

Proceedings

of

STAKEHOLDERS' MEET-2011

Bhopal, MP

on

Setting Research Priorities

of

Tropical Forest Research Institute, Jabalpur

30th April, 2011

Stakeholders' meet was organized at Hotel Palas, Bhopal on 30th April, 2011. The meeting began with welcome by Dr. M.S. Negi, Director of this Institute, to the delegates and participants who were representatives from M.P. State Forest Research Institute (SFRI), Jabalpur, M.P. State Forest Department (SFD), non-government organizations (NGOs), etc. (list of participants is enclosed as annexure). Dr. Negi felicitated Dr. R.B. Lal, Director, IIFM, Bhopal as Chief Guest, Shri R.K. Dave, MP PCCF, Bhopal as Chairperson and Dr. P.K. Shukla, APCCF and Managing Director, MPMFP, Bhopal as Guest of Honor.

Dr. Negi in his introductory remark highlighted the purpose of the meet and emphasized its importance in context to forestry research needs for setting research priorities of the state and accordingly formulation of research projects. He pointed out new opportunities such as Green India Mission, CAMPA, etc., awaiting research interventions from R&D set ups like TFRI and SFRI, thus underlining the need for cooperation.

Shri R.K. Dave in his presidential speech appreciated the research work of TFRI, Jabalpur. He suggested lab to land transfer of the technology and assured cooperation from forest department in this venture. He welcomed that NTPC had come forward for reclamation of degraded forests and informed that the farmers were also interested in forestry crops these days. He also stressed the need for forest development beyond natural forest areas. SFRI and TFRI should work together, avoidance of R&D duplication and maximization of resource utilization. A lot of works had needed to be carried out on NTFP value addition and marketing for financial benefit to villagers. SFRI and TFRI also should address R&D problems related to conservation of wildlife.

Dr. V. Nath, GCR of this institute made a detailed power point presentation which included the research mandate and jurisdiction of the institute such as eco-restoration and rehabilitation of mined areas, development and demonstration of agroforestry models, forest protection, biofertilizers and biopesticides, non-wood forest products and planting stock improvement and core competence/themes (non-wood forest products, forest protection and biofertilizers, genetic improvement and ecosystem conservation and management) for Madhya Pradesh, Chhattisgarh and Maharashtra. Dr. Nath also highlighted salient findings of ongoing research projects, scientific strengths and extension activities of the institute.

Dr. R.B. Lal, the chief guest appreciated the research works of TFRI and encouraged collaborative research work with IIFM, Bhopal. He suggested focus on applied research work

integrating poverty alleviation in the area. He also identified areas of collaboration such as MFP marketing, value addition and extension methodologies wherein both institutes could contribute together.

Dr. P.K. Shukla, the guest of honor, appreciated the work done at TFRI. He emphasized that TFRI should train cadres of MP forest department, who in turn impart training to user groups at grassroot level. Concept notes should also be sent to PCCF, MP forest department before formulation of projects on NTFPs for financial and manpower support.

Shri R.N. Saxena emphasized on research on sal conservation and climate change. He further stressed that the rotation age for harvesting should be based on carbon sequestration potential rather than economic return. He also suggested the following areas of research:

1. Bamboo is having very high “Carbon Sequestration Value” but “baseline methodology for bamboo CDM projects” is not available – TFRI can develop.
2. Right time to pay attention to silviculture based on “Carbon Rotation” instead of “Economic Rotation” – this methodology shall be useful for REDD and REDD+ Projects.
3. Satellite “Climate Change Overlays” predicts serious impact in Gwalior, Nimar, Bundelkhand and Satpuda and scope by 2035 and 2085 - TFRI to suggest adaptations in afforestation and management of “Soil Moisture regime.”

Shri Jitendra Agrawal, MP forest department suggested the following areas of forestry research:

1. Documenting geographical spread of major species and change overtime.
2. Documenting disappearance of species from different areas.
3. Investigation on bamboo silviculture practices considering present biotic pressures – recommendations.
4. Investigation on bamboo regeneration practices in flowered areas – gregarious and sporadic – recommend treatment.
5. Comparative evaluation on expenditure and growth of teak root shoot with pre-sprouts and polypots.
6. Standardizing nursery techniques for people oriented timber species used for nistar.
7. Silviculture practices for JFMs.
8. Documentation of isolated off-beat but widely replicable good practices.

Shri S.P. Singh, MP forest department advised creation of forest outside the forest by planting adaptive tree species in specific climate conditions and suggested following additional research areas:

1. Suitable tree species for Western MP (eg. Ratlam, Mandasaur, Neemach, Jhabua, Dhar, Alirajpur, etc.) also agro-forestry models for western part of MP.
2. Teak seed treatment- Methodology – to shorten the period for treatment of teak seed.
3. Suitable mixture of natural forests of different species for sustainability of the forest.

Mrs. Sonali Bist, NGO, New Delhi, emphasized documentation of knowledge gained through R&D activities and of folklores as the voluminous scattered knowledge might be lost.

Shri Sudhir Kumar, MP State Biodiversity Board, Bhopal, favoured documentation of traditional knowledge and scientific validation of active principal for patenting with an aim of sharing royalty with local community. He also suggested the following areas:

1. Projects related to validation, product making and IPR should be taken up.
2. Work on social prospective of people-forest interface should be taken up.
3. Specific research pertaining to ecology and economic valuation of forest should be taken up.

Dr. M.S. Rana, APCCF joint forest management suggested scientific interventions for productivity enhancement in non-irrigated areas and development of comprehensive package incorporating all aspects such as social financial, ecological and scientific for providing holistic solutions to forestry problems. He also provided following research areas:

1. Carrying capacity.
2. Economic and ecological models of agroforestry system.
3. Research on Institutional development for extension forestry.
4. Research on Watershed development for zero outlet of soil and water – institutional and technological.
5. Research on productivity enhancement in non-irrigated conditions.
6. Networking of research institute for promoting the packages of practices of research findings.

Shri Naredra Kumar APCCF (land management and wild life) suggested investigations to be carried out pertaining to environmental impact on wild life and additionally provided the following list research areas:

1. Habitat fragmentation due to roads, canals, rail-lines in forest areas and corrective measures.
2. Environmental impact assessment of coal/other minerals - open coal mining.
3. Reclamation of mined out areas.
4. Supply of certified quality planting stock of important tree species.
5. Rehabilitation or restoration of drying/dicing nalas/water coursed in forest areas.

Shri V.K. Mathur made NTPC presentation and film show on use of fly ash in reclamation of degraded forests. Shri M.S. Chawla, GM appraised the house that technical assistance of TFRI would help in building up the confidence for carrying out research on management of fly ash.

Shri KP Singh, MPVV Nigam Ltd, Bhopal appreciated the sponsored project on teak skeletonizer and suggested the following research areas:

1. Project on MFP value addition for involvement of rural people.
2. Project on screening resistant species (hardy) to adverse climate.

Shri C P Rai, Director, SFRI, Jabalpur provided a list of following research areas:

1. Quantification and evaluation methodologies/mechanism for environmental goods and services.
2. Development of decision support system for harvesting and sale of timber bamboo, NTFP and afforestation.

Dr. U Prakasham, Addl. Director, SFRI, Jabalpur noted the following research areas:

1. Rehabilitation of gregariously flowered bamboo forests.
2. Tracking the natural regeneration problem of sal forests.
3. Use of flyash and overburden (mined out) as a medium for plant growth and afforestation.

Prof. K N Krishnakumar, IIFM, Bhopal suggested following research areas:

1. Documentation of indigenous practices related to agro-forestry.
2. Constraints in adoption of improved agroforestry practices by different categories of farmers.
3. Value addition of NTFP and medicinal plant products through different post-harvest processing techniques.
4. Integrated pest management practices for selected agro-forestry species (Farmers-Friendly practices).

5. Study on participatory communication and extension methodologies for sustained dissemination of management practices related to agroforestry/sustainable NTFP harvesting and processing/cultivation of medicinal plants, etc.
6. Training need analysis with respect to various improved practices and technologies developed through research at TFRI.

Based on the interactive discussion and suggestions made by different delegates, following common research priority areas were emerged, which may help scientists and researchers to formulate research projects for the forthcoming RAG meeting of the institute.

- 1 Documenting geographical spread of major species and change overtime, including disappearance of species from different areas.
- 2 Investigating biotic pressures on bamboo silviculture and regeneration practices in flowered areas.
- 3 Comparative evaluation on expenditure and growth performance of teak root shoots with pre-sprouts and polypots.
- 4 Standardizing nursery techniques for people oriented timber species used for nistar.
- 5 Silviculture practices in JFMs.
- 6 Documentation of isolated off-beat but widely replicable good practices.
- 7 Projects related to validation, product making and IPR issues.
- 8 Investigating social prospective of people-forest interface.
- 9 Area specific research pertaining to ecology and economic valuation of forest.
- 10 Research on MFP value addition for involvement of rural people.
- 11 Research on climate resistant species (Hardy).
- 12 Research on habitat fragmentation due to roads, canals, rail-lines in forest areas and its corrective measures.
- 13 Environmental impact assessment of coal/other minerals - open coal mining.
- 14 Reclamation of mined out areas.
- 15 Supply of certified quality planting stock of important tree species.
- 16 Rehabilitation or restoration of drying/dicing nalas/water coursed in forest areas.
- 17 Quantification and evaluation methodologies/mechanism for environmental goods and services.
- 18 Development of decision support system for harvesting and sale of timber, bamboo, NTFP and afforestation.

- 19 Tracking the natural regeneration problem of sal forests.
- 20 Use of flyash and overburden (mined out) as a medium for plant growth and afforestation.
- 21 Suitable tree species for Western MP (eg. Ratlam, Mandsaur, Neemach, Jhabua, Dhar, Alirajpur, etc) also agro-forestry models for western part of MP.
- 22 Teak seed treatment methodology.
- 23 Suitable mixture of natural forests of different species for sustainability of the forest.
- 24 Computation of rotation age based on carbon sequestration potential useful for REDD and REDD+ Projects.
- 25 Carrying capacity of forest ecosystem.
- 26 Economic and ecological models of agroforestry system.
- 27 Research on Institutional development for extension forestry.
- 28 Research on watershed development for zero outlets of soil and water – institutional and technological.
- 29 Research on productivity enhancement in non-irrigated conditions.
- 30 Networking of research institute for promoting the packages of practices of research findings.
- 31 Documentation of indigenous practices related to agro-forestry.
- 32 Constraints in adoption of improved agroforestry practices by different categories of farmers.
- 33 Value addition of NTFP and medicinal plant products through different post-harvest processing techniques.
- 34 Integrated pest management practices for selected agro-forestry species (Farmers-Friendly practices).
- 35 Study on participatory communication and extension methodologies for sustained dissemination of management practices related to agroforestry/sustainable NTFP harvesting and processing/cultivation of medicinal plants etc.
- 36 Training need analysis with respect to various improved practices and technologies developed through research at TFRI.

The meeting ended with a vote of thank by Dr. S.A. Ansari, Genetics and Plant Propagation Division, TFRI, Jabalpur.

New Research Problems (emerged in Stakeholder's Meet 2011at Bhopal)

Shri Jitendra Agrawal, IFS, MP Forest Department

1. Documenting geographical spread of major species and change overtime. **(Thrust area – Ecosystem conservation & Management)**
2. Documenting disappearance of species from different areas. **(Thrust area – Ecosystem conservation & Management)**
1. Review of bamboo silviculture practices considering present biotic pressures – recommendations. **(Thrust area – Forest Productivity).**
2. Review of bamboo regeneration practices in flowered areas – gregarious and sporadic – recommend treatment. **(Thrust area – Forest Productivity).**
3. Teak root shoot-vs-pre-sprouts vs-polypots: expenditure and growth. **(Thrust area – Forest Productivity).**
4. Standardizing nursery techniques for people oriented timber species used for nistar. **(Thrust area – Forest Productivity).**
5. Impact assessment on forest and TOF in MP by the works done by TFRI since its establishment. **(Thrust area – Ecosystem conservation & Management)**
6. Silviculture practices for JFMs. **(Thrust area – Forest Productivity).**
7. Documentation of isolated off-beat but widely replicable good practices. **(Thrust area – Forest Productivity).**

Shri Narendra Kumar, IFS, APCCF (LM), MP Forest Department

1. Habitat fragmentation due to roads, canals, rail-lines in forest areas and migratory measures. **(Thrust area – Ecosystem conservation & Management)**
2. Environmental impact assessment of coal/other minerals - open coal mining. **(Thrust area – Ecosystem conservation & Management)**
3. Reclamation of mined out areas. **(Thrust area – Ecosystem conservation & Management)**
4. Supply of certified quality planting stock of important tree species. **(Thrust area – Genetic improvement)**
5. Rehabilitation or restoration of drying/dicing nalas/watercourse in forest areas. **(Thrust area – Ecosystem conservation & Management)**

Shri C P Rai, IFS, Director, SFRI, Jabalpur

1. Quantification and valuing methodologies/mechanism for environmental goods and services. **(Thrust area – Ecosystem conservation & Management)**
2. Development of decision support system for harvesting and sale of timber bamboo, NTFP and afforestation. **(Thrust area – Non Wood Forest Products)**

Dr. U Prakasham, IFS, Addl. Director, SFRI, Jabalpur

1. Rehabilitation of gregariously flowered bamboo forests. **(Thrust area – Forest Productivity).**
2. Tracking the natural regeneration problem of Sal forests. **(Thrust area – Forest Productivity).**
3. Use of fly ash and overburden (mined out) as a medium for plant growth and afforestation. **(Thrust area – Ecosystem conservation & Management)**

Shri Sudhir Kumar, IFS, MP State Biodiversity Board, Bhopal

1. Some projects related to validation, product making and IPR should be taken. **(Thrust area – Non Wood Forest Products)**
2. Some works on social prospective of people-forest interface should be taken by TFRI. **(Thrust area – Non Wood Forest Products)**
3. Some focused and area specific research pertaining to ecology and economic valuation of forest should be taken. **(Thrust area – Forest Productivity).**

Shri K P Singh, IFS, MPVV Nigam Ltd, Bhopal

1. Research on MFP value addition for involvement of rural people. **(Thrust area – Non Wood Forest Products)**
2. Research on climate resistant species (Hardy). **(Thrust area – Forest Productivity).**

Shri S P Singh, IFS, APCCF

1. Suitable tree species for Western MP (eg. Ratlam, Mandasaur, Neemach, Jhabua, Dhar, Aligarh etc) also agro-forestry models for western part of MP. **(Thrust area – Forest Productivity).**
2. Teak seed treatment- Methodology – to shorten the period for treatment of teak seed. **(Thrust area – Forest Productivity).**
3. Suitable mixture of natural forests of different species for sustainability of the forest. **(Thrust area – Forest Productivity).**

Dr. P K Shukla, IFS, MD, MP, MFP Federation

1. Development of varieties/clones of NTFP species with higher productivity of utilizable parts and higher contents of alkaloids/active principles. **(Thrust area – Genetic improvement)**

Dr. R N Saxena, IFS, MP Forest Department

1. Bamboo is having very high “Carbon Sequestration Value” but “baseline methodology for bamboo CDM projects” is not available – TFRI can develop. **(Thrust area – Ecosystem conservation & Management)**
2. Right time to pay attention to silviculture based on “Carbon Rotation” instead of “Economic Rotation” – this methodology shall be useful for REDD and REDD+ Projects. **(Thrust area – Ecosystem conservation & Management)**
3. Satellite “Climate Change Overlays” predicts serious impact in Gwalior, Nimar, Bundelkhand and Satpuda and scope by 2035 and 2085 _ TFRI to suggest adaptations in afforestation and management of “Soil Moisture regime.” **(Thrust area – Ecosystem conservation & Management)**

Dr. M S Rana, IFS, MP Forest Department

1. Carrying capacity. **(Thrust area – Ecosystem conservation & Management)**
2. Economic and ecological models of agroforestry system. **(Thrust area – Forest Productivity).**
3. Research on Institutional development for extension forestry. **(Thrust area – Forest Management).**
4. Research on Watershed development for zero outlets of soil and water – institutional and technological. **(Thrust area – Ecosystem conservation & Management)**

5. Research on productivity enhancement in non-irrigated conditions. **(Thrust area – Forest Productivity)**.
6. Networking of research institute for promoting the packages of practices of research findings. **(Thrust area – Forest Management)**.

Prof. K N Krishnakumar, IIFM, Bhopal

1. Documentation of indigenous practices related to agro-forestry. **(Thrust area – Forest Productivity)**.
2. Constraints in adoption of improved agroforestry practices by different categories of farmers. **(Thrust area – Forest Productivity)**.
3. Value addition of NTFP and medicinal plant products through different post-harvest processing techniques. **(Thrust area – Non Wood Forest Products)**
4. Integrated pest management practices for selected agro-forestry species (Farmers-Friendly practices). **(Thrust area – Forest Protection)**
5. Study on participatory communication and extension methodologies for sustained dissemination of management practices related to agroforestry/sustainable NTFP harvesting and processing/cultivation of medicinal plants etc. **(Thrust area – Non Wood Forest Products)**
6. Training need analysis with respect to various improved practices and technologies developed through research at TFRI. **(Thrust area – Forest Management)**.

RESEARCH PROBLEMS PRIORITIZED BY THE STAKEHOLDERS CONSULTATION MEET 2011 OF MADHYA PRADESH STATE

S. No.	Research Problem	Average
Thrust Area : Forest Protection		
1	Teak mortality and hollowness in teak trees	63.22
2	Research on Sal Borer	61.89
3	Biofertilizers, biopesticides, quality planting materials etc for enhancement of productivity	58.96
4	Problem of defoliator and skeletonizer on teak	57.22
5	Powderly mildew in teak	41.78
Thrust Area : Forest Productivity		
6	Extension and demonstration of agro-forestry models	72.33
7	Sustainability of bamboo species in relation to agro-climatic conditions	60.11
8	Seed collection, storage and treatment of important medicinal plants	54.33
Thrust Area : Ecosystem Conservation and Management		
9	To study the problem of inadequate natural regeneration and gradual disappearance of important species	69.22

10	Determination of rotation period of selected major species on the basis of carbon sequestration	58.89
11	Creation of user friendly data-base of phytodiversity of forests of each agro-climatic zone of MP	55.22
12	Phytodiversity study, inventorization and monitoring, biodeversity of exsisting and new preservation plots	53.67
13	Methodology for quantification of root and soil carbon	53.11
14	Effect of climate change on seed physiology (phenology of seed formation, seed germination and viability)	48.67
Thrust Area : Non-Wood Forest Products (NWFPs)		
15	Species specific package for cultivation and processing of NWFP	60.78
16	Sustainable harvesting of NTFPs including medicinal plants	66.56

ANNEXURE-I

**LIST OF PARTICIPANTS IN THE STAKEHOLDERS' CONSULTATION MEETING OF MADHYA PRADESH
HELD AT BHOPAL ON 30TH APRIL, 2011**

S. No.	Name and designation	Postal Address	Phone No/Mobile no. and Fax no.	Email address
1	Dr. R. B. Lal, IFS	Director, IIFM, Nehru Nagar, Bhopal	9406900057	director@iifm.ac.in
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5	Dr. M.S. Negi	Director, TFRI, Jabalpur		
6	Dr. V. Nath	GC (R), TFRI, Jabalpur	9981041739	nathv_tfri@yahoo.co.in
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12	Shri Sudhir Kumar, IFS	Member-Secretary, MP State Biodiversity Board, Kisan Bhawan, Bhopal	9424417795	Sudhirkr_shu@rediffmail.com
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24	Shri Anil Oberoi, IFS	APCCF (IT), Satpura Bhawan, Bhopal		
25	Shri Animesh Shukla, IFS	APCCF (Admin), Satpuda Bhwan, Bhopal		
26	Shri A.S. Ahlawat, IFS	CCF(LM), Satpuda Bhwan, Bhopal		
27	Shri A. K. Singh, IFS	APCCP (AFM). Satpuda Bhwan, Bhopal		
28	Shri R. P. Singh	ED, MPFDC, Panchanan Bhawan, Bhopal		
29	Shri T.C. Lohani	ED, Panchanan Bhawan, Bhopal		
30	Shri Gopa Pandey, IFS	CCF (Res), Satpuda Bhwan, Bhopal		
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