

A Report

Seminar on “Research Needs in Silviculture & Forest Management”
organized by Silviculture & Forest Management Division, Forest Research Institute
on 27.09.2019.

A seminar on “**Research Needs in Silviculture & Forest Management**” was organized by Silviculture & Forest Management Division of Forest Research Institute on 27.09.2019. The seminar focused on research needs of the States (viz Punjab, Haryana, Uttarakhand, Uttar Pradesh & UTs of Delhi & Chandigarh) in the field of silviculture for better management of the forests in their jurisdiction.

Ms. Arti Chaudhary, Head, Silviculture and Forest Management Division of FRI gave brief introduction about the core research areas and the Research Priorities of the institute based on major thrust areas. She also presented the key research works of the Division in the form of major projects / studies taken up by the Silviculture Division in recent past.

Dr. Dinesh Kumar, Scientist-G, Silviculture & Forest Management Division gave an insight into the mandate of the Division and also gave an elaborate account of the ongoing research works in progress in the Division and also the specific requirements from the Forest Departments in the States/UTs with regard to these works.

Shri Arun Singh Rawat, Director FRI addressed the participants and emphasised the fact that the research should be need based to have visible impact in the forest management in the States. He also requested the senior forest officers representing the States/UTs to flag the major areas which are posing real threat to the forests and where research needs to be taken up on priority. He shared that FRI is committed towards developing technologies for enhancement of forest productivity, improvement of planting stock, rehabilitation of wastelands, efficient utilization of wood & non-wood forest products, development of eco-friendly products & processes; and will take up the research needs of State Forest Departments on priority.

Shri. S.D. Sharma, DDG (Research), ICFRE addressed the participants and highlighted issues related to forest management like status of export and import of timber, degradation of forests, decreasing productivity of the forests, problems related to forest fires, Role of Forest Policies and Acts, Skill development for tribal people and man-animal conflicts

The participants from Punjab, Haryana, Uttarakhand, Delhi & Chandigarh Forest Department, were present in the seminar for discussions on the research needs of the concerned States/UTs. All Heads of Divisions of FRI, Senior Scientists and officers also attended the Seminar.

Ms Arti Chaudhary, Head, Silviculture & Forest Management Division proposed the formal vote of thanks at the conclusion of the seminar.

The State wise research gaps discussed in the seminar are detailed as below:

Uttarakhand: Sh Vincet Pangte, APCCF gave presentation of the research being taken up in the state of Uttarakhand and the group specific conservation initiatives of the State. He stated the research gaps in the State in the following main areas

1. Preparation of local volume tables for major species
2. Statistics of growth & yield and Forest Carbon stock calculation
3. Analysis of the data collected by the SFD on natural regeneration of Silver Fir (*Abies spectabilis*)
4. Rehabilitation of lantana infested areas.
5. Research should be based on forest sub types instead of species

Haryana: Sh Jagdish Chandra, PCCF gave presentation of the research being taken up in the state of Haryana and flagged the issues of changing flowering / fruiting pattern in some of the major tree species observed by the State. He stated the research gaps in the State in the following main areas

1. Managing the invasive species
2. Nursery practices & techniques for herbal/medicinal plant species
3. Establishing the germplasm for all species in a systematic manner.
4. Compiling the best practices for restoration of forests from herbs to tree species.
5. Grafting of compatible species to combat impacts of climate change on species.
6. Translocation of trees in view of road widening projects. Standard protocols to be developed.
7. Widening the agroforestry base from traditional Poplar & Eucalyptus.
8. The causes for decline in seed production in *Pinus roxburghi* as observed by the state needs to be studied/ researched. The species is seen drying & dying in Haryana.
9. Agroforestry for saline areas needs to be explored/researched.
10. Tree improvement study for Salt Cedar (*Tamarix articulata*)
11. Study needs to be taken up for *Prosopis cineraria* being affected by fruit Galls.
12. Little leaf disease in *Cedrellatoona* needs solution.
13. Root knot nematode affecting *Meloidogyne sps.* needs study.
14. Nematodes affecting different trees as below need to be studied-
 - a. *Acacia-Helicotylenchus dihystra, Meloidogyne incognita, Tylenchorhynchus*

- b. Sal-*Paralongidorus sali*, *Xiphinema*, *Macroposthonia xenoplax*, *Hemicriconemoides cocophilus*, *Tylenchorhynchus indicus*, *Pratylenchus* spp.
 - c. Teak -*Xiphinema insigne*, *Paralongidorus sali* and *Pratylenchus* spp.
 - d. Sandal - *Rotylenchus*, *Tylenchorhynchus*, *Helicotylenchus*, *Hoplolaimus*, *Trichodorus*
 - e. Jamun - *Tylenchulus*, *Rotylenchus*, *Tylenchorhynchus*, *Helicotylenchus*, *Fergusobia* spp.
15. Management of *Oroxylum indicum* for species conservation
 16. Regeneration programme for *Boswellia serrata* to study the problem of empty seeds
 17. Regeneration problem in Guggal (*Commiphora wightii*), *Stereospermum chelonoides* (Padari), *Randia spinosa*, *Premna serratifolia*, *Helicteres isora*, *Holarrhena antidysentrica*

Punjab: Sh Sunil Kumar, CCF gave presentation of the research being taken up in the state and flagged the issue of water logged areas in Southern parts of Punjab. He stated the research gaps in the State in the following main areas

1. Alternatives to use of polybags in nursery
2. Reclamation of waterlogged areas, saline/ alkaline areas – appropriate plantation techniques/ species suggestion
3. Future of research / preservation plots existing in the State
4. Widening the agroforestry base from traditional Poplar & Eucalyptus.
5. Livelihood opportunities & energy security from tree borne oil seeds plantations eg. Pongamia, Jatropha
6. Lantana eradication / control / management

Chandigarh: Sh T.C Nautiyal, CF gave presentation of the research being taken up in the UT and flagged the issue of Disproportionate spread of *Leucaena leucocephala* and *Prosopis juliflora* (Mesquite). He stated the research gaps in the State in the following main areas

1. Replacement of *Prosopis juliflora* (Mesquite) and *Leucaena leucocephala* with broad leave endemic trees like Jamun, Gular, Shisham, Khejri and may be even Sal to some extent.
2. Sukhna Lake Reserve Forest area is facing twin problems of Soil Erosion as well as Advancement of *Leucaena leucocephala* and *Prosopis juliflora* (Mesquite) into the Lake area thereby reducing the total area available for the Lake.
3. Working Plan of Chandigarh is due for revision.

4. Management of termite problem in Butterfly park, Chandigarh
5. Chandigarh Forest Flora data portal to be activated again on FRI website.
6. Protecting the heritage trees of Chandigarh

Delhi: Sh Amit Anand, DCF gave description of the works to be taken up for improving the forests of Delhi. He stated the research gaps in the State in the following main areas

1. Restoration of Ridge forests with native species – list of native tree species to be finalised.
2. Local volume tables for Delhi
3. Reducing pollution in Delhi through planting of appropriate tree species.
4. Working Plan for Delhi is to be written for first time as per Working Plan Code-2014. FRI has already submitted the proposal.
5. The Wildlife Circle of Working Plan should contain Habitat management prescription also.
6. Seed production areas need to be demarcated. Management of NTFP/ Medicinal Plants
7. Standard schedule for Treatment of timber needs to be made available.
8. The completed research in relevant fields should be made easily accessible through online links.
