

## CHAPTER-I

### TECHNOLOGIES DEVELOPED BY ICFRE

#### TECHNOLOGIES ALREADY TRANSFERRED TO THE USER AGENCIES

1. Sawing and conversion technique of *Eucalyptus* spp. and Poplar.
2. Utilisation of Poplar for doors and windows.
3. Technology for utilisation of juvenile wood for Poplars/*Eucalyptus* for furniture and joinery.
4. Preservative treatment of secondary species (especially *Eucalyptus* timber).
5. Seasoning of timber, setting up of solar and energy efficient desiccant based kilns.
6. Plasticisation of wood and bending techniques.
7. Colouring and ammonia fumigation of wood.
8. Poplars and *Paulownia* spp. for pencil making.
9. Macropropagation of bamboos.
10. Jigat substitute.
11. Natural dyes from forest biomass.
12. Preparation of flocculants for backwater treatment in paper making.
13. Process for detoxification of *Jatropha curcas* seed oil.
14. Preparation of adhesive from biopolymers.
15. Preparation and use of *Cassia tora* gum.
16. Process for the preparation of katha from *Uncaria gambier*.
17. Process for the preparation of compost from the plant biomass.

#### TECHNOLOGIES READY FOR TRANSFER FOR THE USER AGENCIES

1. Sap displacement techniques.
2. Utilization of alternative timber for catamarans.
3. Jingham gum – A partial substitute for Jigat in agarbathi manufacture.
4. Portable distillation unit for oil distillation in the field.
5. Integrated pest management (IPM) strategies involving different methods (mechanical, silvicultural, chemical botanical and biocontrol).
6. Biofertilizer application for growth enhancement of different tree species in nursery and field.
7. Casuarina in agroforestry.
8. Cost effective infrastructure development for mass multiplication of desired planting stock through vegetative means.

9. Seed technology.
10. Agroforestry models.
11. Low cost draught type drum drier for non wood forest produce.
12. Cultivation of medicinal plants.
13. Non-wood forest produce.
14. Tissue culture of bamboos.
15. Seed testing technologies.
16. Improved tools for nursery practices.
17. Vermicompost.
18. Silvicultural and chemical control of bamboos blight disease in *Bambusa nutans*
19. Rain water harvesting and conservation technology.
20. Techniques for afforestation of stress sites.
21. Rehabilitation and eco-restoration of mined lands and overburden spoils.
22. Leaf skeletonizer resistant clones of teak.
23. Clonal multiplication of *Eucalyptus*.