

Annual Report 2020-21



Central Pulp & Paper Research Institute



Annual Report

2020-21



Central Pulp & Paper Research Institute

An Autonomous Organisation Registered under Societies Act Under Administrative Control of
Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry,
Government of India



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From the Director's Desk

It is my great pleasure to present the progress and achievements of CPPRI during 2020-21 through this Annual report.

The year 2020-21 will be remembered as historical year of fight against pandemic Covid19. Indian Pulp and Paper Industry has also faced a number of challenges due to Covid 19. Central Pulp and Paper Research Institute returned swiftly to its normal working from June 2020, after the lockdown period of March 24th to till 31st May 2020.

The major achievement during the year is the successful NABL Desktop Surveillance. The desktop documents were evaluated at NABL and accreditation was continued as per ISO/IEC 17025: 2017 for Chemical and Mechanical disciplines of testing field for the existing scope.

In the area of product development CPPRI has been consistently working and has successfully completed two different projects for production of fluff pulp from bamboo and production of high purity dissolving pulp from bamboo and whole jute. In addition to this consultancy was provided to a number of startups companies for utilization of cellulosic biomass for production of pulp for table wares or paper crockery.

The Environmental Management Division of CPPRI was engaged by Central Pollution Control Board (CPCB) as third party in monitoring the environmental status of over 95 Grossly Polluting Industries (GPI) located in Ganga River Basin and 60 Grossly Polluting Industries (GPI) located in Hindon River Basin in the states of Uttar Pradesh, Uttarakhand and Haryana.

The Institute also focused on the institute –industry interaction and commercialization of process technologies through NDAs, MOUs and technology transfer. C2C Consultancy, Coimbatore, Rai Sugar, Bangalore, Sparkle Eco Innovations private Limited, Surat, J. P. Mukherji & Associates Private Limited, Pune, Kriya Labs Private Limited, New Delhi, AJM Textiles India, Hyderabad, Telangana, Triveni Trading Corporation, Bangalore, Century Pulp & Paper, Lalkuan, AKAR Limited are some of the companies which have taken CPPRI services for development of process conditions for their plant.

The Institute has been executing 3 projects under Project Based Support and 14 RSC-DCPPAI funded projects in the area of Raw material and Product Development, Process Optimization, Cleaner Production Technologies, Energy Conservation, Environment Management, Skill development etc to address the various issues of Indian Paper Industry.



In the area of technology development CPPRI has developed Process technology for utilization of rice straw for value added products like packaging grade paper and moulded products grade pulp.

Dedicated efforts made by the Institute in rendering technical, testing and consultancy services to various agencies has resulted in Internal Revenue Generation (IRG) of ₹ 323.98 Lacs during the period 2020-21.

With an objective to maintain corruption free work culture, CPPRI is complying the directives of RTI Act and Central Vigilance Commission. The Hindi Cell of CPPRI continued its efforts to increase use of Hindi in Official work.

CPPRI as usual observed various important days during the year like Independence Day, Republic Day, International Women's Day, World Environment Day and Vigilance Awareness Week etc., through organization of meetings and functions for creating awareness among the staff and their families on the related issues.

The Institute deeply mourns the sudden and untimely demise of Dr. Guruprasad Mohapatra, IAS, Secretary, DPIIT, Ministry of Commerce and Industry, Government of India and President, Council of Association (CoA) of CPPRI and place on record the guidance and encouragement extended by his good offices. The institute would also like to place on record the guidance provided by Shri Anil Agrawal, IPS, Additional Secretary (DPIIT), Ministry of Commerce & Industry,

The valuable guidance and support extended by the Hon'ble Chairman and Members of Development Council for Pulp, Paper and Allied Industries (DCPPAI), Council of Association (CoA) of CPPRI and Research Advisory Committee (RAC) of CPPRI is also sincerely acknowledged.

CPPRI also thank Indian Paper Manufacturers Association (IPMA), Indian Newsprint Manufacturers Association (INMA), Indian Agro and Recycled Paper Mills Association (IARPMA) and Indian Recycled Paper Mills Association (IRPMA) as well as all our valued clients from pulp, paper and allied industries for their continued support in various activities and Projects being executed by CPPRI.

I also thank CPPRI Scientific, Technical, Administrative and Accounts Staff for their dedicated and sustained team work which has been a driving force for CPPRI's growth and progress.

Dr. M.K.Gupta
Director In-charge

HIGHLIGHTS OF INDIAN PULP AND PAPER SECTOR 2020-21

PRESENT SCENARIO

Indian paper industry is one of the most fragmented sector with production capacity ranging from 5 TPD to 1650 TPD and geographically highly dispersed. During the decade 2010 to 2020 Indian Paper Industry registered a substantial growth which resulted in a two fold increase in production from 10.99 Million Tons (2010) to 21.36 Million Tons (2020).

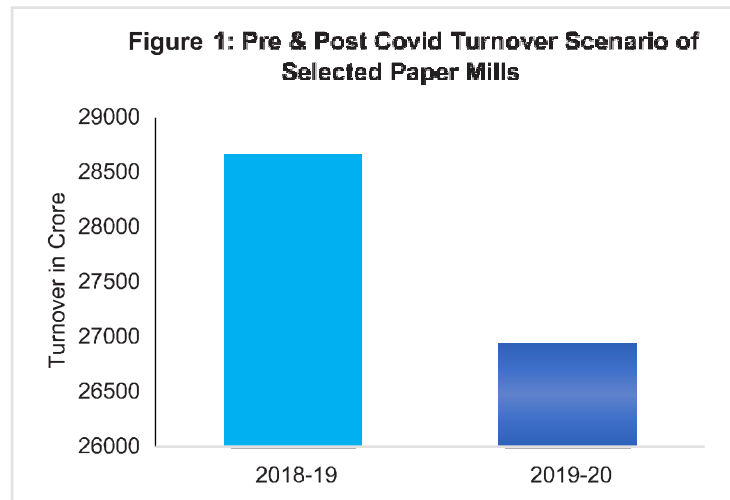
This growth story of Indian Paper Industry has been hampered due to the pandemic situation. Every sector of the industry was forced to stop operations due to nationwide lockdown imposed after March 2020. Initially, Indian Paper Industry also shutdown the operation but after few weeks, paper sector was recognized as an essential service in many states and was allowed to operate with strict COVID Norms.

Upon resumption of operations, strong demand of pharmaceutical sector, FMCG sector, online shopping, and increase use of hygienic paper products etc., gave the momentum to the packaging segment. But, on the other side, due to closure of professional premises, academia, institutions, etc., the demand for writing and printing paper.

In the fourth Quarter of 2019-20 most of the well-known paper units reported downfall in the turnover figures.

In FY 2020-21, mills were forced to close down on an average of 50 days and as a result most of the mills did not file performance report and are still doing compilation of turnover and production figures.

In the mid of 2020, industry was facing immense shortage of raw material mainly because of logistics interruption, shortage of containers, labor issues, etc.,. After June 2020, all units resumed their process with 60% to 70 % capacity utilization. However, due to ongoing demand of pharma and FMCG sector the packaging sector did not loose its pace and registered almost same production levels as that exhibited in 2018-19.



Strong demand of packaging grade paper provided support to the industry and therefore, 71% production share of market remained largely unaffected by the pandemic impact. Further, some green field as well as brown field projects also started their commercial production of packaging grade paper, which covered up the loss of



production wiped out the loss of production figures of the writing and printing sector.

KEY STATISTICS (2019-20)

Table-1
Key Trends - Indian Paper Industry

Total Number of Mills	900		
Total Installed Capacity, million tons	29.11		
Operating Installed Capacity, million tons	23.99		
Production of Paper, Paperboard, and Newsprint, million tons	21.36		
Capacity Utilization, %	~89		
No. of Running units	526		
No. of Mills Closed	374		
Idle installed capacity, million tons	5.12		
Import (in Million tons)	3.54		
Export (in million tons)	2.07		
Consumption (in million tons)	22.83		
Per capita Consumption (kg)	~15.63		
Contribution from Different Segments (million tons)			
Segment wise Production	Wood Based	Agro Based	RCF Based
Production in Million tons	3.91	1.16	16.29

Source: Census Survey of Indian Paper Industry

Today there are about 900 paper mills spread across the country. The total operating installed capacity in the sector is 23.99 million tons per annum and the production is 21.36 million tons per annum. Table -1, presents a snapshot of the Indian paper sector.

Nationally, paper sector is one of the core entities in terms of providing employment in the Indian hinterland. Overall, 2.5 million persons are directly and indirectly getting their livelihood from this sector.

At the national level, this sector contributes Rs. 8000 Crores to the National exchequer with a turnover of Rs. 70000 Crores. Fueled by the National Priority of a knowledge-based economy, the sector is likely to emerge as

a significant contributor to the Government's target of achieving an overall growth of 8% in manufacturing.

A STATISTICAL BACKGROUND NOTE ON INDIAN PAPER INDUSTRY

The consumption of paper in India increased from 16.91 million tons in 2016-17 to 22.83 million tons in 2019-20. During this period India's paper consumption registered CAGR of 6% compared to the global growth of 3% making India one of the largest growing paper markets in the world. Relevant figures are placed in Table 2

Table-2
Indian Paper Industry-Market

Year	Production Capacity	Production	Import	Export	Consumption
	(Million Tons)				
2016-17	20.65	16.91	4.310	1.040	20.18
2017-18	22.11	18.91	3.579	1.323	21.166
2018-19	21.90	19.36	3.250	1.910	20.700
2019-20	23.99	21.36	3.542	2.07	22.83
2020-21	24.24 (E)	21.7 (E)	2.10	2.59	21.21

(E) - Estimated

Source: Production Data from CPPRI, other data from Import Export Data Bank, DoC, GoI

SEGMENTAL REVIEW OF INDIAN PAPER INDUSTRY

The Table 3 gives the segmental production breakup

Table-3
Raw Material wise Production Figures of Indian Paper, Paperboard and Newsprint

Raw Material & Variety of Paper	In Tons
Writing & Printing from Virgin	30,32,524
Writing & Printing from RCF	17,61,748
Sub-1	47,94,272
Kraft from Virgin	8,82,846

Kraft from RCF	108,02,225
Kraft paper board/Duplex Board from Virgin	8,73,797
Kraft paper board/Duplex Board from RCF	25,66,259
Sub-2	151,25,127
Newsprint from Virgin **	0
Newsprint from RCF**	6,67,726
Sub-3	6,67,726
Tissue Paper	2,63,663
Sub-4	2,63,663
Others & Specialty	51,6053
Sub-5	51,6053
Grand total	213,66,840

*** Newsprint Production Figures are tentative
Source: Census Survey of Indian Paper Industry (Primary & Secondary Data Estimates)*

VARIETY WISE ANALYSIS OF INDIAN PAPER INDUSTRY

Table 4
Variety Wise Production Figures based on Raw Material Utilization (in Tons)

Variety	Agro Based	Wood Based	RCF Based	Total
Newsprint Paper **	0	0	6,67,726	6,67,726
Tissue	0	1,78,493	85,170	2,63,663
Kraft Paper	3,17,461	5,65,385	108,02,226	116,85,072
Duplex Paper/Board	0	8,73,797	25,66,259	34,40,056



Writing & Printing Paper	8,44,482	21,88,042	17,61,748	47,94,272
Others	0	1,02,443	4,13,610	5,16,053
Total	11,61,943	39,08,160	162,96,739	213,66,842

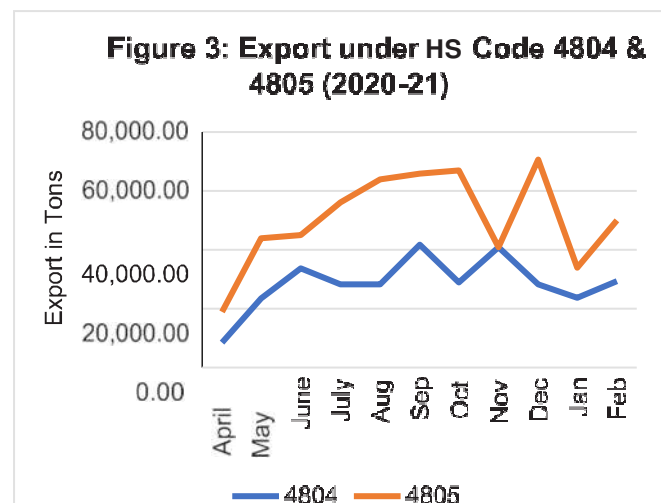
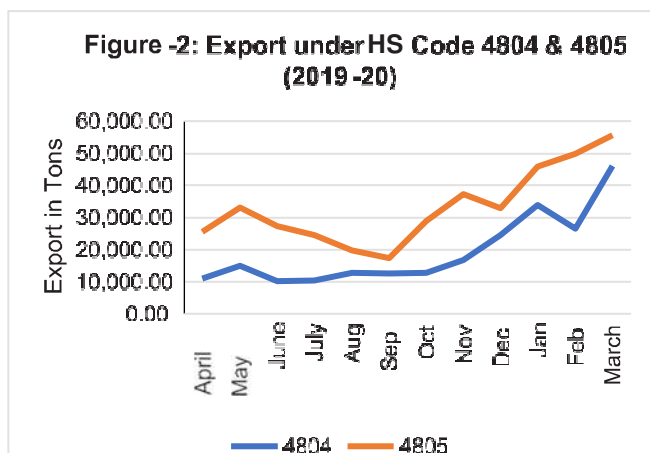
*** Newsprint paper production figures are tentative.
Source: Census Survey of Indian Paper Industry*

Paper industry has three broad categories of products i.e. Writing & Printing Paper, Packaging Grade paper (Kraft paper, duplex paper, board and paperboard) and Newsprint. Table 4 gives the category wise production figures. As can be seen, the newsprint sector continued to be affected by the low cost imports, thereby this sector clocks the production figure higher only to Tissue Paper segment. Further, all the production of Newsprint is coming from the waste paper based mills. Production of writing and printing paper gets contribution from the mills using all the three type of raw materials.

OVERSEAS TRADE OUTLINES OF PACKAGING GRADE PAPER

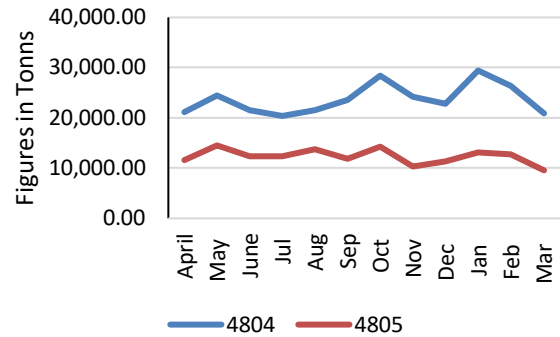
First wave of Covid -19 posted various challenges before paper sector, but industry stakeholders judged the situation wisely. After, November 2019, upward trend can be seen in exports as foreign stakeholders and dealers, started to import from India.

The codes 4804 and 4805 refer the uncoated Kraft paper and other kraft papers (fluting, test liners), respectively.



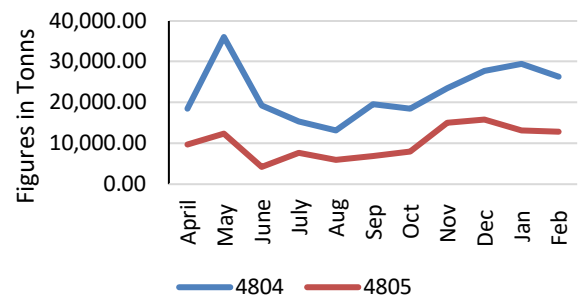
In spite of sufficient domestic capacity of packaging grades paper manufactures, imports under HS code 4804 & 4805 are taking place in India. Industry sources ascribe these imports to the zero to zero tariff regimens under various free trade agreements

Figure -4: Import under HS code 4804 & 4805 (2019-20)

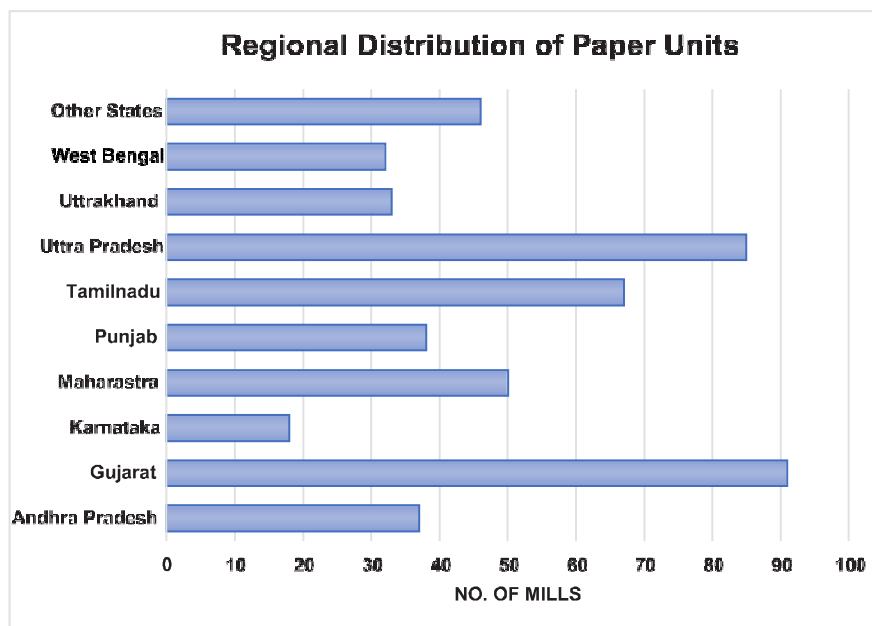


In 2020-21, steep hike can be seen as nationwide lockdown affected the local production and wherefor, to fulfill the domestic demand almost double imports were recorded in the month of April & May, 2020-21. But, as industry resumed its operations, dependency on the imported kraftpaper reduced to pre-covid level.

Figure -5: Import under Hs Code 4804 & 4805 (2020-21)



REGIONAL DISTRIBUTION OF INDIAN PAPER INDUSTRY



Source : CPPRI Statistical Cell

If the numbers alone are considered, then Gujarat has the maximum paper making units. However, most of these units are recycle fibre based. The state of UP has the second largest number of paper mills. Most of these are in the Muzaffarnagar and Meerut clusters. Most of the major players are in Tamilnadu, Andhra Pradesh and Maharashtra. The major pulp and paper mills clusters are in and around Muzaffarnagar, Vapi, Muzaffarnagar, Kashipur, Coimbatore, and Ahmedabad.

CONCLUSION

The Indian paper sector has performed fairly well over the years even though it was confronted with factors internal to the sector as well as due to externalities. The sector has unutilized capacity primarily due to acute fiber shortage in the country. Another reason for low capacity utilization has been the ever-increasing input costs particularly for energy inputs (both coal and non-coal).

The sector is very capital intensive –the ROI in its case is five to seven years. This fact has been reflected over the decades that almost all capacity addition have occurred largely through brownfield expansions. Further, most of these expansions have been in the waste paper based segment and due to de-bottlenecking measures taken by individual units, as low investment options.

Even in the above scenario, the Indian paper sector has taken notable steps to maintain smooth operations and remain competitive to the maximum extent possible in the post globalization era. The work carried out in raw material augmentation and its utilization by the sector is very commendable. Nearly all wood-based paper mills have robust plantations programs in place wherein they can source the major volumes of the required raw material. The agro based segment has mastered the art of paper making from what are known as short fiber and inferior raw material. India is one of the few countries that produce writing/printing paper from bagasse and other agro residues.

Time is now ripe for the Industry to look beyond the medium term and invest in R&D for long term sustainability. There is an urgent need to invest the CSR funds into R&D which not only help the sector but also will impact the communities that are directly or indirectly involved with the paper sector.

There is a pressing need to ensure a sustained availability of quality lignocellulosic raw material for paper making in the country. In this reference the proposal for leasing of degraded forest lands for pulpwood plantations needs to be fast tracked by the Ministry of Environment, Forests and Climate Change (MoEF&CC). If the industry is assured of availability of quality raw material well into the future, it can plan investments and expansions with a long-term vision.

Also, urgent interventions are needed for revising the ITC-HS codes for paper (Chapter 48) at the eight-figure level in order to reflect the needs of the current trade of paper in India. This is needed to reduce the increasing imports of these items under the “Others” category. Also, certain varieties such as copier paper needs to be given a specific code under Chapter 48.

Energy is clearly the most important parameter that needs to be monitored after the raw material availability. The industry needs to shift to energy efficient technologies, but it needs funds for the same which are difficult to be available on commercial terms in view of the long ROI. Whereas the Bureau of Energy Efficiency has made some efforts to help the industry move towards energy efficiency under PAT -2 and the National Motor Replacement Program (NMRP) through its subsidiary, Energy Efficiency Services Ltd. (EESL), direct funding may have to be planned for inducting energy efficient unit operations in the pulp and paper sector.

Currently, the paper sector is moving towards an era of new opportunities driven by introduction of biorefinery approach and possible ban on Single Use Plastic. These opportunities will open new avenues for utilization of all possible unique products from the constituents of ligno-cellulosic raw materials produced in a biorefinery. This would have the potential to change the face of the Industry. The sector may well look into the future where pulp and paper would actually be the by-product of the biorefinery operations, and the other value-added eco-friendly products will become the main stream products contributing substantially to the bottom line.

MANAGEMENT

Council of Association (CoA)

The Council of Association of Central Pulp & Paper Research Institute (CPPRI) is the supreme body consisting of 15 members having representation from Ministry of Commerce and Industry, Department of Science & Technology (DST), Council of Scientific and Industrial Research (CSIR), Indian Council of Forestry Research and Education (ICFRE), Indian Institute of Technology (IIT), Roorkee, Indian Newsprint Manufacturer's Association (INMA), Indian Agro and Recycled Paper Mills Association (IARPMA), Indian Recycled Paper Mills Association (IRPMA) and Indian Pulp and Paper Technical Association (IPPTA) etc. The President of Council of Association of CPPRI is appointed by Government of India. The institute deeply mourns the sudden and untimely demise of its President of Council of Association, Dr. Shri Guruprasad Mohapatra, IAS, Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India. Shri Anil Agrawal, IPS, Additional Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India is also closely associated with the affairs of the Council. The CoA was reconstituted on January 30, 2019

Composition of the Council of Association	
President	Secretary to the Government of India, Department for Promotion of Industry and Internal Trade
Vice President	Joint Secretary to the Government of India, Department for Promotion of Industry and Internal Trade
Member Secretary	Director, Central Pulp & Paper Research Institute (CPPRI)
Members from Government	3
Members from Academic Institutions	2
Members from Scientific Institutions	1
Members from Paper Industry	6



MEMBERS OF COUNCIL OF ASSOCIATION OF CPPRI

1.	Dr. Guruprasad Mohapatra, IAS Secretary & President Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
2.	Shri Anil Agrawal, IPS Additional Secretary Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
3.	Director IF Wing Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
4.	Shri A.S. Mehta Chairman Development Council for Pulp, Paper and Allied Industries and President, J.K. Paper Limited
5.	Shri Ravinder Gaur Scientist D Department of Science and Technology Ministry of Science and Technology, Government of India
6.	Dr. Rakesh Kumar Director CSIR- National Environmental Engineering Research Institute, Nagpur
7.	Dr. Dharam Dutt Professor IIT Roorkee (Saharanpur Campus)
8.	Shri S.D.Sharma, IFS Deputy Director General (Research) Indian Council of Forestry Research and Education, Dehradun
9.	Shri Rohit Pandit Secretary General Indian Paper Manufacturers Association (IPMA), New Delhi
10.	Shri R. Vijay Kumar Secretary General Indian Newsprint Manufacturers Association (INMA), New Delhi

11.	Shri Pramod Agarwal President Indian Agro and Recycled Paper Mills Association (IARPMA) and CMD- Rama Paper Mills Limited	
12.	Dr. R. C. Rastogi President, Indian Recycled Paper Mills Association (IRPMA) and CMD- Khatema Fibres Limited	
13.	Shri Sanjay Singh President Indian Pulp and Paper Technical Association (IPPTA)	
14.	Shri Devesh Khaitan Additional Director Wires & Fabriks (S.A.) Limited, Kolkata	
15.	Dr. B.P.Thapliyal (Up to 31.01.2021) Director Dr. M.K.Gupta (From 01.02.2021 onward) Director Incharge Central Pulp & Paper Research Institute	Member Secretary

Research Advisory Committee (RAC)

The Research Advisory Committee (RAC) of Central Pulp & Paper Research Institute (CPPRI) comprises of prominent scientists and technologists and also representatives from Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry, Government of India, Department of Science and Technology (DST), Council of Scientific and Industrial Research (CSIR), Indian Council of Forestry Research and Education (ICFRE), Indian Institute of Technology (IIT), Roorkee etc. The RAC monitors the progress of various projects carried out by the institute under Project Based Support of DPIIT (Formerly Five-Year plan Projects). Shri Anil Agrawal, IPS, Additional Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India is the Chairman of RAC at present

Composition of the Research Advisory Committee	
Chairman	Joint Secretary, Ministry of Commerce and Industry (DPIIT)
Member Secretary	Director, Central Pulp & Paper Research Institute
Members from Government	3
Members from Academic Institutions	1
Members from Scientific Institutions	3
Members from Paper Industry and other organizations	10
Consultants / Technologists	3

MEMBERS OF RESEARCH ADVISORY COMMITTEE OF CPPRI

1.	Shri Anil Agrawal, IPS Additional Secretary & Chairman Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
2.	Director IF Wing Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
3.	Dr. S.S. Gupta Senior Development Officer Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
4.	Shri K. K. Sinha (Tenure completed on 15.9.2017) Industrial Advisor (TSW, LEI) DPIIT Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India.
5.	Chairman-cum-Managing Director Hindustan Paper Corporation Limited
6.	Dr. S. Chattopadhyaya Faculty Incharge IIT - Roorkee (Saharanpur Campus)
7.	Shri Rahul Khanna President Indian Newsprint Manufacturers Association (INMA) and Managing Director – Khanna Paper Mills Limited
8.	Dr. R. C. Rastogi President Indian Recycled Paper Mills Association (IRPMA) and CMD- Khatema Fibers Limited
9.	Dr. N. V. Satyanarayana Chief Scientist and Head, Business Development Indian Institute of Chemical Technology
10.	Dr. Nishikant Bhardwaj Director Avantha Centre for Industrial Research & Development
11.	Shri Rahavendra Hebbar General Manager (Development) JK Papers Limited

12.	Dr. Vikas Rana Head (C and P Division) Indian Council of Forestry Research & Education	
13.	Dr. Prashant Gargava Member Secretary Central Pollution Control Board	
14.	Shri N. K. Jain Director Valmet Technologies Co. Pvt. Limited (Since Retired)	
15.	Shri Sanjay Singh Chief Operating Officer ITC Limited – Paperboards & Speciality Papers Division	
16.	Shri Pawan Agarwal Chairman Kumaun Garhwal Chamber of Commerce and Industry (KGCCI: Paper Unit Chapter) and JMD - Naini Group of Industries	
17.	Dr. H. D. Kulkarni Vice President (Plantations) ITC Ltd. – Paperboards & Speciality Papers Division	
18.	Shri Tushar Shah Director Daman Ganga Group	
19.	Shri Anil Kumar Executive Director and CEO Shreyans Industries Limited (Unit: Shreyans Papers)	
20.	Shri Pavan Khaitan Managing Director Kuantum Papers Limited	
21.	Shri Arun G. Bijur Vice Chairman SPB Projects and Consultancy Limited	
22	Dr. B.P. Thapliyal (Up to 31.01.2021) Director Dr. M.K. Gupta (From 01.02.2021 onwards) Director Incharge Central Pulp & Paper Research Institute	Member Secretary



STAFF

As on April 1, 2020, CPPRI's core team includes Scientists (18), Technical Staff (12) and Administrative & Finance Staff (5).

CPPRI staff is dedicatedly engaged in providing quality services, support and assistance to Pulp, Paper & Allied Industries. The scientific staff is highly qualified and has vast experience in various areas of paper making such as Raw Material Preparation, Pulping and Bleaching, Stock Preparation and Paper Making, Paper Testing, Chemical Recovery, Energy Conservation, Environmental Management, Biotechnology, Product Development, Quality Control etc. The list of permanent staff along with qualifications is annexed with this report.



MAJOR ACHIEVEMENTS DURING 2020-21

The major achievements of CPPRI during 2020-21 are summarized as under:

NABL Desktop Surveillance

In view of the verification of continued compliance to all the requirements of **ISO/IEC 17025:2017** in the testing field, CPPRI has undergone **NABL Desktop Surveillance**. The desktop documents were evaluated at NABL and accreditation was continued as per ISO/IEC 17025: 2017 for Chemical and Mechanical disciplines of testing field for the existing scope.

Utilization of Cellulosic Biomass

- **Production of Fluff Pulp from Jamaica Bamboo**

Cellulosic fibre (pulp) is the raw material for a number of end products. One of them is hygiene products like adults and baby diapers and sanitary napkins. Conversion of cellulosic pulp for production of super absorbent fluff material to utilize in diapers and sanitary napkins is not only a substantial value addition but also an environment friendly solution too. Cellulosic pulp helps in reduction of synthetic super absorbent material used in these products. The process has two steps:

- Kraft pulping of bamboo and TCF bleaching of optimization of unbleached pulp.
- Hammering of TCF bleached bamboo pulp into fluff.

The fluff prepared from bleached kraft pulp of bamboo is comparable to the pulp available in market.

The project has open the possibility to explore other long fibre raw materials like jute, banana etc to utilize in production of fluff pulp.

- **Production of Dissolving Grade pulp from Bamboo and whole jute**

The fibrous raw material has not only one end use i.e. pulp and paper. Basically pulp is the cellulosic source of raw material for many other end products. Higher the purity of cellulose after pulping and bleaching, higher will be value addition which may turn into better economic viability.

Government of India aims to support the farmers, the growers of the crops like whole jute, bamboo. National Jute Board has sponsored a project on production of high purity dissolving grade pulp from whole jute and bamboo. Whole jute has higher silica and initially it took numbers of experimental trial to remove silica from pulp in different process stages viz. pre-hydrolysis, pulping and bleaching. After sustained efforts we succeeded to produce bleached pulp with +94% alpha cellulose and all other characteristics in the desired accepted range dissolving grade pulp. The trial of conversion of pulp to viscose and to fibre was carried out successfully at Aditya Birla Science and Technology Co. Ltd., Mumbai, Maharashtra. Further

work is in progress on feasibility and pre pilot scale trials.

Environmental Management

- Assistance was provided to **Central Pollution Control Board (CPCB)** as third party in monitoring the environmental status of **over 95 Grossly Polluting Industries (GPI) located in Ganga River Basin** and **60 Grossly Polluting Industries (GPI) located in Hindon River Basin located in the states of Uttar Pradesh , Uttarakhand and Haryana.**

Up gradation of **Air Monitoring Lab** of Environment Management Division through renovation and procurement of **PM_{2.5} Sampler with Mass Flow Controller, Desiccators with hygrometer** and getting all the major equipments calibrated in context of getting the **NABL accreditation** for ambient air and stack emissions pollution parameters.



Upgraded Air Monitoring Lab

- Environment Management Division has been awarded Study on Environmental Audit of Trident Ltd, Barnala Punjab , by Punjab Pollution Control Board , Patiala

Biotechnological Applications

- One microbe was isolated from waste biomass having efficacy for Co-fermentation of C5 & C6 Sugars into ethanol. The application of this microbe is expected to enhance the ethanol yield through co-fermentation of biomass derived pentose and hexose sugars.

Training / Skill Development

CPPRI organized following workshops and training programmes during the year:

- RSC-DCPPAI Web training program on “Chemi-thermo mechanical (CTMP) or Bleached Chemi Thermo-mechanical Pulping (BCTMP) Process of Indigenous Raw Materials for Various End Uses” was organized on September 29, 2020 at CPPRI. 65 participants from various pulp paper mills, academic, R& D institutes etc. attended the web training programme.
- RSC-DCPPAI Webinar on “Indian Paper Industry – An Analysis” was organised on October 29, 2020. Participants from various pulp, paper and allied industries, academia and R & D institutes attended the webinar.
- RSC-DCPPAI Workshop on “Addressing Environmental Issues of Indian Pulp & Paper Mills” was organized on March 20, 2021 at CPPRI. 67 participants from various pulp paper mills, academic, R& D institutes etc. attended the workshop





Glimpses of RSC-DCPPAI Workshop at CPPRI

Organization of webinars/workshop under the RSC-DCPPAI project has helped in information dissemination on latest developments in various area of paper making as well as and skill development of the various mill personnel. The feedback received from mill participants has been encouraging.

Technical and Consultancy Services

- Technical and consultancy services were rendered to various pulp and paper mills and allied industries, technology and chemical suppliers. This included evaluation of raw materials, pulp and paper samples, pulping additives, evaluation of repulpability of packaging grade papers, characterization and analysis of various fibrous and non-fibrous raw materials, environmental samples, etc.. Assistance was also provided

in trouble shooting, adequacy assessment, performance evaluation of various process operations, effluent treatment plant and pollution control equipment. As a result, this resulted in internal revenue generation of ₹ 323.98 Lacs

Contract Agreement / MoU Signed

- Memorandum of Agreement (MoU) has been signed on March 19, 2021 with Avantha Centre for Industrial Research & Development (ACIRD) for collaborative work in the RSC-DCPPAI funded project on “**Study on delignification of Agro Residue Raw Materials Using Deep Eutectic Solvents or/ and Ionic Liquids**”.

Research Papers Published

- 4 Research Papers were published in various journals during 2020-21.

Reports Prepared

- 18 Technical/ Consultancy reports were prepared during 2020-21.

Infrastructure Development / Capacity Building

Upgradation of infrastructure and facilities through purchase of **PM 2.5 Sampler with Mass Flow Calibrator, pH Meter, Electronic Balance, Desiccator with RH Indicator and Stack Monitoring Kit.**



PM 2.5 Sampler with Mass Flow Calibrator



pH meter



Electronic Balance



Desiccator with RH Indicator



Stack Monitoring Kit

Receipts & Expenditure

Receipts

During the year 2020-21, total receipts of the Institute were ` 1415.77 Lacs, which includes ` 92.17 Lacs as Grants in Aid under Project Based Support and ` 999.62 Lacs under the head Development Council for Pulp, Paper & Allied Industries. It also includes Internal Revenue Generation (IRG) of Rs. 323.98 lacs generated from various services viz. Testing, Consultancy, Training etc. as under:

S. No.	Particulars	Amount (₹ in Lacs)
1	Testing	154.44
2	Consultancy/ Membership fee	93.90
3	Training/ M.sc. Fee	9.19
4	Miscellaneous Receipts	66.45
	Total	323.98

Payments

The total expenditure during the year was ` 1425.96 Lacs including ` 105.90 Lacs for procurement of assets.

R&D ACTIVITIES

(A) SCHEMES CARRIED OUT UNDER PROJECT BASED SUPPORT (PBS)

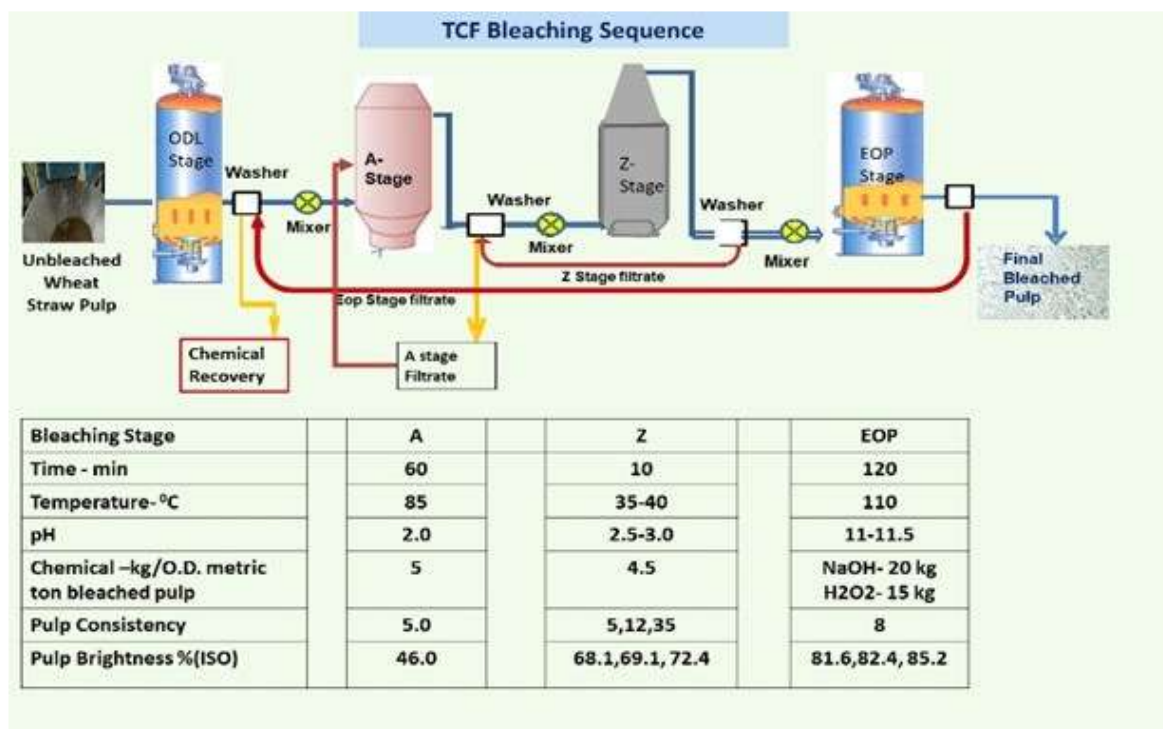
(a) Raw Material and Product Development

I. Bleaching Process Intensification through Short Bleaching Sequences using ECF/TCF Bleaching Technologies for Pulp Produced from Indigenous Raw Materials

The bleaching process intensification is the concept aimed to make the bleaching process stages more efficient so that deliverable of particular process could be higher in terms of brightness gain. These ultimately result into shortening of bleaching sequence while achieving the same targeted pulp properties.

The RAC project was of two years tenure and has been completed successfully in March 2020. The findings of the project are very encouraging. Some of the pulp and paper mills have shown interest to adopt the short sequence TCF bleaching at plant scale and discussed regarding consultancy services on process conditions optimization on mill pulp. The **Figure-1** is representing short sequence TCF bleaching of pulp wherein only two stage bleaching sequence AZ-EOP is compatible to three stage D-Ep-D sequence.

The results of short bleaching sequences were compiled and final report submitted was for third party evaluation to IIT Roorkee. The IIT- Roorkee has found the report satisfactory.



(b) Energy Conservation and Environmental Management

I. Water Conservation through Application of Kidney Technologies in Indian Pulp and Paper Industry

The objective of the project was to study strategies to reduce fresh water consumption in pulp and paper mills by increased reuse and recycling of back water/ treated effluent. The project study involved indepth study on chemical treatment, membrane filtration and ozone treatment of pulp and paper mill effluents from various sources.

A detailed report covering the experimental studies, observations and recommendations was prepared and submitted for third party evaluation to IIT Roorkee. The IIT- Roorkee has found the report satisfactory.

(c) Infrastructure Development and Capacity Building Activities

I. Strengthening of CPPRI Library to Provide Quality Services to Indian Pulp & Paper Industry

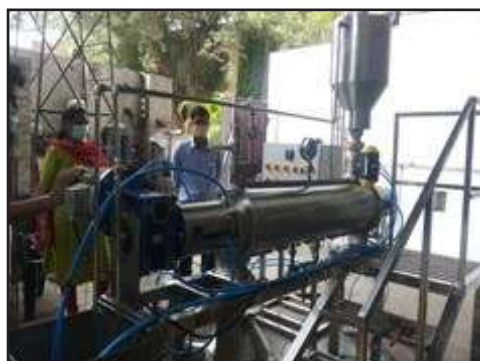
The project was initiated to strengthen the CPPRI library infrastructure so that good quality services could be delivered to Indian Paper Industry by adoption of modern tools and techniques. During 2020-21, CPPRI Library purchased 45 Standards Test Method and two Directories related to pulp and paper to enrich the library collection. Further services were created for providing article alerts to CPPRI scientists on relevant publications related to various areas of pulp and paper manufacturing during the year.

The library also published English and Hindi Version of Annual Report 2019-2020. The project completion report has been submitted.

(B) RSC- DCPPIA FUNDED PROJECTS

I. Demonstration of Ozone Treatment Technology of Indigenous Raw Material Pulp at Pilot Plant Scale (CPPRI)

The main objective of the project was the fabrication of pilot scale ozone reactor for TCF bleaching of agro pulp and its demonstration at pilot scale. The fabrication of ozone reactor is under progress and is likely to be completed by October 2021. After installation of ozone reactor, the experiments related to ozone bleaching of wood/agro pulps will be carried out.



Team CPPRI Pilot Scale Ozone Reactor fabrication site

II. Screening of Parents for Clonal Forestry and Hybridization for Higher Productivity in Eucalyptus (Joint Project of CPPRI-FRI-SPM-IPMA)

Concern for sustained supply of wood to pulp and paper industry is one of the major focus area which has been covered under the project.

The top, middle and bottom sections of 45 species of eucalyptus were collected from FRI and Star Paper Mills Ltd., Nursery. The samples were chipped at Star Paper Mill for proximate chemical analysis, pulping and fibre morphology. Proximate chemical analysis of all three portions were carried out in laboratory. The optimization of kraft pulping experiments of top, middle and bottom parts of eucalyptus was carried out in the laboratory in order to get unbleached pulp kappa 15-16.

The morphological characteristics i.e. average fibre length and fibre diameter were carried out in top, middle and bottom parts of eucalyptus pulp samples.

The oxygen delignification followed by **D-Ep-D** bleaching sequences was carried out to get pulp brightness $85 \pm 2\%$ (ISO



III. Research on Wood Quality and Physical Properties of Pulp Wood Fiber as the basis for Development on Eucalyptus and Subabul Plantation (Joint Project of CPPRI-PAPRI- IPMA)

The aim of the project was selection of right clones and harvesting age of identified species of eucalyptus and subabul and further characterization of wood & fibre quality of 25 promising eucalyptus and 2 subabul clones through detailed proximate analysis and chemical requirement in pulping process.

The experiment work was completed successfully in March 2020. The project is now complete.

IV. Study on delignification of Agro Residue Raw Materials Using Deep Eutectic Solvents or/ and Ionic Liquids (Joint Project of CPPRI-ACIRD)

The aim of the project is to explore an energy conservation & environmental friendly approach for pulping of agro residue raw materials using Deep Eutectic Solvents as an alternate to conventional pulping chemicals. Under the project the Memorandum of Agreement (MoU) has been signed on 19.03.2021 with Avantha Centre for Industrial Research & Development (ACIRD) for collaborative work in the project. Studies are in progress.

V. Creation of Facilities for Testing of Food Packaging Paper and Board and Development of Protocol for Microbial Property (CPPRI)

The objective of the project is creation of dedicated testing facility for food packaging paper and board as per prevailing norms and development of protocol for determining microbial purity of paper and board intended for food packaging application. The work carried out as a part of project activities is as under:

- **Determination of Microbial properties**

In continuation of earlier work, 8 more paper samples used for food packaging including White parchment paper, Natural brown Kraft paper, Grease proof paper and laminated paper board were evaluated for their microbial properties. Total bacterial count and Total fungal count in the samples ranged from 2.6×10^2 to 4.5×10^5 CFU and 0 to 14.3×10^2 CFU. Only one sample i.e. paper plate has shown presence of yeast with 199.3×10^2 CFU/g count.



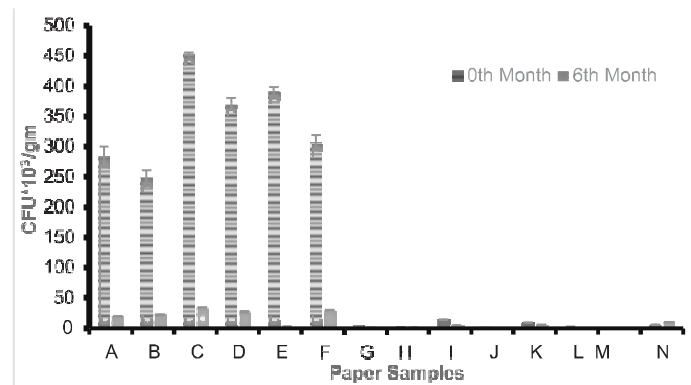
Food grade paper samples collected for study

- **16S rRNA sequencing of dominating microbes isolated from paper samples**

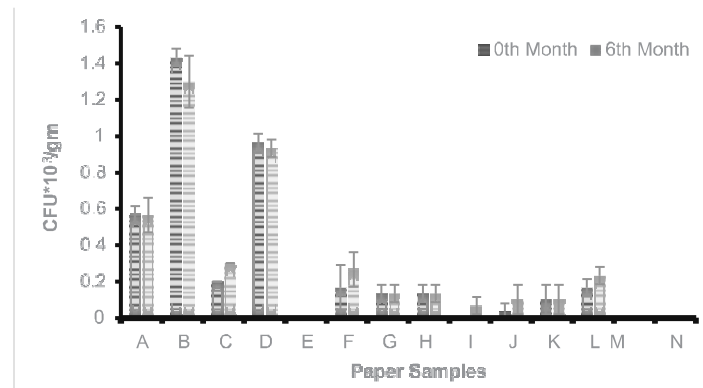
16S rRNA sequencing of 13 dominating microbes isolated from paper samples were completed. 16S rRNA sequencing of dominating microbes have shown that *Bacillus* is most common bacteria present in paper samples. Results have also shown that most prominent bacteria were *Bacillus safensis*, *B. altitudinis* and *B. siamensis*, *B. velezensis* and *B. paranthracis*. These bacteria are not reported for any food borne illness. The dominating fungi were *Aspergillus flavus* and *A. tubingensis* which are food spoilage causing fungi. One novel yeast identified as having closest similarity with *Cystobasidium benthicum* (99.24%) does not have any documented pathogenicity.

- Effect of time on microbial contamination in paper samples**

The samples were examined for their storage effect on microbial count after 6 months of storage at 4°C. The samples have shown reduction in bacterial CFU and can be seen within a range of 1.6×10^2 to 312.3×10^2 CFU per gram with P Value (P) < 0.0001, whereas fungi were close to the previous count i.e. 0 to 13×10^2 CFU/g. Additionally, when samples were examined for presence of yeast, it was found that yeast were not able to sustain the storage duration of 6 months. The number of bacteria and yeast reduced to a certain extent or totally diminished in most of the samples while fungi were unaffected. Thus it indicated that storing samples at low temperature for longer duration can reduce the bacterial and yeast load while fungi load will remain unchanged.



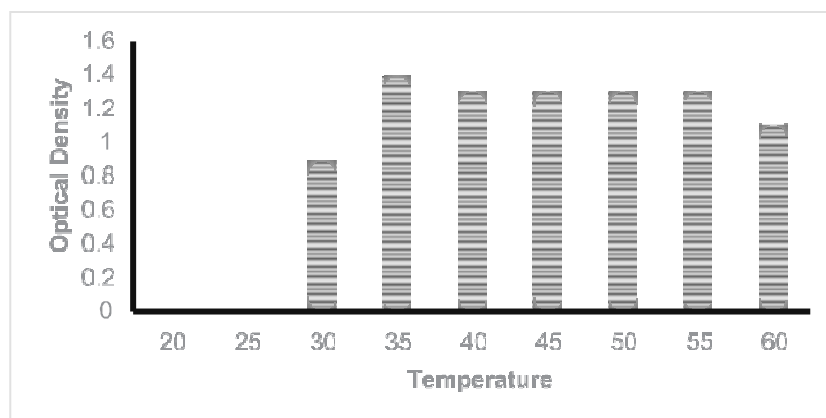
Comparison between bacteriological CFU obtained on 0th and 6th month



Comparison between Fungal CFU obtained on 0th and 6th month

- Effect of temperature on microbial load**

Effect of temperature was carried out by performing temperature profiling with one of the *Bacillus* Species and observed that it can resist high temperature of 50°C- 60°C. The temperature below 30°C was not favourable for the growth of bacteria as there was no turbidity in the broth incubated at 20°C-28°C and the absorbance was also nearly zero for 24 hours, on the other hand Fungi was able to grow well between 25° C-40° C on PDA plate.



Temperature profiling of *Bacillus* Species (*B. siamensis*)

VI. Bacterial Cellulose Production for Diverse Applications in Pulp and Paper Sector (CPPRI)

The objective of the project is laboratory scale production and characterization of bacterial cellulose and then investigating its application in pulp and paper sector. Following work was carried out:

- **Isolation of bacterial cellulose producing bacteria**

For isolation of Bacterial Cellulose Producing strains, different bacterial strains were isolated from samples like rotten fruits and vegetables.

The strains were then grown on Hestrin-Schramm (HS) and Super Optimal Broth with catabolic repression (SOC) for screening of BC producing strains. Swab method followed by serial dilution and pour plate method was used to grow the microbes on agar as well as broth media. To observe bacterial cellulose production a white layer on the liquid-air contact point has been checked. A thin layer of cellulose was formed in case of bacterial isolates from rotten samples.

- **Bacterial cellulose producing strains**

Strains *Glucanoacetobacter Xylinus*, *Acetobacter hansenii* and *Acetobacter Xylinum* that are known to produce good yield of Bacterial cellulose were procured from IMTECH, Chandigarh and NCL, Pune. Studies carried out on *G. xylinus* has shown suspended thin BC pellicle formation. Temperature range between 15-25 °C and pH 6-8 has been found to be optimum pH and Temp for suspended BC pellicle formation. Further studies are in progress. *A.hansenii* and *A.Xylinum* procured from NCL, Pune were revived and stored for further experiments.

VII. Bio-polymeric Approach for Improvement of Mechanical and Barrier Properties of Packaging Paper/ Paperboard through Surface Application (CPPRI)

The consumption of paper and paper board in packaging grade is on rise. Compared to their plastic counterpart, paper and paper board are environmental friendly packaging materials due to the properties of recyclability, biodegradability, sustainability and renewability of paper. However, with each

recycling, there is degradation in strength properties of paper. To improve strength properties and to provide barrier properties, plastic based coating and laminations are commonly used in packaging material. Inherently, paper and paper products are hygroscopic in nature and lack required barrier properties against moisture, oil and water etc.

To control barrier properties number of petroleum based derivatives such as polyethylene, waxes, polyfines, PVOH, polyvinylidene chloride (PVDC) etc. are used which reduces the recyclability and biodegradability of paper. Research is in progress to replace these synthetic barrier chemicals by biopolymeric chemicals like corn zein, soy protein, starch, chitosan, PLA, PHA, etc. A project under RSC- DCPPI was initiated with an approach of focusing the application of biopolymers on paper for achieving barrier properties towards water, oils and moisture. Initial work of literature survey on various biopolymers available and methods of their evaluation and application in laboratory are in progress.

VIII. Studies on Alternate Auto-causticization Process for Conventional and Non-conventional Chemical Recovery Systems (CPPRI)

The project has been initiated in 2020 with an objective to:

- (i) Development of improved method for causticizing sodium carbonate containing smelt in conventional chemical recovery system and Na_2CO_3 generated in Copeland (LTI) chemical recovery system.
- (ii) Reduction in the complexity of conventional causticization process in conventional and non-conventional chemical recovery systems
- (iii) Making chemical recovery operations cost effective and better affordable in small mills.
- (iv) Reduction in energy requirements and environmental hazards associated with solid waste and greenhouse gas emission and
- (v) Reduction in lime requirement.

Literature survey has been completed. Purchase of microprocessor based automatic pH meter, double distillation water unit and chemicals has been initiated. First lot of black liquor, green liquor, white liquor and other chemical recovery samples were collected from the wood based integrated paper mill and analyzed for various physic-chemical parameters. Causticization efficiency Assessment for conventional and LTI recovery system is under progress.

IX. A Synergistic and Economical Approach for Treatment of Pulp and Paper Mill Effluent System using Microbes and Fly Ash Nano Particles to Achieve Minimum/Zero Waste Discharge (CPPRI)

The project was initiated with an objective for development of a novel eco-friendly technology at bench scale for removal of colour from paper mill effluent using bacteria along with fly ash nano particles for facilitating increasing reuse / recycle of treated effluent and consequently minimizing waste water discharge towards zero/ minimum waste discharge.

During the reported period characterization of effluent samples collected from paper mills was completed. Screening and identification of native bacteria from the effluent collected has been

completed at Amity Institute of Biotechnology, Amity University, NOIDA. Further optimization of parameters for maximum removal of colour and other pollutants from the effluent using bacteria and nano particles together is under progress.

X. Census Survey of the Indian Paper Industry (CPPRI)

The above said project has been entrusted to CPPRI with a mandate for continuous updation of the data on the Indian paper sector. The details of the work carried out for the year 2020-21 is placed below please

Work carried out for E-stat application and continuous data updation

- As per the earlier decision of the RSC-DCPPAI, the data collected for the Indian Paper Sector has been made available on a dedicated application over the Android Platform by the name of CPPRI e – Stat.
- The above application provides a data base of Indian paper mills and this requires regular updating.
- In order to update searchable data in the E-stat application like Contact no. address, production, product variety etc., all the necessary information have been added in the E-stat application for the operational mills. Further, a new spreadsheet was created to give elaborative details of all paper mills.
- The Application has been designed in such a mode, where individual mill can self-update mill specific data with specific log in credentials. However, the response from the industry for voluntary update was not up to expected level. Therefore, a special initiative was taken up to sensitize the individual mill representative for self updating of the data base. Updating of data was also done by the Census team after obtaining the same from primary as well as secondary sources. This work was however disrupted time and again due to the pandemic conditions. However, in the last quarter of 2019-20, the mill specific data based on census survey data base has been at updated at E-stat application domain.

Strategic Inputs for the paper sector in the time of the pandemic

- CPPRI presented a status paper to DPIIT wherein specific geographical areas were identified where production could be resumed on immediate basis as well as areas where partial production could be resumed. This deduction was derived based on the geographical impact of Covid- 19.
- Possible measures were also suggested to curtail the impact of covid -19 spread in the premises of paper units.
- Due to Covid-19 impact, it was difficult to reach out to the mills personnel and therefore, it was decided that CPPRI Census Team will design an online platform for real time interaction with the paper mills. After, searching various online methods, it was decided that a WhatsApp group will be created to interact with stakeholders. And therefore, to create WhatsApp group total 700 contact numbers were saved at online platform called Google Contacts. These, all contacts were used to create a WhatsApp group and subsequent communication.

Data updation

- Routine updation of data of mills based on their annual reports was carried out. Due to the present

condition, however, many mills have missed the deadline for annual reports and as of now Annual Reports of about 45 mills only are available with us.

- As required for specific inputs, an exercise was carried out to recheck the products being manufactured by identified mills for the year 2017-18, 2018-19 & 2019-20.
- During updation of data of all paper mills, it was realized that Census Team did not have time series turnover figures of all paper mills (those who have annual report only) and therefore, to fetch this data last five-year annual reports were downloaded from the authentic source of mills. (Number of Mills 43)
- Apart of all these data set, a dedicated excel sheet was prepared giving pin point idea about mills having website or not.
- In view to have updated information about the important identified operational mills, nearly 51 mills dossier were created. In this dossier, key information noted down in a file which can be accessed as and when needed.
- As a further new addition, month wise import & export data for Chapter 47 & 48 for last fifteen year have been consolidated. The data set includes monthly import and export figures in value (Rs as well as USD) and volume. This dataset was subsequently re-categorized into three parts (Rupees, USD and Quantity). Based on the monthly import and export data sheet, a separate consolidated data sheet prepared to have one short information on yearly basis.
- During last meeting of RSC-DCPPAI meeting, it was discussed that Statistical Data Collection Cell, will collect the data from IPPTA, IARPMA & IPMA (through their published hard copy) and considering IARPMA directory as a base, a new spreadsheet needs to be created for bringing all data set on a single platform. In this connection, activities are going on, at present, transformation from hard to digital mode of IPPTA dataset has been completed. As of now, a comparison study is going to mark the gaps found in IPPTA and CPPRI Data base (when this activity will be finalised result will be discussed with the stakeholders and Associations). Once this will be completed, same practice will be carried for IARPMA data also.

Work carried for other agencies

- The quality work of Statistical Data Cell was recognised by another agency and as a result a new project titled *Indian Paper Industry study (under GIZ project- Govt. of Germany funded)* was awarded to statistical data cell. To fulfil the project need, various data sets were generated. These data sets were then used by the CPPRI energy team to work out the sectoral energy usage and overall carbon foot print of the paper sector. The final report has since been submitted to GIZ
- The Statistical Data Cell continuously providing data support to associations in relation to the ongoing activities in relation to setting up of Waste Paper Promotion Center in India in association with METI /Japan Paper Association.

Major output delivered to DPIIT related to data base

- Overseas trade-based study carried out to find out “Disruption in Global Supply Chain” with reference to the paper sector.
- Inputs were provided to DPIIT regarding National Policy for Manufacturing Clusters.



- Data related inputs were also provided to DPIIT for formulation of Quality Control Order 2020.

Ongoing and completed write-up related to Indian Paper Industry

- A Comprehensive Import Data Analysis of Indian Paper Industry- Manuscript under preparation
- Role of Packaging Paper Manufacturers During Pandemic Era- (Abstract submitted for publication)

XI. Continuing Education (Training programme) for Technical personnel in Pulp and Paper Industry (CPPRI)

The project involves organization of training programmes to update the knowledge of technical personnel of Indian Paper Industry which will enable them to utilize the resources, equipment & unit processes to the optimum level.

Following training programmes were organized during the year 2020-2021:

- RSC-DCCPPAI Web training program on “Chemi-thermo mechanical (CTMP) or Bleached Chemi Thermo-mechanical Pulping (BCTMP) Process of Indigenous Raw Materials for Various End Uses” was organized on September 29, 2020 at CPPRI.
- RSC-DCPPAI Webinar on “Indian Paper Industry – An Analysis” was organised on October 29 2020. Participants from various pulp, paper and allied industries, academia and R & D institutes attended the webinar.
- RSC-DCPPAI Workshop on “Addressing Environmental Issues of Indian Pulp & Paper Mills” was organized on March 20, 2021 at CPPRI. Participants from various pulp, paper and allied industries, academia and R & D institutes attended the webinar.

XII. Development of Protocol for Evaluating the Feasibility of Zero Liquid Discharge in RCF based Pulp & Paper Mills (CPPRI)

The project aims to develop methodology for facilitating validation of ZLD status of RCF based paper mills. During 2020-21 the studies were further continued with periodical visits to two RCF based kraft paper mills. Samples of back water were collected from various process operations during each visit and analysed for buildup of pollution load like Total Dissolved Solids (TDS), Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), etc.

Raw material samples collected from the mills were subjected to pulping simulating mill conditions and the back water generated was analysed for pollutional parameters like Total Dissolved Solids (TDS), Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD) etc. Material Balance of process operations and water balance to assess the makeup water required was also carried out.

The project is now complete and report preparation is under progress.



XIII. Land Application of Treated Effluent from Pulp & Paper Mill and Evaluation of its Impact on Soil, Ground Water Properties & Crop Productivity (Joint project of CPPRI & IARI)

The objective of the project is utilization of treated effluents for land application (agriculture / horticulture to conserve fresh water) and evaluation / monitoring of the impact of land application of treated effluent on soil properties , ground water quality as well as crop health.

The project studies were initiated jointly with a detailed literature survey, selection of two mills for project study- (a) Agro based writing & printing paper mill (b) Wood , Agro & RCF based integrated Paper Mill and preparation of questionnaire for collection of primary data.

XIV. A Review Study of ITC-HS Classification for Writing & Printing Grades Papers (Duration: Six Months) (Start Date December 2020)

During the data analysis and deliberations involved in drawing up quality control orders, it was felt that there was a gap between the lines indicated in the BIS code and those specified in the ITC-HS classification. This resulted in a problem in implementation of quality control order and other such related entities. Therefore, the RSC-DCPPAI sanctioned this present study to critically review the ITC-HS classifications of Writing and Printing paper (ITC-HS 4802) and Coated Paper (ITC-HS 4801) with the following broad terms of reference:-

- Analysis of Import /Export data for Writing and Printing paper as well as coated paper
- Identification of ITC-HS items of top imports and exports.
- Comparison of quality standards of the above items with the relevant BIS codes.
- Identification of gaps in the items as presently described in the ITC HS 4802 and 4810
- Creation of new descriptions based on items of import and /or traded in the country.
- Study of present BIS codes
- Establishment of correspondence between the quality parameters of varieties as described in the BIS codes and the ITC -HS classification.

Major portion of the study has been completed. A draft report / interim findings are ready and will be put up before the select committee of RSC-DCPPAI This will be followed by sharing of the findings with all the stake holders and thereafter, the report shall be finalized.

(C) INTERNATIONAL SPONSORED PROJECTS

I. Laboratory and Pilot Plant Pulping and TCF Bleaching of Jamaica Bamboo- Sponsored by Clear Water Technology Group, UK

Clear Water Technology Group, UK awarded a project to CPPRI with an aim to produce 80 kg TCF bleached kraft bamboo fluff pulp.

Initially lab scale optimization of kraft pulping and TCF bleaching of Jamaica bamboo pulp experiments were performed. Unbleached and TCF bleached bamboo pulps were characterised for physical strength properties i.e GSM, Burst index, tensile index, breaking length.

After successful completion of lab trials, 80 kg TCF bleached bamboo pulp was produced in CPPRI pilot plant. The TCF bleached kraft bamboo fluff pulp at quantity of 80 kg of brightness $75 \pm 2\%$ (ISO) shipped to sponsorer at UK. Project report has been prepared and submitted to sponsoring agency



Jamaica Bamboo chips



Pulping experiment performed in pilot plant digester



Cooked materials transferred from digester to blowtank



Washing of Unbleached Jamaica bamboo pulp



Washing of bleached bamboo pulp



Final TCF bleached bamboo pulp production

II. **Pulping Optimization and Bulk Pulp Production of Rice Straw and its Biogas Plant Residue- Sponsored by ECOR Global Research & Development Center, The Netherlands**

ECOR Global Research & Development Center, The Netherlands had awarded a project to CPPRI with an aim to produce 10 kg each of Chemical and CTMP pulp from rice straw and biogas residue of Rice Straw.

10 kg of Chemical Pulp of biogas residue of rice straw and rice straw was produced and shipped to Netherland. Project report has been prepared and submitted to sponsoring agency.



Panel Board prepared by ECOR Panels, The Netherland using rice straw
Chemical and Chemi-thermo mechanical pulp produced by CPPRI

OTHER SPONSORED PROJECTS

I. **Production of High Alpha Cellulose Dissolving (Rayon) Grade Pulp from Whole Jute and Bamboo - Sponsored by National Jute Board of India, GOI.**

Unbleached and bleached pulp of long fibre whole jute and bamboo carry very good potential of pulp for various end uses. High alpha cellulose dissolving (Rayon) grade pulp is one of them. The rayon grade pulp has high price in market and keeping this in focus National Jute Board has sponsored the project to CPPRI.

Under the project activities optimization studies on whole jute and bamboo were carried out in lab using different prehydrolysis process conditions followed by kraft pulping optimisation. Bleaching of was carried out using Elemental Chlorine Free (ECF) bleaching sequence (**O-D-Ep-D1-D2**) for making 85± 2% (ISO) brightness high alpha cellulose dissolving (Rayon) grade pulp. After completion of optimization studies 1 kg OD high alpha cellulose dissolving (Rayon) grade pulp was produced from

Jute and Bamboo in laboratory and sent to National Jute board, New Delhi as per the requirement.

II. Monitoring of Grossly Polluting Industries- Sponsored by CPCB

CPPRI carried out monitoring of the technological environmental status of 95 Grossly Polluting Industries (GPI) located in Ganga River Basin in the states of Uttar Pradesh (Firozabad, Bulandshahar, Noida, Muzaffarnagar, Bareilly), Uttarakhand (Kashipur, Jaspur, Haridwar, Lakuan, Roorkee) and Haryana (Bahadurgarh, Karnal, Sonapat, Gurugram, Yamuna Nagar , Ambala, Kurukshetra) and 60 Grossly Polluting Industries (GPI) located in Hindon River subbasin located in Baghpat, G.B. Nagar, Hapur, Haridwar, Saharanpur, Ghaziabad, Shamli. The units included were of diverse sectors like pulp and paper, converting units, chemical, textiles, refinery,electroplating etc.

Under the project joint visit of CPPRI team along with respective State Pollution Control Board team were conducted for collection of primary and secondary data/ information, samples of effluent generated, discharged, mixed liquor suspended solids (MLSS), upstream and downstream of the receiving tributary/ river as well as ground water samples.

A detailed inspection report for each unit along with ETP adequacy evaluation, recommendation and suggestions were submitted to the CPCB for necessary action at their end.



Textile Dyeing Unit



ETP at a Textile Unit



Joint inspection by CPPRI & UKPCB Team under GPI project

III. Firm Level Demonstration of Technologies and Productivity Enhancement for the Pulp & Paper Industry (UNIDO (IC-ISID) Project)

Under the project, online meetings were held regarding the finalization of design configuration of the proposed skid mounted membrane filtration system as well as process was initiated for recruitment of the staff under the project.

(E) OTHER STUDIES

I. Environmental Audit of Trident Limited, Barnala

This study is awarded to CPPRI by Punjab Pollution Control Board in context of the recommendation of the committee constituted by National Green Tribunal which comprised of Central Pollution Control Board (CPCB), Punjab State Pollution Control Board (PPCB) and District Administration Barnala.

Under the study, a kickoff meeting was held at Trident Ltd between CPPRI team (Dr M.K.Gupta, Director Incharge & Dr Nitin Endlay, Incharge Environmental Management Div) & PCPB, Patiala, PCPB, RO, Sangrur & Officials of Trident Limited.

This was followed by a detailed plant visit of CPPRI team for collection of primary and secondary data, ETP monitoring, performance evaluation of ETP, ambient & stack monitoring, ground water, upstream and down-stream water sampling, etc.



CPPRI Team at Trident Barnala

II Study for Mercury Reduction in Estimation of SO₂ in Ambient Air (IS 5182 P-2 SO₂ Method)

Environment Management Division of CPPRI participated in a study conducted by the Task Force constituted by Chemical Department Air Quality Sectional Committee, CHD 35 to Review the Possibility of Reduction in amount of HgCl₂ used in Absorbing Media for Determination of Sulphur Dioxide in Ambient Air.



CPPRI scientists carrying out study for Mercury Reduction in Estimation of SO₂ in Ambient Air

III Participation in Proficiency Testing Exercise

As a prerequisite for NABL accreditation Environment Management Division successfully participated in PT exercise for :

- PM₁₀ & PM_{2.5} in Ambient Air
- Particulate Matter in Stack Emissions
- Calcium & Magnesium in Effluent samples



Team CPPRI at Mill site for Participation in PT Exercise



PROJECTS SPONSORED BY PULP, PAPER AND ALLIED INDUSTRIES

Raw Material Preparation, Evaluation, Pulping and Bleaching

- Evaluation of Palm Tree Rachis for Production of Pulp and Paper- C2C Consultancy, Coimbatore, India
- Evaluation of Old and New Bagasse Samples of Kenya, Rai Sugar, Bangalore
- Production of Chemical and Semi Chemical Pulps from Banana Fibre -Sparkle Eco Innovations private Limited, Surat, Gujarat
- Pre-Feasibility Report of Project on Production of 20 – 40 TPD Bagasse Semi Chemical and CTMP/BCTMP Plant- J. P. Mukherji & Associates Private Limited, Pune
- Mechanical Pulping of Rice Straw- Kriya Labs Private Limited, New Delhi
- Mechanical Pulping of Depithed Bagasse- AJM Textiles India, Hyderabad, Telangana
- Production of High α – cellulose Dissolving (Rayon) Grade pulp from Bhima bamboo- Triveni Trading Corporation, Bangalore
- Evaluation of Pulping and Bleaching of Rice Straw and Agro-residues Mixed Mill Pulp- Century Pulp and Paper, Lalkuan, U.K.

Pulp/ Chemical Evaluation, Waste Paper Recycling and Papermaking

Evaluation of Pulp for Various Fibre, Physical and Strength Properties

- AKAR Limited, Dadra and Nagar Haveli
- Arihant Fibres, Jind, Haryana
- Ramswamy Balusamy Alayam Rag Chapper, Tamilnadu
- Bio-Lutions Ecotech India Private Limited, Karnataka
- Everest Industries Limited, Bhagwanpur, Uttarakhand
- Everest Industries Limited, Coimbatore, Tamilnadu
- Everest Industries Limited, Nasik, Maharashtra
- KR Pulp & Paper Limited, Shahjahanpur - Uttar Pradesh
- V.L.S. Fibre, SriRam Nagar, Chennai, Tamil Nadu
- Bank Note Paper Mill India Private Limited, Mysuru, Karnataka
- Chemistry and Bio-prospecting Division, Forest Research Institute, Dehradun

Evaluation of Wet End Chemicals

- Rajeev Chemicals Private Limited, Ghaziabad Uttar Pradesh
- Bank Note Paper Mill India Private Limited, Mysuru, Karnataka
- Chemistry and Bio-prospecting Division, Forest Research Institute, Dehradun



Technical know- how on Repulpability and Paper Making Potential of Packaging Material used by Fast Moving Consumer Goods Companies (FMCG) and Packaging Industries

- ITC Life Sciences & Technology Centre, ITC Limited, Bangalore, Karnataka
- West Coast Paper Mills Limited, Karnataka
- Neelkanth Engineering Works, Haridwar, Uttarakhand
- Huhtamaki PPL Ltd, Raigad, Maharashtra
- Bulk MRO Industrial Supply Private Limited, Mumbai, Maharashtra
- Sree Sivgame Offset Printers, Sivakasi, Tamilnadu
- Century Pulp & Paper, Lalkuan, Uttarakhand
- Chandpur Enterprises Limited, Bijnor, Uttar Pradesh
- AKAR Limited, Dadra and Nagar Haveli
- Ajit Industries Private Limited, Haryana

Troubleshooting in Chemical Recovery

- Kuantum Papers Limited, Saila Khurd, Punjab
- Century Pulp and Paper, Lalkuan, Uttarakhand

Environmental Management

ETPAdequacy (Paper Units)

- Chandpur Enterprises, Chandpur, Bijnor, Uttar Pradesh
- Mohit Paper Mills Limited. Nagina Road, Bijnor, Uttar Pradesh
- Silvertoan Pulp & Papers Limited, Unit-II, Muzaffarnagar, Uttar Pradesh
- Andhra Paper Limited, Rajahmundry, Andhra Pradesh

Performance of Existing ETP

- Multiwal Duplex Limited, Kashipur, Uttarakhand
- Multiwal Pulp and Paper, Kashipur, Uttarakhand

Zero Liquid Discharge (ZLD) Feasibility Report

- Punjab Paper Mills Limited, Ludhiana, Punjab
- Satkar Paper Mills Limited, Ludhiana, Punjab
- Hariom Industries Limited, Kanpur, Uttar Pradesh
- Genus Paper Product Limited, Aghwanpur, Uttar Pradesh

Inspection and Monitoring Reports of Grossly Polluting Industries (GPI's)

155 Grossly Polluting Industries (GPI's) located in Uttarakhand, Uttar Pradesh and Haryana

TECHNICAL AND CONSULTANCY SERVICES

Technical services were rendered to the following mills and organizations by analyzing various samples of fibrous and non fibrous raw materials, pulp, paper, black liquor, lime, lime sludge, rice husk, green liquor, white liquor, effluents, ground water, solid waste etc.

1. A.B. Traders, Ludhiana, Punjab
2. ABP Private Limited, Kolkata, West Bengal
3. Agarwal Duplex Board Mills Limited, Muzaffarnagar, Uttar Pradesh
4. Agarwal Enterprises, Patna, Bihar
5. Aggarwal Zarda Factory Private Limited, Saharanpur, Uttar Pradesh
6. Ajit Industries Private Limited, Sonipat, Haryana
7. AJM Textiles India, Hyderabad
8. Akar Limited, Dadra and Nagar Haveli
9. Allora Paper Products, Agra, Uttar Pradesh
10. Alok Printers, Agra, Uttar Pradesh
11. Amber Press Private Limited, Lucknow, Uttar Pradesh
12. Anand Brothers Offset Printers, Sonipat, Haryana
13. Anandeshwar Industries Private Limited, Kanpur Dehat, Uttar Pradesh
14. Anupam Prakshan, Mathura, Uttar Pradesh
15. Arihant Paper Board Mills, Jind, Haryana
16. Avery Dennison India Private Limited, Gurugram, Haryana
17. Bahl Paper Mills Limited, Kashipur, Uttarakhand
18. Balaji Malts Private Limited, Mandhya, Karnataka
19. Bamboo Bio Products, Jamaica, West Indies
20. Bhagwat Printing Press, Mathura, Uttar Pradesh
21. Bihar Agricultural Management & Extension Training, Patna, Bihar
22. Bihar Board of Open Schooling & Examination, Patna, Bihar
23. Bihar Livestock Development Agency, Patna, Bihar
24. Bihar Sarkar Shram Sansadhan Vibhag, Patna, Bihar
25. Bihar Skill Development Mission, Patna, Bihar
26. Bihar State AIDS Control Society, Patna, Bihar
27. Bihar State Text Book Publishing Corporation Limited, Patna, Bihar
28. Bihar Swasthya Suraksha Samiti, Patna, Bihar
29. Bihar Vidhyalya Pariksha Samiti, Patna, Bihar
30. Bio-Lutions Eco Tech India Private Limited, Bengaluru, Karnataka
31. Board of School Education Haryana, Bhiwani, Haryana
32. Box Corrugators and Offset Printers, Bhopal, Madhya Pradesh
33. Bulk MRO Industrial Supply Private Limited, Mumbai, Maharashtra
34. Burda Druck India Private Limited, Greater Noida, Uttar Pradesh
35. C2C Consultancy, Udumalpet, Tirupur, Tamil Nadu
36. Capital Business Systems Private Limited, New Delhi

37. Central Board of Secondary Education, New Delhi
38. Central Pollution Control Board, New Delhi
39. Centre for Environmental, Anna University, Chennai, Tamil Nadu
40. Century Pulp & Paper, Lalkua, Uttarakhand
41. Chadha Papers Limited, Rampur, Uttar Pradesh
42. Chandpur Enterprises Limited, Chandpur, Uttar Pradesh
43. Chaudhary Charan Singh University, Meerut, Uttar Pradesh
44. Chaudhary Devi Lal University, Sirsa, Haryana
45. Cheema Papers Limited, Kashipur, Uttarakhand
46. Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh
47. Classic Binding Industries, Solan, Himachal Pradesh
48. Content Tools and Engineers, New Delhi
49. Controller of Stationery, Thiruvananthapuram, Kerala
50. Controlmatic, Vadodara, Gujarat
51. DCRTPP, HPGCL, Yamuna Nagar, Haryana
52. Deepak Printers & Publishers, Nainital, Uttarakhand
53. Delhi Bureau of Text Books, New Delhi
54. Deoria Paper Mills Limited, Deoria, Uttar Pradesh
55. Devrishi Paper Private Limited, Jaspur, Udham Singh Nagar, Uttarakhand
56. Dharma Raksha Trust, Ahmedabad, Gujarat
57. Disha Industries Private Limited, Muzaffarnagar, Uttar Pradesh
58. DLS Papers Private Limited, Muzaffarnagar, Uttar Pradesh
59. Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh
60. Dr. Mahesh Ganesapillai, Vellore Institute of Technology, Vellore, Tamil Nadu
61. DSG Papers Private Limited, Patiala, Punjab
62. Dynamic Textbooks Printers Private Limited, Bijoli, Uttar Pradesh
63. Employment News (Publications Division), New Delhi
64. Enkey Enterprise, Mumbai, Maharashtra
65. Enmas Andritz Private Limited, Chennai, Tamil Nadu
66. Everest Industries Limited, Bhagwanpur, Uttarakhand
67. Everest Industries Limited, Coimbatore, Tamil Nadu
68. Everest Industries Limited, Nasik, Maharashtra
69. Fuma Labs Private Limited, Pune, Maharashtra
70. Galaxy Papers Private Limited, Muzaffarnagar, Uttar Pradesh
71. General Offset Printing Press Private Limited, Prayagraj, Uttar Pradesh
72. Genus Paper & Boards Limited, Moradabad, Uttar Pradesh
73. Genus Paper and Board Limited Unit-II, Muzaffarnagar, Uttar Pradesh
74. German Development Cooperation, New Delhi
75. Golcha Associated Exports LLP, Jaipur, Rajasthan
76. Good Luck Publishers Limited, Saharanpur, Uttar Pradesh
77. Gopsons Printers Private Limited, Noida, Uttar Pradesh
78. Gospel Press, Lucknow, Uttar Pradesh

79. Grasim Industries Limited, Kumarapatnam, Karnataka
80. Gulshan Arora, Mohali (S.A.S) Nagar, Punjab
81. Hariom Industries Limited, Kanpur, Uttar Pradesh
82. Haryana School Shiksha Pariyojna Parishad, Panchkula, Haryana
83. Henchmen Engineering Consultant Private Limited, Yamuna Nagar, Haryana
84. Himachal Pradesh Board of School Education, Dharamshala, Himachal Pradesh
85. Hindustan Newsprint Limited, Kottayam, Kerala
86. HI-Tech Printers & Publishers, Mathura, Uttar Pradesh
87. HT Media Limited, Greater Noida, Uttar Pradesh
88. Huhtamaki PPL Limited, Khopoli, Maharashtra
89. I. K. Gujral Punjab Technical University, Kapurthala, Punjab
90. Infinity Advertising Services Private Limited, Faridabad, Haryana
91. International Paper APPM Limited, East Godavari, Andhra Pradesh
92. ITC Limited, Bangalore, Karnataka
93. ITC Limited, PSPD Tribeni, Hooghly, West Bengal
94. ITC Limited, Chennai, Tamil Nadu
95. ITC Limited, PSPD, Sarapaka, Telangana
96. J. B. Daruka Papers Limited, Sitapur, Uttar Pradesh
97. J K Paper Limited, Surat, Gujarat
98. J K Paper Limited, Rayagada, Odhisa
99. J&K Engineers LLP, Surat, Gujarat
100. Jai Narayan Vyas University, Jodhpur, Rajasthan
101. K M Papers, Udham Singh Nagar, Uttarakhand
102. K R Pulp & Paper Limited, Shahjahanpur, Uttar Pradesh
103. K R Pulp and Papers Limited, New Delhi
104. K.C. Printing & Allied Works, Mathura, Uttar Pradesh
105. Kagaj Kendra, Kanpur, Uttar Pradesh
106. Kalpana Printing Press, Mathura, Uttar Pradesh
107. Kamal Papers, Mathura, Uttar Pradesh
108. Karyalya Bihar Sanskrit Shiksha Board, Patna, Bihar
109. Karyalya Zila Shiksha Padhadhikari, Madhepura, Bihar
110. Karyalya Collector Evam Zila Nirvachan, Rajgarh, Chhattisgarh
111. Karyalya Collector Evam Zila Nirvachan, Sihor, Gujarat
112. Katyayini Paper Mills Private Limited, Kashipur, Uttarakhand
113. Katyayini Tissues Private Limited, Kashipur, Uttarakhand
114. Kaushambi Paper Mills Private Limited, Amroha, Uttar Pradesh
115. Kazmi & Associates, Allahabad, Uttar Pradesh
116. Ketar Industries, New Delhi
117. Khanna Paper Mills Limited, Amritsar, Punjab
118. Khatema Fibers Limited, Khatema, Uttarakhand
119. Kothari Distributors/ Tanay Eco Wares, Hyderabad, Telangana
120. Krishnanchal Pulp & Papers Private Limited, Muzaffarnagar, Uttar Pradesh

121. Kriya Labs Private Limited, New Delhi
122. Kuantam Paper Limited, Hoshiarpur, Punjab
123. Lucknow Printers & Publishers, Lucknow, Uttar Pradesh
124. M.P. Engineering Construction (1) Private Limited, Saharanpur, Uttar Pradesh
125. Madhya Pradesh Bhoj (Mukt) Vishwavidyalaya, Bhopal, Madhya Pradesh
126. Madhyamik Shiksha Board Rajasthan, Ajmer, Rajasthan
127. Madhyamik Shiksha Mandal, Bhopal, Madhya Pradesh
128. Maharashtra Paper Company, Pune, Maharashtra
129. Mahesh Edible Oil Industries Limited, Agra, Uttar Pradesh
130. Makhanlal Chaturvedi National University of Journalism & Communication Bhopal, Madhya Pradesh
131. Manohar Printing Press, Mathura, Uttar Pradesh
132. Marubeni India Private Limited, New Delhi
133. Mercury Paper Agencies, Bangalore, Karnataka
134. Modern Paper Mart Private Limited, Delhi
135. Mudran Evam Lekhan Samagri Vibhag, Haryana, Pachkula, Haryana
136. Mudran Mahal Printers & Publisher, Agra, Uttar Pradesh
137. Multiwal Duplex Private Limited, Kashipur, Uttarakhand
138. Multiwal Pulp & Board Mills Private Limited, Kashipur, Uttarakhand
139. Mysore Sales International Limited, Bengaluru, Karnataka
140. National Health Mission Haryana, Panchkula, Haryana
141. National Jute Board, Kolkata, West Bengal
142. National Printers, Ranchi, Jharkhand
143. Neelkanth Engineering Works, Haridwar, Uttarakhand
144. New Ratan Priya, Patna, Bihar
145. North Bihar Power Distribution Company Limited, Patna, Bihar
146. NS Papers Limited, Muzaffarnagar, Uttar Pradesh
147. Office of the Deputy Commissioner of Customs, Surat, Gujarat
148. Office of the Assistant Commissioner, Pant Nagar, Udham Singh Nagar, Uttarakhand
149. OG Hemp Company, Kolkata, West Bengal
150. Oyster Printers & Publishers Private Limited, Mathura, Uttar Pradesh
151. Pathya Pustak Adhikari, Lucknow, Uttar Pradesh
152. Pioneer Printers, Agra, Uttar Pradesh
153. Pitambra Books Private Limited, Jhansi, Uttar Pradesh
154. Prakash Packagers, Lucknow, Uttar Pradesh
155. Prarambhik Shiksha Evam Sarva Siksha Abhiyan, Bhagalpur, Bihar
156. Pratibha Pratishthan, New Delhi
157. Pulp and Paper Research Institute, Jaykeypur, Rayagada, Odhisa
158. Punjab National Bank, Noida, Uttar Pradesh
159. Punjab Paper Mills Limited, Ludhiana, Punjab
160. Punjab State Lotteries, Chandigarh, Punjab
161. Rai Sugar, Bangalore, Karnataka
162. Rajasthan Rajya Patya Pustak Mandal, Jaipur, Rajasthan

163. Rajeev Chemical Private Limited, Ghaziabad, Uttar Pradesh
164. Rajeev Prakashan, Allahabad, Uttar Pradesh
165. Rajesh Explosives Private Limited, Haridwar, Uttarakhand
166. Rajya Kendriya Mudranalya, Jaipur, Rajasthan
167. Rajya Pariyojna Nideshak, Lucknow, Uttar Pradesh
168. Ramraja Printers & Publishers, Jhansi, Uttar Pradesh
169. Ramswamy Balusamy, Namakkal, Tamil Nadu
170. Rayana Paper Board Industries Limited, Sant Kabir Nagar, Uttar Pradesh
171. SAB International, New Delhi
172. SAGA India, Yamuna Nagar, Haryana
173. Sahota Papers Limited, Jaspur, Udham Singh Nagar, Uttarakhand
174. Samekit Bal Vikas Sevaye Nideshalya (ICDS), Patna, Bihar
175. Sangal Papers Limited, Sardhana, Meerut, Uttar Pradesh
176. SARG Enterprises, Surat, Gujarat
177. Sarvin Printers Private Limited, Nashik, Maharashtra
178. Satia Industries Limited, Muktsar, Punjab
179. Satkar Paper Mills Private Limited, Ludhiana, Punjab
180. Security Paper Mill, Hoshangabad, Madhya Pradesh
181. Security Printers of India Private Limited, Kanpur, Uttar Pradesh
182. Seshasayee Paper and Boards Limited, Erode, Tamil Nadu
183. The Sandesh Limited, Ahmedabad, Gujarat
184. Sh. Gaurav Agarwal, Saharanpur, Uttar Pradesh
185. Shree Kela Jee Books Private Limited, Agra, Uttar Pradesh
186. Shree Sharda Press, Bhavnagar, Gujarat
187. Shree Shivam Corporation, Bhavnagar, Gujarat
188. Shree Somnath Offset, Bhavnagar, Gujarat
189. Shreya Traders, Nalgonda, Telangana
190. Shreyans Industries Limited, Ahmedgarh, Punjab
191. Shri Durlabh Press, Bhavnagar, Gujarat
192. Shri Tirupati Brick Field, Saharanpur, Uttar Pradesh
193. Shriram Institute of Industrial Research, New Delhi
194. Shsashtra Police Prashikshan Mahavidyalya, Sitapur, Uttar Pradesh
195. Silverton Papers Limited, Muzaffarnagar, Uttar Pradesh
196. Singhal Agencies, Lucknow, Uttar Pradesh
197. Sonex Print Pack Private Limited, New Delhi
198. Sonia Arora W/o Gulshan Arora, Mohali (S.A.S Nagar), Punjab
199. South Bihar Power Distribution Company Limited, Patna, Bihar
200. Sparkle Eco Innovations Private Limited, Surat, Gujarat
201. Sree Sivgame Offset Printers, Sivakasi, Tamil Nadu
202. Star Kraft Papers Private Limited, Meerut, Uttar Pradesh
203. Star Paper Mills Limited, Saharanpur, Uttar Pradesh
204. State Health Society Bihar, Patna, Bihar

205. State Society of Ultra Poor and Social Welfare, Patna, Bihar
206. Suchna Avam Jan Sampark Vibhag, Patna, Bihar
207. Suchna Evam Jansampark Vibhag, Lucknow, Uttar Pradesh
208. Swapna Printing Works Private Limited, Kolkata, West Bengal
209. Swastik Computer, Surat, Gujarat
210. T.T.D. Press, Tirupati, Andhra Pradesh
211. Tamil Nadu Newsprint and Papers Limited, Kagithapuram, Tamil Nadu
212. The Institute of Chartered Accountants of India, Noida, Uttar Pradesh
213. The Sandesh Limited, Ahmedabad, Gujarat
214. The Tribune Trust, Chandigarh, Punjab
215. Trident Limited, Ludhiana, Punjab
216. Triveni Trading Corporation, Bangalore, Karnataka
217. Ujala Brick Field, Saharanpur, Uttar Pradesh
218. United Nations Industrial Development Organization, New Delhi
219. Uttarakhand State Legal Service Authority, Nainital, Uttarakhand
220. Valmet Technologies Private Limited, Chennai, Tamil Nadu
221. Ved Cellulose Limited, Hapur, Uttar Pradesh
222. Veer Bahadur Singh Purvanchal Vishwavidyalaya, Jaunpur, Uttar Pradesh
223. Veer Narmad South Gujarat University, Surat, Gujarat
224. Vidya Vihar, New Delhi
225. Vikram University, Ujjain, Madhya Pradesh
226. Vishwa Pariwar, Raipur, Chhattisgarh
227. Vishwanath Paper & Boards Limited, Kashipur, Udham Singh Nagar, Uttarakhand
228. VLS Fibre, Chennai, Tamil Nadu
229. West Coast Paper Mills Limited, Dandeli, Karnataka
230. Wilson Printcity Private Limited, Ahmedabad, Gujarat
231. Worthwell Papers Private Limited, Faridabad, Haryana
232. Yojna Avam Vikas Vibhag, Patna, Bihar
233. Zila Basic Shiksha Adhikari, Saharanpur, Uttar Pradesh

MEETINGS ATTENDED

Major Meetings attended by CPPRI Scientists during 2020-21 are summarized as under :

Meeting of the Development Council for Pulp, Paper and Allied Industries (DCPPAI)

- The first meeting of reconstituted Development Council for Pulp, Paper and Allied Industries (DCPPAI) was held under Chairmanship of Shri A.S Mehta, President JK Paper Limited on July 24, 2020 through Video Conference.



Meeting of DCPPAI

Meeting of the Technical Subcommittee of Research Steering Committee of Development Council for Pulp, Paper & Allied Industries (RSC-DCPPAI)

- A meeting of the Technical Subcommittee of Research Steering Committee of Development Council for Pulp, Paper & Allied Industries (RSC-DCPPAI) was held on October 10, 2020 via Video Conference to review the progress of ongoing RSC-DCPPAI Funded Projects as well as the New Project Proposals submitted by CPPRI.



Meeting of Technical sub-committee

Meeting of the Reconstituted Research Steering Committee of Development Council For Pulp, Paper & Allied Industries (RSC-DCPPAI), Formerly Cess Committee

- The first meeting of the Reconstituted Research Steering Committee of Development Council For Pulp, Paper & Allied Industries (RSC-DCPPAI), Formerly Cess Committee was held on September 17, 2020 through Video Conference. The meeting was chaired by Shri Anil Agrawal, IPS, Additional Secretary, DPIIT, Ministry of Commerce & Industry, Government of India.

Meetings at Udyog Bhawan, New Delhi

- Dr. Sanjay Tyagi attended virtually the 15th meeting to review the progress of RMDP of NEPA Ltd held on July 30, 2020
- Dr. Sanjay Tyagi attended the 18th meeting of RMC to review the progress of Nepa RMDP "Rightsizing of manpower and implementation of VRS in Nepa Ltd" held on December 4, 2020
- Dr. M.K Gupta and Ms Anuradha V Janbade visited IARI, IARPMA and NCCBM Delhi for a meeting from February 5, 2021 to February 8, 2021.
- Dr. M.K Gupta and Ms Anuradha V Janbade visited Udyog Bhawan, NCCBM and NEERI Delhi from March 2, 2021 to March 5, 2021.
- Dr. Sanjay Tyagi attended virtually 20th meeting to review the progress of the implementation of the revival and mill development plan (RMDP) of Nepa Ltd. held on March 12, 2021.
- Dr. M.K Gupta and Ms Anuradha V Janbade visited IPMA, DPCC and DPIIT from March 15, 2021 to March 18, 2021 for official works and meeting.

Meeting at Manak Bhawan, New Delhi

- Dr. Sanjay Tyagi attended virtually 9th meeting of Publication and Graphic Technology Sectional Committee, MSD 06 held on September 8, 2020.
- Dr. B.P. Thapliyal, Dr. Sanjay Tyagi and Shri Alok Kumar Goel attended virtually 21st Meeting of Paper and its Products Sectional Committee, CHD 15 held on October 28, 2020.
- Dr. B.P. Thapliyal, Dr. Sanjay Tyagi and Shri Alok Kumar Goel attended 2nd meeting for identification of New Subjects for Standards Formulation held on January 27, 2021.
- Dr. M.K. Gupta, Dr. Sanjay Tyagi and Shri Alok Kumar Goel attended e-Meeting on "Sectorial Expert Technical Committee Meeting" held on March 8, 2021.



Meeting at Bureau of Energy Efficiency, Ministry of Power, New Delhi

- Dr. Sanjay Tyagi attended virtually the meeting on “Demand Side Management, Energy Efficiency & Conservation” under chairmanship of DG, BEE” held on September 04, 2020
- Dr. Sanjay Tyagi Attended virtual meeting on “Stakeholder Consultation on Energy Efficiency for Economic Stimulus for India as response to COVID-19” held on February 2, 2021

Meetings with Academic Institutes and R & D Organizations

- Dr. Priti S Lal and Dr. Arvind Kr.Sharma attended web meeting with M/s ABSTC, officials Mumbai on the progress of project “Development of process for the production of dissolving grade pulp for viscose from jute and bamboo” on September 12, 2020
- Dr. Sanjay Tyagi virtually Attended meeting on “Discussion on Potential Assessment Study of Old DCs (P&P Sector): Online Meeting on MS-Team” held on September 30, 2020
- Dr. Sanjay Tyagi attended Webex meeting on “Indian Paper Industry - An Analysis” held on October 19, 2020
- Dr. Priti S Lal and and Mr. Arvind Kr. Sharma attended a meeting on “Progress of RSC-DCPPAI project on Screening of parents for clonal forestry and hybridization for higher productivity in Eucalyptus” with Dr. Ashok Sc. G and Officials of SPM was held at CPPRI on November 11, 2020.
- Dr. Sanjay Tyagi attended Webex meeting of Coordination Committee of NCCBM & CPPRI for discussion on “Use of Starch in Paper Sector” on December 7, 2020
- Dr. Priti S Lal and and Dr. Arvind Kumar Sharma attended a meeting on project “Development of process for the production of dissolving grade pulp for viscose from jute and bamboo with M/s ABSTC, Mumbai through VC on December 9, 2020
- Dr. Sanjay Tyagi attended virtually an interactive meeting with Hon'ble Minister of State (IC) for Power, New and Renewable Energy, Skill Development and Entrepreneurship held on March 1, 2021.

CELEBRATION OF NATIONAL DAYS AND OTHER IMPORTANT DAYS AT CPPRI

Independence Day

CPPRI celebrated the Independence Day on August 15, 2020 with usual fanfare and gaiety. After the guard of honour from CPPRI Security Staff, Dr. B. P. Thapliyal, Director, CPPRI hoisted the National Flag followed by singing of National Anthem. Director, CPPRI addressed the staff and their family members, reminisced the sacrifices of our freedom fighters, highlighted the activities and achievements of CPPRI and unveiled the future plans for growth of CPPRI.

Republic Day

CPPRI celebrated the Republic Day on January 26, 2021 with usual fanfare and gaiety. After the guard of honour from CPPRI Security Staff, the Director Dr. B.P. Thapliyal, unfurled the National Flag followed by singing of National Anthem. Director, CPPRI addressed the staff and their family members, reminisced the contribution of our national leaders in progress and development of our nation and highlighted the activities and achievements of CPPRI.

Dr B. P. Thapliyal, Director also administered the pledge to the staff on fundamental duties as per preamble of Indian Constitution on January 26, 2021.



Republic Day Celebrations at CPPRI

Vigilance Awareness Week

The vigilance week in CPPRI was observed in a sombre manner this year, following the protocols put in place by the institute for COVID – 19 preventions.

As per the extant instructions/directions, a notice was circulated the staff of CPPRI informing one and all about the new initiative of the commission for citizens to suggest systemic improvements in Central Government Organisations. The staff were advised to send suggestions directly to the Central Vigilance Commission from October 27, 2020 to November 14, 2020 by email (coord1-cvc@nic.in) or telephone (011-24651632) with a copy to the CVO, CPPRI.

The official beginning of the VAW week commenced by taking of the integrity pledge by senior staff in person following COVID protocols. The usual procedure of assembly of CPPRI staff in the auditorium was not followed in order to avoid assembly of large number of people. The staff of CPPRI was advised to take the on line pledge. The staff who took the pledge submitted the online generated certificates.

The senior members of the Institute attended the inauguration of the national conference on vigilance and anti corruption on the theme Vigilant India -Prosperous India (सतक भारत – सध भारत). The web cast of the honourable Prime Minister was viewed live by the senior scientist of CPPRI on 27th October 2020. The other staff was advised to attend the session in place.

Further, the CVO, CPPRI attended the online National Conference on Vigilance and Anti Corruption on the theme Vigilant India -Prosperous India (सतक भारत – सध भारत) from 27th – 29th October 2020. The other staff attended the relevant sessions as per requirement.



Glimpses of Vigilance Awareness Week

National Unity Day

CPPRI celebrated National Unity Day on October 31, 2020. On this occasion, Dr. Bipin Prakash Thapliyal, Director of the Institute administered the oath of National Unity to the employees and exhorted the employees of the Institute to follow the ideals of Iron Man Sardar Patel. Dr. Ashwani Kumar Dixit said that our country is comprised of different religions, castes, cultures and languages, because of this Sardar Patel's message of unity

becomes more important.

International Women's Day

International Women's Day was observed at CPPRI on March 8, 2021. The special guest for the occasion was Mrs. Nina Dhingra, Social Worker and Member of CPPRI Internal Complaints Committee (ICC) set up as per provisions of PoSH Act.

She addressed about Social, Economical, Cultural and Political achievement of women in past and present scenario. Dr. M. K. Gupta, Director Incharge, Dr. Priti S. Lal, Scientist E-II (Chairperson of committee-ICC), Dr. Nitin Endlay, Scientist E-II (Member of committee) and other Senior Scientists of CPPRI also presented their views on this occasion



Glimpses of International Women's Day

WORKSHOPS/TRAINING PROGRAMMES ORGANISED

CPPRI organized following workshops/ training programmes during the year 2020-2021:

- RSC-DCCPPAI Web training program on “Chemi-thermo mechanical (CTMP) or Bleached Chemi Thermo-mechanical Pulping (BCTMP) Process of Indigenous Raw Materials for Various End Uses” was organized on September 29, 2020 at CPPRI. 65 participants from various pulp paper mills, academic, R&D institutes etc. attended the web training programme. The programme was chaired by Dr. B.P.Thapliyal and hosted by Dr. A.K.Dixit. Dr. B.P.Thapliyal addressed the participants giving the brief of worldwide scenario of production and utilization of CTMP followed by introduction of speaker, Dr. S.V.Subramaniam, Ex- Scientist CPPRI and former General Manager (R&D and QC) TNPL, who covered the various aspects on production of chemo mechanical pulp (CTMP) of wood by giving a lecture on “Mechanical Pulp from Hardwood”. After very elaborative presentation of Dr. S.V.Subramaniam, special lecture was delivered by Dr. Priti S.Lal, who made a presentation on “Laboratory Scale Optimization of CTMP/ BCTMP Process”.

The training programme ended with very interactive question and answer session by experts & audience. The training programme was concluded by Dr. A.K.Dixit by giving vote of thanks.

- RSC-DCPPAI Webinar on Indian Paper Industry – An Analysis in October 29, 2020. Participants from various Pulp, Paper and Allied Industries, Academia and R & D Institutes attended the webinar.
- A one day lecture series on Air Pollution Issues & Control by Shri J.S. Kamyotra, Environmental Expert & Ex Member Secretary CPCB was organized by CPPRI on February 13, 2021 at CPPRI.



Visit of Shri J.S Kamyotra to CPPRI for delivering lecture Series

- One Day Workshop on Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills, March 20, 2021 at CPPRI Saharanpur. 67 participants from various Pulp Paper Mills, Academic, R& D Institutes etc. attended the workshop.



Glimpses of Workshop on Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills, March 20, 2021.

In addition eighteen B. Tech/M.Sc. students from following Institutions were provided training in the area of biotechnology/chemical Recovery/Environmental management:

- Banasthali Vidyapeeth, Jaipur (Rajasthan)
- Glocal University, Saharanpur (Uttar Pradesh)
- Graphic Era University, Dehradun (Uttarakhand)
- Gurukul Kangdi, Haridwar (Uttarakhand)
- Periyar Maniammai Institute of Science and Technology (PMIST), Thanjavur (Tamil Nadu)



PARTICIPATION IN SEMINARS, WORKSHOPS AND TRAINING PROGRAMMES

CPPRI scientists attended following Seminars, Workshops and Training Programmes during the period 2020-21 to update the knowledge about the latest developments on various aspects of pulp and paper technology:

- Paques Webinar on A Proven CPU Concept to Achieve ZLD in Ethanol & Sugar Industry, April 13, 2020 (Speaker Mark Silvilus Global Specialist, Ethanol, Sugar & Biofuel) – Dr. Nitin Endlay
- Webinar on Lubrication Management for Improved Reliability, April 25, 2020 organized by FICCI- Dr. Sanjay Tyagi
- Webinar on Industrial Pumping System Assessment for Energy Conservation, April 30, 2020 organized by FICCI- Dr. Sanjay Tyagi
- CII - Triveni Web Conference on Water Conservation Initiative in Pulp & Paper industry May 5, 2020 – Dr.. Priti S. Lal & Dr. Nitin Endlay
- IPPTA Webinar on Covid 19 – Emerging Opportunities, Threat and Path Forward for Paper Mills, May 16, 2020 – Dr. M.K. Gupta, Dr. Shivaker Mishra, Dr. Priti S. Lal & Dr. Nitin Endlay
- CII Web Conference on Waste Water Management Sustainable Technology Solution & Best Practices organized by CII Triveni Water Institute, May 22, 2020 – Dr. M. K. Gupta & Dr. Nitin Endlay
- IPPTA Webinar on Trending Technology for Cost Reduction in Paper Mills, May 26, 2020 (Speaker Mika Tammenoja, Valmet) - Dr. M. K. Gupta, Dr.. Priti S. Lal & Dr. Nitin Endlay
- IPPTA Webinar on Emerging Design of Forming Fabric to Meet Future Challenges, June 2, 2020 (Speaker Mr Barathi .G. Wire & Fabrks (SA)- Dr. M.K. Gupta & Dr. Nitin Endlay
- CSE Webinar on An Environmental Agenda for the Future, June 5, 2020 - Dr. Nitin Endlay
- Webinar on the Response of the DBT's Autonomous Institutes to COVID-19, August 21, 2020- Dr. Sanjay Tyagi
- CII National Conference on National Conference on Jal Jeevan Mission : Emerging Partnership Opportunities, September 4, 2020 - Dr. M.K. Gupta & Dr. Nitin Endlay

- 5th CII National Conference on Pulp and Paper: Integrating 3 E's in Water & Wastewater Management, September 18, 2020 - Dr. Nitin Endlay
- Online 5th National Conference on Pulp and Paper: Integrating 3 E's in Water & Wastewater Management, September 18, 2020 organized by Confederation of Indian Industry (CII) - Dr. Sanjay Tyagi
- A webinar on Bamboo Technologies for Sustainable Livelihood, held at Advanced Materials and Processes Research Institute (AMPRI), Bhopal, September 18th -19th 2020- Dr.. Priti S Lal and Dr. Arvind Kr. Sharma
- Webinar / online training session on GeM for DPIIT Organizations, September 22, 2020- Dr. Sanjay Tyagi
- ESCO webinar on Unlocking ESCO Market Potential organized by BEE and International Financial Corporation (IFC) under “Webinar series on Enabling ESCO Market Transformation” September 29, 2020- Dr. Sanjay Tyagi
- Webinar on COVID-19 – Its Affect and Headwind Paper Industry Faces In Months Ahead, November 07, 2020- Dr. Sanjay Tyagi
- Interaction meet on Sustainable Public Procurement for Paper, February 15, 2021- Dr. Sanjay Tyagi
- Workshop on Easing Compliance of BIS Certifications March 3, 2021 organized by BIS New Delhi- Dr. Sanjay Tyagi
- BIS workshop on Collated Issues of Industry March 3, 2021- Dr. Sanjay Tyagi
- Webinar on Pyroelectric Detectors and its Functioning, March 4, 2021- Dr. Sanjay Tyagi
- Webinar on PFMS: Enhancing Usage, Providing a Pleasing Experience, March 5, 2021 organized by Dept. of Expenditure, Ministry of Finance, Govt. of India- Dr. Sanjay Tyagi
- Online capacity building program on Leveraging Industry 4.0 Technologies for Energy Efficiency organized by BEE, Ministry of Power and Administered by National Productivity Council (NPC), DPIIT, Ministry of Commerce & Industry, Government of India, March 10, 2021- Dr. Sanjay Tyagi
- Training programme on “Understanding and Implementation of ISO/IEC-17025 (2017)” at NITTTR, Chandigarh from March 22-25, 2021- Sh. Shubhang Bhardwaj, Dr. Nitin Kumar and Dr. Jitender Dhiman



PAPERS PRESENTED AND LECTURES DELIVERED

- Dr Priti S. Lal delivered lecture on “Utilization of Bamboo for Production of Various Grades of Pulp & Paper” in webinar on Bamboo Technologies for Sustainable Livelihood held at Advanced Materials and processes Research Institute (AMPRI), Bhopal on September 18 -19 2020.
- Dr. Priti S. Lal delivered lecture on “CTMP of Agro based Raw materials” in RSC-DCPPAI funded training program on “Chemithermo Mechanical (CTMP) or Bleached Chemi Thermo-Mechanical Pulping (BCTMP) Process of Indigenous Raw Materials for Various End Uses” on September 29, 2020.
- Ms Anuradha V. Janbade delivered a lecture on “Covid-19 – Behavioral Changes at Workplace” organized by CPPRI on November 23, 2020.
- Dr. A. K. Dixit delivered a lecture on Control Measures of Berklite Scale at M/s Century Pulp and Paper, Lalkuan on December 24, 2020.
- Dr. Nitin Endlay delivered a lecture on “Water Conservation & Environmental Sustainability of Indian Paper Mills” at an expert consultation meet on Sustainable Public procurement for Writing & Printing Paper organized by United Nations Environment Programme (UNEP) and CII- ITC Centre of Excellence for Sustainable Development on February 15, 2021.
- Dr. Nitin Endlay delivered a lecture on National Conference “Sustainable Management of Environment & Natural Resource through Innovation in Science and Technology SMTST 2020” organized by UPES Dehradun & Uttarakhand Council of Science and Technology, (UCOST) Dehradun. on August 7-8, 2020
- Dr. M.K. Gupta delivered a lecture on “Status of Indian Pulp & Paper Industry Mills” at One Day Workshop on “Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills”, March 20, 2021.
- Dr. Nitin Endlay delivered a lecture on “Trends in Meeting Environmental Challenges by Indian Pulp & Paper Mills” at one Day Workshop on “Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills” organized by CPPRI on March 20, 2021.
- Dr. Shivaker Mishra delivered a lecture on “Waste Water Analysis- Need And Significance with respect to Treatment Methods” at one Day Workshop on “Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills” organized by CPPRI on March 20, 2021.

- Dr. Priti S. Lal delivered a lecture on “Environmental Friendly Bleaching of Indigenous Raw Material Pulp” during a workshop on “Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills” organized by CPPRI on March 20, 2021.
- Ms. Anuradha V. Janbade delivered a lecture on “Biotechnological Interventions for Cleaner Production in Pulp and Paper Industry” during a workshop on “Addressing Environmental Issues of Agro & RCF based Pulp & Paper Mills” organized by CPPRI on March 20, 2021.



REPRESENTATION IN EXTERNAL COMMITTEES

Ministry of Environment, Forests and Climate Change, New Delhi

- Member, Environment Appraisal Committee (EAC) Industry –I of Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India - Dr. B.P. Thapliyal (till January 31, 2021, Dr. M.K. Gupta (February 1, 2021 onwards)

Ministry of Home Affairs, New Delhi

- Chairman, Nagar Rajbhasha Karyanvan Samiti, Saharanpur - Dr. B.P. Thapliyal (till January 31, 2021, Dr. M.K. Gupta (February 1, 2021 onwards)

Development Council for Pulp, Paper & Allied Industries, Govt. of India

- Member-Secretary, Development Council for Pulp, Paper and Allied Industries - Dr. B.P. Thapliyal (till January 31, 2021, Dr. M.K. Gupta (February 1, 2021 onwards)
- Member-Secretary, Research Steering Committee of Development Council for Pulp, Paper and Allied Industries (Formerly Cess Committee) - Dr. B.P. Thapliyal (till January 31, 2021, Dr. M.K. Gupta (February 1, 2021 onwards)

Bureau of Indian Standards (BIS), New Delhi

- Convenor, Alert Panel, BIS Paper and Products Sectional Committee, CHD – 15 – Dr. B.P. Thapliyal (till January 31, 2021, Dr. M.K. Gupta (February 1, 2021 onwards), Dr. Sanjay Tyagi
- Technical Member, BIS Paper and Products Sectional Committee, CHD – 15 – Dr. Sanjay Tyagi, and Sh. Alok Goel
- Member, BIS Sectional Committee, Paper Board and its Product, CHD 16- Dr. Sanjay Tyagi
- Member of various panels constituted under CHD 15 and CHD 16 sectional committees of BIS – Dr. Sanjay Tyagi
- Member, Publication and Graphic Technology Sectional Committee, MSD 06 – Dr. Sanjay Tyagi

Bureau of Energy efficiency, Ministry of Power, New Delhi

- Sector Expert (Part time), Pulp and Paper, Bureau of Energy Efficiency, Ministry of Power, New Delhi- Dr. Sanjay Tyagi

National Council for Cement and Building Materials, Ballabgarh, Haryana

- Represented CPPRI as an expert of Pulping and Bleaching at NCCBM- Ballabgarh in a “Use of Lingo-Sulphonates for Production of Admixtures” -Dr. Priti S. Lal
- Member of Fact Finding Committee at NCCBM, Ballabgarh – Dr. A.K. Dixit
- Chairman of SSC meeting at NCCBM, Ballabgarh – Dr. A.K. Dixit

Satia Industries Limited

- Independent Director in Board of Directors of Satia Industries Limited-Dr. Priti S. Lal

PUBLICATIONS

List of publications published during the year 2020-2021 are as under:

- Kumar, V; Janbade, A. V; Thapliyal, B.P. *Treatment of Pulp and Paper Mill Effluent by Bacteria-Pseudomonas putida*. International Research Journal of Natural and Applied Sciences, Volume 7, Issue 08, 2020.
- Lal, P.S.; Sharma, A; Dhiman, G; Deepak; Thapliyal, B.P. *Bleaching of agro raw material pulps by chlorine free bleaching sequence: The “Brand Green Bleaching” Concept for Indian Agro Pulp and Paper Industry*. IPPTA Journal, Volume 32, No.2, 80-83, 2020.
- Sharma, Nidhi; Bhawana; Godiyal, R.D; Thapliyal, B.P. *A Review on Pulping, Bleaching and papermaking Process*. Journal of Graphic Era University, Vol 8, No.2, 2020, 95-112.
- Tandon, Rita; Negi, Satya Dev & Sharma, Kuldeep Kumar. *Biopolymer Treatment to Upgrade Fibre Quality of IOCC Furnish For Strength Improvement of Packaging Paper*. International Journal of Scientific & Engineering Research Volume 11, Issue 6, 236-240, 2020.



REPORTS PREPARED

During the year 2020-21 various reports related to Pulping, Bleaching, Environmental Management, Chemical Recovery etc. were prepared. The details are as under –

Pulping & Bleaching

- **Evaluation of Palm Tree Rachis for Production of Pulp and Paper-** C2C Consultancy, Coimbatore, India
- **Evaluation of Old and New Bagasse Samples-** Rai Sugar, Bangalore
- **Pre- feasibility report of Project on Production of 20-40 TPD Bagasse Semi Chemical and CTMP/BCTMP Pulp-** J. P. Mukherji & Associates Private Limited, Pune
- **Mechanical Pulping of Depithed Bagasse-** AJM Textiles India, Hyderabad, Telangana
- **Evaluation of Pulping and Bleaching of Rice Straw and Mixed Mill Pulp-** Century Pulp & Paper Mill, Nainital, Uttarakhand

Environmental Management

ETPAdequacy Assessment

- Chandpur Enterprises, Chandpur, Bijnor, Uttar Pradesh
- Mohit Paper Mills Limited. Nagina Road, Bijnor, Uttar Pradesh
- Silvertoan Pulp & Papers Limited, Unit-II, Muzaffarnagar, Uttar Pradesh
- International Papers APPM Private Limited, Andhra Pradesh

Performance Evaluation of Existing ETP

- Multiwal Duplex Limited, Kashipur, Uttarakhand
- Multiwal Pulp and Paper, Kashipur, Uttarakhand

Zero Liquid Discharge (ZLD) Feasibility

- Punjab Paper Mills Limited, Ludhiana, Punjab
- Satkar Paper Mills Limited, Ludhiana, Punjab
- Hariom Industries Limited, Kanpur
- Genus Paper Product Ltd., Aghwanpur, Uttar Pradesh

Chemical Recovery

- **Annual Contract Auditing of Chemical Recovery-** Century Pulp & Paper, Lalkua, Uttarakhand
- **Exploration of Banana Fibre for Making of Currency/Security Paper-** Security Paper Mill, Hoshangabad, Madhya Pradesh

Quality Management System- NABL

- Level I and II documents viz. Quality Manual and Procedure Manual were amended as per increased scope of NABL accreditation to implement and maintain the quality management system as per international standard ISO/IEC 17025:2017

VISITS TO PULP AND PAPER MILLS AND OTHER ORGANISATION

Name of Scientists	Organization	Date	Purpose
Pulp and Paper Mills			
Dr M.K. Gupta & Dr Shivaker Mishra	Satakar Paper Mills Limited, Jalandhar	June 23- 25 , 2020	To evaluate the performance of back water recycling system
Dr. Shivakar Mishra	Naini Papers Limited, Kashipur	July 27,2020	Participation in ILC studies
Dr M.K. Gupta & Dr Shivaker Mishra	<ul style="list-style-type: none"> • Stakar Paper Mills Limited, Jalandhar • Punjab Paper Mills Limited 	August 17-18, 2020	To evaluate the feasibility of ZLD
Dr M.K.Gupta & Dr Nitin Endlay	Chandpur Enterprises, Chandpur	August 19, 2020	For study of MVR system installed by the mill
Dr M.K. Gupta	Krishnanchal Pulp and Paper Limited, Muzaffarnagar	August 19, 2020	To study the impact of ZLD on Product and issues related to operation of paper machine
Dr Shivaker Mishra	Multiwal Duplex Limited, Kashipur	September 8 , 2020	For ETP performance evaluation
Dr M.K. Gupta	Hariom Industries , Kanpur	September 9-10 , 2020	For ZLD feasibility study
Dr M.K. Gupta	Shreyans Industries Limited, Punjab	September 12 , 2020	Discussion of pre pilot trial of membrane system
Dr. A.K.Dixit	KR Pulp and Paper, Sahajanpur	December 23, 2020	For Annual Contract of chemical recovery.
Dr. A.K.Dixit	Century Pulp and Paper, Lalkuan	December 24, 2020	For Annual Contract of chemical recovery.

Dr M.K. Gupta & Dr Shivaker Mishra	Maruti Paper Limited, Shamli	January 30,2021	EIP adequacy Assessment
Dr M.K. Gupta & Dr Nitin Endlay	Shreyans Industries Limited , Ludhiana	February 2 , 2021	For meeting with CEO Shreyans Industries limited regarding issues related to RSC-DCPPAI / DCPPAI
Dr M.K.Gupta & Dr Nitin Endlay	Punjab Paper Mills Limited, Jalandhar	February 2 , 2021	ZLD Feasibility Study
Dr M.K. Gupta & Dr Nitin Endlay	Satia Industries Limited, Muktsar	February 3 , 2021	For meeting with managing Director, Satia Industries Limited regarding annual monitoring contract and award of consultancy projects
Dr M.K.Gupta & Dr Nitin Endlay	Trident Limited (PCD) , Barnala	February 3 , 2021	Kickoff meeting with Trident , PCPB , NIT Jalandhar regarding Environmental Audit
Dr.M.K Gupta, Dr. NitinEndlay Dr. Nitin Kumar	Shreyans Industries Limited and PPCB Jalandhar	February 9-10 , 2021	For meeting with Sh. Anil Kumar, CEO and project related discussion on "Bioremediation in small drains in cities".
Dr M.K. Gupta & Dr Nitin Endlay	Shreyans Industries Limited, Ludhiana	February 9, 2021	Discussion regarding RSC- DCPPAI meeting
Dr. M.K Gupta and Ms Anuradha V Janbade on 11-02- 21 to	Krishnanchal Paper Mill,Muzaffarnagar	February 11, 2021	For collection of waste water samples
Dr M.K.Gupta , Dr Nitin Endlay, Mohd Salim , Mr Amitabh Tripathi , Mr Abhishek Tyagi	Trident Limited (PCD) , Barnala	February 24-27 , 2021	Environmental Audit

Dr M.K.Gupta , Dr Shivaker Mishra , Dr Nitin Endlay, Mr. A.K. Goel, Mr Satya Dev Negi, Dr Arvind Sharma, Mr Mohd Salim , Mr Shubhang Bhardwaj, Dr Nitin Kumar & Dr Jitender Dhiman	95 Units located in Kashipur, Jaspur , Bazpur, Haridwar, lalkuan , Roorkee , Muzaffarnagar in Ganga River Basin & 60 units in Hindon River Sub basin located in Ambala,Kurukshetra Ghaziabad , Faridabad , Gurugram , Noida, Karnal , Sikandrabad, Firozabad, Bahadurgarh , Yamunanagar Muzaffarnagar etc .	November 2020- March 2021	Environmental Monitoring under CPCB project of Monitoring of Grossly polluting industries in River Ganga Basin & River Hindon Subbasin
Other Organization			
Dr M.K. Gupta	ACIRD, Yamunanagar	July 27,2020	Outsourcing of samples for analysis
Dr. Nitin Endlay & Mr Abhishek Tyagi	Graphic Era University and University of Petroleum & Energy Studies , Dehradun	July 29,2020	For discussion related to joint collaborative projects, Ph.D etc
Dr. Nitin Endlay & Mr Abhishek Tyagi	Econ Lab & Consultancy Services	July 29,2020	For discussions related to NABL accreditation for Ambient air & Stack Emissions

Dr A.K.Dixit	NCBM, Ballabgarh	August 19, 2020 August 20, 2020 January 05, 2021	For discussion regarding administrative issue
Dr. Nitin Kumar	MTCC Chandigarh	November 03, 2020	For submission of strains isolated from paper and paper board for their 16s RNA sequencing
Dr M.K . Gupta, Dr Nitin Endlay & Mr Abhishek Tyagi	Central Pollution Control Board , Delhi	November 11-12, 2020	For discussions related to NABI accreditation for Ambient air & Stack Emissions
Dr A.K.Dixit	FRI Deemed University, Dehradun	January 13,2021	Discussion regarding MSc. Course
Dr. Nitin Kumar	New Delhi	January 15,2021	For discussion with Shri J.S Kamyotra regarding Bioremediation project
Dr M.K. Gupta & Dr Nitin Endlay	Regional Office Central Pollution Control Board , Chandigarh	February 2, 2021 ,	Discussion related to environmental Audit of trident Limited (PCD)
Dr M.K. Gupta & Dr Nitin Endlay	NITTR , Chandigarh	February 2 , 2021	For meeting related to signing of MoU for joint collaboration
Dr. M.K Gupta, Dr. A.K Dixit and Ms Anuradha V Janbade	NPC and EDCL	February 6-8 , 2021	For discussion on recruitment process.
Dr A.K.Dixit	NPC, New Delhi and EDCIL, New Delhi	February 16, 2021	Regarding recruitment process of CPPRI staff
Dr. M.K Gupta, Dr. A.K.Dixit & Ms Anuradha V Janbade	NITTR , Chandigarh	February 17 , 2021	Joint training and research activity.

Dr. M. K. Gupta, Dr. Sanjay Tyagi, Shri Alok Kumar Goel,	Bureau of Energy Efficiency (BEE), Ministry of Power, Gov. of India, New Delhi, IPMA, New Delhi, IARPMA, New Delhi and Central Pollution Control Board, Delhi	February 18-19, 2021	To discuss existing and new projects
Dr. M.K Gupta, Ms Anuradha V Janbade & Dr Nitin Kumar	National institute of Hydrology , Roorkee	February 23, 2021	Discussion on Area of Mutual collaboration
Dr M.K. Gupta & Dr Nitin Endlay	CPCB , Reginal Office Chandigarh	February 2, 2021	Environmental Audit of Trident Limited
Dr M.K. Gupta	DPIIT, Udyog Bhawan, New Delhi	January 11-12 , 2021 March 2 – 5, 2021 March 25 –27, 2021	Official Work / Meetings
Dr M.K. Gupta, Dr. K. Singh, Ms Anuradha V Janbade, Dr Nitin Endlay & Dr Nitin Kumar	<ul style="list-style-type: none"> • M/s Shreyans Industries Limited • PPCB Jalandhar • NIT Jalandhar 	March 9-11, 2021	For meeting with Sh. Anil Kumar, CEO and project related discussion on “Bioremediation in small drains in cities”
Dr. M.K Gupta & Ms Anuradha V Janbade	<ul style="list-style-type: none"> • National institute of Hydrology , Roorkee • CBRI, Roorkee • IIT Roorkee 	March 23, 2021	Discussion on Area of Mutual collaboration

M.Sc. (Cellulose and Paper Technology)

(A Joint Collaborative Course of FRI, Deemed to be University, Dehradun and CPPRI, Saharanpur)

Activities

The final year classes of the students of the ninth batch (2019 -21) of M.Sc. (Cellulose and Paper Technology) were conducted at CPPRI. Both theoretical and practical knowledge on various aspects of pulp and papermaking i.e. raw material handling and preservation, pulping and bleaching, stock preparation and papermaking, paper recycling, paper properties, specialty paper, chemical recovery, environmental management and biotechnological applications were imparted to the students by CPPRI scientists.

The students also carried out one month compulsory project work in various areas of paper making as a part of curriculum.

The first year toppers in girls and boys category namely Ms. Ruchi Bhaisora and Mr. Sapteshwar Naik respectively were awarded scholarship of Rs 25,000/- each by Star Paper Mills Limited, Saharanpur, Uttar Pradesh.

List of Students

Ms. Bakul Sharma, Ms. Jagrita Bohara, Mr. Joymeet Gupta, Mr. Kuldeep Singh, Ms. Minakshi Banarjee, Mr. Mrinali Zarbade, Mrs Ruchi Bhaisora, Mr. Septeshwar Naik, Ms. Shaan Parveen, Ms. Vaishali, Ms. Vaishali Singh, Mr. Vishal kapil



M.Sc. (CPT) Students (2019-21) at CPPRI Campus



RIGHT TO INFORMATION

Central Pulp and Paper Research Institute has been implementing the Right to Information Act, 2005 since the promulgation of the Act. In compliance of the provision of the RTI Act 2005, CPPRI has constituted a RTI cell. Further, Director is designated First Appellate Authority (FAA) for addressing the appeals/complaints, filed by the Appellant. Dr. B. P. Thapliyal, Director, CPPRI was the designated First Appellate Authority (FAA) in the Institute till January 31, 2021 and after his superannuation, Dr. M.K.Gupta, Director Incharge designated First Appellate Authority (FAA) in the Institute. Mrs. Anuradha V. Janbade, Scientist E-II was the Public Information Officer (PIO) of the Institute till February 9, 2021. Presently, Mr. Alok Kumar Goel; Scientist E-II is Public Information Officer (PIO), who is assisted by Ms. Sarita Sharma, Library Officer- B and Assistant Public Information Officer (APIO).

RTI cell keeps record of all the RTI applications/appeals being received in the Institute and also monitors their timely disposal.

CPPRI has provided the required information on its website (www.cppri.res.in/rti) under suo motu disclosure on proactive basis and also being updated on regular basis.

During the year 2020-2021, Under RTI Act - 2005, CPPRI received total 22 numbers RTIs and 2 Appeals. Details are as under:

RTI Status (2020-2021)

Year	RTI Applications Received	RTI Applications Disposed	Appeal Received	Appeal Disposed	Applications Rejected
2020-2021	22	22	02	02	00

A report under the RTI Act -2005 is furnished to the Central Information Commission (CIC) on quarterly basis.

Financial Report

2020-21



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906192914

CENTRAL PULP & PAPER RESEARCH INSTITUTE

An autonomous organisation registered under societies Act under the administrative control of the Ministry of Commerce & Industry (Govt. of India)

POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR (U.P.)

AUDITOR'S REPORT TO THE MEMBERS OF THE
CENTRAL PULP AND PAPER RESEARCH INSTITUTE, SAHARANPUR (U.P.)

We have audited the attached Balance Sheet of CENTRAL PULP AND PAPER RESEARCH INSTITUTE, SAHARANPUR (U.P.) as on 31.3.2021 and Income and Expenditure account & Receipt & Payment Account for the year ended on that date, which are in agreement with the books of accounts maintained by the Institute. These financial statements are the responsibility of the auditee's management. Our responsibility is to express an opinion on these financial statements based on our Audit.

We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit include examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.


We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of audit. In our opinion proper books of accounts have been kept/ maintained by the Institute.

In our opinion and to the best of our information and according to the explanation given to us, the said account reads with notes thereon; give a true and fair view in conformity with the accounting principles generally accepted in India:

- i) In case of Balance Sheet, of the state of affairs of the Institute as at 31.03.2021, and
- ii) In the case of Income & Expenditure Account of the deficit for the year ended on 31.03.2021.

Date: 28-09-2021
Place: Saharanpur

For Kinra & Associates
Chartered Accountants


(GAGAN KINRA)
F.C.A., M.Com., LLB
M. No. 425053

UDIN : 21425053AAAAAW5259



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7908192914

CENTRAL PULP & PAPER RESEARCH INSTITUTE
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control of the Ministry of Commerce & Industry (Govt. of India)
POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
BALANCE SHEET AS AT 31.03.2021

Amount (Rs.)

PARTICULARS	Schedule	Current Year	Previous year
		2020-21	2019-20
<u>CAPITAL FUND AND LIABILITIES</u>			
CAPITAL FUND	1	120890103.02	119165903.45
UN-UTILISED SP. PROJECT & CONSULTANCY	2	1124.25	1124.25
UNUTILISED GRANTS	3	38491658.66	20723251.53
CURRENT LIABILITIES AND PROVISIONS	4	58782574.67	69967348.00
TOTAL		218165460.60	209857627.23
<u>ASSETS</u>			
FIXED ASSETS	5	86274597.08	82653404.69
CURRENT ASSETS, LOANS, ADVANCES ETC.	6	131890863.52	127204222.54
TOTAL		218165460.60	209857627.23

The Schedules referred above form an integral part of the Balance Sheet.

As per our separate report of even date.

FOR Kinra & Associates

CHARTERED ACCOUNTANTS

(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

PLACE: SAHARANPUR
Date: 28-09-2021

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

DIRECTOR INCHARGE

INCHARGE (F&A)



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906192914

CENTRAL PULP & PAPER RESEARCH INSTITUTE
An autonomous organisation registered under societies Act under the administrative
control of the Ministry of Commerce & Industry (Govt. of India)
POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31.03.2021

PARTICULARS	SCHEDULE	Amount (Rs.)	
		CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
A: INCOME			
Income from Institutional & Consultancy fee	7	25370536.00	23552785.02
Grants from Govt. of India	8	86906821.13	82973851.01
Fees/Subscription	9	420105.00	610500.00
Interest earned	10	4000669.00	5780086.18
Other income	11	715082.40	729818.62
Closing Stock-Store Spares & Stationery		2540645.92	2341838.61
TOTAL (A)		119953859.45	115988879.44
B: EXPENDITURE			
Opening Stock		2341838.61	2237845.39
Establishment expenses	12	67524775.00	75176007.00
Administrative Expenses etc.	13	40668797.01	45864657.36
Depreciation for current year	5	10438141.00	10950557.00
TOTAL (B)		120973551.62	134229066.75
Excess of Expenditure over Income (B-A)		1019692.17	18240187.31
Excess of Income over Expenditure(A-B)			

The Schedules referred above form an integral part of the Income and Expenditure Account
As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS


(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE


DIRECTOR INCHARGE


INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021



Kinra & Associates			H. No. 32, Phase II-D		
Chartered Accountants			Pant Vihar, ITC Road, Saharanpur		
			Contact - 91- 7906192914		
CENTRAL PULP & PAPER RESEARCH INSTITUTE					
An autonomous organisation registered under sec 80C Act under the administrative control of the Ministry of Commerce & Industry (Govt. of India)					
POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR					
RECEIPT & PAYMENT ACCOUNT FOR THE YEAR ENDED 31.03.2021					
RECEIPTS	CURRENT YEAR	PREVIOUS YEAR	PAYMENTS	CURRENT YEAR	PREVIOUS YEAR
Opening Balance:			Establishment Expenses:		
To Bank Balance on current account	18662732.78	37536254.48	By Salary & Allowances	53465706.00	50463617.00
To Deposit Accounts(Margin money against lease of Credit)	6719183.00	11397698.74	By CPF Contribution	4462627.00	5264267.00
To Deposit Accounts	5118171.06	60334287.68	By Encashment of Leave	9822873.00	3032662.00
Grant Received:			By Gratuity paid	9940006.00	4870767.00
To Grant in A/c M/DI,GOI	9217172.00	5730000.00	By Reimbursement of Medical Exp.	1587685.00	1698467.00
To Grant in Aid,Development Council	99881948.00	61882104.00	Other Administrative Expenses:		
Interest Received:			By Lease & Plant Maintenance	2509170.23	6752273.57
To Int. from Staff on Convey. adv.&HBA	83925.00	124834.00	By Cartage & Freight	0.00	87844.00
To Interest received from bank	3463307.00	5328809.18	By Electricity and water	6004349.00	8560920.00
To Interest received on TDR	448435.00	329448.00	By Repair & Maintenance of Assets	8445906.00	11289969.84
Other Income:			By Rent & Lease	816493.00	816480.00
To Refund of TDS	1978304.00	1664034.00	By Postage & Telephone & communication	142800.00	258209.00
To Sale of Publication	0.00	2700.00	By Printing & Stationery	789553.00	1205165.00
To Testing fee	1544171.48	15162708.81	By Travelling & Conveyance Exp.	662649.00	2704560.00
To Consultancy fees	8380988.08	8489339.25	By Exp on Seminar & Workshop	0.00	20176.00
To Misc. Course Fee	667000.00	752000.00	By Membership & Subscription	5200.00	0.00
To Library Fee	8000.00	0.00	By Audit fees	37753.00	37760.00
To Training fees & expenses etc	353105.00	565620.00	By Hospitality Expenses.	17179.00	75050.00
To Membership fee & Taxes etc.	85000.00	182000.00	By Legal & Professional Exp.	112143.00	638286.00
To Lease Rent	82500.00	50000.00	By News Paper	0.00	1262.00
To Hostel rent	214425.00	193475.00	By Training Exp.	228414.00	1698974.00
To Miscellaneous Receipt	46394.66	210551.62	By Watch & Ward	6576075.00	7274161.00
To License Fee	278882.00	272780.00	By Bank charges	203040.15	6882.26
Advances			By Advertisement	57499.00	153966.00
To Festival Advance	0.00	0.00	By Testing Fee paid	221184.00	104617.00
To House Building Advance	365328.00	45528.00	By Staff Car Maintenance	32428.00	377246.00
To Conveyance Advance	18000.00	24900.00	By Hindi Diwas Exp.	2000.00	30764.00
To Computer Advance	49000.00	66500.00	By Swachh Bharat Abhiyan Exp.	18989.73	1366216.00
To Accrued interest on staff advances	370505.00	0.00	By Software Expenditure on IT	1380178.00	164266.00
Other Receipt:			By Paper cost	0.00	125904.00
To SGST	188455.00	0.00	By Expenditure on NABL	0.00	804114.00
To CGST	188455.00	0.00	By Grant in Aid to Participating Agency	1678000.00	0.00
To Security from Student	24000.00	0.00	By Honorarium	129500.00	1055056.00
To Sale of Assets	22680.31	1300.00	By National Festival	41222.00	60461.00
To Sundry Debtors	1097993.00	6667645.23	By Plantation & Gardening	128843.00	226610.00
To refund of Advance	0.00	746109.00	By Interest Paid on TDS	0.00	2404.00
To Scholarship for M.Sc. Student	60000.00	0.00	By Patent fee	0.00	6256.00
To Library Security	0.00	1000.00	By scholarship for M.Sc. Student	0.00	60000.00
To Medical	0.00	60190.00	By Staff Welfare	0.00	2300.00
To Advance/Imprest to C/P/31 Staff	0.00	3648330.18	Fixed Assets/ Capital work in Progress	10612551.70	4889260.80
To Advance to Supplier	755760.00	754636.00	Other Payments:		
			By T.C.S. (Salary & Parties)	311860.00	1742322.00
			By TDS - GST	405174.00	307300.00
			By SGST	0.00	433205.00
			By CGST	0.00	433286.00
			By IRST	86132.00	304444.00
			By Computer Advance	0.00	100000.00
			By Advance to Staff for Expense	148102.51	16015623.23
			By Refund of Security	30000.00	0.00
			By Advance to Suppliers	778189.00	6028066.00
			By Payment to Parties	2400166.50	4403003.19
			By TDS deducted by Parties	954095.82	1834689.00
			By Misc Expenses	0.00	48.82
			Closing Balance:		
			By Bank Balance on current account	21972582.98	19582702.76
			By Deposit A/c(Margin money against L.C.)	13689183.00	6718183.00
			By Deposit Accounts	51372851.66	61181710.66
TOTAL	221170339.97	226616466.16	TOTAL	221170339.97	226616466.16
As per our separate report of even date.					
FOR Kinra & Associates			FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE		
CHARTERED ACCOUNTANTS					
<i>(Signature)</i>			<i>(Signature)</i>		
(Gagan Kinra)			DIRECTOR INCHARGE		
F. C. A., M. Com., LLB			INCHARGE (F&A)		
M. No. 425053					
PLACE: SAHARANPUR					
Date: 28-06-2021					



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906192814

CENTRAL PULP & PAPER RESEARCH INSTITUTE
An autonomous organisation registered under societies Act under the administrative
control of the Ministry of Commerce & Industry (Govt. of India)
POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021
SCHEDULE 1 - CAPITAL FUND

PARTICULARS	CURRENT YEAR 2020-21		PREVIOUS YEAR 2019-20	
	CAPITAL FUND			
Balance as at the beginning of the year	119165903.45		132866049.50	
Add:1:				
Cess project(Capital purpose)	2743891.74		4540041.26	
	121909795.19		137406090.76	
less:-				
Balance of net expenditure transferred from the income & expenditure account	1019692.17	120890103.02	18240187.31	119165903.45
BALANCE AS AT THE YEAR - END		120890103.02		119165903.45

As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS

(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

DIRECTOR INCHARGE

INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021



Kinra & Associates
Chartered Accountants

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SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2021
SCHEDULE - 2 - DETAILS OF UN-UTILIZED AMOUNT SPONSORED PROJECT/CONSULTANCY

Sl. No	NAME OF PROJECT	CURRENT YEAR	PREVIOUS YEAR
		2020-21	2019-20
		AMOUNT	AMOUNT
1	DBT-Technological improvemt of Process	1124.25	1124.25
		1124.25	1124.25

As per our separate report of even date

FOR Kinra & Associates
CHARTERED ACCOUNTANTS

(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

DIRECTOR INCHARGE

INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021


Kinra & Associates
Chartered Accountants

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SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2021
SCHEDULE - 3 - DETAILS OF UN-UTILIZED GRANT

PARTICULARS	BALANCE		GRANTS RECEIVED & UTILISED DURING 2020-2021				UNSPENT BALANCE	
	1.4.2020		RECEIVED	REFUNDED	UTILISED	31.3.21		
	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	
Plan Grant	4705.00	7217172.00	0.00	7221877.00	7107398.00	114479.00	4705.00	
BASE LEVEL SUPPORT(NON-PLAN)	5850085.00	63456990.00	0.00	69307075.00	69047970.60	259104.40	5850085.00	
Swatcha Action Plan	0.00	2000000.00	0.00	2000000.00	2000000.00	0.00	0.00	
Cess Funded project	0.00	614000.00	0.00	614000.00	0.00	614000.00	0.00	
A review study of ITS-HS classification	0.00	4200000.00	0.00	4200000.00	0.00	4200000.00	0.00	
Bacterial Cellulose Production for Driver	87869.00	1725000.00	0.00	1812869.00	39769.00	1773100.00	87869.00	
Continious Education for Technical Personnel in Pulp & Paper Industry	1809867.00	3050000.00	0.00	4859867.00	25031.00	4834836.00	1809867.00	
Demonstration of Ozone Treatment Technology	0.00	800000.00	0.00	800000.00	157770.00	642290.00	0.00	
Biopolymeric approach for Improvement of Land Application of Treated Effluent Fr	0.00	2000000.00	0.00	2000000.00	0.00	2000000.00	0.00	
Studies on Alternate Auto causticisation	0.00	7500000.00	0.00	7500000.00	0.00	7500000.00	0.00	
Capacity Building and upgradation of infrastructure for inter lab comparison	3379282.74	0.00	0.00	3379282.74	3379282.74	0.00	3379282.74	
Study on Daignification of Agro Residu	0.00	3000000.00	0.00	3000000.00	1305109.00	1694891.00	0.00	
Development of Protocol for Evaluating the Feasibility	1749109.30	546000.00	0.00	2295109.30	2295109.30	0.00	1749109.30	
Creation of Testing Facilities for Food Packaging paper	7170072.35	2425000.00	0.00	9595072.35	1588350.23	8006722.12	7170072.35	
Census Survey of the Indian Paper Industry	399063.00	2833000.00	0.00	3232063.00	864710.00	2367353.00	399063.00	
A Synergetic and Economical Approach for Treatment of Pulp & Paper Mill Cess core secretariat of Dev.	76642.00	2300000.00	0.00	2376642.00	398830.00	1977812.00	76642.00	
Screening of Parents for Clonal Forestry & Hybridization for Higher Productivity	196556.14	411958.00	0.00	5100000.00	3201443.00	1898557.00	0.00	
Total =	20723251.53	109179120.00	0.00	129902371.53	91410712.87	38491658.66	20723251.53	

As per our separate report of even date.
FOR Kinra & Associates
CHARTERED ACCOUNTANTS


(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

 DIRECTOR INCHARGE
 INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906182914

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POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021
SCHEDULE 4 - CURRENT LIABILITIES AND PROVISIONS

S.No	PARTICULARS	CURRENT YEAR 2020-21		PREVIOUS YEAR 2019-20	
A.	CURRENT LIABILITIES AND PROVISIONS				
	CURRENT LIABILITIES:				
	<u>Other Liabilities</u>				
1	Retention Money received	32792.00		32792.00	
2	Security Received from Contractors	82212.00		82212.00	
3	Earnest money received	93900.00		93900.00	
4	Advance received for services	214855.00		214855.00	
5	Security received from students	47000.00		55000.00	
6	Security Received from Staff	23000.00		23000.00	
7	SGST	209155.00		20700.00	
8	CGST	209155.00		20700.00	
9	IGST	449681.00		534813.00	
10	Scholarship for MSC Student	50000.00		0.00	
			1411750.00		1077972.00
	TOTAL (A)		1411750.00		1077972.00
B.	PROVISIONS:				
1	Expenses payable	2005601.00		1762704.00	
2	Pro. for gratuity & encashment of leave	52067820.00		66867696.00	
3	Audit fee payable	0.00		37760.00	
4	Performance Bank Gurantee	31317.00		79317.00	
5	Fellow Ship payable	13000.00		13000.00	
6	Income Tax (TDS) Payable	77161.00		69570.00	
7	GST (TDS) Payable	45871.67		59329.00	
8	Arrear of Salary & CPF Contribution	3130054.00	57370824.67	0.00	68889376.00
			57370824.67		68889376.00
	TOTAL (B)		57370824.67		68889376.00
	TOTAL (A+B)		58782574.67		69967348.00

As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS

(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

DIRECTOR INCHARGE
INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021

Kimra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906192914

CENTRAL PULP & PAPER RESEARCH INSTITUTE
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POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2021

Sl. No	PARTICULARS	GROSS BLOCK		NET VALUE ON 1.4.2020	ADDITION DURING THE YEAR			SALES DURING THE YEAR	COST AT THE YEAR END	%AGE OF Dep	DEPRECIATION FOR 2020-21	NET BLOCK	
		TOTAL COST AS ON 1.4.2020	TOTAL DEPRECIATION 31.3.2020		FIRST HALF	SECOND HALF	AS AT THE 31.3.2021 YEAR-END					AS AT THE 31.3.2020 YEAR-END	
A. FIXED ASSETS													
1	Land	16872204.10	0.00	16872204.10	0.00	0.00	0.00	16872204.10	0%	0.00	16872204.10	16872204.10	
2	Land Scaping Work in Progress	487684.45	0.00	487684.45	0.00	0.00	0.00	487684.45	0%	0.00	487684.45	487684.45	
3	Building	116372547.34	106137659.96	10234887.38	0.00	0.00	0.00	10234887.38	10%	10234887.38	9211399.38	10234887.38	
4	Office Equipment	16413827.86	11998154.90	4415672.96	83389.00	1246059.00	0.00	5745120.96	10%	512209.00	5232911.96	4415672.96	
5	Furniture & Fixtures	8910886.38	7215557.31	1695329.07	12626.00	1599.00	0.00	1709554.07	10%	170875.00	1538679.07	1695329.07	
6	Hotel Furniture	408288.06	397750.81	10537.25	0.00	0.00	0.00	10537.25	10%	1054.00	9483.25	10537.25	
7	Vehicle	2931118.84	2456105.00	475013.84	0.00	0.00	0.00	475013.84	15%	71252.00	403761.84	475013.84	
8	Plant Machinery & Lab Equipment	278654980.23	236505936.47	42149043.76	9980.00	9241164.70	0.00	51400188.46	15%	7016940.00	44383248.46	42149043.76	
9	Plant & Machinery at HNL	5800000.00	5749277.29	50722.71	0.00	0.00	0.00	50722.71	15%	7608.00	43114.71	50722.71	
10	Equipment with NCBM	500000.00	489635.14	10364.86	0.00	0.00	0.00	10364.86	15%	1555.00	8809.86	10364.86	
11	Workshop equipment	536385.07	498748.11	37636.96	0.00	0.00	0.00	37636.96	15%	5646.00	31990.96	37636.96	
12	Instruments	211032.13	210671.69	360.44	0.00	0.00	0.00	360.44	15%	54.00	306.44	360.44	
13	D.G.Set	2094916.68	2062346.99	32569.69	0.00	0.00	0.00	32569.69	15%	4885.00	27884.69	32569.69	
14	Air Conditioner & Cooler etc.	6450128.72	5241121.86	1209006.86	0.00	0.00	0.00	1209006.86	15%	181351.00	1027655.86	1209006.86	
15	Electrical Install & Equipment	2648407.59	2048448.78	599968.81	0.00	2493600.00	0.00	3093558.81	15%	277014.00	2816544.81	599968.81	
16	Books and Periodicals	10497044.68	10189407.85	307636.83	5160.00	667519.00	22550.31	957765.52	40%	254113.00	703652.52	307636.83	
17	Computers	18907694.64	17196241.94	1711452.70	16596.00	304191.00	0.00	2032239.70	40%	752057.00	1280182.70	1711452.70	
18	Capital work in Progress	965125.00	0.00	965125.00	0.00	0.00	0.00	965125.00	0%	0.00	965125.00	965125.00	
19	Guest House Equipment	6800.00	2338.80	4461.20	0.00	0.00	0.00	4461.20	10%	446.00	4015.20	4461.20	
20	Horticulture Equipment (tractor)	415565.00	31167.00	384398.00	0.00	0.00	0.00	384398.00	15%	57660.00	326738.00	384398.00	
21	Tubewell	1298684.00	299346.18	999337.82	0.00	0.00	0.00	999337.82	10%	99934.00	899403.82	999337.82	
TOTAL OF CURRENT YEAR		49138320.77	408729916.03	82653404.69	127751.00	13954132.70	22550.31	96712738.08		10438141.00	86274597.08	82653404.69	
TOTAL OF PREVIOUS YEAR		486291554.01	397779359.08	88512194.93	2824874.50	2268192.26	1300.00	93603961.69		10950557.00	82653404.69	88512194.93	

As per our separate report of even date.
FOR Kimra & Associates
CHARTERED ACCOUNTANTS

(Signature)
(Sugan Kishor)
F. C.A., M. Com., LLB
M. No. 425063

PLACE: SAHARANPUR
Date: 28-09-2021

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

(Signature)
DIRECTOR INCHARGE
INCHARGE (F&A)



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact: 91 7906192914

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POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2021
SCHEDULE - 6 - CURRENT ASSETS, LOANS, ADVANCES ETC.

		2020-21		2019-20	
A: CURRENT ASSETS:					
Inventories:					
1	Store & Spares	1940285.89		1815374.90	
a.	Stationery & Misc. Store	600360.03	2540645.92	526463.71	2341838.61
2	Bank Balances:(With Schedule Banks)				
a.	On Current Accounts		21372562.39		19562702.78
b.	On Deposit Accounts(margin money-against letter of credit)		13669183.00		5719183.00
c.	FDR for Bank Guarantee to UPNEDA	100000.00			0.00
d.	On Deposit Accounts on SDR	54272861.68	54372861.68		51181710.68
e.	Accrued Interest on SDR		1748524.09		1864888.09
B: LOANS,ADVANCES AND OTHER ASSETS:					
Loan to Staff:					
1	Interest bearing Advances				
a	House Building Advance	758108.00		1128435.00	
b	Advance for Purchase of Vehicle	10328.00		28328.00	
c	Advances for computer	113500.00		182500.00	
d	Accrued Interest on Advances	302297.00	1184233.00	672802.00	1987068.00
2	Advances and other amounts recoverable in cash or in kind or for value to be received				
ADVANCES:					
a	Purchase of Machinery and other work	12230577.94		15711200.94	
b	Advance Paid to DBT for Biological B.L. Project	50.00		50.00	
c	Advance to UPRNN	350000.00	12580627.94	350000.00	18061250.94
Amounts recoverable in cash or in kind					
a	Amount Recoverable	4142.00		5353.00	
b	T D S	6969547.49		8312858.60	
c	Conventilment -Education Cess	1334.00		1334.00	
d	Conventilment - H.Education Cess	290.00		290.00	
e	Conventilment - K. K. Cess	4999.00		4999.00	
f	Sundry Debtors	10951296.12		12650900.25	
g	Plant Equipment of CPCB	2694541.00		2694541.00	
h	Lab Equipment-IPMA/Dev. Council	1350882.00		1350882.00	
i	Earnest Money Deposit	50.00		50.00	
j	N.P.C.	708.75		708.75	
k	Imprest	10652.55		22945.18	
l	Advance to CPPRI Staff	348814.50		1184364.50	
m	Security Deposits	1957206.00		1956906.00	
n	Telephone deposit under QYT	39139.00		39139.00	
o	Interest on FDR Amount Recoverable	49813.18		49813.18	
p	DCPPAI	11000.00	24422225.52	11000.00	28485582.46
TOTAL			131890853.52		127204222.54

As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS

Gagan Kinra
(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

PLACE: SAHARANPUR
Date: 28-09-2021

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

[Signature]
DIRECTOR INCHARGE

[Signature]
INCHARGE (F&A)



Kinra & Associates
Chartered Accountants

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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021

SCHEDULE - 7 - INCOME FROM INSTITUTIONAL AND CONSULTANCY FEE

S.No.	PARTICULARS	CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
1	Testing fee	13543555.00	13252154.02
2	Consultancy fee.	11249981.00	9548631.00
3	Laboratory Fee	5000.00	0.00
4	Library Fee	8000.00	0.00
5	M.Sc. Course Fee	564000.00	752000.00
	TOTAL	25370536.00	23552785.02

As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS


(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE


DIRECTOR INCHARGE


INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021



Kinra & Associates
Chartered Accountants

H. No. 32, Phase III-B
Pant Vihar, ITC Road, Saharanpur
Contact - 91- 7906192914

CENTRAL PULP & PAPER RESEARCH INSTITUTE
An autonomous organisation registered under societies Act under the administrative
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POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021
SCHEDULE - 8 - GOVERNMENT GRANT RECEIVED

S.No.	PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
		2020-21	2019-20
1(a)	Government of India - Plan	7107398.00	8795453.00
(b)	Swatch Action Plan	2000000.00	0.00
2(a)	Government of India through Development Council for Pulp, Paper & Allied Industries-Non Plan	69047970.60	63149915.00
(b)	Core Secretariate for Development Council PP&A Industry	3201443.00	0.00
3	Government of India through Development Council for Pulp, Paper & Allied Industries for Cess Projects		
(a)	Continous Education Training of Tech Personal	39769.00	2430880.00
(b)	Development of Protocole	525129.30	1744334.70
(c)	Statistical Data collection Cell for Indian Pulp & Paper Industry	824829.00	1188815.00
(d)	Utilization of Lignin as Value Added Product for Manufacturing of Rubber Product	0.00	37937.00
(e)	Capacity Building and upgradation of infrastructure for inter lab Comparison	1750000.00	1022075.00
(f)	Study on Preparation of Cellulose Micro/Nano Fibrils	0.00	463907.80
(g)	Creation of Testing Facilities for Food Packaging paper	523602.23	1948412.65
(h)	A Synergistic and Economical Approach for Treatment of Pulp & Paper Mill	398830.00	420765.00
(i)	Screening of Parents for Clonal Forestry & Hybridization for Higher Productivity	0.00	520204.86
(j)	Demonstration of Ozone Treatment Technology	25031.00	1251151.00
(k)	Biopolymeric approach for improvement of	157710.00	0.00
(l)	Study on Delignification of Agro residu	1305109.00	0.00
	TOTAL	86906821.13	82973851.01

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SCHEDULE - 9 - FEES/SUBSCRIPTION'S

S.No.	PARTICULARS	CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
1	Membership fees	65000.00	121500.00
2	Training fees	355105.00	489000.00
	TOTAL	420105.00	610500.00

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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021
SCHEDULE - 10 - INTEREST EARNED

SI. No.	PARTICULARS	CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
	INTEREST EARNED		
1	On Term Deposite with schedule Bank	3463307.00	5328806.18
2	On Loan to staff	93926.00	121834.00
3	Interest on Refund of TDS	443436.00	329446.00
	TOTAL	4000669.00	5780086.18

As per our separate report of even date.

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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021
SCHEDULE - 11 - OTHER INCOME

Sl.No.	PARTICULARS	CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
	OTHER INCOME		
1	Hostel rent	252325.00	193475.00
2	Lease rent	62500.00	50000.00
3	Licence fee	278682.00	272762.00
4	Miscellaneous income	121575.40	210881.62
5	Sale of Publications	0.00	2700.00
	TOTAL	715082.40	729818.62

As per our separate report of even date.

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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021

SCHEDULE - 12 - ESTABLISHMENT EXPENSES

S.No.	PARTICULARS	CURRENT YEAR 2020-21	PREVIOUS YEAR 2019-20
	ESTABLISHMENT EXPENSES		
1	Salary & Allowances	53485706.00	59674135.00
2	CPF Contribution	4492527.00	5264287.00
3	Gratuity Paid	2474298.00	3452641.00
4	Encashment of leave	2354505.00	5185477.00
5	Reimbursement of medical expenses	1587685.00	1599467.00
6	Arrear of Salary	2808685.00	0.00
7	Arrear of CPF Contribution	321369.00	0.00
	TOTAL	67524775.00	75176007.00

As per our separate report of even date.

FOR Kinra & Associates
CHARTERED ACCOUNTANTS


(Gagan Kinra)
F.C.A., M.Com., LLB
M. No. 425053

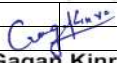
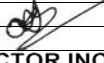
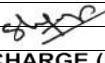
FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE


DIRECTOR INCHARGE


INCHARGE (F&A)

PLACE: SAHARANPUR
Date: 28-09-2021



Kinra & Associates		H. No. 32, Phase III-B	
Chartered Accountants		Pant Vihar, ITC Road, Saharanpur	
		Contact - 91- 7906192914	
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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2021			
SCHEDULE - 13 - ADMINISTRATIVE EXPENSES ETC			
S.No	PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
		2020-21	2019-20
OTHER ADMINISTRATIVE EXPENSES ETC.			
1	To Lab & Plant Maintenance	2869080.23	6295492.77
2	To Cartage & Freight	2400.00	87844.00
3	To Electricity and water	6756000.00	8176624.00
4	To Repair & Maintenance of Assets	9481291.25	11776858.94
5	To Rent & Taxes	907200.00	907200.00
6	To Postage & Telephone & Communication	211314.37	313513.63
7	To Printing & Stationery	947527.00	1305715.50
8	To Travelling & Conveyance Exp.	855113.00	2627466.00
9	To Exp.on Seminar & Workshop	0.00	20178.00
10	To Membership subscription	5200.00	0.00
11	To Audit fees	0.00	37760.00
12	To Hospitality Expenses	32939.00	75823.00
13	To Legal & Professional Exp.	249834.00	740671.28
14	To News Paper Exp.	3235.00	1392.00
15	To Training Expenses	320516.00	1593374.00
16	To Watch & Ward	7281776.00	7365588.00
17	To Bank charges	204545.68	6982.26
18	To Advertisement	322284.00	197122.00
19	To Testing Fee Paid	224154.00	108117.00
20	To Staff Car Maint	328428.00	399187.00
21	To Hindi Diwas Exp.	4000.00	30794.00
22	To Swachh Bharat Abhiyan Exp.	2186093.00	1306216.00
23	To Software Exp. / Expenditure on IT	5132135.00	167265.00
24	To Paper Ex	0.00	123304.00
25	To Expenditure on NABL	0.00	804114.98
26	To Grant in Aid Paid	1678000.00	0.00
27	To Staff Welfare	0.00	2300.00
28	To Patent Fee	0.00	5250.00
29	To Honorarium	129500.00	1093050.00
30	To National Festival	49842.00	66461.00
31	To Plantation & Gardening / Horticulture	161278.00	226509.00
32	To Interest paid on TDS	7750.00	2484.00
33	To Loss in Forex	2324.48	0.00
34	To Bank Interest	116364.00	0.00
35	To loss on TDS	198673.00	0.00
	TOTAL	40668797.01	45864657.36
As per our separate report of even date.			
FOR Kinra & Associates		FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE	
CHARTERED ACCOUNTANTS			
			
(Gagan Kinra)		DIRECTOR INCHARGE	INCHARGE (F&A)
F.C.A., M.Com., LLB			
M. No. 425053			
PLACE: SAHARANPUR			
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Kinra & Associates
Chartered Accountants

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CENTRAL PULP & PAPER RESEARCH INSTITUTE

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POST BOX - 174, PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR (U.P.)

ANNEXURE

Significant Accounting Policies & Notes on Accounts

Overview:

CPPRI is an autonomous organization registered under the Societies Act under the administrative control of Ministry of Commerce & Industry (Govt. of India) vide Government of India Gazette Notification dated 7.8.1979.

Financial Accounts:

The financial statements are prepared on the basis of historical cost convention and the Accounting Policies used in preparation of these financial statements confirm with the Accounting Principles generally accepted in India. The Institute follows the accrual method of accounting.

A. Significant Accounting Policies:

1. Revenue Recognition:

1.1 Testing fee is accounted for on accrual basis.

1.2 Lease Rent is accounted for on accrual basis.

1.3 Government Grant, Institutional fee, Sponsored Project, Membership fee, Training and Registration fees are accounted for on receipt basis.

2. Inventory valuation:

The inventory comprises of stores and spares are valued at cost.

3. Fixed Assets:

Fixed Assets are stated at cost less accumulated depreciation.

4. Depreciation:

4.1 Depreciation is provided on written down value methods, as per the rates specified in the Income Tax Act 1961.

5. Government Grants:

Government Grants received to the extent utilized for capital expenditure being added to the capital fund and to



the extent utilized for revenue expenditure being treated as income in the income and expenditure account and the un-utilized grant being carried forward. This is not as per the para no.14 of the Accounting Standard (AS-12) relating to Accounting for Government Grants. The Institute was advised to consider the guidelines on the subject in consultation with the concerned organizations /agencies for implementation. The Institute in reply has confirmed that other similar organizations / agencies are also following the same pattern. This point was also discussed by the concerned officer in the training imparted by National Institute of Finance Management, Govt. of India during the course of training.

6. Foreign currency transaction:

Transactions in foreign currency are accounted at the exchange Rate prevailing on the date of transaction in Indian Currency.

B. Notes forming part of Accounts:

1. Information about the activities of the Institute:

The Institute running under the Administrative control of Ministry of Commerce & Industry, Department for Promotion of Industry and Internal Trade (DPIIT), New Delhi is engaged to promote Research and other scientific work connected with Pulp, Paper & Allied Industries to establish and maintain Laboratories, Pilot Plant, and Workshop etc and to edit, print, publish and exhibit books, papers and periodicals bearing upon the said industries. Besides that the Institute also under take Cess funded projects and Sponsored projects from Govt. of India, Government Institutions and other Organizations also.

2. Retirement Benefits:

2.1 Provision for Gratuity payable on death/retirement of employees, during this year is Rs. 2474298.00 and for leave encashment is Rs. 2354505.00 payable to them based on accrual basis and as per the actuarial valuation certificate.

3. Current Assets Loans & Advance:

Management has stated that the current assets, loans and advances have full value on realization in the ordinary course of Business.

4. Corresponding previous year figures have been re-grouped or re-arranged wherever necessary.

5. Total advances stand as on 31.3.2021 is Rs. 12580627.94 excluding advance to staff relates for advance against supply of equipments etc.

6. As per Schedule No.1 of the Balance-sheet, capital fund shows that Grant of Rs. 2743891.74 has been incurred as capital expenditure while as per Schedule No.5 of the Balance-sheet relating to fixed assets shows an addition of Rs.14081883.70. Regarding more capital expenditure of Rs.11337991.96 it is stated by the management that it is due to adjustment of suppliers bills and from letter of credits in the current year.



7. The management has confirmed that:
- 7.1 The provisions of all known income, expenditure and liabilities have been made.
- 7.2 No contingent liability exist on the date of Balance-sheet.
- 7.3 No significant event has occurred from the date of Balance-sheet and audit.

For Central Pulp & Paper Research Institute

In-charge (Finance & Accounts) (DIRECTOR INCHARGE)

**For Kinra & Associates
Chartered Accountants**

**(GAGAN KINRA
F.C.A., M.Com., LLB
M. No. 425053**

Date: 28-09-2021
Place: Saharanpur



THE STAFF

SCIENTIFIC STAFF

Director	Dr. B. P. Thapliyal, M.Sc., M.Tech., Ph.D. (Superannuated on 31.01.2021)
Director Incharge	Dr. M. K. Gupta, M.Sc., Ph.D (w.e.f. 01.02.2021)
Scientist-G	Smt. Rita Tandon, M.Sc. (Superannuated on 31.07.2020)
Scientist F	Dr. M. K. Gupta, M.Sc., Ph.D Dr. Kawaljeet Singh, M.Sc., Ph.D., MBA Dr. A. K. Dixit, M.Sc., Ph.D.
Scientist E-II	Dr. R. D. Godiyal, M.Sc., D.Phil. (VRS taken on 18.05.2020) Dr. Shivaker Mishra, M.Sc., Ph.D. Dr. Priti Shivhare Lal, M.Sc., Ph.D. Smt. Anuradha V. Janbade, M.Sc. Dr. Nitin Endlay, M.Sc., PGDIPM (PG Diploma in Industrial Pollution Management), Ph.D. Dr. Sanjay Tyagi, B.E., M.E., Ph.D., Accredited Energy Auditor Shri Alok Kumar Goel, M.Sc., Certified Energy Manager
Scientist E-I	Shri Satya Dev Negi, M.Sc., PGDPPT (PG Diploma in Pulp and Paper)
Scientist - B	Dr. Arvind Kumar Sharma, M.Sc., PGDPPT (PG Diploma in Pulp and Paper), Ph.D. Mohd. Salim, M.Sc. Shri Kumar Anupam, B.Tech. Shri Shubhang Bhardwaj, B.Tech, M.Tech Dr. Snehashish Bhakta, M.Sc., Ph.D (Resigned on 23.07.2020)



Dr. Nitin Kumar, B.Tech, M.Tech, Ph.D

Dr. Jitender Dhiman, M.Sc., Ph.D.

TECHNICAL & SUPPORT STAFF

Technical Officer E-I	Shri N. K. Naik, Diploma in Engineering (Industrial Electronics)
Technical Officer - B	Shri Pankaj Kumar Goley, B.Tech. (Electrical Engineering)
Library Officer-B	Smt. Sarita Sharma, M.A., MLISc.
Technical Grade VI	Shri Dushyant Kumar Shri M.L.Semwal Shri Soban Singh Shri Nasir Ali (Superannuated on 31.07.2020) Shri Gopal Dutt Shri R. K. Kapoor Shri Sunder Lal Shri Gopal Singh
Driver	Shri Shri Bhagwan Sharma

ADMINISTRATIVE & FINANCE STAFF

Administrative Officer	Shri A. K. Saxena, M.Com. (Superannuated on 30.06.2020)
Accountant	Shri O. P. Bhatia, B.Com. (Hons.)
Assistant	Shri B. B. Chetri, M.A. (Superannuated on 30.06.2020)
Accountant	Shri H. C. Pandey, M.Com.

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Technical Review

Dr. M.K. Gupta

Compilation and Editing

Dr. Priti S. Lal

Shri Satya Dev Negi

Smt. Sarita Sharma

Mr. Mohd Salim

Dr. Jitender Dhiman



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Amrit Mahotsav

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