

Proceedings

of

**STAKEHOLDERS' CONSULTATION
MEETING-2011**

Raipur, CG

on

Setting Research Priorities

of

Tropical Forest Research Institute, Jabalpur

28th June, 2011

Stakeholders' meet was organized at Chhattisgarh Medicinal Plant Board Office, Raipur, CG on 28th June, 2011. The meeting began with welcome by Dr. Yogeshwar Mishra and lightening of lamp by the honorable guest. Dr. M.S. Negi, Director of this Institute, welcome the delegates and participants who were representatives from CG State Forest Department (SFD), University, non-government organizations (NGOs), etc. 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 stressed for reorganizing SFIs to avoid duplication of research and extension work. The research work should be extended to tribal with the help of Van Vigyan Kendras. He suggested value addition and sustainable harvesting of NWFPs. Under CAMPA project TFRI extend help in the field of tissue culture and biotechnology. TFRI is very closely working with NTPC regarding afforestation and utilization of fly ash in degraded forests in this endeavor NTPC provide funds for rehabilitation of degraded land. CG forest department can provide such land for rehabilitation work. For doing applied research fund should be provided to TFRI by the stakeholders.

Dr. Negi felicitated the chief guest, Shri Dharendra Sharma, PCCF, Chhattisgarh; Shri AK Singh, MD, CGMPBF; Dr. AA Boaz, APCCF, Chhattisgarh. He also welcome the other participants namely Shri Sunil Mishra CF, Raipur; Alok Tiwari, DFO, Office, Raipur; Ms. Upasana Sharma, Learn Nature consultants, Raipur; Shri SC Rahatgaonkar, Additional Director SRFTI; Dr. Rajesh Shukla, Sr. Exe. Tech. (Inventory Head), CG State Minor Forest Produce Co.; Shri VS Silekar, Adl. MD. CGFDC, Raipur; Shri MS Chawla, GM, NTPC, New Dehli; Shri BN Dwivedi, APCCF (WP), CG Forest, Dept.; Shri Ram Prakash PCCF (w/l) Chhattisgarh, Raipur; Shri Pratap Singh CIF, Forest Dept., Raipur; Shri RBP Sinto, CCF, Forest Deptt, CG, Raipur; Shri SK Sanbad, Sr Mgr (EMG & Ash Utilisation), NTPC, Korba; Shri Manoj Sharma Sr.Vice President (Plantations & Development), Prakash Ind. Ltd. Raipur; Subhash Hardaha AGM, (Plantation & Dev.) Prakash Ind. Ltd. Raipur; Mrs. Anita Nandy, RGM, Raipur FDC, CRVVN, Raipur; Shri MD Patel, PRO, Forest Dept., Raipur; Shri OP Yadav, IFS, CF, CG State medicinal plant board, Raipur; Shri KC Kisku, CCF (Vig) C.G., Office of the PCCF, CG Raipur; Shri BR Jha, CCF, (Adm) Office of the PCCF, CG. Raipur; Dr. AK Geda, Prof. & Head, Dept. of medicinal Plants and Shri Lalji Singh, Dept. of forestry, IGKV, Raipur; Shri Neeraj Tiwari,

Project Manager, Raipur; Shri SC Agarwal, CCF (project formulation) PCCF, Raipur; Shri Mudit Kumar Singh, chief conservator of forests, Raipur; Shri VK Mathur, GM, (Ash Utilization) NTPC, Noida; Shri Alok Kumar Baxi, OSD, SMPB, Raipur; and Manas Manohar Ujjaini, SFRTI, Raipur.

Dr. Fatima Shirin on behalf of GCR TFRI made a brief 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.

Shri Dharendra Sharma, PCCF, Chhattisgarh in address stressed the need of development of plantation technique of sal. In this direction work of raising sal seedlings is initiated by the DFO Korba Division under CAMPA fund. He also stressed the need of standardization of fertilization doses for nursery.

Shri AK Singh, MD, CG MFP, A-25 UIP Estate, Khamardih, Raipur (CG) emphasized the need of developing 4-5 days course on sustainable harvesting of NTFPs for training of 12th passed under JFM.

Dr. AA Boaz ADCCF, Chhattisgarh, Aranya Bhawan, medical college road, Raipur has stressed on seed collection techniques and certification standard of important species. He also emphasized on selection of plus trees of bael, char, etc. He proposed to establish a standard potting mixture plant to supply standard mix to every nursery to avoid stunted growth of seedlings. He also stressed the need of tissue culture raised plant and informs the house that for the purpose three tissue culture laboratories has been established at Raipur, Bilaspur and Jagdalpur and their need of one crore tissue culture raised plant per year in the state. After separate discussion with scientists of TFRI he also proposed formulation of following project for funding under CAMPA project:

1. Identification of gene pools of flora in three agroclimatic zones of Chhattisgarh.
2. Causes of selective extinction of species like *Buchnanania lanzan*, *Dalbergia latifolia*, etc.

3. Sequence of felling of tree species in SCI coupes so that NWFP species are not damaged and the protective mechanisms to be followed after cutting the species.
4. Location and maintenance of existing preservation plots in Chhattisgarh
5. Species selection for river bank plantations
6. Development of Hi-tech nursery
7. Value addition of medicinal plants- how long can imli, chironji, mango kernel and mahua flowers be kept in cold storage
8. Development of site specific agroforestry models in Mahasamund, Durg, Kawardha and Jangir Champa
9. Causes of disappearance of bamboo in forest? Its rehabilitation in forests and which species should be planted outside forests based on social acceptability and marketing
10. Selection and propagation of *Buchnanian lanzan* and *Pterocarpus marsupium*
11. Application of mycorrhizae in sal plantation

Shri Sunil Mishra CF, CG forest department, Jail Road, Raipur has suggested the following research areas needed to be undertaken:

1. Development of mechanism to develop productivity in degraded forest and reversing the process of degradation.
2. Emphasis in working plan on areas where forest degradation increasing due to biotic pressure (fuel wood index)
3. Development of protocol/plantation models for plantation of fast growing species in high biotic pressure areas to meet the demand of the adjoining areas to check further degradation.

Shri SC Rahatgaonkar, Additional Director, State Forest Research & Training Institute, Raipur emphasized research on the following topics:

1. Germplasm collection and mass propagation of char (*Buchnanian lanzan*) and Bija (*Pterocarpus marsupium*) in Chhattisgarh.
2. Livelihood promotions and human subsistence through forest of CG Manipat (Sarguja), Abujhmad, Narayanpur, Tadmelta and Bhadrabalideep, etc.
3. Effectiveness of solar electric fencing for curbing elephant, wild boars and deer menace in fringe forest areas of CG.

Dr. Rajesh Shukla, Sr. Exe. Tech. (Inventory Head), C.G. State Minor Forest Produce Fed., VIP Estate, Raipur, CG has suggested the following areas of reaserch:

1. Training module for NTFP's collection, primary processing and packaging.
2. Need assessment study require for particular geographical situation.
3. Develop best harvesting practices for sustainable production of NTFP's.
4. Develop standards fro primary processing & quality management of NTFP's.

Shri Ram Prakash PCCF (w/l) Chhattisgarh, Aranya Bhawan, Raipur-492009 has stressed the need of research for introduction of suitable species of Bamboos which could be grown in forest areas as well as farmlands not naturally found in the state of CG.

Shri Pratap Singh, CCF (R & E), Forest Dept., Aranya Bhawan, Raipur stressed on production of long planting stock (2-3 years old saplings) and develops planting techniques for the same. He further suggested the following areas of research:

1. Raising, transport and planting techniques of tall plants/trees of different species.
2. Raising gall free and high yielding seedlings of Eucalyptus
3. Developing most viable Agro-forestry model in Chhattisgarh.
4. Standardization of fertilizer doses and irrigation doses for optimum growth of indigenous species.
5. Eradication of Sal borer.

Shri S.K. Sanbad, Sr. Mgr. (EMG & ASH Utilisation), NTPC, Korba Vikash Bhawan, Jammipali Korba-495450 stress the use of fly ash for development of waste land and eco-rehabilitation.

Manoj Sharma, Sr. Vice President (Plantations & Development), Prakash Ind. Ltd. Ring Rd. no. 2, Near Tel. exch., Gogaon, Raipur (9826902468, manoj0664@yahoo.com) suggested the following areas for research:

1. Standardization of irrigation & fertilization practices of the wasteland reclamation projects over the degraded revenue lands, with particular reference to the lateritic and the black soils of CG.
2. Modeling of tree plantations over the degraded revenue lands, pertaining to varied characteristics of ash.

Subhash Hardaha AGM, (Plantation & Dev.) M/s Prakash Ind. Ltd. Ring road no-2, Gogaon, Raipur stressed the following areas:

1. Fertilization and irrigation pattern to the pollution in different age.
2. Central from, Tingis and milae in khamar (Gmelina arborea) Tree.

Ms. Anita Nandy, RGM, FDC, CRVVN, B-7 Sector II, Devendra Nagar, Raipur, CG suggested the following areas for research:

1. Review on reasons and remedies for degradation of forests and wild life in Chhattisgarh.
2. Inventorization of flora and fauna for working plans (at present data is taken from previous records) for different areas.
3. Studies on direct and indirect losses occurring due to forest land diversions and formula/method for quantifying.
4. FDC corporations- Diversification towards NTFP, medicinal plant production, marketing.

Dr. AK Gede, Professor & Head, Department of medicinal Plants, IGKV, Raipur stressed the need for standardization of techniques for quality material by value addition of medicinal plants. He suggested the following areas of research:

1. Quality evaluation of medicinal plant species.
2. Genetic diversity of medicinal plants.
3. Standardization and techniques on processing and value addition of NTFP.

Dr. Lalji Singh, Department of Forestry, IGKV, Raipur stressed the need of making an Agroforestry committee to let agroforestry on large scale, permanent plots should be marked for research. He also stressed the need of developing long planting stock for river bank plantations. He further suggested the following areas for research:

1. Land use change vs carbon sequestration and carbon storage.
2. Focus on agroforestry research.
3. Wasteland reclamation/restoration through plantation programme.
4. Invasive species' impacts on structure and function of ecosystem.

Shri Mudit Kumar Singh, Chief Conservator of Forests (LM), Department of Forest, Aranya Bhawan, Medical College Road, Raipur – 492001 proposed the following areas for research:

1. Effect of mining in coal areas of SECL- Impact on forest health.
2. Effect of mining in Iron ore areas of NMDC- Impact on forest and crop productivity.

Shri B.N. Dwiwedi, APCCF (WP), CG Forest Dept. proposed the following areas for reaserch:

1. Addressing the problems of degradation of Bamboo forest on Chhattisgarh and measures to arrest the same (Surguja circle may be taken up).
2. Assessing the quantum of biotic pressure on the forests of Chhattisgarh, its impact on forests and measures to reduce the same.

Shri VK Mathur, GM (Ash utilization) NTPC, Noida has made presentation and film show on use of fly ash in reclamation of degraded forests. Shri MS 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. He informed the house that present level of ash utilization is 50% which needs to be extended to 100% as per guidelines issued by the ministry. The less utilization is due to lack of awareness.

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 21th RAG of the institute.

RECOMMENDATIONS

1. Development of plantation technique of sal with standardization of fertilization doses for nursery.
2. Identification of gene pools of flora in three agro-climatic zones of Chhattisgarh.
3. Causes of selective extinction of species like *Buchnanian lanzan*, *Dalbergia latifolia*, etc.
4. Sequence of felling of tree species in SCI coupes so that NWFP species are not damaged and the protective mechanisms to be followed after cutting the species.
5. Location and maintenance of existing preservation plots in Chhattisgarh
6. Species selection for river bank plantations
7. Development of Hi-tech nursery
8. Value addition of medicinal plants- how long can imli, chironji, mango kernel and mahua flowers be kept in cold storage
9. Development of site specific agroforestry models in Mahasamund, Durg, Kawardha and Jangir Champa

10. Causes of disappearance of bamboo in forest? Its rehabilitation in forests and which species should be planted outside forests based on social acceptability and marketing
11. Selection and propagation of *Buchnanian lanzan* and *Pterocarpus marsupium*
12. Application of mycorrhizae in sal plantation
13. Development of mechanism to develop productivity in degraded forest and reversing the process of degradation.
14. Emphasis in working plan on areas where forest degradation increasing due to biotic pressure (fuel wood index)
15. Development of protocol/plantation models for plantation of fast growing species in high biotic pressure areas to meet the demand of the adjoining areas to check further degradation.
16. Germplasm collection and mass propagation of char (*Buchnanian lanzan*) and Bija (*Pterocarpus marsupium*) in Chhattisgarh.
17. Livelihood promotions and human subsistence through forest of CG Manipat (Sarguja), Abujhmad, Narayanpur, Tadmelta and Bhadrabalideep, etc.
18. Effectiveness of solar electric fencing for curling elephant, wild boars and deer menace in fringe forest areas of CG.
19. Training module for NTFP's collection, primary processing and packaging. Developing 4-5 days course on sustainable harvesting of NTFPs for training of 12th passed under JFM.
20. Develop best harvesting practices for sustainable production of NTFP's.
21. Develop standards for primary processing & quality management of NTFP's. Standardization of techniques on processing and value addition of NTFP.
22. Quality evaluation of medicinal plant species.
23. Introduction of suitable species of Bamboos which could be grown in forest areas as well as farmlands not naturally found in the state of CG.
24. Raising, transport and planting techniques of tall plants/trees of different species.
25. Raising gall free and high yielding seedlings of Eucalyptus
26. Eradication of Sal borer.
27. Developing most viable Agro-forestry model in Chhattisgarh.

28. Standardization of fertilizer doses and irrigation doses for optimum growth of indigenous species.
29. Use of fly ash for development of waste land and eco-rehabilitation.
30. Standardization of irrigation & fertilization practices of the wasteland reclamation projects over the degraded revenue lands, with particular reference to the lateritic and the black soils of CG.
31. Modeling of tree plantations over the degraded revenue lands, pertaining to varied characteristics of ash.
32. Fertilization and irrigation pattern to the pollution in different age.
33. Review on reasons and remedies for degradation of forests and wild life in Chhattisgarh.
34. Inventorization of flora and fauna for working plans (at present data is taken from previous records) for different areas.
35. Studies on direct and indirect losses occurring due to forest land diversions and formula/method for quantifying.
36. FDC corporations- Diversification towards NTFP, medicinal plant production, marketing.
37. Genetic diversity of medicinal plants.
38. Land use change vs carbon sequestration and carbon storage.
39. Wasteland reclamation/restoration through plantation programme.
40. Invasive species' impacts on structure and function of ecosystem.
41. Effect of mining in coal areas of SECL- Impact on forest health.
42. Effect of mining in Iron ore areas of NMDC- Impact on forest and crop productivity.
43. Addressing the problems of degradation of Bamboo forest on Chhattisgarh and measures to arrest the same (Surguja circle).
44. Assessing the quantum of biotic pressure on the forests of Chhattisgarh, its impact on forests and measures to reduce the same.

The meeting ended with a vote of thank by Dr. A.K. Pandey, Non Wood Forest Produce Division, TFRI, Jabalpur.