' Journal of Phytochemistry



and Ayurvedic Heights held on on 24 December, 2011 at Dehradun.

- Paper entitled "Search of Modern Anti- diabetic Remedies: Ayurveda Show the Pathway by S. Nagar, M. Redhu, Y.C. Tripathi and L. Upadhyay received 1 Prize for best presentation in the 10 Symposium on Phytochemistry and Ayurveda: Potential and Prospects held on 24 December, 2011 at Dehradun.
- Papers entitled "Structural analysis of *Tinospora sinensis* polysaccharide" by V. Kumar, Y.C. Tripathi and Shipra Nagar and "Effect of *Cassia glauca* leaf extract on gentamycin sulphate induced nephrotoxicity in rats" by M. Redhu, M. Singh, V.K. Varshney and Y.C. Tripathi awarded for best presentations in the INDO-US Workshop on Green Chemistry for Environment and Sustainable Development organized by HNB Garhwal University, Srinagar, on 11 – 13 March, 2012 at Dehradun.
- Shipra Nagar, and Praveen Onial, RA-I received 'Young Scientist Award' for Best Oral Presentation of the paper entitled 'Structural Studies on *Tinospora sinensis* Polysaccharide' and 'Utilization of *Tagetes minuta* and *Terminalia chebula* as a source of natural dye,' respectively in the 6 UCOST Congress 2011 held on 14-16 November 2011 at Almora (Uttarakhnad).
- Rashmi and Sapana was awarded II Prize on paper entitled 'Value addition of Cheura: A Wonder Tree Borne Oil Seeds, In National Conference on 'Recent Developments in Chemistry and Chemistry Education' held on 16-17 December.
- Paper entitled "Value Addition of *Terminalia chebula* fruits for sustained Livelihood" by Praveen Onial and Rakesh Kumar was awarded first award for best poster presentation in International Conference on Non-Wood Forest Produce for Sustained Livelihood from 17-19 December 2011, at Bhopal.
- Saklani, R., Thapliyal, M. and Veerababu, O. 2011. "Influence of temperature and pretreatments on the germination of seeds of *Buxus wallichiana*-an

alternate species for the woodcraft industry," Won the best oral presentation award in Environmental Science and Forestry discipline during 6th Uttarakhand State Science & Technology Congress, Kumaon University, SSJ Campus, Almora. November 14-16, 2011.

- Dr. Veena Chandra, Scientist-F, won First Prize in First Indian Forest Congress held at Delhi from November 22-25, 2011 for best Poster Presentation entitled "Wild Medicinal Plants in Traditional Health Care System: An Assessment of Jaunsar-Bawar region of Dehra Dun (Uttarakhand)". She was also felicitated by the Prof. H.S. Srivastava Foundation for Science and Society, Lucknow (UP).

IFGTB, Coimbatore

- Dr. Kannan C.S. Warriar received the *Rolla S Rao Award* constituted by the Indian Association of Angiosperm Taxonomy for the best research work on biodiversity conservation for the year 2010.
- Dr. Modhumita Dasgupta, Scientist E has been awarded the *DBT-CREST Award* (Cutting Edge Research Enhancement and Scientific Training Award) for the year 2010-2011 for pursuing advanced research training in the area of tree biotechnology.

IWST, Bangalore

- Dr. O. K. Remadevi was elected as the President of Indian Academy of Wood Science and Dr. R. Sundararaj as Treasurer of the Academy.
- Dr. R. Sundararaj became the member of the National Academy of Sciences, India.
- Dr. V. P. Tewari, Scientist-F has been appointed as Deputy Coordinator IUFRO Div. 4, unit 04.01.03 (Instruments and Methods in Forest Mensuration) by the IUFRO Executive Board.

TFRI, Jabalpur

- Senior Scientist Award for the year 2011-12 to Dr. S.A. Ansari by Foundation for Scientific Forestry India, Institute of Forest Productivity, Ranchi.



- Shri N.D. Khobragade, Scientist –B of the centre received best paper presentation award for the research paper entitled “Effect of organic fertilizer on production of tubers of *Asparagus racemosus* –An important medicinal plant” in National Seminar on Transfer of Biotechnology for Sustainable Development and Environment Protection on 21-22 January 2012, Sponsored by UGC (CRO) Bhopal Organized by Department of Zoology Govt. College, Aron, District Guna (Madhya Pradesh).

Eco-tourism award, a certificate and a cash reward of Rs. 25,000/- in the field of individual innovative works in Tamia & Patalkot has been awarded to Dr. Suneesh Buxy, IFS Director, CFRHRD, Chhindwara by His Excellency Governor Shri Ram Prasad Yadav at Bhopal, M.P.

AFRI, Jodhpur

Dr. Tarun Kant received the Young Scientist Award, 2012 from the Foundation for Scientific Forestry (FSF), Ranchi, during National Symposium on Assessment & Conservation of Forest Genetic Resources through Biotechnological Interventions on 19-20 December, 2011 at Institute of Forest Productivity, Ranchi.

IFP, Ranchi

Shri R. Das, received Life time achievement award for his contributions in community based natural resource management by Global Consortium of Contemporary biologists (2010).

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

National Technology Day

FRI, Dehradun observed National Technology Day on 11 May 2011 at the Shatabdi Van Vigyan Kendra (Ranger's College), Dehradun. All the museums of the Institute were open free on this day.

World Environment Day

FRI, Dehradun observed World Environment Day & FRI Foundation Day on 5 June 2011. The plastic and other waste strewn around the campus was collected and disposed off by the officers and staff of the Institute during the cleaning drive which sensitized the residents of the FRI Campus about the problem of the plastic waste and the sources of the waste. A special exhibition was also displayed in front of the Information Centre of the Institute. The exhibition was inaugurated by Dr. V. K. Bahuguna, IFS, Director General, ICFRE. He was accompanied by Dr. S. S. Negi, Director, FRI, and officers and staff of FRI. In the evening a performance of “**Territorial Army Symphony Orchestra**” was also witnessed. The song of FRI composed by them was also played and appreciated by the audience. Entry to all the museums of the Institute were free on this day.

RFRI observed World Environment Day on 5 and 6 June 2011 at Cheniamguri Middle English School, Cheniamguri-Sotai, Jorhat (Assam) with various events.

AFRI, Jodhpur observed World Environment Day on 5 June 2011. On the occasion 50 plants of various arid and semiarid tree species were planted in the arboretum of AFRI and a pamphlet on problem of Khejri mortality and its management was released.

HFRI, Shimla observed "World Environment Day" on 5 June 2011. About 110 people including school



RFRI Observed World Environment Day



children from various schools alongwith their teachers participated in the celebrations. For encouraging the school children, competitions like Quiz Competition, Declamation contest, Slogan writing and Drawing/ painting competition were also organized by the Institute.

World Forestry Day

FRI, Dehardun observed the World Forestry Day. An Exhibition was organized at the FRI Information Centre which included posters and models depicting the achievements of the Institute. The exhibition was attended by students from many colleges and schools, besides farmers and people. RFRI, Jorhat observed World Forestry Day on 21 March 2012 to create awareness among the villagers and public of its vicinity.

Wild Life Week

FRI, Dehardun organized "Wild Life Week" from 1-5 October 2011. On this occasion the students of FRI University had organized an exhibition which was inaugurated by Dr. S.S.Negi, Director FRI, Dehradun.

Vigilance Awareness Week

FRI, Dehardun observed "Vigilance Awareness Week" from 31 October - 5 November 2011. Dr.V.R.R. Singh, Head Silviculture Division, FRI had taken the pledge with all the staff of the Institute. During this function, there was an essay competition on the subject "Kya Lokpal Bill Bhrashtachar Mitane Ka Sahi Vikulp Hai?" A workshop was also organized in the board room of FRI.

IFGTB, Coimbatore observed Vigilance Awareness Week 2011 on 4 November 2011. Issues related to preventive vigilance, Right to information, etc were discussed and deliberated. Essay competitions in Tamil and English were held and prizes were distributed to the winners. IWST, Bangalore celebrated Vigilance Awareness Week on 31 October 2011.

Himalayan Day

FRI, Dehardun observed "Himalayan Day" on 9 September 2011. On this occasion, the faculty guests



Vigilance Awareness Week at IFGTB, Coimbatore

Dr. Rakesh Shah, CCF (Wildlife)Uttarakhand, Dr. Subhash Nautiyal, Head Botany Division, Dr. Rakesh Kumar, HESCO (Himalayan Environmental Studies & Conservation Organization) and Dr. Laxmi Rawat, Head Ecology Division delivered valuable lectures. Acting Director, FRI Dr. V.R.R. Singh and other Officers and Scientists of FRI were also present on that occasion. Smt. Jayshree Ardey, Head Extension Division welcomed all the guest and faculty members and Shri R.B. Singh, Scientist-B, Extension Division proposed a vote of thanks to all.

International biodiversity day

IFGTB, Coimbatore observed the international Biodiversity Day by organizing various programmes to the school and college students on 22 May 2011. A Mini Marathon was organised for both men and



Mini Marathon Event Inaugurated by Dr. C. Sylendra Babu, IPS, Commissioner of Police, Coimbatore



Shri J.C. Kala, IFS, Former DGF & SS, MoEF

women. Along with the international Biodiversity Day celebrations the *Centenary of Fisecher Herbarium* was also celebrated and Souvenir was released. Fischer Herbarium established in 1911 has collections made by C.E.C. Fischer, P.F. Fyson etc., About 3312 species are available in the herbarium.

IWST, Bangalore celebrated International Biodiversity day on 20 May 2011.

TFRI, Jabalpur observed World Biodiversity Day on 23 May 2011 at Jamtara village to create awareness about biodiversity among the local people .

RFRI observed International Day of Biological Diversity on 22 - 23 May 2011 at Chandra Kamal Bezbarua High School, Boloma, Jorhat (Assam).

AFRI, Jodhpur observed International Biodiversity Day on 22 May. On this occasion, 50 plants of various arid and semi-arid tree species *Capparis decidua*, *Mangifera indica*, *Saraca indica*, *Pithecellobium dulce*, *Annona squamosa*, *Prunus dulcis*, *Annona reticulata* were planted in the arboretum of AFRI. AFRI's quarterly Hindi magazine '*AFRI Darpan*' (having special issue on Forest Genetic & Tree Breeding Division) was released on this occasion.

Van Mahotsav

- TFRI, Jabalpur observed Van Mahotsava at CII, Skills Training Park Imlikheda, Chhindwara on 23 - 24 July 2011. RFRI, Jorhat observed the 62 '*Van Mahotsav*'



Ceremonial Plantation by Sh. P. J. Parmar & Dr. T. S. Rathore at Arboretum, AFRI

on 7 July 2011. IFP, Ranchi organized one day workshop on "*Van Mahotsav*" on 13 June 2011.

- AFRI, Jodhpur celebrated Van Mahotsav on 28 July 2011 with involvement of Salawas gram panchyat and SFD Jodhpur. The whole programme was celebrated at Demo-Village site, Salawas for sensitizing people about demo village and activities carried out by AFRI at Salawas Panchyat. Ceremonial planting of various tree species seedlings at demo-village was carried out by chief guest Sh. Malakhan Singh Bisnoi, MLA Luni, Sh. Omaram Patel Sarpanch Salawas, Sh. Hazari Singh, a social worker, and AFRI officials. A pamphlet in Hindi about Van Mahotsav and Information Booklet of AFRI (Hindi) were also released on the occasion by the chief guest and Director, AFRI. One hundred fifty quality seedlings of Khejri, Rohida, Sissoo & Karanj were



distributed to the farmers of Demo Village for the planting on the occasion.

World Day to Combat Desertification

AFRI, Jodhpur observed World Day to Combat Desertification on 17 June 2011. The theme was 'Forests keep dry lands working'. A brief programme was organized by AFRI Jodhpur on this occasion. On this occasion, Ceremonial Plantation of more than 50 plants of various arid and semi-arid tree species were planted in the premises of UBI Bank, Basni branch, Saraswati nagar, Jodhpur. A pamphlet on "World day to combat desertification" was also published and distributed to the stakeholders.

IWST, Bangalore observed the Kannada Rajyotsava Day on 30 November 2011.



Ceremonial Plantation on the Occasion of "World Day to Combat Desertification"

Indian Forest Congress (IFC) 2011

The Indian Council of Forestry Research and Education organized First Indian Forest Congress (IFC) from 22 to 25 November 2011. The IFC was inaugurated by Ms. Jayanthi Natarajan, Hon'ble Minister of Environment & Forests in New Delhi. Ms. Jayanthi Natarajan, in her inaugural address called for more scientific analysis of the issues relating to forest management in the country, in the midst of ever burgeoning pressure on the forests and climate change threat. She urged for developing reliable data at the state level on Forest Biomass, increment, Non-Timber Forest Products, Eco-tourism, etc. She asked the experts to evolve innovative solutions for human-wildlife conflict, development of forest certification in the country and to assess the tangible and non-tangible benefits from the forests.

Dr. M.S. Swaminathan, Member of Rajya Sabha welcomed the initiatives of the ICFRE to organize the



The DG, ICFRE Welcoming the Honorable Minister



Ms. Jayanthi Natarajan, Hon'ble Minister of Environment & Forests, GoI Addressing the Inaugural Session of IFC 2011



First Forest Congress. He stressed the need for the ICFRE to conduct focused research on Coastal Mangroves, Hills and Dry Zones of the country. Many Van Vigyan Kendras need to be established in the country to promote Agro forestry, he added. He also asked ICFRE to initiate projects on developing technologies for the mining rehabilitation as these areas need immediate interventions.



Dr. M.S. Swaminathan Member of Rajya Sabha

Dr. V.K. Bahuguna, DG, ICFRE, in his address emphasized that massive investment in forestry sector is imperative not only for the forest management, but also for ensuring food and water security in the country.

Ms. Caitilin Wiesen, Country Director of UN DP-India stated that UNDP is supporting the efforts of mainstreaming the biodiversity conservation and forest



Ms. Caitilin Wiesen, Country Director of UNDP

based livelihoods. She welcomed the theme areas selected for the Congress and pledged support of UNDP to ICFRE.

During the congress, the Hon'ble minister released a galaxy of books on forestry including "Forestry in the Service of Nation: ICFRE technologies"- a book encompassing the history and innovations of over hundred years of forestry research in India, "Voices from the Field" and "Status of JFM in India" all published by ICFRE. These books provide glimpses of innovations in the field of forestry and contribution of forestry for the welfare of the people. Over 550 participants from over 50 organizations participated in this gala event which simultaneously held different sessions in 28 sub-themes of 4 themes and the best presentations were awarded. The event concluded with the adoption of New Delhi Forest Charter 2011.



Participants of 1st Indian Forest Congress 2011

4th Tree Growers Mela 2012

IFGTB, Coimbatore organised the 4th Tree Growers Mela 2012 on 23 - 24 February 2012. The Mela was inaugurated on 23 February 2012 by Smt. Jayanthi Natarajan, Hon'ble Minister of State (Independent charge), Ministry of Environment and Forests, Government of India. More than 1000 farmers from



IFGTB, Coimbatore Organised Tree Growers Mela 2012

Tamil Nadu, Puducherry and Palakkad District of Kerala participated in the mela. Dr. V.K. Bahuguna, IFS, Director General, Indian Council of Forestry Research and Education presided over the function. Hon'ble Minister also declared open the Exhibition on Agroforestry and Farm Forestry Technologies, wherein, more than 30 forestry research organizations, wood based industries, bio-manures and bio-fertilizers industries, farm equipments and implements, organic products, Irrigation agencies, Tree Growers, hitech nurseries involved in planting stock production, Self help groups, etc participated. A workshop on Improved tree farming for enhancing livelihood was organised.

Advance Research Centre for Bamboo & Rattan

The Hon'ble Chief Minister of Mizoram, Pu Lal Thanhawla inaugurated the new building complex of

Advance Research Centre for Bamboo & Rattan on March 16, 2012 at Bethlehem Venthlang, Aizawl, Mizoram in a glittering function in presence of Pu S. Hiato, Minister for Industries, Govt. of Mizoram and Dr. V.K. Bahuguna, DG, ICFRE. Other Dignitaries who were present on the occasion included Dr. R. Lalthantlunanga, Vice Chancellor, Mizoram University; Pu R. Vanchhawang, Addl. PCCF, Mizoram; Pu L.R. Thanga, Principal Secretary to the Chief Minister, Mizoram; Shri R. Deori, Superintending Engineer, CPWD, Officers of other Central/State Government Departments etc. Shri N.K. Vasu, Director, RFRI, Jorhat welcomed all guests present in the inaugural ceremony and felicitated distinguished guests at the Dias with traditional *phulam gamosa*. Ms Imtienla Ao, Director, ARCBR presented a brief account of ARCBR from its inception from 29 November, 2004.



Dr. V.K. Bahuguna, DG, ICFRE Receiving the Hon'ble Chief Minister of Mizoram



Pu Lal Thanhawla, the Hon'ble Chief Minister of Mizoram Inaugurating the ARCBR Complex



Dr. V. K. Bahuguna, DG, ICFRE Addressing the Gathering



New ARCBR building

DISTINGUISHED VISITORS

- Her Excellency Smt. Pratibha Devisingh Patil, President of India visited FRI, Dehradun on 11 June 2011. During the visit Several VIPs and dignitaries were also present.



Dr. V.K. Bahuguna, DG, ICFRE Apprising Smt. Pratibha Devisingh Patil, President of India During Her Visit to ICFRE and FRI, Dehradun

- Shri R. Gopal Krishnan, Additional Secretary to Prime Minister, New Delhi visited FRI, Dehradun on 5 May 2011.
- Shri M. K. Narayanan, Governor of West Bengal, Kolkata visited FRI, Dehradun on 23 June 2011.
- A team of the Planning Commission consisting of Ranjan Chatterjee, Senior Advisor and Dr. Biswajeet Banerjee,, Director (Forestry) visited ICFRE on 19 January 2012 and held an interactive meeting with the senior officials and Scientists of ICFRE and FRI.
- A four member delegation from the SAARC forestry Centre, Thimpu visited ICFRE on 1 March 2012. The delegation consisted of Dr. Sanjay Wangchuk, Director SAARC Forestry centre, A.K.Lal, Head Passang Narbu, SFM specialist, and Chado Tshering, PFM specialist.



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- A 6 member delegation, headed by President, Chinese Academy of Forestry, Beijing, China visited FRI, Dehradun on 19 December 2011.
- Mr. Steve Watkins and Dr. K.S. Murali from RARE Organization visited FRI, Dehradun on 12 September 2011 and brief information on developed technology was given to him.
- Dr. V.K. Bahuguna, Director General, ICFRE, Dehradun visited AFRI, Jodhpur from 20 - 21 June 2011. The Director General inaugurated mist chamber and renovated nursery facilities on 21 June 2011. He also addressed and took meeting with all the officers, Scientists and other officials of the institute.
- A group of nine African countries accompanied by Central Academy for state Forest Service Dehradun (CASFOS), total 18 participants under India-Africa Forum under a training programme on "Combating Desertification and Climate Change" visited AFRI, Jodhpur and met the Director, AFRI.
- Dr. VK Bahuguna, Director General, ICFRE during his visit to HFRI, Shimla inaugurated the newly constructed MD Chaturvedi Memorial Training Complex in the premises of the Institute on 5 December 2011. Interacting with the media, he said that the complex would be equipped with the latest gadgets and will provide a platform for dissemination of technologies developed by the Institute to the target groups including the State Forest Department.

44th BOG Meeting of ICFRE

44th meeting of ICFRE Board of Governors was convened on 24 June 2011 at Board Room of FRI, Dehradun. The meeting was chaired by the Secretary, MoEF, New Delhi. The meeting was attended by the DG, ICFRE, Dehradun and other members of the Board.



44th BOG Meeting of ICFRE, Dehradun