

**MINISTRY OF ENVIRONMENT
& FOREST**

**FOREST RESEARCH INSTITUTE
—DEHRADUN**

**ESTIMATES COMMITTEE
1990-91**

NINTH LOK SABHA



5 R
3
**LOK SABHA SECRETARIAT
NEW DELHI**

FOURTEENTH REPORT ESTIMATES COMMITTEE (1990-91)

(NINTH LOK SABHA)

MINISTRY OF ENVIRONMENT & FORESTS
FOREST RESEARCH INSTITUTE — DEHRADUN



Presented to Lok Sabha on 4.1.91

LOK SABHA SECRETARIAT
NEW DELHI

November 16, 1990/Agrahayana 25, 1912 (S)

E.C. No. 1241

Price: Rs.

©1990 LOK SABHA SECRETARIAT

Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Seventh Edition) and Printed by the Manager, P.L. Unit, Govt. of India Press, Minto Road, New Delhi.

CONTENTS

	PAGE
Composition of the Estimates Committee	(iii)
INTRODUCTION	(v)
REPORT	1
Historical Background	1
Director FRI	3
Management Committee	4
Role of Forestry Research in Preservation and Regeneration of Forests	5
Research Programme	8
Timber Research	10
State Forest Research Institutes	11
Under Utilisation of Plan Outlay	13
Long Term Planning	15
Training to Scientists	16
Forestry Conferences	16
Vehicles	17
Buildings & Hostel Facilities	18
ANNEXURES	20
APPENDIX	25

ESTIMATES COMMITTEE
(1990-91)

CHAIRMAN

Shri Jaswant Singh

MEMBERS

2. Shri J.P. Agarwal
3. Shri Era Anbarasu
4. Shri Kamal Chaudhry
5. Shri Anantrao Deshmukh
6. Prof. Prem Kumar Dhumal
7. Shri Balvant Manvar
8. Shri Hannan Mollah
9. Shri Arvind Netam
10. Dr. Debi Prosad Pal
11. Shri Rupchand Pal
12. Shri Harin Pathak
13. Shri Bhausahb Pundlik Phundkar
14. Bh. Vijaya Kumara Raju
15. Shri Mullappally Ramachandran
16. Shri Y. Ramakrishna
17. Shri Rameshwar Prasad
18. Shri J. Chokka Rao
19. Shri Chiranji Lal Sharma
20. Shri Yamuna Prasad Shastri
21. Shri Dhanraj Singh
22. Shri Subedar Prasad Singh
23. Shri Sukhendra Singh
24. Shri Tej Narain Singh
25. Shri Taslimuddin
26. Dr. Thambi Durai
27. Shri Nandu Thapa
28. Shri P.K. Thungon
- *29. Shri K.C. Tyagi
30. Shri Kailash Nath Singh Yadav

SECRETARIAT

1. Shri G.L. Batra — *Joint Secretary*
2. Shri B.B. Pandit — *Director*

*Shri K.C. Tyagi has resigned from the membership of the Committee on Estimates with effect from 30th August, 1990.

INTRODUCTION

1. Chairman of Estimates Committee having been authorised to submit the Report, on their behalf, present this Fourteenth Report on the Ministry of Environment and Forest—Forest Research Institute, Dehradun.

2. The Committee chose to examine Forest Research Institute, Dehradun in the recognition of the importance this Institute has had over the years in promoting research effort towards proper management of forest resource in the country. Even though, the Institute is now a part of Indian Council of Forestry Research and Education it continues to have a pivotal role in the field of forestry research.

3. The Committee considered the replies given by the Ministry of Environment and Forest to a detailed questionnaire issued on the subject whereafter the Committee took evidence of the representatives of the Ministry of Environment and Forest on 8.8.1989. The Committee wish to express their thanks to the officers of the Ministry for placing before them the material and information which they desired in connection with the examination of the subject and giving evidence before the Committee.

4. The Report was considered and adopted by the Committee on 31.8.1990.

5. The Committee have viewed with concern the rapid depletion of forest cover in the country, and have, therefore, recommended provision of sufficient financial support to activities aimed at preservation and generation of forests. In this context, the Committee expect the Government to provide considerable encouragement to social forestry and agro-forestry programmes during the 8th Five Year Plan. They also hope that greater efforts will be made to focus forestry research on twin problems of preservation and recreation of forests. The Committee at the same time wish the monitoring and review mechanism in relation to various research schemes strengthened during the 8th Five Year Plan. The Committee have recommended to Ministry of Environment and Forest and the ICFRE to make necessary organisational and financial readjustments towards this end. They also desire that the existing deficiencies in various disciplines identified by the representatives of the ICFRE during evidence before the Committee be removed expeditiously.

6. Conscious of the present strain on Country's forest resources, the Committee hope that efforts towards finding suitable substitutes for timber and promotion of social forestry on commercial scales will be stepped up.

7. The Committee also recommended that Ministry of Environment and Forest should take initiative in persuading the State Governments to invest

adequately in creating institutional frameworks for forestry research where such arrangements do not exist or- are inadequate at present.

8. As regards Forest Research Institute, as it exists after the setting up of ICFRE, the Committee have noted with concern delays in appropriately staffing the new areas of research. To overcome the difficulties regarding human resource the Committee have recommended that deputations in FRI be made more attractive. At the same time attention needs to be given to training the scientists in FRI for which necessary infrastructure is to be built up.

9. The Committee have also viewed with concern the Ministry's inability to hold forestry conferences on a regular basis and inadequacy of transport facilities for field research activity. They hope that these deficiencies will be removed in the coming years.

10. The Committee would also like to express their thanks to the Estimates Committee (1989-90) for taking evidence on the subject and obtaining valuable information thereon.

11. For facility of reference the recommendations/observations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix of the Report.

NEW DELHI;
November 16, 1990.

Agrahayana 25, 1912 (Saka).

JASWANT SINGH
Chairman,
Estimates Committee.

FOREST RESEARCH INSTITUTE, DEHRADUN

Historical Background

1.1 Scientific management of the country's forest resources requires a sound research base. This fact was realised in India as early as in the latter half of nineteenth century when research work in the field of forest botany, utilization of timber and minor forest products was initiated. A beginning of organised forestry research was made in 1878 with the establishment of a Forestry School and a small chemical laboratory at Dehradun. In 1906, this laboratory was raised to the status of a Forest Research Institute within the campus of the Forest School already in existence and rechristened as "Imperial Forest Research Institute and College". Research work at this stage was organised into six branches, namely, silviculture, working plans, forest zoology, forest botany forest economics and forest chemistry. The Forest Research Institute gradually expanded to meet the increasing research requirements, in the field of forestry. After independence, the name of the institute was changed to Forest Research Institute and further expansion of the institute continued. A number of new branches pertaining to various disciplines of research were added at different intervals thereafter.

1.2. The organisation of Forest Research Institute underwent various changes with the creation of Indian Council of Forestry Research and Education (ICFRE) in 1986. Prior to this reorganisation, Forest Research Institute had five Directorates besides the Indian Forest College, Dehradun, State Forest Service Colleges at Dehradun, Burnihat and Coimbatore, Regional Research Centres at Jabalpur, Coimbatore, Bangalore and Burnihat besides Rangers Colleges at Chandrapur, Balaghat, Kursong and Dehradun.

1.3 With the establishment of Indian Council of Forestry Research and Education, the following organisational changes were effected in regard to Forest Research Institute:—

(a) Indian Forest College, Dehradun was given an independent status in May, 1987 and renamed as Indira Gandhi National Forest Academy.

(b) Regional Research Centres of F.R.I. were either upgraded to independent Institutes or their research functions were merged with the six such independent research institutes created in April, 1987.

(c) The Logging Development Institute and Directorate of Lac Development, Ranchi, which used to be earlier independent institutes, were merged with the Forest Research Institute.

1.4 Forestry research set-up in the Forest Research Institute, Dehradun was also reorganised in September, 1988 and the following areas of research were identified for Forest Research Institute, Dehradun:—

Basic Research

- Studies in silvicultural characters of the species comprising the ecosystems of temperate and sub-tropical forests.
- Seed characters, germination, and growth characters of important species.
- Soil characteristics in temperate and sub-tropical forests.
- Role of mycorrhizae and soil micro-organisms.
- Mechanical and chemical characteristics of forest produce in the region.
- Watershed management concepts and practices.

Technology

- Silvicultural practices for inducing and tending natural regeneration in forests.
- Conservation oriented management practices.
- Inventory and remote sensing practices suited to different forest types.
- Development of forestry tools and operational techniques.
- Improved methods of tapping resin.

Application

- Standardisation of silvicultural and management practices of different forest types.
- Optimum practices of raising tree crops in reclaimed sites.
- Soil and water conservation.
- Monitoring of status of forests at regular intervals.
- Use of improved tools and practices.
- Revision of laws and regulations pertaining to forests.

1.5 Consequently four Directorates and 10 coordinated research schemes were reallocated into ten research Divisions. These ten research Divisions are as under:

- i. Silviculture
- ii. Resources Survey and Management
- iii. Ecology and Conservation
- iv. Social Forestry
- v. Genetics and Tree Propagation
- vi. Forest Protection

- vii. Forest Products
- viii. Forest Operations
- ix. Minor Forest Products
- x. Forest Botany

Director FRI

1.6 The post of President, Forest Research Institute was redesignated as Director, Forest Research Institute. The Director is overall incharge of the activities of the Institute. Research activities of all the ten Divisions of the Institute have been grouped under a Group Coordinator who reports to the Director. Library, computers, reprographics, central laboratory and services and other facilities have been assigned to a Coordinator (Facilities). Functions related to personnel and general administration including finance and accounts, purchase and stores, etc., are looked after by the Registrar reporting to the Director.

1.7 The organisational chart of the Institute is given at Annexure-I.

1.8 The Committee enquired about the reasons for reorganisation of FRI, Dehradun and the specific benefits accruing therefrom. The Ministry stated that the various Review Committees appointed by the Government of India to examine the forestry research structure in the country were unanimously of the view that the forestry research organisation in the country was very weak and needed considerable strengthening by upgrading the regional research centres to the level of new institutes and by creating new institutes wherever necessary. Establishment of the Indian Council of Forestry Research and Education to coordinate and supervise forestry research was also recommended. Consequent to the recommendation of the Scientific Advisory Committee to the Cabinet (SACC) reorganisation of F.R.I. was taken up to strengthen forestry research and to coordinate forestry research and education.

1.9 The Ministry further stated that reorganization of F.R.I. has helped (i) strengthening of forestry research capabilities, (ii) focusing efforts on priority areas, (iii) restructuring the organization according to specialisations, (iv) achieving increased focus on training, (v) better interaction and coordination with users of research results etc.

1.10 Asked whether the organisational set-up of Forest Research Institute, Dehradun was adequate to carry out its aims and objectives, the Ministry stated that the present organisational set up of Forest Research Institute, Dehradun by and large was adequate for traditional forestry research. However, new areas and priorities keep on emerging which necessitate strengthening of the existing organisation.

1.11 The Ministry listed the following disciplines which needed strengthening:

- (a) Inventory and remote sensing practices suited to different forest types.

- (b) Development of forestry tools and operational techniques.
- (c) Watershed management concept and practices.
- (d) Revisions of laws and regulations pertaining to forests.

1.12 It is expectation of the Committee that in harmony with emerging priorities in Forestry, the Ministry and ICFRE, will make necessary organisational and financial readjustments in the FRI.

1.13 The Committee would further expect that measures will be initiated to remedy deficiencies as regards discipline as listed in para 1.11 above.

Management Committee

1.14 Prior to the reorganisation of the F.R.I., a Management Committee constituted by the Ministry of Environment in January 1982, used to guide the policy matter regarding research, organisation, personnel and finance. However, as this committee had limited scope for deciding the financial matters and other policy matters, it was subsequently reconstituted to include within its scope the following:

- (i) to consider and approve all policy matters, lay down priorities and introduce the organisational changes necessary to meet the requirements of the Institute;
- (ii) to approve the budget of the Institute for presentation to the Government;
- (iii) to consider and approve changes in the Annual Programmes involving substantial reallocation of funds in relation to approve programme subject to restrictions on powers of reappropriation;
- (iv) to recommend and implement policies regarding all matters pertaining to personnel management;
- (v) to exercise financial powers as may be appropriately delegated under the Delegation of Financial Powers Rules, 1978,

1.15 The reconstituted Management Committee was required to meet as often as was necessary but not less than once in a quarter.

1.16 The Ministry, however, reported that it had met only on 3 occasions, i.e. 6.2.84, 31.8.85 and 14.11.85. In this context the Secretary, Ministry of Environment and Forest explained:—

“The Committee was required to meet. But there were no matters to be taken before the Committee. Matters exceeding the powers of the Director and required to be discussed by the Managing Committee.”

1.17 Asked as to why the Committee did not meet further, the Secretary stated:—

“Forestry research was reorganised in 1986 and the ICFRE was established. This management committee did not meet afterwards

because that was not considered necessary because ICFRE are looking after the functioning of this Institute."

1.18 Subsequent to the reorganisation of FRI during 1987-88, the Director General, ICFRE constituted a Research Advisory Group on 8.12.1988 to identify and priorities research problems keeping in view the resources available at the Institute and to ensure that research projects are directly relevant to the problems and forestry sector. The Group is also required to monitor the progress of research projects at the end of each year.

1.19 The Director, Forest Research Institute, Dehradun has been nominated as Chairman of the Group. Besides him, there are 16 other members. Of these, 8 are Principal Chief Conservators of Forests in the States of J&K, Himachal Pradesh, Punjab, Haryana, U.P., Bihar, West Bengal and Sikkim. The remaining members are various experts associated with bodies like Tata Energy Research Institute, New Delhi, Federation of Indian Plywood and Panel Industry, Universities of Delhi and Gwalior and National Botanical Research Institute, Lucknow. Group coordinator of FRI, Dehradun is the convener of the Advisory Group.

1.20 The Group held its first meeting in January, 1989 to scrutinise the project prepared by the scientists. The projects thus finally approved are under implementation since, 1989.

1.21 No specific tenure of the members of Research Advisory Group had been fixed so far. Explaining the reasons, the Ministry stated in their written note as under:—

"Forestry Research is long term research unlike agriculture, the experiments could not be completed in one or two years. The evaluation of research also does not end in one or two years and more usually it extends. The results of most of the experiments are available only after third or fourth year. Hence, it has been decided to examine the working of RAG for one year and after that tenure will be fixed."

1.22 The Committee are unable to appreciate:

- (a) Why the Management Committee has not been constituted;
- (b) Research Advisory Group has been given insufficient opportunity to succeed.

The Committee would recommend early remedial action.

Role of Forestry Research in Preservation and Regeneration of Forests

1.23 The Committee were informed that total forest area in the country was about 15 million hectares. These include densely stocked forests, open forests as well as blank areas. About 48% of the total forest area is

densely stocked and 36% is comprised of open forests, the remaining area being blank.

1.24 Explaining the position further, the representative of the Ministry stated:

"The total forest area is 75 million hectares, as recorded. But in fact the actual forest cover available to us is very much less. We are having the satellite survey. We are also doing it by the help of remote sensing device according to which it is of the order of 64 million hectares. In other words, we have lost forest cover of about 11-12 million hectares. If the density of forest cover is 40 per cent of the total, then it is referred to as good forests. This is about 36 million hectares. The rest is regarded as degraded forests. The forest cover has depleted because of non-forest activities that have come up in recent years. It may be due to some activities like grazing, agriculture, fodder collection, fuel collection etc."

1.25 As per a statement made by the Minister of Environment & Forest on 20.8.90 in keeping with the standards laid down by Forest Policy of our country, the forest cover should be one third of the geographical area of our country. Our geographical area is 329 million hectares and therefore according to standards prescribed by the Forest policy forest cover should be 110 million hectares. However as against this our recorded forest area now is 35 million hectares. "The actual forest cover, as surveyed by the Satellite imagery is 64.20 million hectares. Therefore there has been decline in so far as the forest cover is concerned. After the enactment of the Forest Conservation Act of 1980, the situation has considerably improved as against the period", beginning from 1952 to 1980 the total loss of forest due to diversification was above four million and thirty three hectares. After this it has come down and annually there has been a net decline of 44,675 hectares. of forest cover.

1.26 Population explosion is one the reason for decline in the forest cover area because with the increase in population men's need for firewood and housing has increased. To overcome the problem there is a need to make alternative sources of energy available to the people.

1.27 In reply to Lok Sabha Starred Question No. 144 regarding the extent of geographical area covered by forest of vegetation in the country, it was stated by the Minister of Environment and Forests that according to the studies conducted by Forest Survey of India using Landsat Imagery, the extent of forest cover in the country during the period 1985-87 was 64.01 million hectares. The forest cover has declined from 64.20 million

* At the time of factual verification Ministry has as per the State of Forest Report 1989, actual forest cover reported is 64.01 million hectares.

** At the time of factual verification Ministry has stated as under: beginning from 1952 to 1980 the total loss of forest down and the diversion of forest land between 1980 to 1987 has been 0.115 million hectares.

hectares in 1981-83 to 64.01 million hectares in 1985-87. However, the area under dense forest cover with a crown density of over 40% has increased from 36.14 million hectares to 37.85 million hectares.

1.28 Regarding the steps being taken by the Government to prevent degradation of forest, the representative of the Ministry stated:—

“We have first of all stopped further depletion of forest. We are now recreating forest. Though the rate of recreation is slow, it will pick up.”

1.29 It was also stated in the reply to the Parliament Question that steps to restore proper land and forest ratio in India involve forest protection measures and massive afforestation, which include:—

- (1) The National Forest Policy, 1988, which lays more emphasis on conservation of forests. There are specific provisions for protection of forest from grazing, fires and encroachment.
- (2) Alternative sources of energy are being developed to replace fuelwood in domestic and commercial sectors.
- (3) Wood is substituted by alternative materials in packaging, railway sleepers, building construction, furniture etc.

1.30 The Committee were further informed that on account of the concern arising from the rapid depletion of forests and considerable increase in biotic pressure the Constitution has been amended to bring forestry in the Concurrent List. Subsequently Forestry Conservation Act, 1980 has been passed by the Parliament enabling Government of India to take through FRI more creative role in the problems.

1.31 Commenting about the role of FRI in this context, the representative of the Ministry stated:—

However, the Institute is engaged in research and proper management of all these 3 types of forests. We also concentrate on developing techniques for improving these areas. We also undertake research to standardise plantation technology to afforest the degraded forest areas. We are also engaged in taking up research work in regard to social forestry and agro-forestry programmes which are being taken up on a very big scale in our country today.”

1.32 The Committee enquired as to the type of research being carried out in social forestry. The representative of the Ministry stated:—

“We are conducting research on various species of agro-forestry. Recently, we have placed emphasis on the importance of social forestry species being planted by the farmers. We have identified 23 such species which are being investigated from all aspects. We

are also taking care to study the root system of these species. we have come across various species for promotion in areas where the trees get uprooted by wind. the reports we received are from U.P. and Haryana. We are looking into them."

1.33 Asked to indicate the reasons due to which all the trees planted in different parts of Maharashtra under social forestry programme got uprooted due to cyclone, the representative further added:—

"We will certainly look into the problems which you have mentioned from Maharashtra. We will depute our scientists. We are seeing the root system where they can survive better and which trees should be planted and in which area the root will be firm and will not topple."

1.34 Asked about the impact of research on actual regeneration of forests, the representative of the Ministry stated:—

"There are two different parts; one is to carry out the research and the other is to apply the benefit of that research. The latter part is more in the realm of the management. We also have to be content with the social pressures and realities of life. While we can say that the kind of research that we are doing has to a large extent made ourselves self-reliant and it has shown us the way to achieve the purpose of generating the requisite forest cover but on the side of the actual creation of the forest cover the effort has been wanting and this is because of the kind of financial resources that we require to regenerate the forest cover over an area of 11 million hectares. these resources have not been available. The second point is that because of various human and animal activities that go on the forest land, it is not feasible to straightaway fence the whole area so that we can not only protect whatever we plant there but also preserve whatever the nature can regenerate. So, these are some of the practical limitations. But progress has been made and we are travelling in that direction. Some measures of success has also been achieved."

1.35 The Committee are greatly concerned with this rapid depletion of our forest cover in the country. The Committee, therefore, strongly recommend provision of sufficient financial support to activities aimed at preservation and regeneration of forests. In this context the Committee expect that social forestry and agro forestry programmes will be given all encouragement during the 8th Five Year Plan. They also expect that greater efforts will be made to focus on forestry research and the twin problems of preservation and recreation of forests.

Research Programme

1.36 Asked as to how the areas of research studies are selected, it has been stated that thrust areas, presently selected for research studies are

based on the recommendations of a seminar that was held in November 1988 on the Perspective Plan and Priorities for Research. These recommendations were further considered in depth by the Research Advisory Group to earmark specific research projects for implementation in consideration of the facilities of staff and equipment available and the priorities with regard to social and industrial benefits.

1.37 Pointing out that from five disciplines at the time of its inception, research work in FRI had now expanded to 24 disciplines, Committee asked whether these 24 disciplines met our national requirement or not and whether there was any plan for the next few years to expand this Institute to meet the national requirement. The representative of the Ministry stated:—

“To meet the increasing requirement of research, the research disciplines were increased. Besides the FRI at Dehradun, we have additional 5 research institutes and these are : Institute of Wood Science and Technology at Bangalore, Institute of Forest Genetics and Tree Breeding at Coimbatore, Institute of Arid Zone forestry Research at Jodhpur, Institute of Deciduous Forests at Jabalpur and Institute of Deciduous Forests at Jorhat. Each of these institutes has about 8 to 10 disciplines. The work in these institutes will be expanded as and when facilities will be available. So, we have expanded forest research considerably to meet the increasing requirement of the country. There are proposals in the 8th Five Year Plan also to expand forest research capability further.”

1.38 About research on minor forest it has been stated that there is one research division consisting of only 8 scientists for looking after the research needs on minor forest products. However, it is stated that the areas of research and the number of minor forest products is so large that it is not possible to tackle research work on various aspects of all the minor forest products effectively in that division.

1.39 About the adequacy of research fellows, another representative of the Ministry stated:—

“In these six institutes we have got a total of 60 research fellowships. Out of the sixty some are of junior level and some are senior research fellows. These 60 positions are there but all of them are not filled up. Out of these about 12 research fellows are actually in position. These 60 research fellowships were created recently and 12 are actually working. The conditions which are required are rather stringent, that we can get only UGC fellows or people who have passed CSIR test only are admitted as research fellows. The idea is that they should attain some intellectual level.”

1.40 Asked whether there was any demand for the SAARC countries for such research scholars, the representative of the Ministry stated:—

“In many areas our institutes will be able to provide the necessary facilities for research but there are certain areas in which we have not been able to develop. For example, forest changes and bio-engineering, tissue culture, micro biological research, these are some of the areas where we have not been able to develop and we have to send our people outside institutes also.”

1.41 To a question as to whether the Forest Research Institute had got proper facilities to carry out research and the proposal to augment existing research facilities, the Ministry has stated that the facilities available were by and large adequate for traditional forestry research. However, in view of new emerging research thrust areas and wide mandate given by the Seminar on Perspective Plan for Research and the Research Advisory Group for Perspective Research Plan, Steps have already been taken to fill up the vacant posts and procure equipments and materials as and when needed.

1.42 The Ministry has also stated that care is taken to ensure that the research projects are result oriented and the results anticipated should find ready application in the field and industries.

1.43 The Ministry added that the flexible complimenting system provide for five yearly assessment of each scientist's work for promotion. No system for out of turn merit promotion presently exists under the flexible complimenting scheme.

Timber Research

1.44 About the achievement of FRI in respect of research on the forest waste products, the representative of the Ministry stated:—

“Our research covers wide variety of subjects including this. We not only do research on timber but also evolve a policy that will subserve both in terms of food and fodder.”

1.45 Asked whether the Forest Department had made any research to ascertain as to how the deficiency of timber could be removed, the representative stated:—

“According to a survey carried out, the total requirement of timber in the country is 26.5 million cubic metres out of which only 12 million cubic metres is produced officially by the forests. As regards the fire wood, the estimate is between 235 million cubic metres to 300 million cubic metres out of which 40 million cubic metres is out of the forest. That is what is recorded.

I do not think it will ever be possible in view of today's depleted state of forest, to meet the total requirement of timber and fire wood from within the reserve forest area. This is just what we are talking about. Our forests are under various kinds of pressure and

in the process a good deal of damage has been done. Therefore, we are thinking to curtail completely the forestry operations. In other words we are *thinking* not to extract any timber whatsoever. But, to meet the requirement of timber progressively partly by import and partly by raising plantation both for commercial timber as well as for requirements of fuel, industrial raw materials and other requirements, forest degraded lands will be used."

1.46 The committee expect that monitoring and review of research schemes will be strengthened during the Eighth Plan.

Conscious of the present strain on country's forest resources, the Committee hope that the FRI will step up its own research. The Committee would recommend the finding of suitable substitutes for timber and a promotion of social forestry on commercial scales.

State Forest Research Institutes

1.47 The Committee enquired about the extent of collaboration affected by FRI with the State Forest Research Institutes, the Ministry in a note stated that Forest Departments of State Government usually maintain a research wing in their organisational set up. The strength of such research wing depends upon the size of the State and the importance which is attached to forestry research by the State forest department. Some of the State Government such as, Madhya Pradesh and Kerala, have established independent forest research institutes. Kerala Forest Research Institute at Peechi is an autonomous organisation while Madhya Pradesh Forest Research Institute located at Jabalpur, works under the forest department of the State. In almost all other state forest departments, there is a research wing which is headed by either Dy. Conservator of Forests or Conservator of Forests. In some of the states, there are posts of silviculturists who look after the research works related to forestry in the state. For example, Uttar Pradesh has three silviculturists. Similarly Orissa, Gujarat, Andhra Pradesh, Karnataka have two posts of silviculturists each. In some of the states like Himachal Pradesh, Haryana, Punjab and some other States there is only one post of silviculturist who is responsible not only for research but also other activities such as training.

1.48 The Ministry also stated that Forest Research Institute, Dehradun maintains a close collaboration between the State Forest Research Institutes/Research Divisions of the State Forest Departments/silviculturists in the matters of silvicultural research. In fact since inception of Forest Research Institute, Dehradun almost all silvicultural research pertaining to natural forest management systems, development of plantation technology, thinning regime, collection of data for preparation of volume and yield tables, trial introduction of different fast growing species etc. has been taken up with the collaboration of State Forest Research Institutes/State Forest Research Organisations. In the matters of tree improvement, forest utilisation, forest protection and other forestry subjects, the scientists of

Forest Research Institute, Dehradun were maintaining a close link with their counterparts in the State Forest Departments and research wings of State Forest Departments. The scientists of FRI, Dehradun visit various states and give demonstration of the developed technology.

1.49 Forest Research Institute, Dehradun also organises periodic seminars/meetings/symposia/workshops, etc. in which the silviculturists of State Forest Department, the scientists of State Forest Research Institutes are invited to interact with scientists of FRI, Dehradun.

1.50 Regional silviculturists' meets are also organised by the silviculturist of FRI, Dehradun and the research programmes and priorities of State Forest Departments are discussed and finalised in these meetings. The progress of various research programmes are also evaluated in these meetings.

1.51 Asked whether the research infrastructure of the various State Govts. was adequate, Ministry has stated that the Research infrastructure under various State Governments is not adequate and efforts have been made to strengthen the research infrastructure under State Governments. Indian Council of Forestry Research and Education (ICFRE) appointed a committee to study the present infrastructure in the State Forest Departments and made suitable recommendations. This Committee, under the chairmanship of Shri Syam Sunder, Principal, Chief Conservator of Forests, Karnataka has submitted its recommendations which have been circulated to all the State Governments to take up follow up action. A meeting of Forest Secretaries and Principal Chief Conservator of Forests was arranged at the Forest Research Institute, Dehradun which was presided by Prof. M.G.K. Menon, Member Planning Commission, to emphasise the need of strengthening forestry research under state governments. It is expected that the State Governments would take suitable action for strengthening research infrastructure under States in the VIII Five Year Plan.

1.52 About the steps being taken to strengthen the research base of State Forest Departments the Ministry in their note has stated that state governments have been requested to strengthen research base in their States. A letter in this regard was written to all the Chief Secretaries of the State Governments requesting them to strengthen forestry research in the States and earmark at least 5 per cent of the forestry allocation for research purposes.

1.53 Asked during evidence, to indicate the response, of that States to suggestions for strengthening of research base, the representative of the Ministry stated:—

"We are now going to have a meeting with the representatives of the State Forest Departments, on 7th September, 1989, to decide about the rest of the research in the State for the 8th Five Year Plan and we are hopeful to persuade them to invest this much

amount because it is very necessary that the State Research Forest Organisation must be strengthened."

1.54 The Committee observe that except for Madhya Pradesh and Kerala, no other state has so far set up an independent forest research institute.

They would therefore recommend that the Ministry of Environment and Forests persuade the State Govts. to invest adequately in creating institutional frameworks, for forestry research in their states.

Under Utilisation of Plan Outlay

1.55 The Table below indicates the grant and actual expenditure under various coordinated research schemes in the 7th Five Year Plan:—

Scheme		Budget grant	Actual expenditure upto 1988-89 (Rs. in lakhs)
1	2	3	4
1.	Research on minor forest products	41.00	27.35
2.	Forest soil-cum vegetation survey	190.90	90.11
3.	Establishment of Tropical Pine Research Centre	40.00	21.85
4.	Environmental Research Stations	100.00	43.96
5.	Establishment of Popular Research Centre	28.00	12.08
6.	Research & demonstration in growing cash crops	61.00	25.36
7.	Indo-Danish Project on Seed procurement Tree Improvement.	128.00	33.81
8.	Establishment of high level coniferous research centre	60.00	35.92
9.	Forest Productivity	28.00	3.56
10.	Disease & insect survey	114.00	9.30
		790.90	303.30

1.56 Details of various coordinated research schemes are given in Appendix II.

1.57 Asked to explain the reasons for gross under utilisation of the plan outlay under the above schemes even after a lapse of more than 4 years of the 7th Five Year Plan, the Ministry stated that one of the reasons for underutilisation of the plan outlay is that a large number of posts remained vacant for most part of the 7th five year plan period. In a subsequent note Ministry explained that in coordinated research schemes new centres and posts were sanctioned to man them. But they could not be filled because the forest officers did not find it attractive to join these posts. When officers to man senior posts did not become available, the

lower posts could not be filled up. The pending reorganisation of FRI also necessitated keeping the posts vacant. This resulted in under utilisation of the plan outlay.

1.58 As regard the details of posts which remained unfilled, the Committee were informed that the total sanctioned strength of staff of forest Research Institute, Dehradun was 2181 of which only 1712 were in position. The sanctioned and available strength of Group A.B.C. and D posts was as under:—

Sanctioned Strength	Actual Strength
Group A 182	125
Group B 86	59
Group C 995	681
Group D 918	847
<u>2181</u>	<u>1712</u>

1.59 The Committee were informed that several steps had been taken to fill up the vacant posts. The Ministry listed these steps as under:—

- (a) 24 posts of Group A (Scientific) have been advertised for direct recruitment and process of recruitment is in progress.
- (b) Union Public Service Commission has been requested for making recruitment for the post of Director and 3 posts of Group B (Scientific).

1.60 Asked about the reasons for not filling up the sanctioned posts, the Secretary of the Ministry during evidence before the Committee stated:—

“The reorganisation of forestry research was done in 1986. There was a state of uncertainty in the FRI. About 400 posts remained vacant. But after the reorganisation, now this subject is being addressed to and some good progress has been achieved in filling up the vacant posts in these disciplines. The total number of vacant post, which includes scientific tenure posts, research staff, ministerial staff, etc. on 1st October 1988 were 437. On 1st August 1989, it has come down to 384.”

1.61 In all 153 posts including 16 Group A posts had been filled through direct recruitment as well as promotion since September, 1988.

The Secretary stated further:—

“Out of 32 scientific posts, which are vacant, the recruitment rules in respect of 24 of these are being finalised. Eight posts have been re-advertised because there was very poor response to an earlier advertisement. Three posts of Scientists Group ‘B’ have

been vacant. They have been advertised. The whole process is now under way...."

1.62 Explaining the position of supporting staff the Secretary stated:—

"For each scientist there is supporting staff of four to six—two Research Assistants Gr. I, two Research Assistants Gr. II and two Technical Assistants. Unless the scientists are in position the back-up staff will be of no use. Our anxiety is to recruit scientists first. The supporting staff is quite easy to find. There is no point in having these people first before the scientists who will conduct and guide the research."

1.63 Asked about the posts which were reserved for scheduled castes and scheduled tribes? and steps taken to fill those posts, the Secretary stated:—

"All these posts have been advertised and special recruitment drive launched to fill up those posts on priority basis."

1.64 In reply to another question about delay in filling up of vacant posts even after reorganisation, the Secretary of the Ministry stated:—

"There are certain posts in the FRI which are tenure posts. These posts were going to the Indian Forest Service Officers on deputation. They would bring with them varied administrative experience required in maintenance and preserving the forests. Certain posts had been kept for them. We discovered that while at one time, the positions in the FRI were attractive proposition, for some reason it has lost that attraction. Certain training institutions have been set up in Dehradun where some allowances are available to the people. They get 30 per cent deputation allowance, but in FRI this benefit is not available."

1.65 The Committee note with concern that after reorganisation a number of new areas of research have remained either unstaffed or understaffed. The Committee, therefore, desire that all necessary steps be taken to fill the existing vacancies, in accordance with the recruitment rules of the Institute. The Committee also hope that the Ministry will make deputation posts more attractive for outside experts.

Long term planning

1.66 The Committee enquired whether any long term plan had been prepared to enhance the capacity and performance of Institute. They were informed by the Ministry that efforts had been made to prepare a comprehensive perspective plan for research and identify priorities for 5 years for Forest Research Institute, Dehradun. In this connection each Division in the first instance prepared a perspective plan for a period of about 20 years and circulated the same among the foresters/scientists of State Forest Departments/Universities and other research institutes. A seminar was also organised from 28th to 29th November, 1988 to finalise

the perspective plan and priorities for research for Forest Research Institute, Dehradun. On the basis of its recommendations the thrust areas of research for various Divisions have been identified.

1.67 The Ministry, however, admitted that there has been no comprehensive perspective planning for improving the infrastructure, requirement of manpower, buildings, equipments and other resources so as to be commensurate with the perspective plan of research already finalised.

1.68 The Committee are disappointed to note the approach adopted towards long term planning needs of the Institute. The Committee, therefore, desire that a perspective plan for improving the infrastructure should be prepared to ensure that staff, equipments and other resources in the Institute are commensurate with the requirements of its research objectives.

Training to Scientists

1.69 In a Seminar on Perspective Plan and Priorities of Research held in November, 1988 it was sought out that scientists working in FRI, Dehradun might be provided training in India and abroad to upgrade their technical scientific capabilities.

1.70 Asked about the details of various training courses being imparted to forestry scientists, faculty member of university etc., the Ministry has stated that no training courses are being organised specifically for forestry scientists or faculty members of universities. However, facilities are provided and scientific guidance given for a limited number of research fellowship/scholarships awarded in forestry research.

1.71 Asked as to whether the institute has got adequate training and infrastructural facilities to conduct various technical training courses, Ministry has stated that appropriate boarding and lodging facilities are not available for the trainees; sufficient transport facilities are also lacking; efforts would be made to develop these facilities in the VIIIth Five Year Plan.

1.72 The Committee are concerned to note that training of scientists in FRI has not been receiving adequate attention and recommend that this deficiency, including lack of infrastructure, be removed early.

Forestry Conferences

1.73 The Institute has been organising Forestry and Forest Products Conferences every 4 years to provide the much needed interaction of F.R.I. Scientists with forestry Scientists of other research Institutes/

Universities/field foresters which is helpful in monitoring, reorienting and planning of the Institute's research programme. The Conferences were organised during the years mentioned against each below:

Forestry Conferences (2nd & 3rd)—1980 and 1989.

Forest Products Conferences (1st & 2nd)—1973, 1986.

1.74 Asked to indicate the reasons for not organising the Forestry Conferences and Forest Products Conferences regularly after a gap of 4 years, the Ministry in a note furnished to the Committee, has stated that the four yearly Forestry Conference between 1980 and 1989 was not held as reorganisation of F.R.I. was under consideration and system of holding such Conferences under the reorganised set-up was being worked out. The year 1987 also happened to be drought year in which holding of Conferences was restricted as an austerity measure.

1.75 The Committee have been informed that the next Forestry Conference will be held in 1993.

1.76 The Committee note with some disfavour that Forestry Conferences have not been held regularly; while 2nd forestry conference was held in 1980, the 3rd conference was held in 1989 i.e. after a lapse of 9 years. Similarly while 1st forest product conference took place in 1973 the 2nd Forest Products Conference took place in 1986 i.e. after a lapse of 13 years. The Committee do not appreciate the reasons put forth by the Ministry in this regard.

Vehicles

1.77 The Ministry in their note furnished to the Committee has stated that the number of existing vehicles available with the institute is not adequate and that mobility of the scientists is very necessary to handle research work in the adjoining states.

1.78 The number of vehicles available as on 1.9.88 are stated to be as under:—

Jceps	9
Cars	3
Mini buses	4
Trucks	2
Ambulances	2
Three Wheeler	2
Toyotas (Mini Trucks)	4
Fire Tender	1

1.79 Subsequently the Committee were informed that the number of

vehicles available as on 1.9.1988 with the Forest Research Institute, Dehradun was 26. Out of these 5 jeeps and 4 mini buses are very old. This seemed to be hardly sufficient for the research needs of scientists in the field work, which was very commonly involved for Forestry Projects. With increase in strength of scientists from 216 to 330 (recently proposed for F.R.I., Dehradun under the Draft 8th Plan Document), the requirement of vehicles had further increased. The Additional requirement over the above the existing number of vehicles has been estimated as follows:—

Cars	2
Jeeps	8
Matador Vans	5
Ambulance	1
Fire Tender	1
Buscs	2

1.80 About the steps taken to acquire additional vehicles for F.R.I., the Ministry has stated that the old unserviceable vehicles were being condemned to purchase new vehicles in their place and that one matador and one fire tender had been purchased. It was also stated that more vehicles would be purchased during the VIIIth Five Year Plan period.

1.81 The Committee recommend that sufficient transport facilities should be provided to the scientists for field research activity. They hope that the present shortfall will be made good in the VIItth Five Year Plan.

Buildings & Hostel Facilities

1.82 In their note furnished to the Committee, Ministry has stated that existing buildings will not suffice. Additional buildings will be needed to set up additional laboratories and also to provide for residential accommodation to the additional staff.

1.83 Asked about the steps being taken to meet the requirement of additional buildings the Ministry have stated that some of the buildings such as laboratory buildings for Genetics Branch have already been constructed. Some buildings are proposed to be constructed in Eighth Five Year Plan. The proposal for building for Eighth Five Year Plan is in the process of preparation.

1.84 About adequacy of hostel facilities, the Ministry has stated that FRI Dehradun at present has no independent Hostel facility available for trainees of the technical courses being run by it. Uptil now the trainees were being accommodated in the hostels of state forest Service College and Indira Gandhi National Forest Academy as these institutions were earlier under control of the then President, Forest Research Institute and Colleges. Problems may now arise as these colleges have become indepen-

dent and because of the large number of recruitment in the IFS and SFC Colleges.

1.85 About the steps being taken to create independent hostel facilities for the trainees of the Technical courses being run by Forest Research Institute, Ministry has stated that the proposal for construction of a 27 roomed hostel for visiting scientists is presently under consideration. Meanwhile, the trainees of Technical Training Courses will be accommodated as heretofore by borrowing accommodation that can be spared by the Indira Gandhi National Forest Academy and the State Forest Service College, Dehradun.

1.86 The Committee recommend that sufficient laboratory and residential accommodation may be provided by the Government in keeping with the expanded role of FRI. They also recommend that adequate hostel facilities are created for the trainees of Technical Training Course and hope that the Ministry will sanction these facilities early.

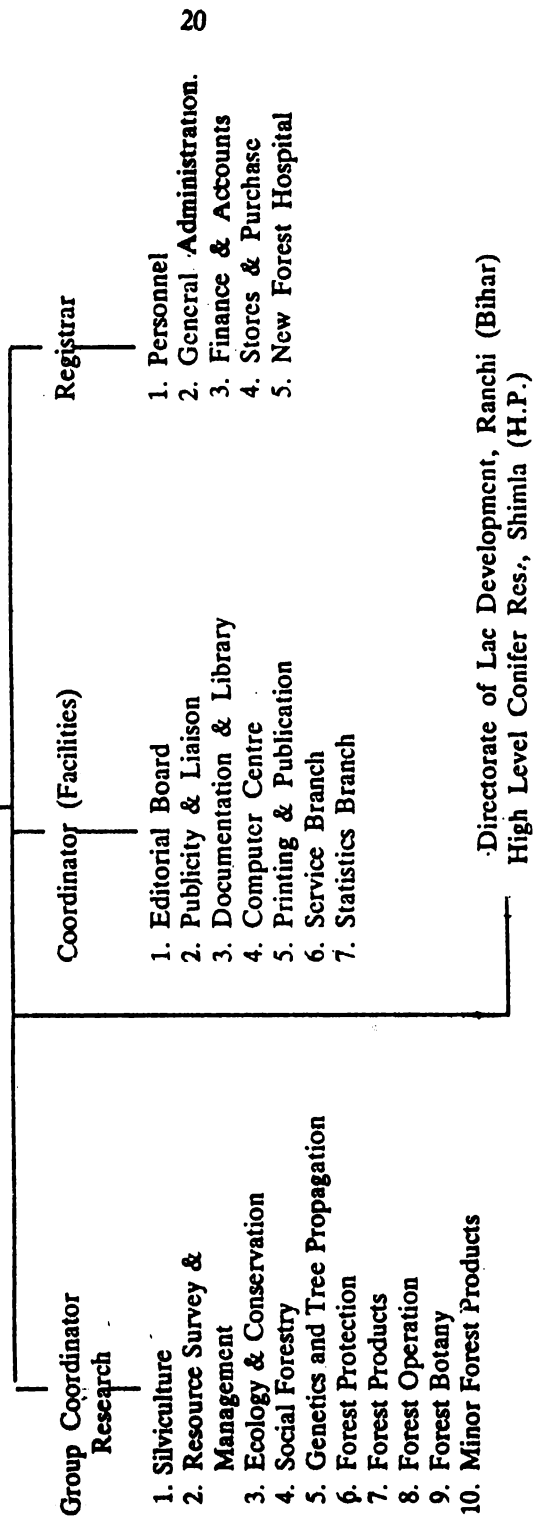
NEW DELHI;
November 16, 1990

Agrahayana 25, 1912 (Saka)

JASWANT SINGH
Chairman,
Estimates Committee

**ORGANISATION OF
FOREST RESEARCH INSTITUTE, DEHRADUN**

DIRECTOR



In a true sense there is no coordinated research scheme in operation in FRI. However, the following field oriented research schemes are in operation in Forest Research Institute, Dehradun:

- (1) Research of Minor Forest Products.
- (2) Forest Soil-cum-Vegetation survey.
- (3) Establishment of Tropical Pine Research Centre.
- (4) Environmental Research Stations.
- (5) Establishment of Popular Research Centre.
- (6) Research and demonstration in growing cash crops.
- (7) Indo-Danish Project on Seed Procurement and Tree Improvement.
- (8) Establishment of High Level Conifers Research Centre.
- (9) Forest Productivity Scheme.
- (10) Evaluation of Diseases and Insect Pests of economically important tree species and their control.

(1) *Research on Minor Forest Products:*

The objectives of this scheme are to develop methods of extraction, processing and storage of minor forest products and to conduct survey regarding availability and potential production of minor forest products. The total allocation for this scheme in 7th five year plan is Rs. 41.00 lakhs. The expenditure upto 1988-89 has been Rs. 27.35 lakhs. Under this scheme studies on solar drying, improving the quality of sal seeds, chemical studies on oil seeds of forest origin, chemical studies on *Eucalyptus* hybrid leaves, chemical investigation of *Pinus roxburghii*, research on cultivation and utilization of important minor forest products have been taken up. This research scheme, after reorganization of Forest Research Institute, Dehra Dun is being looked after by Minor Products Division.

(2) *Forest Soil-Cum-Vegetation Survey:*

The objectives of this scheme are (i) to study and establish the correlation between characteristics of the forest soils and vegetation, (ii) to assess and evaluate the different soil characteristics in relation to various tree species, and (iii) to identify and rate significant soil limiting factors and to carry out special investigations on forest soils. The total allotment for this scheme in the 7th five year plan is Rs. 190.90 lakhs. The expenditure

upto 1988-89 has been Rs. 90.11 lakhs. Under this scheme studies on correlation between forest soil characteristics and different tree species have been taken up. The effect of fertilizer in the nursery stage for important species is being studied. The effect of forest soil limitations and improved criteria for different degraded soils such as saline and sodic soils are being worked out. This coordinated research scheme after reorganization of F.R.I. Dehradun is merged with Ecology and Conservation Division.

(3) *Establishment of Tropical Pine Research Centre:*

The objectives of this research scheme are to establish research trails of different species and provenances in different climatic regions and to identify suitable species and provenances for different areas. The objectives also include research on nursery and planting technique of pine species and investigations on Mycorrhiza. The total allocation for 7th five year plan for this scheme is Rs. 40.00 lakhs. Upto 1988-89 Rs. 21.85 lakhs this scheme is Rs. 40.00 lakhs. Upto 1988-89 Rs. 21.85 lakhs have been utilised. The important activities which have been taken up under this scheme include (i) collection of seeds of different species and provenances from different sources, (ii) establishment of trial plantations under different locations in collaboration with state forest departments, (iii) raising of nursery stock, and (iv) studies on nursery techniques and mycorrhiza etc. After reorganisation of Forest Research Institute, Dehradun this research scheme has been merged with Social forestry Division.

(4) *Environment Research Station:*

The objectives of this scheme are (i) to study the relation between forest cover and hydrological behaviour of watersheds under different climatic and bedaphic conditions, (ii) to study the effect of ground water table, (iii) to study the effect of vegetation on soil loss and run-off in catchment areas, (iv) to co-relate atmospheric precipitation with vegetation, soil loss and run-off in catchment areas and (v) to co-relate atmospheric precipitation with vegetative cover and stream flow. The total allotment under this scheme for 7th five year plan is Rs. 100.00 lakhs. Upto 1988-89 Rs. 43.96 lakhs have been spent. Some of the important studies initiated include (i) experiments on the effect of forest cover on water resources, (ii) studies of hydrology of different types of watersheds, (iii) selection and trials of species suitable for soil conservation and maintenance of mined spoils reclamation near Dehradun. This research scheme has been merged with Ecology and Conservation Division after reorganization of Forest Research Institute, Dehradun.

(5) *Establishment of Popular Research Centre:*

The objectives of this research scheme are (i) procurement, propagation and multiplication of planting material and its distribution, (ii) nursery and field trials of promising clones under different agroclimatic conditions, (iii) determining best combination of agricultural crops under popular

plantations and the effect of popular trees of various ages on growth and yield of agricultural crops. The total allocation for 7th five year plan under this scheme is Rs. 28.00 lakhs and expenditure upto 1988-89 has been Rs. 12.08 lakhs. The important works which have been carried out under this scheme include (i) standardization of nursery and planting technique of poplars, (ii) studies on performance of various clones in the nursery and field plantations (iii) studies on popular-crop combinations, phenological studies of popular clones and economics of poplar cultivation under agro-forestry. This scheme after reorganisation of F.R.I., Dehradun has been merged with Social Forestry Division.

(6) Research and demonstration in growing cash crops

The objectives of this research scheme are (i) to find out the most compatible combination of trees, shrubs, grasses and agricultural crops for different agro-climatic conditions of the country, (ii) to study the tree and crop interactions (iii) to study the effect of agro-forestry on micro climate, and (iv) studies of root behaviour of different types of crops and nutrient evolving. Under this scheme research projects on finding out most suitable trees and agricultural crop combinations have been initiated for certain areas. Tree-crop interaction studies in relation to important tree species such as eucalyptus, sissoo, babul, etc. have been initiated. Studies on rooting behaviour of some of the tree species important from the point of view of agro-forestry have been taken up. The total allocation for 7th five year plan under this scheme is Rs. 61.00 lakhs and expenditure upto 1988-89 has been Rs. 25.36 lakhs.

(7) Indo-Danish Project on Seed Procurement and Tree Improvement:

The objectives of this scheme are (i) survey, selection, registration and demarcation of seed sources and competence of broad leaved species, (ii) inspection and finalization of plus trees selected by states, (iii) collection of seeds for experimental purposes testing, (iv) registration of seed orchards and plus trees and providing guidance to state forest departments in the subject of tree improvement. The total allocation under this scheme in 7th Five year plan is Rs. 28.00 lakhs and expenditure upto 1988-89 has been Rs. 33.81 lakhs. Important studies which have been taken up under this scheme include (i) survey, selection and demarcation of some of the seed sources of important timber species of North India, (ii) finalization of plus trees of some of the important tree species as selected by state forest departments, and (iii) collection of seed for undertaking progeny trials, provenance trials and seed testing of important species like babul, neem, jamun, pines etc. After reorganisation of Forest Research Institute, Dehradun this scheme has been merged with Genetics and Tree Propagation Division.

8. Establishment of High Level Coniferous Research Centre

The objectives of this research scheme are to (i) take up research on artificial as well as natural regeneration of high level conifers including research on nursery technology and field planting methods and (ii) investigate methods and establish suitable species of plants for afforestation of cold desert areas. The total allocation under this scheme in 7th Five Year Plan is Rs. 60.00 lakh and Rs. 35.92 lakhs have been utilized upto 1988-89. The important research works which have been taken up under this scheme include standardization of field planting methods for these species, and development of nursery and planting technology for species suitable for Himalayan cold desert.

9. Forest Productivity

The objectives of this scheme are to study the biomass production, nutrient distribution/cycling of minerals in plantations ecosystems, the effect of monoculture on the site and how best site deterioration could be avoided.

Studies have been conducted and results published in case of *Pinus patula* in Darjeeling and Tamil Nadu; *Casuarina equisetifolia* and *P. Cassia* in Orissa; *E. Hybrid* and *Acacia auriculiformis* in Bihar; *E. grandis* in Kerala; *A. nilotica* in Haryana and *Ailanthus excelsa* and Poplars in U.P. Studies are under way for *P. roxburghii* in Himachal Pradesh and *E. hybrid* in Haryana.

The total allotment for this scheme under 7th five year plan is Rs. 28.00 lakhs and actual expenditure during 1988-89 is Rs. 3.56 lakhs.

10. Disease and Insect Survey

The objectives of this scheme are to evaluate the studies of existing diseases and insect pests in the nurseries and plantation of timber species, fuelwood and fold species and in social forestry plantations. The scheme also aims at detecting new diseases and insect pests outbreaks, identifying their causes and developing their control measures. Total allotment for this scheme under 7th five year plan is Rs. 114.00 lakhs and actual expenditure during 1988-89 is Rs. 9.30 lakhs. Under this scheme nursery pests and diseases of various States have been surveyed and the listing of important diseases and insect pests has been done. Suitable control measures for nursery pests in form of soil and seed treatments have also been developed. Similarly, surveys have also been undertaken to identify insect pests and diseases in plantations, in natural forests and agro-forestry plantations. Suitable control measures for pests of important species such as poplars, pines etc. have been prescribed.

APPENDIX

Statement of Recommendations and observations

Sl. No.	Para No.	Recommendations and observations
1	2	3
1	1.12	It is expectation of the Committee that in harmony with emerging priorities in Forestry, the Ministry and ICFRE, will make necessary organisational and financial readjustments in the FRI.
	1.13	The Committee would further expect that measures will be initiated to remedy deficiencies as regards discipline as listed in para 1.11 above.
	1.22	The Committee are unable to appreciate: (a) why the Management Committee has not been constituted; (b) Research Advisory Group has been given insufficient opportunity to succeed. The Committee would recommend early remedial action.
	1.35	The Committee are greatly concerned with this rapid depletion of our forest cover in the country. The Committee, therefore, strongly recommend provision of sufficient financial support to activities aimed at preservation and regeneration of forests. In this context the Committee expect that social forestry and agro-forestry programmes will be given all encouragement during the 8th Five Year Plan. They also expect that greater efforts will be made to focus on forestry research and the twin problems of preservation and recreation of forests.
	1.46	The Committee expect that monitoring and review of research schemes will be strengthened during the Eighth Plan. Conscious of the present strain on country's forest resources, the Committee hope that the FRI will step up its own research. The Committee would recommend the finding of suitable substitutes for timber and a promotion of social forestry on commercial scales.

1	2	3
1.54	The Committee observe that except for Madhya Pradesh and Kerala, no other state has so far set up an independent forest research institute.	
	They would therefore recommend that the Ministry of Environment and Forests persuade the State Govts. to invest adequately in creating institutional frameworks, for forestry research in their states.	
1.65	The Committee note with concern that after reorganisation a number of new areas of research have remained either unstaffed or understaffed. The Committee, therefore, desire that all necessary steps be taken to fill the existing vacancies, in accordance with the recruitment rules of the Institute. The Committee also hope that the Ministry will make deputation posts more attractive for outside experts.	
1.68	The Committee are disappointed to note the approach adopted towards long term planning needs of the Institute. The Committee, therefore, desire that a perspective plan for improving the infrastructure should be prepared to ensure that staff, equipments and other resources in the Institute are commensurate with the requirements of its research objectives.	
1.72	The Committee are concerned to note that training of scientists in FRI has not been receiving adequate attention and recommend that this deficiency, including lack of infrastructure, be removed early.	
1.76	The Committee note with some disfavour that Forestry Conferences have not been held regularly; while 2nd forestry conference was held in 1980, the 3rd conference was held in 1989 i.e. after a lapse of 9 years. Similarly while 1st forest products conference took place in 1973 the 2nd Forest Products Conference took place in 1986 i.e. after a lapse of 13 years. The Committee do not appreciate the reasons put forth by the Ministry in this regard.	
1.81	The Committee recommend that sufficient transport facilities should be provided to the scientists for field research activity. They hope that the present shortfall will be made good in the VIIIth Five Year Plan.	
1.86	The Committee recommend that sufficient laboratory and residential accommodation may be provided by the Government in keeping with the expanded role of FRI. They also recommend that adequate hostel facilities are created for the trainees of Technical Training Course and hope that the Ministry will sanction these facilities early.	

**LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA
SECRETARIAT PUBLICATIONS**

Sl. No.	Name of Agent	Sl. No.	Name of Agent
ANDHRA PRADESH		UTTAR PRADESH	
1.	M/s. Vijay Book Agency, 11-1-477, Mylargadda, Secunderabad-500 361.	12.	Law Publishers, Sardar Patel Marg, P.B. No. 77, Allahabad, U.P.
BIHAR		WEST BENGAL	
2.	M/s. Crown Book Depot., Upper Bazar, Ranchi (Bihar).	13.	M/s. Madimala, Buys & Sells, 123, Bow Bazar Street, Calcutta-1.
GUJARAT		DELHI	
3.	The New Order Book Company, Ellis Bridge, Ahmedabad-380 006. (T. No. 79065)	14.	M/s. Jain Book Agency, C-9, Connaught Place, New Delhi, (T. No. 351663 & 350806)
MADHYA PRADESH		15.	M/s. J.M. Jaina & Brothers, P. Box 1020, Mori Gate, Delhi-110006 (T. No. 2915064 & 230936)
4.	Modern Book House, Shiv Vilas Place, Indore City. (T. No. 35289).	16.	M/s. Oxford Book & Stationery Co., Scindia House, Connaught Place, New Delhi-110001. (T. No. 3315308 & 45896)
MAHARASHTRA		17.	M/s. Bookwell, 2/72, Sant Nirankari Colony, Kingsway Camp, Delhi-110 009. (T. No. 7112309).
5.	M/s. Sunderdas Gian Chand, 601, Girgaum Road, Near Princes Street, Bombay-400 002.	18.	M/s. Rajendra Book Agency, IV-DR59, Lajpat Nagar; Old Double Storey, New Delhi-110 024. (T. No. 6412362 & 6412131).
6.	The International Book Service, Deccan Gymkhana, Poona-4.	19.	M/s. Ashok Book Agency, BH-82, Poorvi Shalimar Bagh, Delhi-110 033.
7.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-400 001.	20.	M/s. Venus Enterprises, B-2/85, Phase-II, Ashok Vihar, Delhi.
8.	M/s. Usha Book Depot, 'Law Book Seller and Publishers' Agents Govt. Publications, 585, Chira Bazar, Khan House, Bombay-400 002.	21.	M/s. Central News Agency Pvt. Ltd., 23/90, Connaught Circus, New Delhi-110 001. (T. No. 344448, 322705, 344478 & 344508).
9.	M & J Services, Publishers, Rep- resentative Accounts & Law Book Sellers, Mohan Kunj, Ground Floor, 68, Jyotiba Fuele Road Nalgaum, Dadar, Bombay-400 014.	22.	M/s. Amrit Book Co., N-21, Connaught Circus, New Delhi.
10.	Subscribers Subscription Services India, 21, Raghunath Dadaji Street, 2nd Floor, Bombay-400 001.	23.	M/s. Books India Corporation Pub- lishers, Importers & Exporters, L-27, Shastri Nagar, Delhi-110 052. (T. No. 269631 & 714465).
TAMIL NADU		24.	M/s. Sangam Book Depot, 4378/4B, Murari Lal Street, Ansari Road, Darya Ganj, New Delhi-110 002.