

वार्षिक अनुसंधान प्रतिवेदन Annual Research Report 2016-17



State Forest Research Institute, Jabalpur
राज्य वन अनुसंधान संस्थान, जबलपुर

वार्षिक अनुसंधान प्रतिवेदन *Annual Research Report*

2016 - 17

*With best compliments from :
Director
SFRI, Jabalpur*



STATE FOREST RESEARCH INSTITUTE

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ANNUAL RESEARCH REPORT

2016 - 17

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This report contains semi-processed data which will be on the basis of scientific publications in future. Therefore, the data here-in may not be used without the permission of Director, SFRI, Jabalpur.

FROM THE DIRECTOR'S DESK

Appropriate scientific and technological intervention associated with natural resources and traditional knowledge provide ample opportunities for harnessing advanced knowledge, technical knowhow and services that form the basis of sustainable development leading to significant improvement in the socio-economic status of societies dependant on the resources. State Forest Research Institute, since its inception in 1963, has been making steady progress in search of excellence; and putting in efforts to expand scientific interventions of adaptive and applied nature to shoulder the emerging challenges of forest management in the state.



In its quest of keeping with times during 2016-17, the institute has upgraded its infrastructure by renovating the seed technology laboratory, soil science laboratory, environmental impact assessment laboratory, forest utilization laboratory, and wildlife section with state of art equipments and facilities to conduct advanced multidisciplinary research as per the requirement of the present time. The institute also renovated its conference room and auditorium with improved seating arrangements and audio-visual equipments with modern amenities. The forestry museum of the institute has been renovated with the diorama exhibiting forest ecosystems, timber samples for identification, a model of Sal borer affected tree and the insect, posters exhibiting the history of forestry research and the current research being conducted by the institute.

The institute is now equipped with mobile soil testing van which will provide on door, soil testing services and advise field foresters and other stakeholders regarding deficiency of nutrients and suggest means to overcome them in the forest areas, where plantations are to be taken up. They will also be provided with soil health card. The van will move throughout Madhya Pradesh to provide soil testing services to the forest officials.

National Medicinal Plants Board, New Delhi has given formal approval to establish a Regional Cum Facilitation Center in the institute. This Center will serve to the central region covering the states of M.P., Chhattisgarh and Southern districts of Uttar Pradesh. This multipurpose center will function to train farmers, local stakeholders and NGOs in processing, grading and marketing of medicinal plants along with interaction between producers and traders to develop marketing linkages and technical skills for development of medicinal plants sector in the region.

The institute achieved its objectives envisaged in its Annual Action Plan for the year 2016-17 by undertaking 49 research projects. During the year 2016-17, 14 projects were completed, 49 research projects were continued, 06 new projects were initiated and 15 regular activities were carried out. During the year, 08 papers were published in various journals, 08 papers were published in various newsletters and 13 papers were presented in various seminars and workshops. Edited books by the scientists and research personnel of the institute were also published. Other than this, the institute also published 22 technical bulletins and brochures based on the findings of completed research projects with a view to make research available to stakeholders. The institute published the Annual Research Report 2015-16. Quarterly journals 'Vaniki Sandesh' and 'Journal of Tropical Forestry', marketing information newsletter 'Van Dhan Vyapar' were also published regularly.

The institute has undertaken two ambitious project on "Wildlife habitat improvement in the adjoining area of Sardar Sarovar Project Madhya Pradesh" wherein, a detailed project report of the area including 230 forest compartments spreading over 6000 hectares to be submitted to NVDA, Bhopal is being prepared. Another project on "Management interventions in wildlife habitat improvement in the evacuated sites of Satpura Tiger Reserve by developing habitat suitability models" is being executed and management prescriptions for preparing suitable habitats are being worked upon.

Under the network project on conservation of Lac Insect Genetic Resources, one Lac Insect Cooperation Center has been established in the institute wherein, efforts are being made for surveying and conservation of Lac insects in the states of Madhya Pradesh, Maharashtra, Goa, Daman and Diu. The farmers are being motivated to adopt Lac cultivation on the Palash, Ber and Kusum trees which are available on their fields, to improve their socio economic status and provide alternative sources of income.

A study on carbon sequestration under the project "Protection, maintenance and growth study of dominant tree species for estimation of biomass and carbon sequestration in preservation plots laid in different forest types of M.P." is being carried out in 39 preservation plots situated in 25 different forest areas, to assess the role of different tree species in carbon sequestration in the state.

During the study conducted on collection of gums, production and rural economy it was found that due to climate change and illicit felling of gum trees, the production of gums has been reduced. The gum collectors in the districts of Morena, Chhindwara and Betul are using chemicals to increase gum production, harming gum producing trees. In Khandwa and Burhanpur districts, the trees are being destroyed due to wrong procedure of gum tapping. In Sheopur, Shivpuri and Ashoknagar districts, it was found that the primary collectors who were trained by M.P., M.F.P. Federation and NGOs were using the proper techniques of gum tapping. During the study, it was found that the gum collectors should be trained for sustainable harvesting of gum tapping for continuous availability of gum for livelihood and ultimate increase in the rural economy.

A project on climate change and its impact on forests and livelihood of tribals in Damoh district with the objective to develop climate smart village is making people aware about their role in mitigation and adaption with reference to climate change.

Efforts are being made to transfer technologies developed from lab to land, keeping in view the applied and adaptive research mandate of the institute. The awareness and exposure trainings for newly recruited forest rangers, forest guards, school and college students are being organized in the institute.

The institute conducted training programmes for 300 forest staff of tiger reserves, national parks and sanctuaries and territorial forest divisions of Madhya Pradesh on "Capacity building on wildlife population monitoring techniques to prepare them as master trainer". They were acquainted with transect line, camera trap, range finder, compass, GPS and other advanced equipments for accurate estimation of wild animals. These master trainers will train local forest staff to assist during All India Wildlife Census during the year 2018. The forest genetics and bio-technology branch of the institute provided hands on trainings to 28 graduate students from Department of Agriculture and Veterinary Science from Mewada University, Rajasthan on tissue culture, DNA isolation, bio-technology.

The institute organized the 30th meeting of the Board of Governors on 7th December, 2016 and held 43rd meeting of Research Advisory Committee on 12th June, 2017. One workshop on "Strategies to address wildlife crime: Sensitization of stakeholders for enhanced coordination" on 12th November, 2016, at Hotel Kalchuri, Jabalpur (M.P.) which was attended by the Chief Justice, MP High Court, Advocate General, Senior Judges of the High Court, District Judges, Collectors of different districts, PCCF Wildlife and Senior Forest Officers. The 7th K.P. Sagreiya Memorial Lecture on "Environment Forestry and People" was delivered on 15th February, 2016 by Dr. D. N. Tiwari, ex Vice Chairman, Planning Board of Chhattisgarh and ex Member, Planning Commission of India. The lecture was attended by senior forest officers, scientists, SROs, technical staff, research scholars of SFRI and eminent guests of sister organizations.

I am grateful for the guidance, advice and support received from the eminent members of the Board of Governors and the Research Advisory Committee of the institute, which has motivated us to achieve the goals and objectives of the institute.

Our sincere thanks and appreciation to the M.P. Forest Department and other esteemed national and state funding agencies for having reposed faith and confidence in us, which enabled us to accomplish our research endeavors.

I take pride in having the responsibility to steer this vibrant institute towards continued excellence and all round progress; and consider it as a great honor and privilege in presenting this Annual Research Report. I thankfully acknowledge the overall progress and development of the institute which would not have been possible without the support, commitment and cooperation of my scientific and administrative colleagues.

I sincerely hope that this Annual Research Report will provide useful information to all concerned with the forestry sector and look forward to your valuable suggestions and advice that can help us improve our future research activities.

Dr. Dharmendra Verma, IFS
Director

1. THE INSTITUTE

1.1 INTRODUCTION

Following the impetus generated by the recommendations of tenth Silvicultural Conference held at Dehradun in 1961, the institute came into existence on 27th June, 1963, for the scientific development of forestry sector in the state. It was granted autonomy on 29th October, 1994 and was registered on 2nd August, 1995 as a society under M.P. Societies Registration Act, 1973. Over the years the institute has developed as an educational, training, research and consultancy organization at the state and national level. The institute is carrying out adaptive and applied research programmes. It is dedicated to research on tropical forestry, environment and biodiversity conservation. The vision of SFRI is to function as nodal centre of research in forestry and to provide scientific support to the state and its people's on matters related to forestry, wildlife and climate change with particular emphasis on conservation, sustainable utilization and scientific management of natural resources. The institute conducts multidisciplinary research and provides technical advice to practical problems. It also disseminates research findings through training, education, seminars, workshops, participation in public fairs and consultancy services. Technical bulletins, series of pamphlets, brochures and two quarterly journals namely 'Vaniki Sandesh' and 'Van Dhan Vyapar' are published. 'Vaniki Sandesh' contains papers and articles of practical importance and also on research findings of the projects of the institute which can be applied and adopted in the field. The Journal of Tropical Forestry is also published from the institute campus by the Society for Tropical Forestry Scientists, comprising of senior forest officers and scientists from the state and all over the country. The Journal carries technical research papers, articles and research recommendations of forestry projects undertaken by various organizations.

The institute is located at N 23°07'38" latitude and E 79°55'92" longitude at Jabalpur in a lush green campus spread over a sprawling area of about 102 ha. The region of Jabalpur has close proximity to two major forest types, namely; sal and teak forests of Madhya Pradesh and four protected areas (PA's) namely; Kanha, Bandhavgarh, Pench and Satpuda. This unique location rendered it suitable for the setting this institute here. It houses a rich infrastructure of various research and experimental plots, research nursery, ornamental nursery, clonal nursery, medicinal and aromatic plants nursery, rose garden, seasonal garden, gene-bank, glass-house, mist-chambers, shade-net houses, poly houses, botanical garden, bambusetum, tissue culture, fully renovated state of art EIA, soil and seed testing laboratories along with administrative block, conference halls, lecture room, museum, herbarium, auditorium, library and documentation centre, guest house, officers' rest house, etc. The institute is now equipped with a mobile soil testing laboratory. The institute also provides residential accommodation to its employees inside the campus.

1.2 MISSION AND GOALS

Mission

The institute's mission is to focus its efforts on adaptive and applied research programmes for the conservation and development of forests and forestry sector in the state of Madhya Pradesh.

It endeavours to focus its activities as per the requirement of the forest development community and is engaged in need-based research. The institute tries to acquire knowledge about sectoral problems in forest management and means to overcome them and disseminate the same simultaneously to the stakeholders.

Goals

Ongoing research aims at :

1. Conservation of forests and forest resources - soil, water and floral and faunal diversity.
2. Enhancement of productivity of natural forests and plantations.
3. Efficient and sustainable utilization of forest resources and forest products – timber and NTFPs and expansion of tree cover.
4. Sustainable management of forests involving forest dependent communities and people's participation.
5. Mass production of high fruit yielding forest tree species through biotechnological approaches.
6. Preparation of inventory and biodiversity assessment in Madhya Pradesh.
7. Monitoring and evaluation of wildlife and their habitats.
8. Documentation of existing agro-forestry systems for different agro-climatic conditions.
9. Climate change and its impact on livelihood rural communities.

1.3 THRUST AREAS

1. Collection of quality seeds, its certification and disposal.
2. Production of quality planting material using biotechnological tools.
3. Development of micro and macro-propagation techniques.
4. Vegetational surveys to assess bio-diversity status and to identify rare and threatened species.
5. Germplasm collection, evaluation and conservation.
6. Cultivation, sustainable harvesting, processing, storage, certification and market information service for medicinal plants.
7. Collection of growth data and preparation of volume and yield tables.
8. Ecological studies and environmental impact assessment and preparation of environmental management plans.
9. Strengthening of *ex-situ* gene bank of medicinal and aromatic plants.
10. Development of botanical garden for conservation of rare, endangered, threatened and endemic plants of MP for mass multiplication.
11. Vegetation and edaphic studies in different preservation plots, established in various forest types of MP.
12. Conservation of rare, endangered and threatened (RET) species in natural condition.
13. Study on ecology & conservation of wildlife including herbivores, carnivores & avifauna of the state.
14. Protection, maintenance and successional study in terms of growth, biomass and carbon sequestration in preservation plots laid in different forest types of Madhya Pradesh.

15. Modernization and digitalization of existing forest herbarium of State Forest Research Institute, Jabalpur (M.P.).
16. Development, implementation of sustainable harvesting technologies and determination of sustainable harvesting limits of commercially important NTFPs in tribal dominated tropical forests.
17. Impact assessment of agro-forestry technologies on natural resource management and livelihoods.
18. Sustainable harvesting and primary processing of gums and gum oleo resin.
19. Screening and management of diseases of some selected important medicinal & aromatic plants.
20. Management intervention in wildlife habitat improvement.
21. Preparation of form factor table for important miscellaneous timber species of M.P.
22. Soil analysis of various forest plantation and providing mobile soil testing services.
23. Training on techniques of protection of sal forests affected by sal borer attack.
24. Knowledge upgradation and skill development of field foresters and forest dependent communities through training and extension.

1.4 MAJOR RESEARCH CONTRIBUTIONS

The institute undertakes need-based forestry research programmes of the state and plays a dynamic role to address various forestry management problems. Some of the important research contributions during the year are enumerated below:

1. Documentation of ethno-botanical information on natural gum and resin yielding plants of Madhya Pradesh.
2. Documentation of traditional knowledge of local tribal and communities of Malwa eco region of Madhya Pradesh – Neemuch and Ratlam districts.
3. Sustainable livelihood based management plan for Kuno-Palpur Wildlife Sanctuary of Madhya Pradesh.
4. Integrated management of diseases of economically important tree species and causes and remedial measures of sal mortality.
5. Selection of suitable species on the basis of growth performance of established plantation and development of nursery techniques to increase green cover under Green India Mission (GIM) in western Madhya Pradesh.
6. Preparation of detailed project report of wildlife habitat improvement in the adjoining area of Sardar Sarovar Project, Madhya Pradesh.
7. Development of high-tech nursery and preparation of quality planting material of RET species for their restoration in natural forest of rural and urban areas through plantation.
8. Development of raised mother-bed technology and mass multiplication of clonal plants of eucalyptus in SFRI, Jabalpur.
9. Computerization and digitization of records of sample plots situated in Madhya Pradesh.
10. Preparation of Wildlife Conservation Plan for Jaggannathpur OCM of South Eastern Coal Field Ltd. (SECL) Bhatgaon Area, Distt. Sarguja (C.G.).

11. Development of integrated biotechnological package by genetic diversity assessment using molecular characterization, chemo-profiling, and standardization of micro-propagation and cryopreservation protocol of four RET species (*Berberis aristata*, *Swertia angustifolia*, *Embelia tsjeriam-cottam* & *Saraca asoca*).
12. Quantitative determination of bioactive compounds of highly threatened medicinal plant species (*Butea superba*, *Epigeous corallocarpus*, *Alectra chitrakutensis*) through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation.
13. Standardization of seed and nursery techniques for production of quality planting stock of important indigenous species (*Terminalia chebula*, *Terminalia bellirica*, *Adina cordifolia*, *Sapindus trifoliatus* & *Adunsonia digitata*).
14. The scheduled tribes and other traditional forest dwellers (Recognition of Forest Right Act, 2006) Implementation and its impact in Madhya Pradesh.
15. Social Impact Assessment (SIA), Environment Impact Assessment (EIA), Bio-diversity (BD), study and identification of High Conservation Value Forest (HCVF) of Barghat & Lamta project division plantation of MPRVVN Ltd.
16. Estimation of wood demand and supply in M.P.
17. Impact of tourism on environmental, ecological and socio-economics dynamics around the tiger reserves of Madhya Pradesh.
18. Study on agricultural crop damage by wildlife animals and its management in Hoshangabad circle of Madhya Pradesh.
19. Role of Management Interventions in Wildlife Habitat Improvement on abandoned sites of Satpura Tiger Reserve, Madhya Pradesh.
20. Study of comparison of soil cultural produces in existing bamboo (*D. strictus*) plantation project.
21. Study to ascertain causes of mortality in teak trees in different regions of M.P.
22. Preparation of volume and yield tables of several species.
23. Revision of form factors of teak and sal in different forest divisions of M.P.
24. Identification and collection of germplasm from plus trees.
25. Standardization of protocols for micro propagation of endangered medicinal plant species of central India and their cryogenic preservation for future multiplication.
26. Assessment of sal regeneration in borer affected sal forests of Madhya Pradesh.
27. Germplasm evaluation of important medicinal plants through chemo-profiling technique.
28. Protection, maintenance and successional study of growth biomass and carbon sequestration in different forest types of M.P.
29. Development of nursery techniques and models for plantation of rare endangered and threatened (RET) species in natural condition.
30. *Ex-situ* conservation of medicinally important wild tuberous/rhizomatic plants and studies on their phenology and growth performance.

31. Studies on photosynthetic efficiency, biomass production and carbon sequestration of bamboo in plantation forests.
32. Development of technology for conservation and sustainable management of wild medicinal plants and NTFPs through community participation in Shahdol forest circle of Madhya Pradesh.

1.5 ADMINISTRATION

The administration of the State Forest Research Institute Society is governed by a Board of Governors, which is constituted by the following members:

1.	Honorable Minister of Forests, Forest Department, Govt. of M.P., Bhopal	Chairman
2.	PCCF & HoFF, Madhya Pradesh, Bhopal	Vice Chairman
3.	Addl. Chief Secretary, Dept. of Forests, Govt. of M.P., Bhopal	Member
4.	Principal Secretary, Dept. of Finance, Govt. of M.P., Bhopal	Member
5.	PCCF (Wildlife) M.P., Bhopal	Member
6.	Managing Director, M.P. Forest Development Corporation, Bhopal	Member
7.	Managing Director, M.P. Minor Forest Produce (Trade and Development) Federation, Bhopal	Member
8.	Director General, Indian Council of Forestry Research & Education, Dehradun	Member
9.	Director, Wildlife Institute of India, Dehradun	Member
10.	PCCF (Working Plan), MP, Bhopal	Member
11.	PCCF/APCCF (R/E & Lok Vaniki) M.P., Bhopal	Member
12.	Director General, MP Council of Science & Technology, Bhopal	Member
13.	Shri A. P. Dwivedi, PCCF (M.P.), Retd	Member (Nominated by Govt. of MP)
14.	Prof. N. N. Pathak, Head, Department of Forestry, JNKVV, Jabalpur	Member (Nominated by Govt. of MP)
15.	Director, State Forest Research Institute, Jabalpur	Member Secretary & Treasurer

RESEARCH ADVISORY COMMITTEE

The Research Advisory Committee of the institute comprising of eminent forest officers and stakeholders examines and approves the project proposals of the institute, evaluates their progress and results and also monitors the quality of research. The committee comprises of the following members:

1.	Principal Chief Conservator of Forests & HoFF, M.P.	Chairman
2.	PCCF (Wildlife), M.P.	Member
3.	PCCF (Working Plan), M.P.	Member
4.	APCCF (Development), M.P.	Member
5.	APCCF (M.P. Forestry Project), M.P.	Member
6.	PCCF (Production), M.P.	Member
7.	PCCF/APCCF (Research and Extension), M.P.	Member
8.	Director General, MPCOST, Bhopal	Member
9.	Managing Director, MPRVVN, Bhopal	Member
10.	Managing Director, MP MFP Federation, Bhopal	Member
11.	Director, TFRI, Jabalpur	Member
12.	Director, IIFM, Bhopal	Member
13.	Director (Research), JNKVV, Jabalpur	Member
14.	Head, Bioscience Division, RDVV, Jabalpur	Member
15.	CCF (Central Circle), Jabalpur	Member
16.	DFO (Territorial), Jabalpur	Member
17.	Director, Horticulture, Govt. of M.P.	Member
18.	Dean, Veterinary and Animal Husbandry, JNKVV, Jabalpur	Member
19.	Representative of an NGO	Member
20.	APCCF/CCF, NCL, Singrauli	Member
21.	Representative of Traders of Forest Based Products	Member
22.	Representative of Forest Based Industries	Member
23.	Farmers' Representative	Member
24.	Director, SFRI, Jabalpur.	Member Secretary

1.6 ORGANIZATION

S.No	Forestry Professionals	Sanctioned	Working
1	Director (PCCF/APCCF/CCF)	1	1
2	Addl. Director (CCF/CF)	1	0
3	Deputy Director (CF/Dy.CF)	4	3
4	Assistant Director (ACF)	3	2
5	Forest Ranger	1	1
6	Dy. Ranger	1	0
7	Forester	8	9
8	Forest Guard	10	9
	Total	29	25
	Scientist		
1	Forest Ecology Scientist	1	0
2	Forest Genetics Specialist (Scientist-E)	1	1
3	Seed Specialist (Scientist-E)	1	1
4	Tree Improvement Specialist	1	0
5	Forest Botanist (Scientist-E)	1	1
6	Biodiversity Scientist	1	0
7	Marketing Specialist (Scientist-E)	1	1
	Total	7	4
	Technical		
1	Statistical Assistant (Sr. Research Officer)	1	1
2	Technical Assistant (Social–economics), (Sr. Research Officer)	3	1
	Technical Assistant (Contingency)		2
3	Technical Assistant (Forestry Research), (Sr. Research Officer)	9	7
	Technical Assistant		2
4	Technical Assistant (Consultancy/Extension), (Sr. Research Officer)	1	1
5	Technical Assistant (Library), (Sr. Research Officer)	1	1
6	Technical Assistant (Documentation) (Sr. Research Officer)	1	1
7	Technical Assistant (Computer) (Sr. Research Officer)	1	1
	Lab Technician, (Sr. Research Officer)	7	1
8	Lab Technician		1
9	Lab Incharge, (Sr. Research Officer)	3	1
10	Ledger Assistant (Research Officer)	3	1
	Ledger Assistant		1
11	Herbarium Assistant (Contingency)	1	1
12	Lab Assistant	3	1
13	Field Assistant	3	3
	Total	37	26

	Non-Technical		
1	Head Clerk	1	0
2	Accountant	1	0
2	Assistant Grade – II	1	1
3	Assistant Grade – III	3	3
4	Driver	5	3
5	Daftari	2	0
6	Peon/ Orderly/ Chowkidar/Mali/ Dak Runner	13	4
7	Sweeper	2	1
	Total	27	12

1.8 WORKING BRANCHES OF THE INSTITUTE

Forestry research in the institute is categorized in 12 broad areas. They are as follows :

1. Biodiversity and Medicinal Plants
2. Forest Botany
3. Forest Ecology and Environment (EIA Cell)
4. Forest Genetics, Plant Propagation and Biotechnology
5. Forest Mensuration and Statistics
6. Silviculture
7. Seed
8. Social Economics and Marketing
9. Tree Improvement
10. Wildlife
11. Agro-Forestry
12. Climate Change Cell
13. Extension, Training and Consultancy
14. Library and Documentation
15. Computer and Information Technology

1.9 TRANSFER OF TECHNOLOGY

1. Capacity building of Forest Staff of Madhya Pradesh on Wildlife Population Monitoring Techniques.
2. Knowledge upgradation and skill development of field foresters, forest dependent communities and resource persons through lab to lab training modules.
3. Training on technical knowhow of gum tapping from *Butea monosperma* in Umaria and Tikamgarh districts to local people and frontline staff of forest department.
4. Training on biotechnology, plant propagation and tissue culture.
5. Training-cum-demonstration program in cultivation, processing and marketing of medicinal and aromatic plants.
6. Trainings for the staff of forest department in the maintenance of seed orchards and seed production areas.
7. Training on sustainable harvesting, processing, grading and storage of gums.
8. Participation in exhibitions and fairs.

2. RESEARCH ACTIVITIES

Abstract of Research Activities 2016 - 2017

S. N.	Name of the Research Branch	No. of Completed Projects		No. of Ongoing Projects		No. of Newly Initiated Projects		No. of Regular Activities
		Internal Projects	External Projects	Internal Projects	External Projects	Internal Projects	External Projects	
1	2	3	4	5	6	7	8	9
1	Biodiversity and Medicinal Plants	1	5	-	3	-	-	2
2	Forest Botany	-	-	-	3	-	-	-
3	Forest Ecology and Environment	-	3	1	3	-	-	-
4	Forest Genetics, Plant Propagation and Biotechnology	-	2	-	2	1	-	-
5	Forest Mensuration & Statistics	-	-	-	1	-	-	1
6	Seed	2	-	-	1	-	1	2
7	Silviculture	-	1	-	2	-	2	1
8	Social Economics and Marketing	-	1	1	3	-	2	-
9	Tree Improvement	-	-	-	1	-	-	7
10	Wildlife	-	4	-	4	-	2	-
11	Agro-Forestry	-	-	-	1	-	-	-
	TOTAL	3	16	2	24	1	7	13

Total No. of completed projects (Coln. 3 + 4) - 19

Total No. of ongoing projects (Coln. 5 + 6 + 7 + 8) - 34

Total No. of regular activities (Coln. 9) - 13

2.1 BIODIVERSITY AND MEDICINAL PLANTS

Mandate

1. Biodiversity assessment in forest areas of Madhya Pradesh.
2. Identification of rare and threatened plant species and their *in-situ* and *ex-situ* conservation.
3. Survey of medicinal plants.
4. Mass multiplication and development of agro-techniques of commercially important medicinal plants.

Completed projects

Internally funded : One

1. Xyjhfl fM; k l fi ; e dh dfVx }kjk jki .k rduhd dk fodkl A

Externally funded : Five

1. Development of nursery techniques and models for plantation of rare, endangered and threatened (RET) species in natural conditions.
2. Development of cultivation techniques of Van jeera (*Centrantherum anthelminiticum* (L) Kantze).
3. Documentation of ethno-botanical information on natural gum and resin yielding plants of Madhya Pradesh.
4. Documentation of traditional knowledge of local tribal and communities of Malwa eco region of Madhya Pradesh - Neemuch and Ratlam districts.
5. Upgradation and renovation of forestry museum of State Forest Research Institute, Jabalpur.



Development of Nursery Techniques of RET Species



Van jeera (*Centrantherum anthelminiticum* (L) Kantze)



Focused group discussion for collection of traditional knowledge



Upgradation and renovation of forestry museum

Ongoing Projects

Externally funded : Three

1. *Ex-situ* conservation of medicinally important wild tuberous/rhizomatic plants and studies on their phenology and growth.
2. Development of high-tech nursery and preparation of quality planting material of RET species for their restoration in natural forest and rural/urban areas through plantations.
3. Development of raised mother-bed technology and mass multiplication of clonal plants of eucalyptus in SFRI, Jabalpur.

Regular Activities

Ongoing : Two

1. Development of raised mother-bed technology and mass multiplication of clonal plants of eucalyptus in SFRI, Jabalpur.
2. Development of high-tech nursery and preparation of quality planting material of RET species for their restoration in natural forest and rural/urban areas through plantations.



A view of *ex-situ* conservation site of tuberous /rhizomatic plants: In the gene bank of the Institute



Conservation of RET Species



Development of high tech nursery and preparation of quality planting material



Development of raised Mother-Bed Technology for mass multiplication of clonal plants of Eucalyptus

2.2 FOREST BOTANY

Mandate

1. Maintenance and development of botanical garden.
2. Maintenance and development of forest herbarium.
3. Documentation and inventorization of plant diversity in natural forests of Madhya Pradesh.
4. Phenological studies of forest species.
5. Carbon sequestration and climate change.

Ongoing projects

Externally Funded Projects : Three

1. Protection, maintenance and successional study in terms of growth, biomass and carbon sequestration in preservation plots laid in different forest types of Madhya Pradesh.
2. Sustainable livelihood based management plan for Kuno-Palpur Wildlife Sanctuary of Madhya Pradesh.
3. Studies on photosynthetic efficiency, biomass production and carbon sequestration of bamboo in plantation forests.



Barbed wire fencing of Preservation plot in Shahdol (Lamer) Forest Division



Numbering of trees in Preservation Plots in Narsinghpur (Gadarwara) Forest Division

2.3 FOREST ECOLOGY AND ENVIRONMENT (EIA CELL)

Mandate

1. Ecological studies in natural forests of M.P
2. Environmental Impact Assessment
3. Sustainable Forest Management

Completed Projects

Externally funded : Three

1. Preparation of Wildlife Conservation Plan for Jagannathpur OCM of SECL, Bhatgaon Area, Chhattisgarh.
2. Integrated management of diseases of economically important tree species Dhawada, Bija and Achar occurring in forests of M.P.
3. Causes and remedial measures of sal mortality (*Shorea robusta*) in forest areas of M.P.

Ongoing Projects

Internally funded : One

1. Analysis activities of EIA Lab in SFRI Jabalpur

Externally funded : Three

1. Ecological studies on grasslands of Bandhawgarh Tiger Reserve with special reference to Wildlife Management.
2. Development of technology for conservation and sustainable management of wild medicinal plants and NTFPs through community participation in Shahdol forest circle of Madhya Pradesh.
3. e/; in\$ k LVW ekbfuax dkj i kj\$ku fy- }kjk fofHkUu ftyka (Datia, Raisen, Bhind, Khargone, Gwalior) ea jr [kuu DyLVI ZdsvUrxZ i Lrkfor jr [knkuka dk i ; kbj.k i Hkko eW; kadu , oai ; kbj.kh; i Hkko i zdkuA



Soil sample and leaf sample collection



A

B

C

Infected trees of (A) Dhawada (B) Achar (C) Bija
Initial drying of Sal trees



Initial drying



Half drying



Full drying



Healthy sal trees



Discussion on sustainable management & NTFPs and wild medicinal plants to community participation in Shahdol Forest Circle



EIA for Soil



EIA for Water



EIA for Air



EIA for Noise



Representative of Collector along with Officer's of MPPCB and Mining Officer, Raisen addressing the participants



Public hearing in Raisen (M.P.)



EIA Lab of the Insitute

2.4 FOREST GENETICS, PLANT PROPAGATION AND BIOTECHNOLOGY

Mandate

1. Standardization of propagation protocol using biotechnological applications of tree & medicinal plant species.
2. Production of quality planting material by using biotechnological tools.
3. Germplasm evaluation of medicinal plants through chemoprofiling.
4. Cryopreservation of rare and endangered medicinal plants.
5. Genetic diversity assessment of different species using molecular marker techniques.
6. Species specific identification through molecular marker technique for plant and wild animals.
7. Consultancy /training in the field of plant tissue culture and biotechnology.

Completed Projects

Externally funded : Two

1. Genetic diversity assessment of *Boswellia serrata* and standardization of micro clonal propagation protocol through biotechnological interventions for the production of elite planting material.
2. Standardization and multiplication of clonal propagation protocol for commercially important forestry species *Anogeissus pendula*.

Ongoing Projects

Externally funded : Two

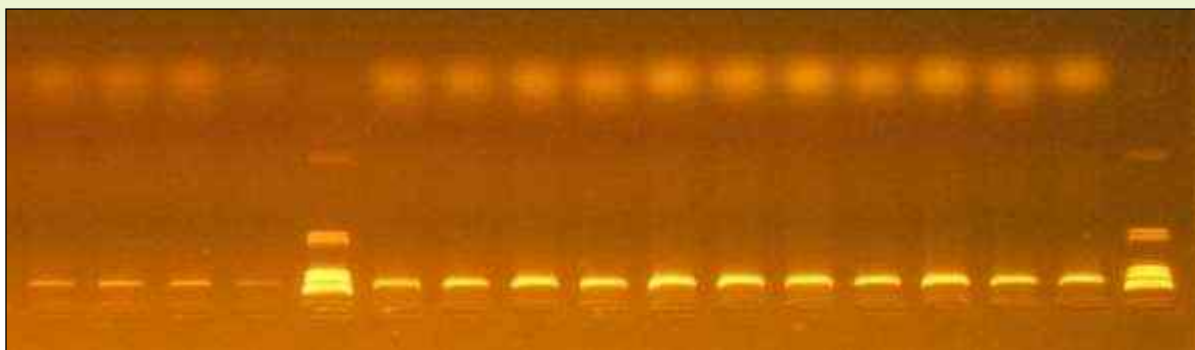
1. Development of integrated biotechnological package by genetic diversity assessment using molecular characterization, chemoprofiling, standardization of micropropagation and cryopreservation protocol of four RET species *Berberis aristata* (Danu Haldi), *Saraca asoca* (Sita Ashok), *Swertia angustifolia* (Chirayata) & *Embelia tsjeriam cottam* (Baibidang).
2. Quantitative determination of bio-active compounds of highly threat medicinal plant species through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation.

Newly Initiated project

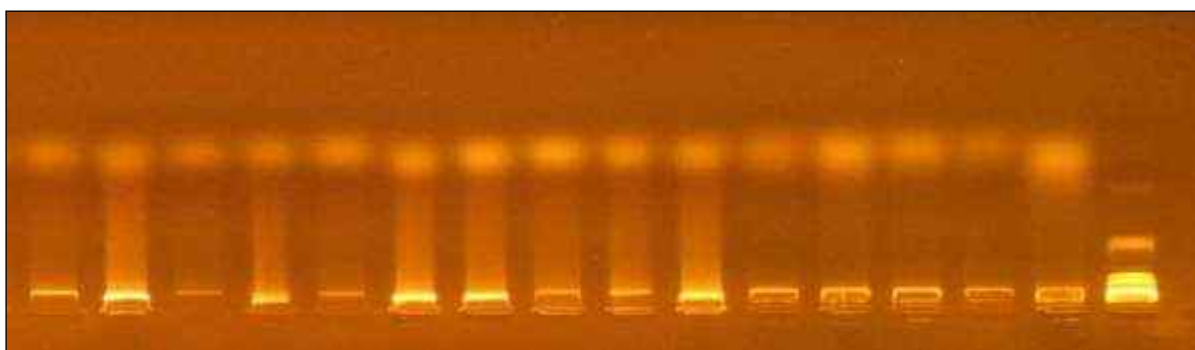
Internally funded : One

1. Clonal multiplication of *Dendrocalamus asper* (Thailand bamboo) through micropropagation technique.

Isolated DNA from leaf sample of *Embelia tsjeriam cottam* germplasm collected from 3 states of India



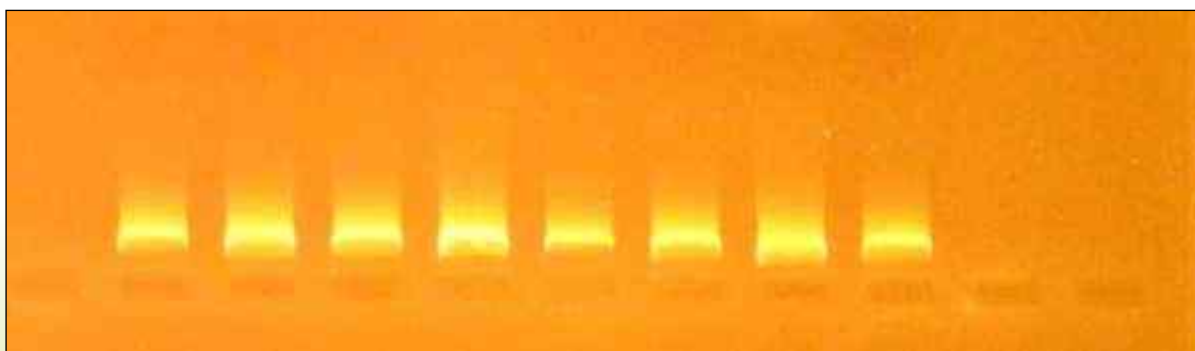
Isolated DNA from leaf sample of *Saraca asoca* germplasm collected from 4 states of India



Isolated DNA from leaf sample of *Berberis aristata* germplasm collected from different locations of Madhya Pradesh



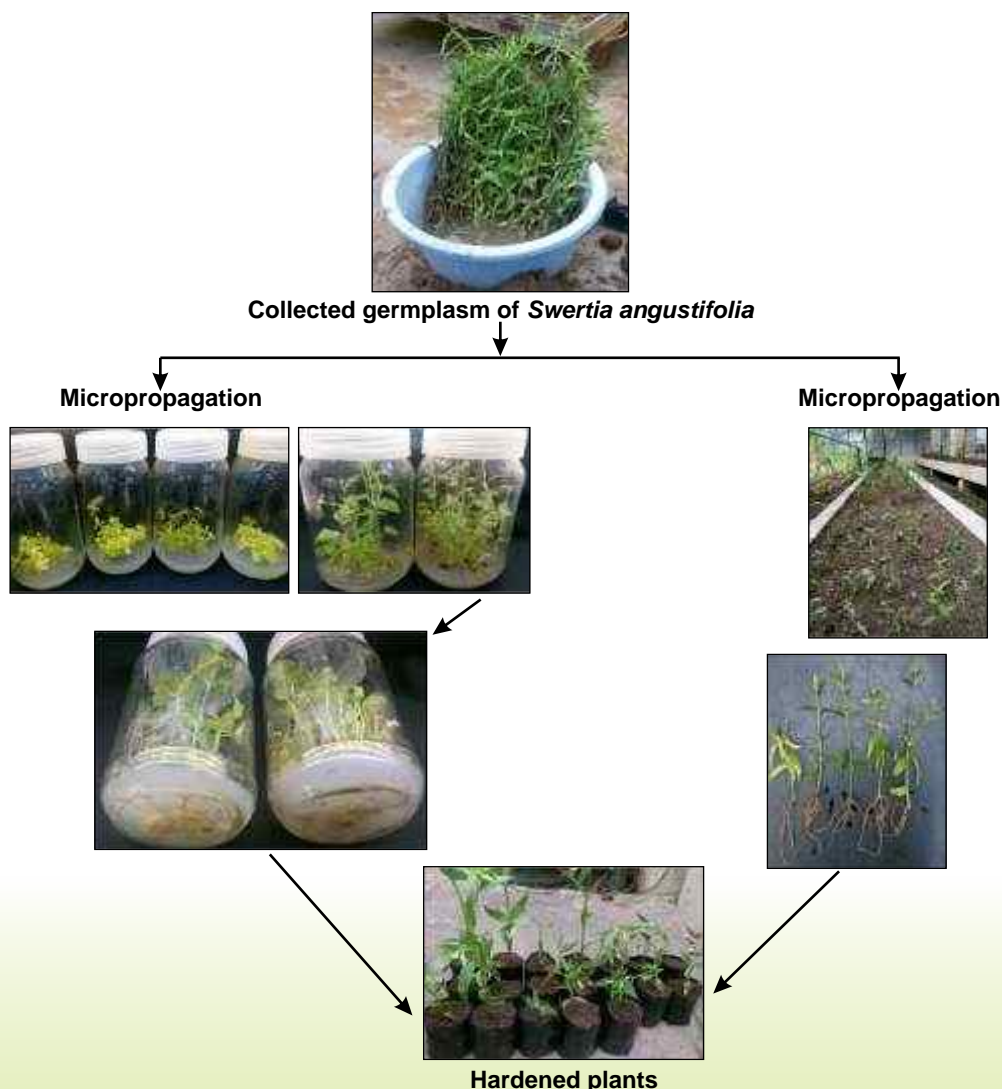
Isolated DNA from leaf sample of *Swertia augustifolia* germplasm collected from 2 states of India



4. Multiplication for the production of quality planting material

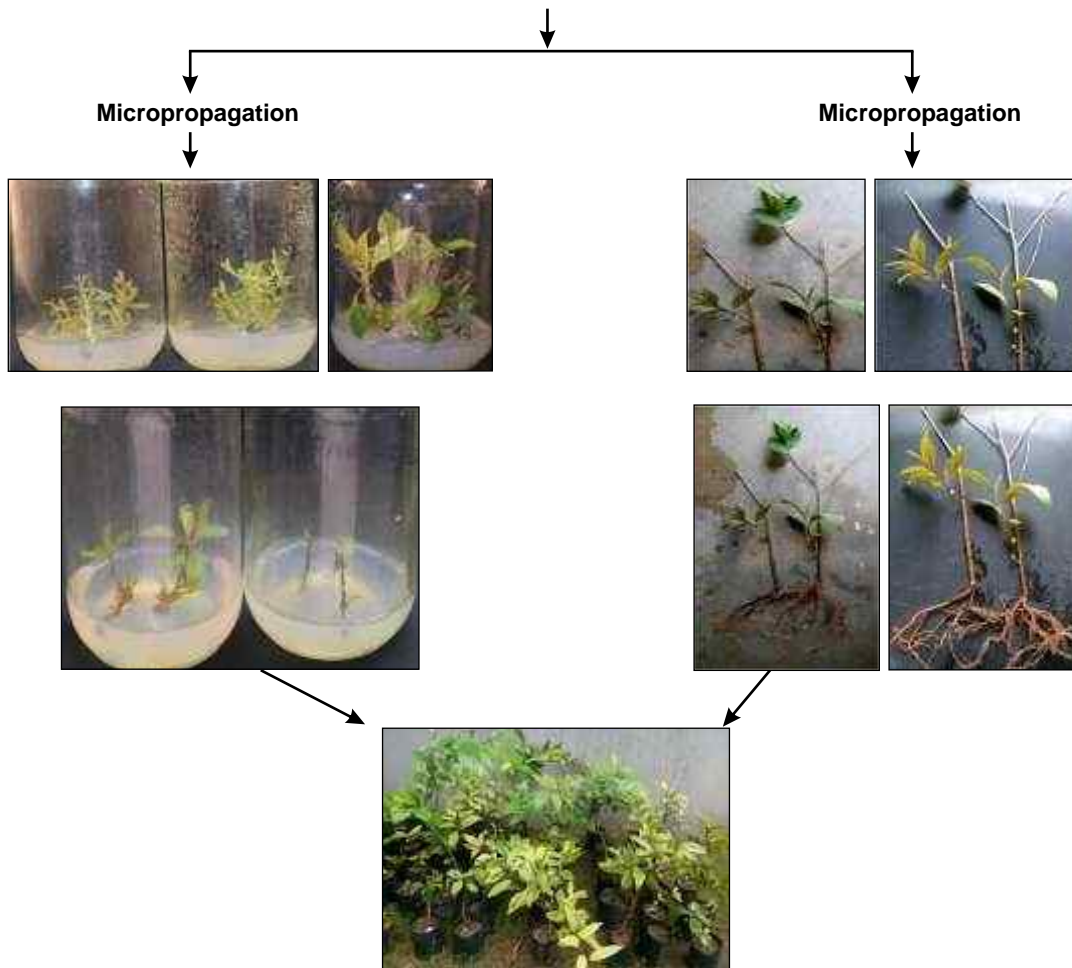
Clonal propagation

- (i) **Micropropagation:** Micropropagation technique have been standardized for *Embelia tsjerium cottom*, *Berberis aristrata* and *Swertia angustifolia* from identified sources, moreover, refining of protocol is in progress for getting excellent morphogenetic response in terms of multiplication and extensive rooting from *in-vitro* grown plants. *In-vitro* multiplication of *Saraca asoca* is very slow, culture becomes dry after third sub culturing, however, standardizing of micropropagation protocol is in progress. (Photo plate-1)
- (ii) **Macropropagation:** Macropropagation techniques through stem branch cuttings from known sources have been successfully standardized for *Berberis aristrata*, *Embelia tsjerium cottom* and *Swertia angustifolia*. *Saraca asoca* showed very poor rooting response. The plants of first three species have been successfully hardened.
- (iii) **Cryopreservation:** Cryopreservation for long term conservation for two species has been successfully standardized for *Embelia tsjerium cottom* and *Swertia angustifolia* in cryocontainers through encapsulation technique from *in-vitro* grown apical shoot tips. The cryo-protocol for *Berberis aristrata* and *Saraca asoca* is in progress. (Photo plate-2)





Collected germplasm of *Embelia tsjerium* cottom



Hardened plants



Cryopreservation of *Swertia angustifolia* & *Embelia tsjerium* cottom

2.5 FOREST MENSURATION AND STATISTICS

Mandate

1. Measurements of growth for computing volume and finding the development of crop stands, for different species, in different quality classes and in different climatic zones of the state.
2. Designing of experiment and analysis of data for all branches of the Institute.

Ongoing Project

Externally funded : One

1. Computerization and digitalization of records of sample plots situated in Madhya Pradesh.

Regular Activities

Ongoing : One

1. Measurement of sample plots due for measurement in the year 2016-17.



Diameter Measurement using Caliper
in Sample Plot-18 of South Seoni



Digging of Trench around sample plots



Trench around the plot



Marking of Trees in Sample Plot-18 South Seoni



Boundary Pole TIP- 8



South Seoni Bamboo Plot

2.6 SEED

Mandate

1. Collection of quality seeds from identified superior genetic sources.
2. Seed storage.
3. Seed certification.
4. Research on seed biology, pollination biology, physiology and biochemistry.
5. Contribution to the knowledge of seed technology with regard to enhanced germination and longevity of seeds.

Completed Projects

Internally funded : Two

1. Documentation of developed seed technology, nursery and planting techniques of important forestry tree species.
2. Seed testing and certification of various forestry seeds.

Ongoing Projects

Externally funded : One

1. Standardization of seed and nursery techniques for production of quality planting stock of important indigenous species.

Newly Initiated Project :

Externally funded : One

1. Collection, processing, testing, certification and supply of quality seeds of various forestry species

Regular Activities : Two

1. Seed certification
2. Seed collection and disposal

New Protocols Developed :

1. Seed longevity and germination potential enhanced by appropriate technology in various species viz; *Mitragyna parviflora* (Mundi), *Bauhinia vahalli* (Mahul), *Careya arborea* (Kumbhi), *Semicarpus anacardium* (Bhilawa) and *Tectona grandis* (Teak) seeds.



Determination of Germination potential and Seed Longevity

Supply of Quality Seeds



Collection



Processing



Certification



Storage



Certification



Storage

Development of Nursery and Planting Techniques

2.7 SILVICULTURE

Mandate

1. Development and standardization of nursery and planting techniques of different forestry species.
2. Development of technology for afforestation and eco-restoration of stress sites.
3. Contribution to the knowledge of silviculture of forestry species.
4. Determination of sustainable harvesting practices of timber and bamboo species (harvesting intensity, time, etc.)
5. Evaluation of impact of various silvicultural systems and evolution of new systems of management in the context of changed environment.
6. Studies on the effects of grazing and fire on forest eco-system.
7. Evaluation of the quality and impact of various development activities of the state forest department.
8. Provision of soil testing services to the SFD, FDC and other users.

Completed Projects

Externally funded : One

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Ongoing Projects

Externally funded : Two

1. Study & comparison of soil cultural practices in existing bamboo (*D. strictus*) plantations.
2. e-iz jkT; ou fodkl vfHkdj.k }kj k fofHkUu ou fodkl vfHkdj.k kkaeaforRh; o"kZ 2013&2014] 2014&2015 , oa2015&2016 dso"kkZ__rgeagq of{kkjksi .k dk; kadk vuqfjo.k , oaeW; kaduA

Newly initiated projects

Externally funded : Two

1. Mobile Soil Testing Van
2. Selection of suitable species on the basis of growth performance of established plantations and development of nursery techniques to increase green cover under Green India Mission (GIM) in western Madhya Pradesh.

Regular Activities

Ongoing : One

1. Analysis of soil samples.



PIA meeting with Committee Members & Villagers



View of Plantation under FDA



Study & Comparison of Soil Cultural Practices in Kalpi Range



Soil analysis in remote forest plantation sites by Mobile Soil Testing Van

2.8 SOCIAL ECONOMICS AND MARKETING

Mandate

The branch conducts research on social, economic, utilization and marketing aspects related to forestry. The broad areas of research are:

Social Economics

1. Forestry in the context of socio-economic development and tribal economy.
2. People's participation in JFM and other forestry programmes.

Marketing

1. Marketing of forestry products.
2. Marketing information service.

Utilization

1. Forest based industries and rural development.
2. NWFP processing.

Archive

1. Maintenance of Forest Archive.
2. Restoration and preservation of old official records.

Completed Project

Externally funded : One

1. Social Impact Assessment (SIA), Bio-diversity (BD), Environment Impact Assessment (EIA), Study and Identification of High Conservation Value Forest (HCVF) of Barghat and Lamta project division plantations of MPRVVN Ltd.

Ongoing Project

Internally funded : One

1. Market information service for NTFPs in M.P.

Externally funded : Three

1. Compilation of 50 years of forestry research in SFRI (1963-2013).
2. Network project on conservation of lac insect genetic resources.
3. The Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Rights Act, 2006) implementation and its impact in Madhya Pradesh.

Newly Initiated Projects

Externally funded : Two

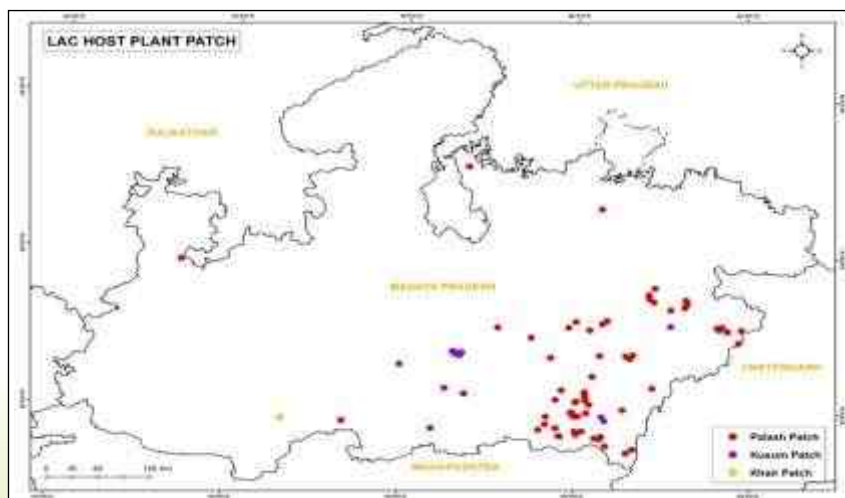
1. Estimation of wood demand and supply in Madhya Pradesh.
2. Climate change and its impact on forests and the livelihood of people of Damoh district.



GIS Map showing the occurrence of the live lac insect in different host plants of Madhya Pradesh



GIS Map showing the occurrence of the live lac insect in different host plants of Maharashtra



Representation of lac host patches in Madhya Pradesh



Discussion with rural households in villages of Jabalpur and Shivpuri districts regarding wood demand and supply



Collection of primary data from the villages by group discussion regarding impact of climate change



Discussion with rural households in villages of Damoh district regarding adaptation to climate change

2.9 TREE IMPROVEMENT

Mandate

1. To select, document and maintain the plus trees.
2. To raise seedling and clonal seed orchards.
3. To conduct progeny trials.
4. Tree breeding.
5. To raise quality planting stock.
6. To study reproductive biology of trees.
7. To propagate rare and endangered species.

Ongoing Project

Externally funded : One

1. Establishment of Bambusetum and Bamboo Interpretation Centre at SFRI, Jabalpur

Regular activities : Seven

1. Identification, documentation and maintenance of plus trees of important tree species.
2. Maintenance of progeny trials (Half-Sib) of *Tectona grandis*.
3. Maintenance of Seedling Seed Orchard of *Gmelina arborea*.
4. Maintenance of clonal orchard of *Zizyphus jujuba*.
5. Maintenance of germplasm of fruit bearing species.
6. Maintenance of clonal germplasm of *Madhuca latifolia*.
7. Provenance trial of *Litsea glutinosa*.



Bambusetum of SFRI, Jabalpur



Flowering in 3 yr old Clonal Mahua plant at SFRI, Jabalpur

Mahua clonal plant orchards at SFRI, Jabalpur



Germplasm of 3 Kaitha varieties
at SFRI, Jabalpur



Germplasm of 11 Bel varieties
at SFRI, Jabalpur



Gola & Hyderabad Ber at SFRI, Jabalpur

2.10 WILDLIFE

Mandate

1. Monitoring & evaluation of wildlife & their habitats.
2. Study on ecology & conservation of wildlife including herbivores, carnivores & avifauna of the state.
3. Impact of wildlife on human habitation & vice-versa.
4. To prepare the wildlife management plan.
5. Serve as a nodal agency to compliment management authorities for scientific inputs.
6. To develop wildlife forensic laboratory.
7. Documentation & dissemination of information on wildlife conservation.

Completed Projects

Externally funded : Four

1. Assessment of wildlife around the Dumna Airport, Jabalpur.
2. Status of Wildlife in Dewas Territorial Division-2016.
3. Status Report : Prey-base in Kuno-Palpur Wildlife Sanctuary, 2016.
4. DNA based monitoring of tigers presence and their movements in Kanha-Pench Corridor of M.P.

Ongoing Projects :

Externally funded : Four

1. Phase-IV: Monitoring and evaluation of wildlife and their habitats for sustainable management and development in the protected areas of Madhya Pradesh.
2. Impact of tourism on environmental, ecological and socio-economic dynamics, in and around the tiger reserves of Madhya Pradesh.
3. Study on agricultural crop damage by wild animals and its management in Hoshangabad Circle of M.P.
4. Evaluation of impact of rehabilitation of Pardhi children in Panna district of Madhya Pradesh with reference to the wildlife conservation.

Newly Initiated Projects:

Externally funded : Two

1. Role of management interventions in wildlife habitat improvement on evacuated sites of Satpuda Tiger Reserve, M.P.
2. Preparation of detailed project report for wildlife habitat improvement in the adjoining area of Sardar Sarovar Project, Madhya Pradesh.



Map showing camera trap locations in study area



Study of agricultural crop damage by wild animals



Training of field foresters for estimation of prey and predators



Survey of study sites of Sardar Sarovar Project (NVDA) for Wildlife habitat improvement

2.11 AGRO-FORESTRY

Mandate

1. Documentation of existing agro-forestry systems for different agro-climatic condition.
2. Impact assessment of agro-forestry technologies on natural resource management and livelihoods.
3. Study of social, anthropological and economic issues of agro-forestry with special reference to tribal and women.
4. Strengthening agro-forestry database development programme and to serve as a repository of information.

Ongoing Project

Externally funded : One

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3. EXTENSION, TRAINING AND CONSULTANCY

Mandate

1. Dissemination of forestry research technologies evolved by the institute.
2. To act as a nodal agency for co-ordination and extension activities.

Activities

- Publication of Annual Research Report, Annual Action Plan of the institute and training modules.
- Organization of trainings, workshops, meetings, seminars and conferences.
- Participation in 'Kissan Mela', 'Herbal Fairs' and public events.
- Providing logistic support and co-ordination with different branches to research projects.
- Maintenance of xerox, operation of audio-visual equipment, public address system and binding etc.
- Providing desired information to the users through correspondence, consultancy and visits.
- Preparation of Annual Administrative Report and Annual Statistical Report of the institute for the M.P. Forest Department.
- Providing I.D. nos. to all research projects, compilation of information of research projects of the institute for periodical monitoring of their progress.
- Organization of trainings and audit for ISO certification 9001:2008 of the institute.

Dissemination of information through publications

a. Annual Action Plan

The Annual Action Plan of the institute for the year 2017-18 was compiled and prepared on quarterly basis from April, 2017 to March, 2018 and progress of the works were monitored and evaluated by conducting review meetings of each branch after the end of each quarter.

b. Annual Research Report

The Annual Research Report for 2015-16 was prepared, published, and disseminated to all the stakeholders.

c. Dissemination of research technologies and strengthening of extension linkages

The institute organized four environmental awareness eco-camps for 04 schools located in Jabalpur. This programme was sponsored & organized under the Anubhuti programme of M.P. Eco Tourism Development Board, Bhopal. Around 200 school children both from government and private sectors were chosen and included in the environmental and forestry research awareness programme. The school students were made aware about the forest eco system and its impact on environment and their role in keeping it safe. They were taken around various sections of institute for an exposure of forestry research, class room lectures, followed by question answer session and visit to Dumna Nature Park Jabalpur for nature trail.



Exposure visit of trainee forest rangers and forest guards



Organization of Seminar on Wildlife for Judiciary



Visit of Addl. Chief Secretary (Forests) Government of Madhya Pradesh

Completed Project :

Externally funded : One

Anubhuti Programme 2016-17 organization of Eco-Camp for school students of Jabalpur.





Environmental Awareness of School Students under Anubhuti Programme

Organization of Meetings

S.N.	Meeting	Place	Date of organization
1.	Meeting of Revision of Service Rules, 2003 of SFRI, Jabalpur	Satpura Bhawan, Bhopal	3 rd August, 2016
2.	Meeting with IISER Bhopal & Chief Wildlife Warden Madhya Pradesh & Director, SFRI	Bhopal	4 th December, 2016
3.	4 th Coordinating committee meeting of Network project on conservation of lac insect genetic resources	Jorhat (Assam)	5 th - 6 th December, 2016
4.	30 th meeting of Board of Governors	Bhopal	7 th December, 2016
5.	Meeting with IISER Bhopal & Chief Wildlife Warden Madhya Pradesh	Bhopal	28 th December, 2016
6.	Meeting with Chief Wildlife Warden Madhya Pradesh	Bhopal	4 th February, 2017
7.	Meeting with IISER Bhopal & Chief Wildlife Warden Madhya Pradesh	Pragati Bhawan BDA Building, Bhopal	13 th February, 2017
8.	43 rd meeting of Research Advisory Committee	Bhopal	12 th June, 2017
9.	Meeting with IISER Bhopal & Chief Wildlife Warden Madhya Pradesh	Bhopal	17 th December 2017

Organization of Seminars/Symposiums/Workshops

S.N.	Topic	Organized by	Date	Participants
1.	World Tiger Day	Wildlife Branch, SFRI, Jabalpur	29 th July, 2016	All Forest Officers, Scientist, SROs and Technical Staff and Research Scholars of SFRI
2.	Workshop on experience sharing of development of bamboo industry in China	Extension Branch, SFRI, Jabalpur	9 th September, 2016	--"--
3.	Transcendental Meditation programme by Brahmachari Shri Girish Verma	Extension Branch, SFRI, Jabalpur	23 rd September, 2016	--"--
4.	Strategies to address wildlife crime: Sensitization of stakeholders for enhanced coordination	Extension Branch SFRI, Jabalpur	12 th November, 2016, Hotel Kalchuri, Jabalpur (M.P.)	Chief Justice MP High Court, Advocate General, Senior Judges, District Judges, Collectors of different Districts, PCCF Wildlife, Senior Forest Officers

Organization of Trainings

S.N.	Name of the programme	Organized by	Date	Organized for	Name/No. of participants
1.	Training for handling of various equipments (Camera trap, range finder, compass and GPS) to be used in monitoring and census work.	Wildlife Branch SFRI, Jabalpur	27.04.2016	Forest officers & field staff of Ratapani & Singhori Wildlife	50
2.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	06.06.2016	VFC members engaged in seed collection work of various divisions (Beej Mitra)	174
3.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	21.06.2016	Balaghat Forest Rangers, College	55
4.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	22.06.2016	Forest Guard, Pachmarhi	57
5.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	28.07.2016	Forest Guard, Seoni, Lakhnadon	66

6.	Training on lac cultivation by scientific method	Social-economics branch, SFRI, Jabalpur	21.08.2016	Farmers & Van Samiti Members of Madosa, District Panna	43
7.	वकश/कह; िकश, oa vdk"Bh; yAqouki t ds l aktgdka dks l aktgh cukus dh dk; Z kkyk	yAqouki t l A] Hkks ky	3-10-16 l s 5-10-16 rd	ou ifj {ks= vejd/d oue.My] vuq ij	Jherh ek/kjh JhokLro
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10.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	05.11.2016	GCF Estate, Shishu Vidya Mandir, Jabalpur	15
11.	Training for handling of various equipments (Camera trap, range finder, compass and GPS) to be used in monitoring and census work.	Wildlife Branch SFRI, Jabalpur	16-18.10.2016	Forest officers and field staff of Satpura Tiger Reserve in three range (Madai, Matkuli & Churna)	100
12.	Capacity building on Advanced Wildlife Population monitoring Techniques	Wildlife Branch SFRI, Jabalpur	30.11.2016 to 1.2.2017	Frontline forest staff of Madhya Pradesh	80
13.	3 day training programme on "Establishment, maintenance and periodic measurement of sample plots."	M.P. Forest Department, Bhopal	Dec. 2016	One student of B.Sc Forestry from Mewar University, Rajasthan	01
14.	Dissertation on "Calculation of crop parameter"	Forest Mensuration and Statistics branch, SFRI, Jabalpur	Dec.2016- Jan.2017	One student of B.Tech. from SRM University, Kancheepuram	01
15.	Plant Biotechnology/ Plant Tissue Culture Training/dissertation Programme	Forest Genetics Plant Propagation & Biotechnology Division, SFRI, Jabalpur	April 16 to March 17	Under Graduate, Post Graduate, & self motivated students	10
16.	Training on lac cultivation by scientific method	Social-economics branch, SFRI, Jabalpur	07.01.2017	Farmers of Chaurai, District Shahdol	28

17.	Training on lac cultivation by scientific method	Social-economics branch, SFRI, Jabalpur	08.01.2017	Farmers of Banonda, District Umariya	25
18.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	09.01.2017	Field Forester, From Balaghat	34
19.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	10.01.2017	Student trained from Krishi Nagar H.S. School, JBP	50
20.	Organization of Anubhuti Programme for environmental awareness programme for school children.	Extension Branch, SFRI, Jabalpur	10.01.2017 to 14.01.2017	For School Children	200
21.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	11.01.2017	(Anubhuti program) Student trained from MLB School, Jabalpur	50
22.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	12.01.2017	Field Foresters Training School, Balaghat	34
23.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	07.02.2017	SFRI field staff & research officers engaged in teak seed collection	12
24.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	08.02.2017	Dr. Ankur Awadhiya, IFS	01
25.	Training on lac cultivation by scientific method	Social-economics branch, SFRI, Jabalpur	21.02.2017	Farmers of Nandiya District Hoshangabad	23
26.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	22.02.2017	Field foresters from Training School, Betul	88
27.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	23.02.2017	Field foresters from Training School, Amarkantak	93
28.	Training on seed collection, processing, storage, pre-treatment and nursery management.	Seed Technology Branch, SFRI, Jabalpur	03.03.2017	Anupama Modi, Indore with students	09

Trainings/ Workshops/ Meetings attended by officers/scientists and research staff of the institute.

S.N.	Name of the programme	Organized by	Date	Participants
1.	Training on: NABL Certification quality manual preparation and record keeping training programme	SFRI, Jabalpur	29.09.2015, 12-16.10.2015, 26-28.10.2015	Dr. Jyoti Singh, Shri Rakesh Jain
2.	"SPSS online training programme for government"	SPSS, Bangalore	Oct. 2015 to June 2016	All Forest Officers, Scientist, S.R.Os and Technical Staff of SFRI, Jabalpur
3.	Workshop on Lac	SFRI, Jabalpur	31.01.2016	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
4.	"A study of human trafficking: trends, socio impact and legal perspective for combating in India".	Banaras Hindu University, Banaras on 24 to 26 February 2016.	Feb. 2016.	Dr. A.K. Sharma
5.	Advanced Training Programme on Pollution Monitoring Techniques	Centre for Science & Environment 41, Tughlakabad, New Delhi 110062	14.03.2016 to 18.03.2016	Dr. Pratiksha Chaturvedi & Shri Vinay Kumar Kori
6.	Surveillance Assessment (SA1) as per Version 3 of QCI-NABET EIA Scheme and assessment of FAE for accreditation	SFRI, Jabalpur	20-22.03.2017	All Forest Officers, Scientist, S.R.Os and Technical Staff of SFRI, Jabalpur
7.	Global Bamboo Summit 2016 Indore, M.P.	M.P. State Bamboo Mission, Bhopal	08-10.04.2016	Dr. S. K. Tiwari, Dr. Uday Homkar, Shri A. Sarkar, Shri K. L. Verma
8.	Inter collegiate competitive events on biotechnology in emphasis on Swachchh Bharat Abhiyan	RDVV, Jabalpur	29.04.2016	Dr. Archana Sharma
9.	National symposium on physiological approaches to enhance productivity in pulses under changing climate	JNKVV, Jabalpur	30.04.2016	Smt. Richa Seth
10.	VfuaK ^i kQskuy MoyieW i kxte&dMfDVx bZvkbZ, - LVMh, M fi i jsku vKND bZvkbZ, - fji kV&cd LVMh, M xij fMLd'ku**	Hkkjrh; LVkQ bZvkbZ; fjaK dKwyst] gñjkckn	11-13-05-2016	MKW vkj- ds i k.Ms MKW T; kfr fl g
11.	Training on: Internal audit No. IA/02 Certification Audit- BVQI, Indore- ISO Certification quality manual preparation and record keeping training programme	SFRI, Jabalpur	18.05.2016	Dr. R.K. Pandey Dr. Jyoti Singh Shri Shailendra Nema Shri Vijay Haldkar & Mrs. Madhuri Shrivastava

12.	ISO-9001-2008 of 2 nd Management Review Committee meeting	SFRI, Jabalpur	27.05.2016	Dr. Jyoti Singh
13.	"7th International Conference on Environmental Science and Technology, ICESS 2016 Barcelona – Spain "	CBEES, Kowloon, Hong Kong, held at Barcelona – Spain	10-12.06.2016	Dr. R.K. Pandey
14.	Rural Technology Regional Workshop	JNKVV, Jabalpur	28.07.2016 to 29.07.2016	Shri Vinay Kumar Kori
15.	Training on "Air Pollution Monitoring and Modeling Software Applications - Theory and practices"	Engineering Staff College of India, Hyderabad	08-10.08.2016	Dr. R.K. Pandey & Dr. Jyoti Singh
16.	Core group meeting of experts	MPSBB, Bhopal	26.08.2016	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
17.	National Convention on Innovation for Green Highways	National Green Highways Mission, Delhi	7-9.11.2016	Dr. G. Krishnamurthy & Dr. S. K. Masih
18.	"Experience sharing of Bamboo industry development in china" presented by Shri. H.S. Mohanta, C.F. Working Plan, Seoni	SFRI Jabalpur	09.09.2016	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
19.	Training on internal auditor quality management system of laboratory for NABL	SFRI Jabalpur	14-14.11.2016	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
20.	01; i k. kh l j f {kr ou {k= ea i k d f r d o ekuo f u f e r p k j k x k g k a d s i c a k u , o a l o / k u g r q f n u k a d 26@09@2016 d k s v k ; k f t r , d f n o l h ; d k ; Z k k y k	{k= l p k y d c k k o x <+ V k b x j f j t o z	26.09.2016	MKW vkj- ds i k. Ms
21.	Training on instrumentation	TFRI, Jabalpur	26-31.09.2016	Mrs.Madhuri Shrivastava
22.	v k S k / k h ; i k S k k a , o a v d k " B h ; y ? k q o u k i t d s l a g . k] m i p k j . k , o a f o i . k u d h d k ; Z k k y k	e M y k] b d k s l b v j H k t e i g] 1 / p p k y h i / c s m y] v e j d a / d	03-05.10.2016	MKW T ; k f r f l g
23.	L F k k u h ; L r j i j l a t g d k a @ x t e o k f l ; k a t k s v k S k / k h ; i k S k k a , o a v d k " B h ; y ? k q o u k i t d s l a g . k] m i p k j . k , o a f o i . k u e a l a y X u g d d k s l a t g h c u k u s (S e n s i t i z a t i o n) g r q r h u f n o l h ; d k ; Z k k y k	i c a k l p k y d] y ? k o u k i t l g d k j h l a k e / ; i n s k] H k k i k y	03.10.2016 to 05.10.2016	25 Participants

24.	Collection, processing and value addition of NTFPs	MP MFP, Bhopal & DFO, Singrauli	4-6.10.2016	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
25.	Training on "Application of GIS, GPS and RS in environmental data management"	Engineering Staff College of India, Hyderabad	18-20.10.2016	Dr. Jyoti Singh,
26.	ISO-9001-2008 of 3rd Management Review Committee meeting	SFRI, Jabalpur	26.11.2016	All Forest Officers, Scientist, S.R.Os and Technical Staff of SFRI, Jabalpur
27.	International herbal fair	MP MFP, Federation, Bhopal	18-24.12.2016	Dr. S.K. Masih & Shri K. L. Verma
28.	Continuing professional development programme on review of environmental impact assessment (EIA) Reports - Case study & Group Discussion	Engineering Staff College of India, Hyderabad	3-4.01.2017	Mrs.Madhuri Shrivastava
29.	Training on "Review of Environment Impact Assessment (EIA) Reports- Case study & Group Discussion."	Engineering Staff College of India, Hyderabad	3-4.01.2017	Shri Rakesh Kumar Jain
30.	Training programme on CRDP on "Review of EIA - A case study and Group Discussion.	ESCI, Hyderabad	3-4.01.2017	50 Participants
31.	7th K.P. Sagreiya Memorial Lecture on "Environment forestry and People"	State Forest Research Institute, Jabalpur (M.P.) and Society for Tropical Forestry Scientists, Jabalpur (M.P.)	15.02.2017	All Forest Officers, Scientist, SROs & Technical Staff and Research Scholars of SFRI
32.	Lab visit and information collected for Soil analysis	Indian Institute of Soil Science, Bhopal, M.P.	07.02.2017 to 08.02.2017	Dr. Archna Sharma
33.	Training on "Collection, processing, testing, certification and supply of seeds of various forestry species".	Seed Branch, SFRI, Jabalpur	07.02.2017	Dr. A.K. Sharma
34.	Vigyan Mela	MP Forest Department Bhopal	03.03.2017	Shri Ramkumar Kahar
35.	^ol; tho l jff{kr {ks- ea i kdfrd o ekuo fufefr pkjxkgka dk iczku , oa l o/kz** fo"k; ij , d fnol h; dk; Z kkyk dk vk; kst u	{ks- l pkyd} ckdokx<+ Vkbkj fj toz	29-03-2017	MKW vkj- ds i k.Ms Jh ih , u- feJk

4. DOCUMENTATION BRANCH

Mandate

1. Documentation of research information/results.
2. Documentation of technical literature on forestry research activities of the Institute.
3. Maintenance of ledger files.
4. Providing research information to the users.

Activities

1. Maintenance of general and specific ledger files. At present, 250 general and 173 specific ledger files are being maintained. The research findings published in various journals/bulletins and reports, etc. were photocopied and added regularly in the respective ledger files.
2. Documentation of technical literature on forestry research.
3. Documentation of research articles published in different Journals, Magazines, Newsletters, Bulletins, Vaniki Sandesh, Annual Research Report and Extension series.
4. Documentation of final reports of the projects financed by external agencies.
5. Publication of quarterly journal "Vaniki Sandesh", technical bulletins and extension series.
6. Sale of SFRI publications.

A quarterly journal "Vaniki Sandesh" covering articles on forestry research in the institute and elsewhere is published by the institute. Vaniki Sandesh is circulated to officers of the state forest department, research institutes, universities and individuals. The annual subscription is fixed at Rs.150/- for individuals and Rs. 300/- for institutions.

Sale of Publications

The institute has published 69 technical bulletins and 49 extension series till date which are available for sale.

Journal Section

The branch is well furnished with a reading room. During the year 13 journals were subscribed for reference to the users.

Achievements during the year

1. Four issues of Vaniki Sandesh Vol. 6 No. 3-4 and Vol. 7, No. 1-2 were published.
2. 45 project reports were documented.
3. A sum of Rs. 12845/- was received from the sale of bulletins, extension series, Vaniki Sandesh and Vandhan Vyapar.
4. 45 periodicals were received and displayed.
5. 289 articles were selected, photocopied, classified and filed into ledger files.
6. 159 damaged pages of ledger files were replaced by xerox copies.

Periodicals subscribed during the year 2016-2017

S.N.	Name of the Journal
1.	PTI Science Service
2.	Economic and Political Weekly
3.	Indian Journal of Forestry (Vol. 40)
4.	Journal of Non Timber Forest Products (Vol. 24)
5.	The Indian Forester
6.	TIDEE
7.	Journal of Tropical Forestry
8.	Indian Phyto-pathology (Vol. 69)
9.	Journal of Mycology and Plant Pathology
10.	ou/ku 0; ki kj ¼ lFkku }kjk izdkf'kr½
11.	okfudh l nsk ¼ lFkku }kjk izdkf'kr½
12.	Heritage Amruth

SFRI PUBLICATIONS

1. Technical bulletins –

S N.	Bulletin No.	Title	Year	Price
1	2	Volume Table of <i>Terminalia tomentosa</i> for M.P.	1963	70.00
2	4	Yield Table of Sal for M.P.	1966	70.00
3	5	Seed Directory Vol. I	1967	30.00
4	9	Standard Volume Table of Teak for South Chhindwara in M.P.	1971	70.00
5	10	Family <i>Ranunculaceae</i> to <i>Polygonaceae</i> in M.P. (Monograph of 13 families)	1971	25.00
6	11	Teak growth tables of different ecological forest types in M.P.	1971	70.00
7	12	Standard volume tables of <i>Boswellia serrata</i> for Nimar tract in M.P.	1971	70.00
8	15	Bark Table for <i>Boswellia serrata</i>	1971	25.00
9	16	Family <i>Linaceae</i> to <i>Berseraceae</i>	1974	25.00
10	18	Species for plantation in M.P. (Reprint)	1977	100.00
		e/; i nsk eao{kkjki .k dsfy; smi ; Ør iztkfr; ka	1977	100.00
11	22	Bamboo Plantation	1986	50.00
12	23	Fuelwood removal by headloads - A case study of Jabalpur	1987	20.00
13	24	Eucalyptus cultivation in M.P.	1987	25.00
14	26	Socio-economic potential of minor forest produce in M.P.	1991	75.00
15	28	Material for forest flora of Madhya Pradesh	1996	150.00
16	29	Tissue culture protocols for Teak, Neem & Khamer	1997	150.00
17	30	Growth statistics of forest plantations	1997	75.00
18	31	Medicinal plant of M.P. distribution, cultivation & trade	1998	200.00

19	32	Local Volume Table for Teak, Sal and other species	1997	60.00
20	33	Price Trends of some medicinal plants	1998	80.00
21	34	Biological Diversity of SFRI premises	1998	50.00
22	35	Seed production in Teak Seed Orchards in M.P.	1998	100.00
23	36	Seed certification protocol of forest tree species	1998	75.00
24	37	Tissue culture protocols for important medicinal plants of M.P.	1998	30.00
25	38	Macro-propagation protocol of some tree and medicinal plants species.	1998	40.00
26	39	Yield and stand tables of teak in Madhya Pradesh	1998	200.00
27	40	An Annotated Bibliography of Bamboo	1999	50.00
28	41	Status survey of Non Timber Forest Produce in primary Tribal Markets : A case study in Amarkantak Plateau.	1999	100.00
29	42	Application of laboratory seed testing results in nursery practices.	2000	50.00
30	43	e-iz ea flkyok dk l kelftd vkfkd fo'y'sk.kkRed v/; ; u	2000	100.00
31	44	Silviculture research in M.P.	2000	150.00
32	45	Handbook of Bamboos with particular reference to M.P.	2002	80.00
33	46	vkSk/kh; i kSkka dh [krh dh ipkj&id kj if=dk	2003	150.00
34	47	Medicinal herbs in trade: a study of safed musli, (chlorophytum species) in Madhya Pradesh	2003	20.00
35	48	Collection, processing and marketing of <i>Buchanania lanzan</i> in Madhya Pradesh	2005	20.00
36	49	e/; inSk ds egRo i wk vk; pnd i kni	2005	70.00
37	50	vkoyk o{kjki .k , oa vkfkd egRo	2008	50.00
38	51	mPp xqkorrk ds cht , d=hdj.k] Hk.Mkj.k] mi pkj.k] i ek.khdj.k rFkk cht kRi knu {ks=ka ds p; u , oa i caku ij fnXnf' kdk	2008	50.00
39	52	Floral Diversity of Kanha Tiger Reserve	2009	900.00
40	53	Nursery and Planting technique of Tree Species	2010	100.00
41	54	Forest Glossary for All (English-Hindi)	2010	50.00
42	55	o{kjki .k ekXnf' kdk	2011	150.00
43	56	l xgr yk[k ea l e; ds l kfk ouki tka ea gkus okyh deh dk v/; ; u	2014	TM
44	57	Status of natural gum and gum oleo-resin of M.P.	2014	TM
45	58	cht i {ks= dk p; u] cht mRi knu {ks= dh LFkki uk] i caku] cht l xg.k] Hk.Mkj.k] mi pkj.k] ij h{k.k , oa jki .kh i caku	2014	TM
46	59	okfudh ea eS ØkDyky i ki x'sku rduhd }kj o{k , oa vkSk/kh; iztkr; ka ds Dyky i kSk r\$ kj djus dh fof/k; k	2014	TM
47	60	l kenkf; d Hkxhkh }kj vdk"Bh; ouki tka ds ekufp=.k , oa vkDy fof/k ekXnf' kdk	2015	TM
48	61	vdk"Bh; ouki t l rr-fonkgu , oa i caku fu; ekoyh	2015	55.00
49	62	dEjk V\$ ekXnf' kdk	2016	TM
50	63	vdk"Bh; ouki t iztkr; ka dk v%Fkyh;] ckg; LFkyh; l j{k.k] uoiDrL & ouo/Lu , oa fodkl	2016	1120.00

51	64	vdk"Bh; ouki t l rr-fonkgu , oa i cdku fu; ekoyh	2016	800.00
52	65	Volume table of Teak for various divisions of Madhya Pradesh	2016	TM
53	66	Volume table of <i>Shorea robusta</i> (Sal) for various divisions of Madhya Pradesh	2016	TM
54	67	jki .kh ekxhf' kdk	2016	100.00
55	68	Growth table of important coppice origin species for Madhya Pradesh	2016	TM
56	69	ou , oa vksk/kh; iztkfr; ka dh jki .kh , oajki .k rdudh ekxhf' kdk	2016	370

● TM - Training Material

2. Extension Series

Ext. Series	Title	Year	Price
1.	Teak seed collection and uses	1981	10.00
2.	o{kkjki .k ea ch tka dk egro	1981	15.00
3.	e-iz ea l ky jki .k dh rdudh	1991	15.00
4.	i Mr Hkfe fodkl grqmi ; pr iztkfr yM; k	1991	10.00
5.	bl cxky	1994	5.00
6.	l izu/kk	1994	5.00
7.	jk k ?kk	1995	5.00
8.	A mechanical device for pre-sowing treatment of teak seeds	1995	5.00
9.	o{kkjki .k d s dja	1996	25.00
10.	SFRI Publications	1999	40.00
11.	ekbdkjkb tk %e½	1999	TM
12.	jk; tkfc; e	1999	TM
13.	, t vkcDVj	2000	TM
14.	i h, l -ch %QkLQkj l foyk; d½	2000	TM
15.	vkpyk %ouks l sfd l kuka rd	2000	40.00
16.	ckl %ouks l sfd l kuka rd	2000	40.00
17.	l kxks %ouks l sfd l kuka rd	2000	60.00
18.	[kej %ouks l sfd l kuka rd	2000	60.00
19.	; vdfyvl %ouks l sfd l kuka rd	2000	50.00
20.	cp ¼ dgl d s e l ½	2001	5.00
21.	l rkoj ¼ Li jxl j d held l ½	2001	5.00
22.	l Qn ea yh %DyjkQkbVe ckj fofy; kue½	2001	5.00
23.	d f y g k j h %y k s j v k l k l q j c k ½	2001	5.00
24.	l uk; %dfl ; k vlxLVhQkfy; k½	2001	5.00

25.	I i zdkk ½ jkoksYO; k I i iVuk½	2001	5.00
26.	v'oxdkk ½oFkkfu; k I keuhOj k½	2001	5.00
27.	eqdnkuk ¼ cyekl dl ekLdVl ½	2001	5.00
28.	yæuxkl ½l cki kxu ½ySDl i kd l ½	2001	5.00
29.	ebFkk ; k i kshuk ½ebFkk vkoF l ½	2001	5.00
30.	y?kpuksi tka dk i kFkfed i d l dj .k ½kkx 1½	2003	20.00
31	y?kpuksi tka dk i kFkfed i d l dj .k ½kkx 2½	2007	20.00
32	Directory of Medicinal Plants Trades and ISM Industries of Central India	2009	100.00
33	Monograph on <i>Alectra chitrakutensis</i>	2011	60.00
34	Monograph on <i>Ceropegia bulbosa</i> and <i>Ceropegia macrantha</i>	2011	60.00
35	Monograph on <i>Crateva magna</i> and <i>Ficus cupulata</i>	2011	60.00
36	Monograph on <i>Dioscorea tomentosa</i> , <i>D. wallichia</i> and <i>D. alata</i>	2011	60.00
37	Monograph on <i>Flemingia stricta</i> and <i>F. paniculata</i>	2011	60.00
38	Monograph on Guggal (<i>Commiphora wightii</i>)	2011	60.00
39	Monograph on Maida tree (<i>Litsea glutinosa</i>)	2011	60.00
40	Monograph on Padri tree (<i>Radermachera xylocarpa</i>)	2011	60.00
41	Monograph on Shyonaka (<i>Oroxylum indicum</i>)	2011	60.00
42	Some ethnic plants in cure of various human diseases	2011	250.00
43	dejd l ¼ yk' k½ xkn dk l rr-fonkgu] i kFkfed i d l dj .k] Js kh dj .k , oa tk . Mkj .k rduhdka dk in' kZ	2012	TM
44	I ky ckj j l s l ky ouks dh l j {kk	2014	TM
45	Education material on conservation, multiplication and utilization of rare, endemic <i>Angiosperms</i> and <i>Pteridophytes</i> in Forest Botanic Garden of State Forest Research Institute, Jabalpur (M.P.)	2014	TM
46	Education material on Herbarium preparation and its management	2015	TM
47	e/; i n'sk ds ouka ea i k; h tkus okyh egROI w kZ nyBk i ztkfr; ka dh mi ; Ør j ki .kh rduhd dk fodkl	2015	TM
48	[kej 'kh'kz l v[ku j kx , oa i zdku rduhdh ekxhf' kZdk	2015	TM
49	[kuu {k=ka ea ouhdj .k , oa i kfj l Fkfrdh; i qLFkki uk grq rduhdh ekxhf' kZdk	2015	TM
50	egROI w kZ l dVxLr i ztkfr; ka dh j ki .kh rduhd	2016	TM

TM - Training Material

Note: Payment for the above bulletins and extension series may be made by Demand Draft in favour of the Director, State Forest Research Institute, Jabalpur.

Payment for the Bulletin No. 24 (Eucalyptus cultivation in M.P.) may be made by Demand Draft in favour of the Treasurer, Society for Tropical Forestry Scientist, SFRI, Jabalpur.

5. LIBRARY AND INFORMATION CENTRE

Mandate

SFRI library and information center is a prominent library of the state of Madhya Pradesh in the field of forestry. It houses books, reports, Indian Forest Records, Working Plans, Working Schemes, Forest resource surveys and Sanctuary Plans. Apart from the research staff of the Institute, forest officers, scientists and technical staff make use of the library facilities. Students, research scholars from various institutes and universities also visit the library regularly.

The library and information centre maintains literature on forestry and allied subjects. It has books on environment, silviculture, forest protection, mensuration, management, marketing, utilization, social forestry, biodiversity, ecology, botany, tissue culture, tree improvement, law, medicinal plants, wildlife, seed scheme and computer science, etc.

Activities

During the year 2016-2017, 28 new books, 10 new working plans and 14 reports were received with the total as under:

1. Books (including 2657 gratis books)	7574
2. Reports (Govt. and NGO's)	396
3. Indian Forest Records	641
4. Working Plans	1448
5. Sanctuary Plans	24
6. Working Schemes	85
7. Forest Resource Surveys	27

Total	10195
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Following activities were undertaken during the year.

S. No.	Works	Status
1.	Preparation of book card slips and pasting of book pockets on books	Routine work
2.	Correspondence with users for return of books	Routine work
3.	Provide CAS to users	Routine work
4.	Classification of books and arrangement of classified books	Routine work
5.	Circulation of books, working plans, reports and other reading material	Routine work
6.	Accession of books	28 books added

6. COMPUTER AND INFORMATION TECHNOLOGY

Mandate

1. Application of computers in forestry.
2. Design, development and implementation of computer based information system.
3. Analysis of the forestry based statistical/mathematical data.
4. Analysis of the Geographical Information System (GIS) data.

Objectives

1. To design, develop and implement computer based information system.
2. To design and develop the website of the institute.
3. To provide logistics and maintainance of all the computers of the institute.

Computer Centre

Computer centre has a number of computer systems (Desktop - 55, Laptop - 12) connected to each other via local area network (LAN) and with Domain server. The computer system is shared by a router to access World Wide Web information and Wi-Fi, which is also connected with local area network.

Activities carried out during the year

1. Presentation of PowerPoint for BOG, RAC, workshops, meetings, seminars and trainings, etc.
2. Updation of the website of the institute.
3. Providing internet surfing and e-mail facilities to users through LAN.
4. Maintenance of computer equipments viz., computer systems, printers, scanners, LAN, UPS, etc.
5. Storage of research work data in a domain server.

7. PUBLICATION OF BOOKS AND PRESENTATION OF RESEARCH PAPERS / ARTICLES BY SCIENTISTS/ RESEARCH PERSONNEL OF THE INSTITUTE

During the year (April 2016 to March 2017)

S.N.	Name of Journal	Title of paper	Author(s)	Vol. No.
Paper published in Journals (National and International)				
1.	International Journal of Bio-Science and Bio-Technology	Biomass production and carbon sequestration by <i>Azadirachta indica</i> in coal mined lands	P. Bohre , O.P. Choubey	(2016) Vol. 8 (02)
2.	International Journal of Applied and Universal Research	Morphological growth parameters of <i>Andrographis peniculata</i> Wall. ex. Nees	Anil Kusram, S.K. Masih, R.P. Mishra	IV (1)
3.	Journal of Tropical Forestry	Development of fungal growth of <i>Aspergillus niger</i> , <i>A. flavus</i> and <i>Penicillium chrysogenum</i> on penoxsulam and pvrzosulfuros ethyl herbicides in agricultural soil	Smita Rajput, Shobha Sondhia, Uzma Waseem Khan, S.K. Masih	32 (IV)
4.	Journal of Biotechnology & Biomaterials	Standardization of clonal macropropagation protocol of <i>Dillenia pentagyna</i> Roxb. An important and endangered tree species through stem branch cuttings	S.K. Tiwari	6:11
5.	Journal of Non Timber Forest Produce	Sustainable supply of Medicinal plants through domestication in Madhya Pradesh.	Pratibha Bhatnagar	32 (1)
6.	Journal of Tropical Forestry Scientists	Lac host plant diversity in Balaghat and seoni districts of Madhya Pradesh	Pratibha Bhatnagar, Ramdeen Bhalavi, Balram Lodhi	33 (I)
7.	International Journal of Current Research in Bioscience and Plant Biology	Identification of Wild Indian Elephant (<i>Elephas maximus</i>) through species specific Molecular Markers.	S.K. Tiwari, G. Krishnamurthy, S.S. Yadav, Amit Pandey, Sachin Dixit	3 (1)
8.	Journal of Tropical Forestry	Forest growth, composition, herbaceous biomass and litter production study in Kanha Tiger Reserve	Sachin Dixit, G. Krishnamurthy	32 (3)

Papers published from SFRI				
1.	Vaniki Sandesh	<i>Sterculia foiteda</i> - A rare gum yielding tree of Madhya Pradesh	S.K. Masih	6 (3&4)
2.	Vaniki Sandesh	Distribution of <i>Andrographis peniculata</i> Wall. ex. Nees in agroclimatic zones of M.P.	Anil Kusram, S.K. Masih, R.P. Mishra	6 (3&4)
3.	Vaniki Sandesh	Climatic changes V/s Plant diversity of Madhya Pradesh	S.K. Masih	6 (1&2)
4.	Vaniki Sandesh	Volume tables of <i>Tectona grandis</i> (Teak) for Vidisha division.	Richa Seth	Volume 7 No. (1&2)
5.	Vaniki Sandesh	Volume tables of <i>Shorea robusta</i> (Sal) for East Sidhi division.	Richa Seth	3 & 4
6.	Van Dhan Vyapar	यक [क ifjp; mRiknu , oadfk ifØ; k	ifrHkk HkVukxj] cyjke ykdkh] jkenhu Hkykoh	16 (1&2)
7.	Van Dhan Vyapar	egRoi wkz oukSkf/k; k; outhjk dk mi ; ksx , o foi .ku	vkykd jSlokj] jktSk ceU	16 (3)
8.	Van Dhan Vyapar	oukSkf/k; ka ds mi ; ksx	ohjlnz dekj fcn] vkykd jSlokj] jktSk ceU	16 (4)

Papers presented in seminars/ symposiums/ workshops during the year (April 2016 to March 2017)

S. No.	Name of seminars/ symposiums/ workshops	Title of paper	Author(s)
1.	International Conference on Global Biodiversity Climate change and Sustainable Development, ICBCS 15th to 18th October 2016, Rajiv Gandhi University, Doimukh, Arunachal Pradesh.	<i>Ex-situ</i> conservation of wild tuberous and rhizomatic plants in State Forest Research Institute, Jabalpur, Madhya Pradesh.	Uday Homkar, Tanvi Telang, G. Krishnamurthy
2.	International Conference on Global Biodiversity Climate change and Sustainable Development, ICBCS 15th to 18th October 2016, Rajiv Gandhi University, Doimukh, Arunachal Pradesh.	Development of Nursery Techniques of some RET species of Madhya Pradesh : An <i>ex-situ</i> conservation approach.	Uday Homkar, Tanvi Telang, G. Krishnamurthy

3.	International Conference of Environmental Science & Technology–ICEST, 2016, held at Barcelona, Spain	" <i>In-situ</i> conservation and sustainable management of forest resources through community participation in tropical forests"	R.K. Pandey
4.	International Conference of Environmental Science & Technology–ICEST, 2016, held at Barcelona, Spain	Invention of <i>Parthenium hysterophorus</i> L. in Tropical Forest: Threat and its bio-control in Tropical Forest Ecosystem in India	Jyoti Singh
5.	Arunachal Pradesh, from 15-18 Oct, 2016.	"Impact of climate change on forest ecosystem services with reference to <i>in-situ</i> forest resource conservation and sustainable management"	R.K. Pandey
6.	National Conference on "Forestry in India : Current challenges and future prospects" Himalayan Research Institute Shimla, from 15-18 Nov, 2016.	"Challenges and future prospects of <i>in-situ</i> conservation and sustainable management of non timber forest products (NTFPs) through community participation"	R.K. Pandey, Shailendra Nema, Vijay Haldkar
7.	31 st ISTA Seed Symposium 15 - 17 June, 2016, Tallinn, Estonia	Pre sowing seed treatment in <i>Tectona grandis</i> to enhance seed germination and seedling growth	Archana Sharma
8.	31 st ISTA Seed Symposium 15 - 17 June, 2016, Tallinn, Estonia	Effect of various fertilizers, chemicals and hormones on seed production in seed orchards <i>Tectona grandis</i> .	Archana Sharma
9.	31 st ISTA Seed Symposium 15 - 17 June, 2016, Tallinn, Estonia	Effect of different storage condition on seed viability and germination potential of <i>Withania somnifera</i>	Archana Sharma
10.	"Recent innovation in Science Engineering and Technology" held at Tirupati dated 13 August, 2016	Species conservation through applied seed research with special reference to <i>Careya arborea</i> (Kumbhi) : A high value lesser known medicinal tree species of Central India	Archana Sharma, G. Krishnamurthy
11.	Published in proceeding of National conference on "Forestry in India : Current challenges and future prospects" held at HFRI, Shimla (HP)	Physiological studies in <i>Schleichera oleosa</i> Lour an Important tool for enhancing seed longevity and germination potential through pre sowing treatments under storage.	Archana Sharma, G. Krishnamurthy
12.	Lekfjdk %vrjkZvh; ou eyk] l á kfnr }kjk e/; i nsk jkT; y?kqouki t] l gdkjh l ák e; kfnr] Hkks ky	vkSk/kh; i ztkfr; ka dk i jEi jkxr mi ; kx , oa egRo	th, l - feJk , oa ohjbnz dækj fcln
13.	World Forestry Day at Forestry Training Institute, Jaipur	Distribution of Indian Pangolin and associated habitat and flora of Pench Tiger Reserve	Bhaskar Bhandari, Anjana Rajput

Publication of technical bulletins / brochures during the year (April 2016 to March 2017)

S.N.	Name of technical bulletins/ brochures	Authors
1.	dV : V LVKk fof/k yVvkuk mleyu dh ubz rduhd	th d".kerh] vksi h- frokjh] mn; gkedj
2.	Lkky o{kka dh eR; nj dks i Hkkfor djus okys dkj dka dk v/; ; u , oa muds jkdFkke ds mi k; &ekxhf' kzk	/keBnz oek] T; kfr fl g] d".k dckj i vSy
3.	vdk"Bh; ouki t lrr-fonkgu , oa izaku fu; ekoyh (Community oriented procedure for sustainable harvesting and management of NTFPs)	vkj-ds i k.Ms
4.	vdk"Bh; ouki t Atkfr; ka dk var : LFkyh; I j{k.k] uoi oru - ouo/kz , oa fodkl	vkj-ds i k.Ms
5.	Volume tables of <i>Tectona grandis</i> (Teak) for various divisions of Madhya Pradesh.	G. Krishnamurthy, Richa Seth
6.	Volume tables of <i>S horea robusta</i> (Sal) for various divisions of Madhya Pradesh.	G. Krishnamurthy, Richa Seth
7.	Growth tables of important coppice origin species for Madhya Pradesh.	G. Krishnamurthy, Richa Seth
8.	Oku , oa vksk/kh; ctkfr; ka dh jki .k rduhd ekxhf' kzk	vpuk 'keZ
9.	fhkyok %cht , oa jki .kh rduhd	vpuk 'keZ
10.	ekgy %cht , oa jki .kh rduhd	vpuk 'keZ
11.	eqMh %cht , oa jki .kh rduhd	vpuk 'keZ
12.	dqHkh %cht , oa jki .kh rduhd	vpuk 'keZ
13.	Ykk[k mRi knu dh df" k i fØ; k	ifrHk HkVukxj] cyjke yksh] jkenhu Hkykoh
14.	lkyk'k o{k i j yk[k dh [krh	ifrHk HkVukxj] cyjke yksh] jkenhu Hkykoh
15.	lkyk'k o{k i j yk[k dhV i kyU D; k dja , o D; k u dja	ifrHk HkVukxj] cyjke yksh] jkenhu Hkykoh
16.	oKkfud fof/k l syk[k dh [krh	ifrHk HkVukxj] cyjke yksh] jkenhu Hkykoh
17.	ck/k l g&i jHk[kh] pks k; ka , oa muds okl LFky ds vufo.k grqekxhf' kzk	vatuk jktir] vfu:) etenkj
18.	cf' k(k.k ekxhf' kzk %k/kfud thi h, l] jat OkbMj , oa dEi kl grq	/keBnz oek] vatuk jktir] vfu:) etenkj] 'kq[k ft'kku vyh

8. BUDGET / FINANCE

Funding Sources

1. Grant-in-aid under non-plan budget of the Govt. of Madhya Pradesh, Forest Department
2. Project based external funding from govt./semi govt./non- govt. organizations and private donors.
3. Special assistance received from miscellaneous funding agencies.
4. Revenue from various sources of the institute.

Financial support and expenditure 2016-17

Budget head	Opening balance in (Rs.)	Budget received during the year in (Rs.)	Total Amount in (Rs.)	Expenditure in (Rs.)
10-2406 Non-Plan (Grant-in-aid)	0.00	5,40,00,000.00	5,40,00,000.00	6,10,75,201.00
Deposit Works (Sponsored projects)	10,49,03,063.00	6,33,68,571.00	16,82,71,634.00	14,06,51,998.00
Total Rs.	10,49,03,063.00	11,73,68,571.00	22,22,71,634.00	20,17,27,199.00

Details of sponsored projects

Various projects have been funded by govt./semi. govt. and a private agencies from time to time. Such completed and on-going projects during the year 2016-17 are given below.

S. No.	Project Name & I.D.No.	Sponsoring agency	Opening Balance	Amount received in the year	Total Amount	Total Expenditure (1.4.16 to 31.3.17) in Rs.
1	Development of nursery techniques and models for plantation of rare, endangered and threatened (RET) species in natural conditions BD/P/E/10-11/08	APCCF (Research, Extension & Lok Vaniki)	609,469.00	2,632.00	612,101.00	612,101.00
2	e-iz ea lky ckj j l s l ky ouka dh l j (kk grq if'k(k.k dk; ØeA BD/P/E/11-12/22	APCCF (Research, Extension & Lok Vaniki)	141,837.00	-	141,837.00	87,160.00
3	Upgradation and renovation of museum at SFRI Jabalpur (M.P) BD/P/E/12-13/18	13 th Finance Commission	4,796,306.00	-	4,796,306.00	289,497.00
4	<i>Ex-situ</i> conservation of medicinally important Wildlife tuberous/rhizomatic plants and studies on their phenology and growth performance. BD/P/E/13-14/05	APCCF (R&E and Lokvaniki) M.P., Bhopal	1,803,101.00	1,389,000.00	3,192,101.00	1,752,035.00

5	Development of cultivation techniques of van jeera (black cumin) <i>Centrantherum antheleminiticum</i> (L) Kantze. BD/P/E/13-14/16	APCCF (R&E and Lokvaniki) M.P., Bhopal	505,075.00	-	505,075.00	206,675.00
6	Documentation of ethnobotanical information on natural gum and resin yielding plants of (M.P.) BD/P/E/13-14/17	APCCF (R&E and Lokvaniki) M.P., Bhopal	472,188.00	-	472,188.00	192,486.00
7	Documentation of some traditional knowledge of local & communities of Malwa Eco Region of M.P. BD/P/E/13-14/19	M.P. Council of Science of Technology, Bhopal	15,601.00	163,000.00	147,399.00	58,559.00
8	Development of raised mother bed technology and mass multiplication of clonal plants of eucalyptus in SFRI, Jabalpur BD/P/I/16-17/03	SFRI, Jabalpur	-	2,121,000.00	2,121,000.00	1,146,091.00
9	Development of high-tech nursery and preparation of quality planting material of RET species for their restoration in natural forest and rural/urban areas through plantations. BD/P/E/16-17/19	APCCF (R&E and Lokvaniki) M.P., Bhopal	-	2,000,000.00	2,000,000.00	-
10	Protection, maintenance and growth study of dominant tree species for estimation of biomass and carbon sequestration in preservation plots laid in different forest types of M.P. BOT/P/E/11-12/07	APCCF (CAMPA) MP, Bhopal	1,251,896.00	-	1,251,896.00	417,568.00
11	Sustainable livelihood based management plan for Kunopalpur wildlife sanctuary. of M.P. BOT/P/E/13-14-15	APCCF (R&E and Lokvaniki) M.P., Bhopal	(-) 208836	2,321,000.00	2,112,164.00	569,866.00

13	"Studies on photosynthetic efficiency, biomass production and carbon sequestration of bamboo in plantation forests" BOT/P/E/14-15/07	APCCF (R&E and Lokvaniki) M.P., Bhopal	1,395,967.00	548,000.00	1,943,967.00	661,433.00
14	Survey of existing Barahsingha & Blackbuck habitat evaluation for habitat viability assessment for Kanha Tiger Reserve and Satupra Tiger Reserve. ECO/P/E/11-12/26	{ks= l pkyd] l ri Ml Vkbxj fj to] gk'kakckn	151,567.00	-	151,567.00	26,582.00
15	Ecological studies on grasslands of Bandhawgarh Tiger Reserve with special reference to Wildlife Management. ECO/P/E/12-13/24	APCCF (R&E and Lokvaniki) M.P., Bhopal	2,946,242.00	-	2,946,242.00	1,508,194.00
16	Development of technology for conservation and sustainable management of wild medicinal plants and NTFPs through community participation in Shahdol Forest Circle of M.P. ECO/P/E/14-15/01	APCCF (R&E and Lokvaniki) M.P., Bhopal	3,116,703.00	-	3,116,703.00	1,283,397.00
17	e&kuht vlij ds Hkifexr mR [kuu grqnf(k.k ¼ k-½ oueMy ckyk?kV ou ij {ks= okj kfl ouh vvxr oud { Øekad 460] 461] 466 eajdck 10-000 gDVs j vf/kfu; e 1980 ds vvxr ou Hkif e 0; iorU Hkif i LrkoA ECO/P/E/14-15/06	J.K. Minerals, Balaghat	596,691.00	-	596,691.00	124,445.00
18	e-iz [kfut l d k/ku foHkx }kj k foHkku ftyka eajr [kuu DyLVI l ds vvxr i Lrkfor jr [knkuka dk i; kbj .kh; eW; kacu , oa i; kbj .kh; i Hkko i cakua ECO/P/E/15-16/09	The Madhya Pradesh State Mining Corporation Limited, Bhopal	10,746,096.00	1,388,197.00	12,134,293.00	10,229,022.00
19	Preparation of Wildlife Conservation Plan for Jagannathpur OCM of South Eastern Coalfields Ltd (SECL), Bhatgaon Area, Chhattisgarh ECO/P/E/15-16/10	General Manager (Operation) Bhatgaon Area South Eastern Coalfields Ltd. Bhatgaon Distt. Sarguja (C.G.)	456,597.00	473,671.00	930,268.00	891,784.00

20	jkT; ou vuđ dkku l ĩFkk tcyij dh vuđ dkku ifj; kst ukvka ds fu"cd"kkā ds i pĳ&i ĩ kj grq dk; Zkkyk dk vk; kst uA EXT/P/E/13-14/10	APCCF (R&E and Lokvaniki) M.P. Bhopal	150,528.00	-	150,528.00	46,688.00
21	vuđkkir ifj; kst ukj jkT; ou vuđ dkku l ĩFkk tcyijA EXT/P/E/16- 17/10	e-iz bĳkĳi; M/u fodkl ckMZ e-iz Hkĳi ky	-	120,000.00	120,000.00	83,265.00
22	Genetic diversity assessment of <i>Boswellia serrata</i> and standardization of microclonal propagation protocols through biotechnological interventions for the production of elite planting material. GEN/P/E/12-13/05	e-iz jkT; y?kpkĳi t 0; ki kj , oa fodkl l gdkjh l ĳk e; kĳnr Hkĳi ky	248,419.00	-	248,419.00	219,100.00
23	Standardization and multiplication of clonal propagation protocol for commercially important forestry species <i>Anogeissus pendula</i> . GEN/P/E/12-13/17	APCCF (R&E and Lokvaniki) M.P., Bhopal	44,406.00	-	44,406.00	38,665.00
24	Development of integrated biotechnological package by genetic diversity assessment using molecular characterization, chemoprofiling and standardization of micro-propagation and cryopreservation protocol of four RET species. GEN/P/E/14- 15/02	Govt. of India. Ministry of Health & Family Welfare, National Department of Ayush, National Medicinal Plants Board, New Delhi	427,011.00	1,000,000.00	1,427,011.00	1,293,812.00
25	National Seminar on "Recent advances in research and development in medicinal and aromatic plants - A country scenario" GEN/P/E/14- 15/08	National Medicinal Plants Board (NMPB) New Delhi	679,653.00	-	679,653.00	104,152.00
26	Quantitative determination of bioactive compounds of highly threatened medicinal plant species through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation. GEN/P/E/15-16/03	APCCF (R&E and Lokvaniki) M.P. Bhopal	2,231,102.00	154,000.00	2,385,102.00	2,579,665.00

27	Revised- form factors table for important miscellaneous timber tree species of Madhya Pradesh. MEN/P/E/11-12/12	APCCF (R&E and Lokvaniki) M.P. Bhopal	134,096.00	-	134,096.00	68,293.00
28	जकि .lh ekxhf' lzk dk i zk'ku MEN/P/E/12-13/25	APCCF (R&E and Lokvaniki) M.P. Bhopal	93,419.00	-	93,419.00	29,275.00
29	Computerization and digitalization of records of sample plots situated in Madhya Pradesh MEN/P/E/15-16/14	APCCF (R&E and Lokvaniki) M.P. Bhopal	-	122,000.00	122,000.00	35,812.00
30	Documentation and development & packages of seed and nursery techniques for some important indigenous Species. SD/P/E/12-13/14	APCCF (R&E and Lokvaniki) M.P., Bhopal	296,593.00	-	296,593.00	30,275.00
31	Standrization of seed and nursery techniques for production of quality planting stock of important indigeneous species. SD/P/E/15-16/02	APCCF (R&E and Lokvaniki) M.P., Bhopal	636,771.00	800,000.00	1,436,771.00	1,267,452.00
32	Collection, processing testing, certification and supply of quality seeds of various forestry species. SD/P/E/15-16/06	SFRI, Jabalpur	33,276,333.00	5,422,499.00	38,698,832.00	38,698,832.00
33	Strengthening of MIS cell and establishment of five regional markets data collection and analysis centre in Madhya Pradesh. SEM/P/E/11-12/01	MPMFP Federation (Trade and Development) Bhopal	1,161.00	8,256.00	9,417.00	9,417.00
34	ou foHkx dk 150 o"lz dk; Øe eukus grq SEM/P/E/11-12/20	APCCF (R&E and Lokvaniki) M.P. Bhopal	157,828.00	-	157,828.00	82,073.00
35	Standardization of primary processing and drying techniques for selected medicinal species and NWFP. SEM/P/E/11-12/25	APC,CF (R&E and Lokvaniki) M.P., Bhopal	65,065.00	-	65,065.00	4,223.00
36	Compilation of 50 years of forestry research of State Forest Research Institute. Jabalpur SEM/P/E/12-13/03	APCCF (R&E and Lokvaniki) M.P., Bhopal	198,500.00	-	198,500.00	100,000.00
37	e-iz iedk xlnka ds l xg.k ds vkad/Mka dk l dyu , oa i kffed l xtgdkai j l kelftd vkffkd i HkkoA SEM/P/E/13-14/18	APCCF (R&E and Lokvaniki) M.P., Bhopal	(-) 199033.00	780,000.00	580,967.00	466,428.00

38	Network project on conservation of lac insect genetic resource SEM/P/E/14-15-05	Indian Institute of Natural Resin and Gum Namkum, Ranchi	126,451.00	1,950,000.00	2,076,451.00	2,018,411.00
39	The Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Right Act), 2006 implementation and its impact in Madhya Pradesh SEM/P/E/15-16/11	APCCF (R&E and Lokvaniki) M.P., Bhopal	567,336.00	1,000,000.00	1,567,336.00	909,706.00
40	"SIA, EIA, BD, HCVFs of Barghat and Lamta Project Division Plantation of MPRVVN Ltd" SEM/P/E/16-17/01	Madhya Pradesh Rajya Van Vikash Nigam, Bhopal	-	1,076,400.00	1,076,400.00	1,053,290.00
41	Climate change and its impact on forest and livelihood of people in Damoh District - SEM/P/E/16-17/07	APCCF (R&E and Lokvaniki) M.P., Bhopal	-	1,070,000.00	1,070,000.00	480,989.00
42	Market Information Service for NTFPs In Madhya Pradesh SEM/P/E/16-17/02	SFRI, Jabalpur	-	100,000.00	100,000.00	35,250.00
43	Estimation of wood demand and supply in Madhya Pradesh- SEM/P/E/16-17/10	APCCF (R&E and Lokvaniki) M.P., Bhopal	-	100,000.00	100,000.00	90,333.00
44	Estimation of carrying capacity of grazing in different forest types and canopy density in Jabalpur Forest Division SIL/P/E/2009-10/ 07	APCCF (R&E and Lokvaniki) M.P., Bhopal	844,851.00	-	844,851.00	844,851.00
45	DNA-Based monitoring of tigers and their movement in the Kanha, Pench corridor of M.P. SIL/P/E/12-13/09	APCCF (R&E and Lokvaniki) M.P., Bhopal	191,487.00	-	191,487.00	177,675.00
46	e-iz ou fodkl vfhkdj.k }kjk foHkUu ou fodkl vfhkdj.k ka ea foRrh; o"iz 2012&13 ds o"kkZ _rqeaqq o{kjki.k dk; ka dk vuq'o.k eW; kduA SIL/P/E/15-16/08 (FDA)	e-iz ou fodkl vfhkdj.k }kjk foHkUu	204,015.00	300,025.00	504,040.00	145,531.00
47	Study & Comparison of soil cultural practices in existing bamboo (<i>D. strictus</i> plantation project) SIL/P/E/16-17/04	APCCF R&E Extension and Lokvaniki (M.P.) Bhopal	-	768,000.00	768,000.00	445,974.00

48	e-iz ou fodkl vfhkdj.k jkjk fofhku ou fodkl vfhkdj.kka ea foRrh; o"iz 2013&14 2014&15 , 2015&16 ds o"iz _r qea gg o{kkjki .k dk; ka dk vuqlo.k eW; krcuA SIL/P/E/16-17/18	e-iz ou fodkl vfhkdj.k Hkki ky	-	332,750.00	332,750.00	71,600.00
49	Establishment of Bamborium/Bambusetum and Bamboo interpretation centre at SFRI, Jabalpur (ckd okfVdk , oacfcw bVjfi V\$ku l Vj dh LFki uk) TI/P/E/10-11/01	PCCF (Development), M.P., Bhopal	453,279.00	-	453,279.00	354,032.00
50	Selection of superior races of Khamer (<i>Gmelina arborea</i>) through clonal propagation TI/P/E/12-13/02	APCCF (R&E and Lokvaniki) M.P., Bhopal	516,606.00	92,552.00	609,158.00	609,158.00
51	Integrated management of disease of economically important tree species Dhawada, Bija and Achar occurring in forest of (M.P.) TI/P/E/13-14/03	APCCF (R&E and Lokvaniki) M.P., Bhopal	50,228.00	379,000.00	429,228.00	380,739.00
52	Causes and remedial measures of Sal (<i>Shorea robusta</i>) mortality in forest area of (M.P.) TI/P/E/13-14/04	APCCF (R&E and Lokvaniki) M.P., Bhopal	308,754.00	326,000.00	634,754.00	472,573.00
53	Monitoring and valuation of wildlife and their habitats for sustainable management and development in the protected areas of Madhya Pradesh WL/P/E/15-16/01	PCCF (Wildlife) M.P., Bhopal	24,270,937.00	27,793,141.00	52,064,078.00	50,200,915.00
54	Evaluation of impact of rehabilitation of Pardhi children in Panna district of Madhya Pradesh with reference to the wildlife conservation WL/P/E/15-16/04	APCCF (R&E and Lokvaniki) M.P., Bhopal	395,000.00	386,000.00	781,000.00	256,432.00
55	Study on agricultural crop damage by wild animals and its management in Hoshangabad circle of Madhya Pradesh WL/P/E/15-16/12	APCCF (R&E and Lokvaniki) M.P., Bhopal	991,397.00	1,345,500.00	2,336,897.00	1,540,674.00

56	Impact of tourism on environmental, ecological, and socio-economic dynamics, in and around the Tiger Reserves of Madhya Pradesh WL/P/E/15-16/13	APCCF (R&E and Lokvaniki) M.P., Bhopal	1,043,007.00	1,600,000.00	2,643,007.00	1,094,789.00
57	Preparation of detailed Project Report for wildlife habitat improvement in the adjoining areas of Sardar Sarovar Project (M.P.) WL/P/E/16-17/08	Narmada Valley Development Authority, Bhopal (M.P.) (NVDA project)	-	100,000.00	100,000.00	15,000.00
Total Project Balance			95,811,192.00	58,392,623.00	154,203,815.00	126,618,191.00
58	NOT DISTRIBUTED AMT. (APCCF)		1,649,512.00	150,233.00	1,799,745.00	1,799,745.00
59	Inter Bank		(-) 150000	184,012.00	34,012.00	-
60	Interest Under Bank		7,143,108.00	4,053,251.00	11,196,359.00	11,196,359.00
61	Internal Project		15,794.00	-	15,794.00	15,794.00
62	Misce. Project - 3987		433,457.00	588,452.00	1,021,909.00	1,021,909.00
Grand Total			104,903,063.00	63,368,571.00	168,271,634.00	140,651,998.00

Income of the A/c SB/3990 Revolving Funds for the year 2016-17.

S.No.	HEAD	Income (In Lakh)
1	Gate Entry Fees	5,53,575
2	Guest House Receipts	9,15,765
3	House Rent & Water Charges	7,71,837
4	Misc Receipts	8,02,313
5	Plant Sale	9,20,017
6	Donation	1,00,000
7	Seed collection Project	1,27,500
8	Soil Testing	21,425
9	Tender Form Sale	1,67,750
10	Training Receipts	36,000
11	Vehicle Auction	46,100
12	Institutional Charge s	43,71,931
	Interest Received	
13	Interest on FDR	25,54,793
Grand Total		1,13,89,006

Expenditure of the A/c SB/3990 Revolving Funds for the year 2016-17

S.No.	HEAD	Expenditure (Inlakh)
1	Daily Wages	6,39,593
2	Repair & Maintenance	44,06,431
3	Travelling	20,48,470
4	Advertisement	34,592
5	Bank Charges	7,418
6	Chemical & Glassware Purchase	20,042
7	Consultancy Charges	44,655
8	Electricity	19,406
9	Misc. Expenses	2,167
10	Nursary Expenses	64,097
11	Office Expenditure	2,48,948
12	POL Expenses	26,931
13	Seminar & Meeting Expenses	1,64,007
14	Soil Testing Charges	14,600
15	Staff Welfare	1,64,490
16	Stationary	66,998
17	Uniform	46,800
18	Vehicle Maintenance	1,03,126
	Transfer A/c	
19	Anubhuti Project Expenses	17,325
20	CAMPA Expenditure	10,000
	Grand Total	81,50,096

Income incurred from the Reserve Funds for the year 2016-17
(Sanchit Nidhi) A/c 5007081661

S.No.	Details	Income
1	RTI Receipts	11,558
2	Misc. Receipts	15,885
3	Plant Sale	21,413
4	POL Charge Recovery	8,335
5	Institutional Charges	43,71,931
6	Book & Magazine Sales	1,000
7	Seed Supply	97,710
8	Soil Testing Charges	31,200
	Interest	
9	Interest on FDR	50,47,556
10	Saving Interest	1,83,730
	Grand Total	97,90,318

**Expenditure incurred from the Reserve Funds for the year 2016-17
(Sanchit Nidhi) A/c 5007081661**

S.No.	Details	Income
1	Repair & Maintenance	20,06,345
2	Bank Charges	34
3	Misc. Expenses	40,860
4	Wages	2,847
	Grand Total	20,50,086.00

Financial Status as on 31st March, 2017

S. No.	Details	Cash in Bank	F.D.R.	Total
1	Revolving Fund A/c SB/3990	99,81,219	3,39,00,000	4,38,81,219
2	Grant-in-aid A/c SB/3268	55,48,920	0	55,48,920
3	Deposit Work s A/c SB/3987	42,14,636	2,34,05,000	2,76,19,636
4	Reserve Funds A/c Sanchit Nidhi 50070181661	1,21,02,110	3,09,99,000	4,31,01,110

9. ESTABLISHMENT

Postings, Transfers, Retirements (2016-2017)

Postings :

S.No.	Name	Designation	Date of Joining
1	Shri O.P. Tiwari, IFS	Dy. Director	09-06-16
2	Dr. Dharmendra Verma, IFS	Director	26-10-16
3	Shri Basant Rajak	Forest Guard	04-07-16
4	Shri Sajid Ali	Forester	19-12-16

Transfer :

S.No.	Name	Designation	Date of Relieving
1	Smt. Indira Jha	Accountant	09-09-16

Retirements :

S.No.	Name	Designation	Date of Relieving
1	Shri Damodar Prasad Pandey	Daftari	30-04-16
2	Shri S.N. Nachane, IFS	Additional Director	30-06-16
3	Shri S.K. Jain	Assistant Director	30-06-16
4	Shri Ambika Prasad Mali	Mali	30-09-16
5	Dr. G. Krishnamurthy, IFS	Director	31-12-16
6	Dr. R.K. Pandey	Scientist	31-03-17

Deaths :

S.No.	Name	Designation	Date of Death
1	Shri S.B. Sareyam	Dy. Ranger	17-10-16
2	Shri Vinod Singh Negi	Driver	23-12-16
3	Shri Sitaram Thakur	Peon	26-12-16
4	Shri Santosh Kumar Sharma	Driver	21-02-17
5	Shri Janki Prasad Kori	Chowkidar	07-02-17
6	Smt. Usha Bai	Orderly	26-06-17

Temporary project staff engaged during the year (April 2016 to March 2017)

S. No	Name	Designation	Project under which appointed	Period	
				From	To
1	Shri Shailendra Nema	JRF	Development of technology for conservation and sustainable management of wild medicinal plants and NTFPs through community participation in Shahdol forest circle of Madhya Pradesh	March 2016	July, 2017
2	Shri Shivkumar Korav	Research Associate	Ecological studies in natural regeneration of sal and grasslands of national parks with special reference to wildlife management	March 2016	March 2017
3	Shri Kundan Sharma	Project Assistant	<i>Ex-situ</i> conservation of medicinally important wild tuberous/rhizomatic plants and studies on their phenology and growth performance	Dec - 2016	March 2017
4	Shri Prakash Singh	Junior Research Fellow	The scheduled tribes and other traditional forest dwellers (Recognition of Forest Right Act, 2006) Implementation and its impact in Madhya Pradesh	Nov.2016	Oct. 2017
5	Ku. Tanvi Telang	Project Assistant	Development of nursery techniques and models for plantation of rare, endangered and threatened (RET) species in natural conditions	Feb. 2015	March 2016
6	Shri Sandeep Bhandari	Computer Operator	Phase-IV monitoring and evaluation of wildlife and their habitats for sustainable management and development in the protected areas of Madhya Pradesh	Feb. 2016	July 2017
7	Shri Mukesh Gavane	Sales Promotion Representative	Strengthening of MIS Cell at SFRI and establishment of five regional marketing analysis centres in Madhya Pradesh.	Jan. 2016	Feb. 2017
8	Shri Nitin Jaiswal	Sales Promotion Representative	Strengthening of MIS Cell at SFRI and establishment of five regional marketing analysis centres in Madhya Pradesh.	Nov. 2016	Oct. 2017
9	Shri Rajesh Barman	Sales Promotion Representative	Strengthening of MIS Cell at SFRI and establishment of five regional marketing analysis centres in Madhya Pradesh.	Jan. 2016	March 2017
10	Shri Balram Lodhi	Senior Research Fellow	Network project on conservation of lac insect genetic resources	Sept. 2016	June 2017
11	Shri Ramdeen Bhalavi	Senior Research Fellow	Network project on conservation of lac insect genetic resources	Sept. 2016	June 2017

12	Shri Virendra Kumar Bind	Junior Research Fellow	e-iz ea iedk xlonka ds l xg.k ds vkadMka dk l adyu , oa ikFkfed l xkgdka ij l keftd i kkoA	March 2016	Oct. 2017
13	Shri Pradeep Kanojiya	Junior Research Fellow	e-iz ea iedk xlonka ds l xg.k ds vkadMka dk l adyu , oa ikFkfed l xkgdka ij l keftd i kko	March 2016	March 2017
14	Shri Vineet Kumar Mehra	Junior Research Fellow	Genetic diversity assessment of <i>Boswellia serrata</i> and standardization of micro clonal propagation protocol through biotechnological interventions for the production of elite planting material	Jan.2016	March 2017
15	Shri Shailendra Singh Yadav	Research Associate	Quantitative determination of bio-active compounds of highly threat medicinal plant species through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation	March 2016	March 2017
16	Shri Manish Puri Goswami	Senior Research Fellow	Development of integrated biotechnological package by genetic diversity assessment using molecular characterization, chemoprofiling, standardization of micropropagation and cryopreservation protocol of four RET species. (<i>Berberis aristata</i> , <i>Saraca asoca</i> , <i>Swertia angustifolia</i> , <i>Embelia tsjeriam cottam</i>)	March 2016	March 2017
17	Shri Pankaj Saini	Project Fellow	Quantitative determination of bio-active compounds of highly threat medicinal plant species through chemoprofiling and standardization of propagation techniques using biotechnological interventions for their conservation	March 2016	March 2017
18	Shri Suresh Prasad Charmkar	Junior Research Fellow	Sustainable livelihood based management plan for Kuno-Palpur Wildlife Sanctuary of Madhya Pradesh.	Sept. 2016	Aug. 2017
19	Shri Akshya Jain	Data Entry Operator	Sustainable livelihood based management plan for Kuno-Palpur Wildlife Sanctuary of Madhya Pradesh.	Feb. 2016	March 2017
20	Shri Mohd. Asif Mansoori	Project Assistant cum Data Entry Operator	Studies on photosynthetic efficiency, biomass production and carbon sequestration of bamboo in plantation forests	Sept. 2016	March 2017
21	Shri Abhisek Gupta	Data Entry Operator	Standardization of seed and nursery techniques for production of quality planting stock of important indigenous species	Sept. 2016	Aug. 2017
22	Smt. Anupama Goswami	Junior Research Fellow	Integrated management of disease of economically important tree species Dhawra, Bija and Achar,	Dec. 2015	March 2016
23	Shri Nitin Kumar Verma	Computer Operator	Establishment of Bambosetum and Bamboo Interpretation Centre at SFRI, Jabalpur	March 2016	March 2017

24	Shri Krishna Kumar Patel	Junior Research Fellow	Causes and remedial measures of sal mortality (<i>Shorea robusta</i>) in forest areas of M.P.	Dec. 2015	Sept. 2016
25	Smt. Anju Kathel	Junior Research Fellow	Standardization of seed and nursery techniques for production of quality planting stock of important indigenous species	July 2016	June 2017
26	Smt. Snehlata Mishra	Computer Operator	Development of technology for conservation and sustainable management of wild medicinal plants and NTFPs through community participation in Shahdol forest circle of Madhya Pradesh	March 2016	March 2017
27	Dr. Anirudha Mazumdar	Research Associate	Phase-IV monitoring and evaluation of wildlife and their habitats for sustainable management and development in the protected areas of Madhya Pradesh	March 2016	March 2017
28	Shri S.K. Zeeshan Ali	Research Associate	Phase-IV monitoring and evaluation of wildlife and their habitats for sustainable management and development in the protected areas of Madhya Pradesh	March 2016	March 2017
29	Shri Shivraj Singh Parmar	Field Assistant	Evaluation of impact of rehabilitation of pardhi children in Panna district of Madhya Pradesh with reference to the wildlife conservation	March 2016	March 2017
30	Shri Ramkumar Kahar	Junior Research Fellow	Standardization of seed and nursery techniques for production of quality planting stock of important indigenous species	July 2016	June 2017
31	Ku. Subhangi Khattri	Computer Operator	The scheduled tribes and other traditional forest dwellers (Recognition of Forest Right Act, 2006) implementation and its impact in Madhya Pradesh	Jan. 2016	March 2017
32	Smt. Pragya Diwedi	Project Associate	Studies on photosynthetic efficiency, biomass production and carbon sequestration of bamboo in plantation forests.	March 2016	March 2017
33	Shri Jitendra Singh	Junior Research Fellow	Study on agricultural crop damage by wild animals and its management in Hoshangabad circle of Madhya Pradesh	Feb. 2016	March 2017
34	Shri Awdhesh Kumar Singh	Junior Research Fellow	Impact of tourism on environmental, ecological, and socio-economic dynamics, in and around the tiger reserves of Madhya Pradesh	Feb. 2016	March 2017
35	Shri Suryakant Choubey	Computer Operator	e-iz LVW ekbfux dkjijksku fyfeVM }kjk fofHku ftyka eajs [kuu DyLVI l ds varxh iLrkfor js [knkuka dk i ; kbj.kh; i Hkko i cakuA	Feb. 2016	March 2017
36	Shri Vivek Awasthi	Computer Operator	e-iz LVW ekbfux dkjijksku fyfeVM }kjk fofHku ftyka eajs [kuu DyLVI l ds varxh iLrkfor js [knkuka dk i ; kbj.kh; i Hkko i cakuA	Feb. 2016	March 2017

37	Moh. Ashad Hussain	Field Assistant	Study on agricultural crop damage by wild animals and its management in Hoshangabad circle of Madhya Pradesh	Feb. 2016	March 2017
38	Ku. Durga Choudhary	Project Assistant	Impact of tourism on environmental, ecological, and socio-economic dynamics, in and around the tiger reserves of Madhya Pradesh	Feb. 2016	March 2017
39	Shri Amardeep Rajak	Computer Operator	e- iz jkT; ou fodkl vfHkdj.k }kjk fofHkUu ou fodkl vfHkdj.k ka ea forrh; o"nz 2013&2014] 2014&2015 , oa 2015&2016 ds o"nkZ __rqeaqq o{kkjki.k dk; kZ dk vuqfo.k eW; kadu fd; s tkus ds l cdk ea	March 2016	March 2017
40	Shri Jaiprakash George	Senior Research Fellow	Climate change and its impact on forests and the livelihood of tribals in Damoh district	Nov. 2016	Oct. 2017
41	Shri Prayut Mandal	Junior Research Fellow	ouls , oa ou jki f.k; ka ea yxus okyh dhV 0; kf/k; k; , oa mudsfunku ij fd; s x; s dk; kZ dk l jy Hkk"kk ea l dyu %e/; insk ds l mHkZ ea	March 2016	March 2017
42	Shri Roshan Jhariya	Field Assistant	Climate change and its impact on forests and the livelihood of tribals in Damoh district	Nov. 2016	Oct. 2017
43	Smt. Sonam Jain	Junior Research Fellow	Estimation of wood demand and supply in M.P.	Nov. 2016	Oct. 2017



Release of Technical Bulletin on Plantation Technique by Hon'ble Chief Minister, Hon'ble Forest Minister & Hon'ble Chief Secretary, Government of Madhya Pradesh



Participation of the Institute in the Global Bamboo Summit 2016 at Indore, M.P.



Exposure Visit of Trainee Forest Range Officers from Telangana State Forest Academy, Hyderabad



Environmental Awareness Camp under Anubhuti Programme for School Students



Exposure Visit of Trainee Forest Guards from Forest Training School, Lakhnadon, M.P.

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State Forest Research Institute**

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