

Recommendations of Regional Research Conference held at IWST Bangalore on 17th July 2017

A Regional Research Conference for one day was held at Institute of Wood Science and Technology, Bangalore on 17th July 2017. Director General of Forests and Special Secretary to Ministry of Environment, Forest and Climate Change, Government of India, Director General ICFRE, all the Deputy Director Generals of ICFRE, Directors of ICFRE Institutes, PCCFs and Senior Officers of Karnataka, Tamilnadu, Andhra Pradesh, Telangana and Kerala Forest departments, representatives from Universities, Research institutes, Industries, NGOs, Farmers and other Stake holders participated in the conference. About 100 participants attended the conference.

Inaugural session:

Sri Surendra Kumar, Director IWST welcomed all the participants and Dr. Neelu Gera, DDG (Research), ICFRE explained the objective of the workshop.

Dr. S.C. Gairola, DG ICFRE, in his address emphasized the need for integrating ICFRE research activities with national needs and thereby having synergy between ICFRE and Government of India. He also stressed on need to formulate holistic research projects covering contemporary issues in Forestry. Mr. K.S. Sugara, PCCF & HOFF, Karnataka Forest Department suggested a range of issues related to forestry research and managements including increase in forest cover, conservation, water management, human animal conflicts, eco-tourisms and modernization of logging tools.

Sri. Siddhant Das, Director General of Forests and Special Secretary to Ministry of Environment, Forest and Climate Change, Government of India, in his inaugural address reiterated the need to have synergy between Research Institutes and Government. He stressed the need of both fundamental as well as applied research particularly in the areas of climate change, development of high value products from bamboo, technology for fodder productivity in forests and develop models for forestry education.

The presentations and deliberations were made under following Sessions:

- Session 1: Forestry Research by ICFRE: Recent Advances
- Session II: Focused /theme based presentations of regional importance
- Session III : Working Groups on developing/ research needs
- Session IV: Draft Group presentations

The detailed programme is enclosed as Annexure – I.

The theme-wise recommendations are as follows:

Theme 1: Enhancing Forest Productivity and Green Cover

- Selection of suitable long and short-term rotation indigenous tree species with appropriate domestication programs considering the time-frame and continuous funding.
- Identification of superior genotypes based on economical traits, assemblage of germplasm and establishing multi-locational trials with active collaboration among research institutes, forest departments, farmers and industries.
- Concerted efforts for focused research on species of regional importance like sandalwood, red sanders etc.
- Use of biotechnological tools like Marker assisted selection for identification of superior genotypes.
- Use of clonal technology for mass propagation of superior genotypes of economically and ecologically valuable species.
- Prioritizing the research on the RET species listed in the National Biodiversity Act
- Emphasis on fundamental and applied research with focus on productivity enhancement and developing package of practices including market prospects.
- Research on developing site specific improved agroforestry models and studies on allelopathic effects and trees-crop interactions
- Framing of policies on production and marketing rights of farmers to encourage trees outside forests
- Adopting tree transplantation for environmental solution.
- Development of pest and diseases management techniques for important tree species.
- Improving the quality of degraded forest with indigenous species using PPP models
- Identification of suitable region specific tree species for tree planting programmes.

Theme 2: Forest Hydrology, Forest valuation and Ecosystem services

- Research on long-term ecological effects of fast wood forestry (short-term rotation trees).
- Long-term studies on selected hydrological parameters in few identified catchments.
- All India coordinated project on assessing ecosystem services on the basis of forest types.
- Monitoring and assessment of area under invasive alien species using RS & GIS
- Studies on eco-restoration and containment of invasive alien species
- Studies on the effect of forest fire in different forest types and quantification of economic loss thereof.
- Assessment of forest soil health and identification of suitable species with reference to specific forest types
- Scaling up and commercialization of Bio-pesticides and bio-fertilizers technologies

- Studies on tree phenology and migration of forest species (latitudinal and altitudinal) in view of climate change.
- Forest observational studies for long term ecological monitoring.
- Studies on water use efficiency of different tree species and assessing its environmental impacts *vis-a-vis* water table depletion.
- Quantification of non-tangible forest ecosystem services (water conservation, eco-tourism, soil conservation etc.).
- Assessment of emissions and carbon sequestrations in various forest eco-systems.
- Work on fringe forest areas where there is human-animal conflict.

Theme 3: Forest Products development and livelihoods

- Studies on wood properties of promising indigenous species.
- Utilization of recycled/waste material for development of Wood Polymer Composites
- Development of new material using lignocellulosic fibres and their composites e.g., packaging/insulating applications
- Develop efficient wood processing technologies suitable for Lesser Used Species (LUS) / fast grown and small girth timbers.
- Establishment of National Timber Development Board
- Infrastructural support for research on Nano technology in forest products development
- Promotion of operational research to utilize substitute/alternate technologies for cottage industries
- Research on wood properties, chemical content, utilization and marketing of Red sanders and.
- Research on commercial exploitation of Sandalwood seed oil
- Policy formulation to enhance timber use in buildings / houses with the objective of mitigating climate change
- Commercial scale upgradation of technologies developed by the institutes.
- Strengthening of the partnership with industry.

Theme 4: Promoting Bamboo Industry for Livelihood

- Resource inventory in Government and Private Lands and estimation of production potential
- Silvicultural intervention to increase productivity, insect-pests management and establishment of Gene pool
- Development of grading Standards
- Estimation of capacity of primary processing centre/unit and identification of technology gaps for improvement of machinery, tools and related technologies
- Improved treatment techniques for Bamboo Preservation
- Establishment of market linkages - Forward/Backward.
- Formulation of policies for promotion of bamboos cultivation and utilization.
- Development of technologies for source identification
- Formulation of policies for relaxation of transit rules.

Theme 5: Strengthening PAN-INDIA Collaboration for coordinated Research & Adoption of Research Findings in Forestry

- Networking and pooling of forestry expertise, financial resources, infrastructure and human resources, technologies and sharing of benefits (patent, copyright, financial etc.)
- Formulation of All India Coordinated Research Projects
- Development, validation and release of package of practices to public domain for large scale adoption
- Research priorities should be more need based and should include industries and other stakeholders.
- Preparation of short documentary film on successful Public-Private collaboration and designing of web portal on utilization aspects of forestry research.
- Setting up of regional level different expert groups (Plantations, Agro-forestry, Tree improvement, Protection etc.) for consultation and guidance.
- Strengthening of VVKs to expand extension activities.
- Synergy between research organization, NGO's, farmers and other stakeholders to facilitate coordinated/collaborated research programs
- Revision of National Forestry Research Programme 2000 in view of changing forestry scenario.
- Creation of Centre for Forest Policy Research and exposure of ICFRE scientific staff in International conventions of forestry.

Concluding session:

Dr. S.C. Gairola, DG, ICFRE in his concluding remarks thanked the participants for their suggestions. He expressed his concern on missing linkage between research and end users and urged to bring down the gap. He assured the participants that ICFRE is very serious about the implementation of suggestions made during conference and also need of collaborative research with other organization. He emphasized the need for a re-look on National Forestry Research Programme 2000. He also stated that there is a need for tapping the potential of bamboo utilization. Dr. K.K. Pandey, Scientist G, IWST, proposed formal vote of thanks.