

**INDIAN PLYWOOD INDUSTRIES RESEARCH
AND
TRAINING INSTITUTE**



**RESULTS – FRAMEWORK DOCUMENT (RFD)
2013-14**

(April 01, 2013 – March 31, 2014)

Section 1

IPIRTI's Vision

IPIRTI's Vision is to be an apex institution of international repute with concurrent state-of-art technology and develop inhouse frontline expertise to be able to carryout necessary R&D advising and/or providing competitive consultancy to the academia as well as wood & other lignocellulosic based panel industry sector, the conservation of natural forests through development and adoption of efficient technologies in the field of wood and panel products from renewable fibres including plantation timbers and bamboo while meeting the vital needs of the developing society.

IPIRTI's Mission

RESEARCH

Global concern for protection of environment and conservation of bio-diversity are reflected in the research programmes. Multidisciplinary and applied research projects based on problems identified by the Institute, industries and other interested organizations are taken up. All programme are approved and supervised by the Research Advisory Committee headed by the President, Federation of Indian Plywood and Panel Industries [FIPPI] and having representatives from the Industry and other Scientific organizations.

Guided by the shortage of prime timbers from forests, the Institute is pursuing two pronged strategy for bridging the gap between demand and supply for industrial round wood, namely:

- (i) Development of appropriate processing technologies for efficient utilization of plantation grown tree species for manufacturing quality wood and panel products including plywood of different grades, block boards, flush door shutters, particle board and medium density fibre board.
- (ii) Evolving technologies for using non-wood renewable fibers to manufacture alternates to wood, including development of environment and people friendly products from bamboo. Another important new area of research is utilization of agro residues like rice husks, coir, bagasse jute, wheat straw etc. for making panels or boards suitable for specific end uses in place of plywood/wood particle/fibre boards.
- (iii) Technologies for manufacturing several mat based industrial products from bamboo i.e. Bamboo Mat Board [BMB], Bamboo Mat Veneer Board [BMVC], Bamboo Mat Moulded items [trays], Bamboo Mat Corrugated Sheet [BMCS] for roofing have been developed and commercialized. Technologies for Bamboo Wood [laminates], Bamboo match sticks, Bamboo Mat Moulded Skin Door, Bamboo Mat Ridge Cap have also been developed that are ready for industrial adoption.

- (iv) Enhancing service life of composite products made from wood and other lignocellulosic materials has gained significance in recent years. The Institute continues to work for evolving suitable treatment regimes and code of practices using environmentally safe chemicals.

TRAINING

In accordance with the business allocation of MoEF in **Environment research and development, education, training, information and awareness**, IPIRTI conducts training programs.

Special training programs for Indian Forest Service (IFS) Officers, Assistant Conservators of Forests, Range Forest Officers are conducted by IPIRTI. The Institute caters to HRD needs of the wood based panel industries through several training programmes such as One year PGD Course in Wood Based Panel Products Technology, 1-2 week vocational training courses for industry personnel and regulatory departments. IPIRTI is also a center recognized by Forest Research Institute Deemed University for pursuing research leading to award to Ph.D.

STANDARDIZATION

The Institute continues to play a significant role in formulating/amending Indian Standards for wood, wood products and other lignocellulosic materials through active participation in various committees of the Bureau of Indian Standards [BIS].

CENTEC-Centre for Testing and Evaluation of Composites, under the aegis of IPIRTI is a specialized national laboratory recognized by Bureau of Indian Standards [BIS] under the certification scheme for testing of wood & wood based panels and other lignocellulosic materials, adhesives, adhesive components, preservative chemicals, identification of timber species, etc., for conformity to Indian and other Standards. The Mechanical and Chemical Laboratory of the Institute is accredited under NABL.

The facilities are availed by Central and State Public Works Departments, BIS, DGS&D, Customs, etc.

EXTENSION

IPIRTI adopts a multi-pronged extension approach for quick adoption of new technologies and/or improvements/changes in technologies by the industry so that the benefits flow to the society. This includes information dissemination through research/technical/miscellaneous reports, publication

of quarterly newsletter, scientist visits to industries on request, participation in national exhibitions, technical presentation in conferences/seminars, etc., consultancy service and technology transfer to the industry. An important and unique aspect of extension approach is that lab-scale findings are up-scaled to industrial level to facilitate easy adoption by the industry which is further facilitated by many industries being members of the IPIRTI Society.

Objectives and Functions:

The objective of the research work of the institute is conservation of natural forests through effective utilization of plantation grown timber and developing and adoption of technology for manufacturing wood alternative and panel products from renewable fibre like bamboo, agro and forest residue to meet the growing need of developing society in the country.

Section 2

Inter se Priorities among the various key objectives, success indicators and targets

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6					
Objective	Weight	Actions	Success indicator	Unit	Weight	Target / Criteria Value				
(As consistent with the Mandate of MoEF & also considering Current Media concerns)						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
Research	55	Institute Projects (including spill over programs which require sequential attention)	<ul style="list-style-type: none"> Completed Research Projects/ Reports Published Patents obtained (Progress in obtaining Patent is graded on an index of 10) 	Number of.	35	7	6	5	4	3
		Sponsored Projects		Number of.	20	4	3	2	1	0
Training & Education	25	Diploma Courses	• No of students trained / Industrial Placements made	Number of.	12	29	26	23	20	18
		Short Term Courses	• No. of courses conducted	Number of.	8	12	11	10	9	8
		IFS training	• No. of Officers trained	Number of.	5	38	34	30	26	24
Testing & Standardization	5	Formulating/ Revising Standards	• No. of Standards Formulated/Revised	Number of.	3	4	3	2	1	0
		Testing Samples	• No. of Samples tested		2	960	860	760	660	600
Extension	15	Transfer of Technology	• No. of Technologies implemented by Industry	Number of.	6	2	1.5	1	0.5 If one is in process	0
		Consultancy	• Service delivery i.e. No. of Industries to which consultancy provided / No. of Industries becoming IPIRTI members		3	67	60	53	46	42
		IPIRTI-Industry Meet (formulation of special programs)	• No. of Meets organized		2	2	1	-	-	-
		Publications	• No. of Publications		2	5	4	3	2	1
		Establishment of Extension Centres	• No. of Extension Centres established(Once Centre in 10 years)		2	0.8	0.6	0.4	0.2	0

Section 3: Trend values of success indicator

Objective	Weight	Actions	Success indicator	Weight	Actual value for		Target Value for	Projected Value for	
					FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Research	55	Institute Projects (including spill over programs which require sequential attention)	<ul style="list-style-type: none"> Completed Research Projects/ Reports Published Patents obtained 	35	35	35	35	35	35
		Sponsored Projects		20	20	20	20	20	20
Training & Education	25	Diploma Courses	• No. of students trained / Industrial Placements made	12	7.92	10.32	10.32	10.32	10.32
		Short Term Courses	• No. of courses conducted	8	8	8	8	8	8
		IFS training	• No. of Officers trained	5	4	5	5	5	5
Testing & Standardization	5	Formulating/ Revising Standards	• No. of Standards Formulated/Revised	3	3	3	3	3	3
		Testing Samples	• No. of Samples tested	2	2	2	2	2	2
Extension	15	Transfer of Technology	• No. of Technologies implemented by Industry	6	4.5	4.5	4.5	4.5	4.5
		Consultancy	• No. of Industries to which consultancy provided / No. of Industries becoming IPIRTI members	3	2.7	2.7	2.7	2.7	2.7
		IPIRTI-Industry Meet (formulation of special programs)	• No. of Meets organized	2	1	1	1	1	1
		Publications	• No. of Publications	2	2	1.6	1.6	1.6	1.6
		Establishment of Extension Centres	• No. of Extension Centres established (One centre in 10 years)	2	0.5	1	1	1	1
			TOTAL		90.57	94.12	94.12	94.12	94.12

Section 4

Description and definition:

Success Indicator

1. Research: Completion of the research project in stipulated time with all objectives of the project fulfilled and/or with full satisfaction of the sponsorer of the project.
2. Training: (i) Completion of one year duration Post Graduate Diploma Training Course and 100% placement of successful students in Industry through campus interview.
(ii) Conducting short term (national and international level) training course for panel manufacturing technologist as per the requirement of the trainee/Industry.
(iii) Conducting Training for IFS Officers for information dissemination on latest development in Wood technology and formulation of national standards for wood/wood based panel Industry
3. Testing: Testing of wood based panel and allied project and adhesive as per requirement of national and international standards or to the requirement of customer. Formulating Standards
4. Extension: Number of Technologies successful transferred for commercialization with the result of commercial production.

Section 5

Specific performance requirement:

1. Fund allocation from MoEF: Timely fund allocation within the time frame of the project is very important for successful completion within stipulated time frame.
2. Lack of manpower delays execution and completion of research project, extension activities.