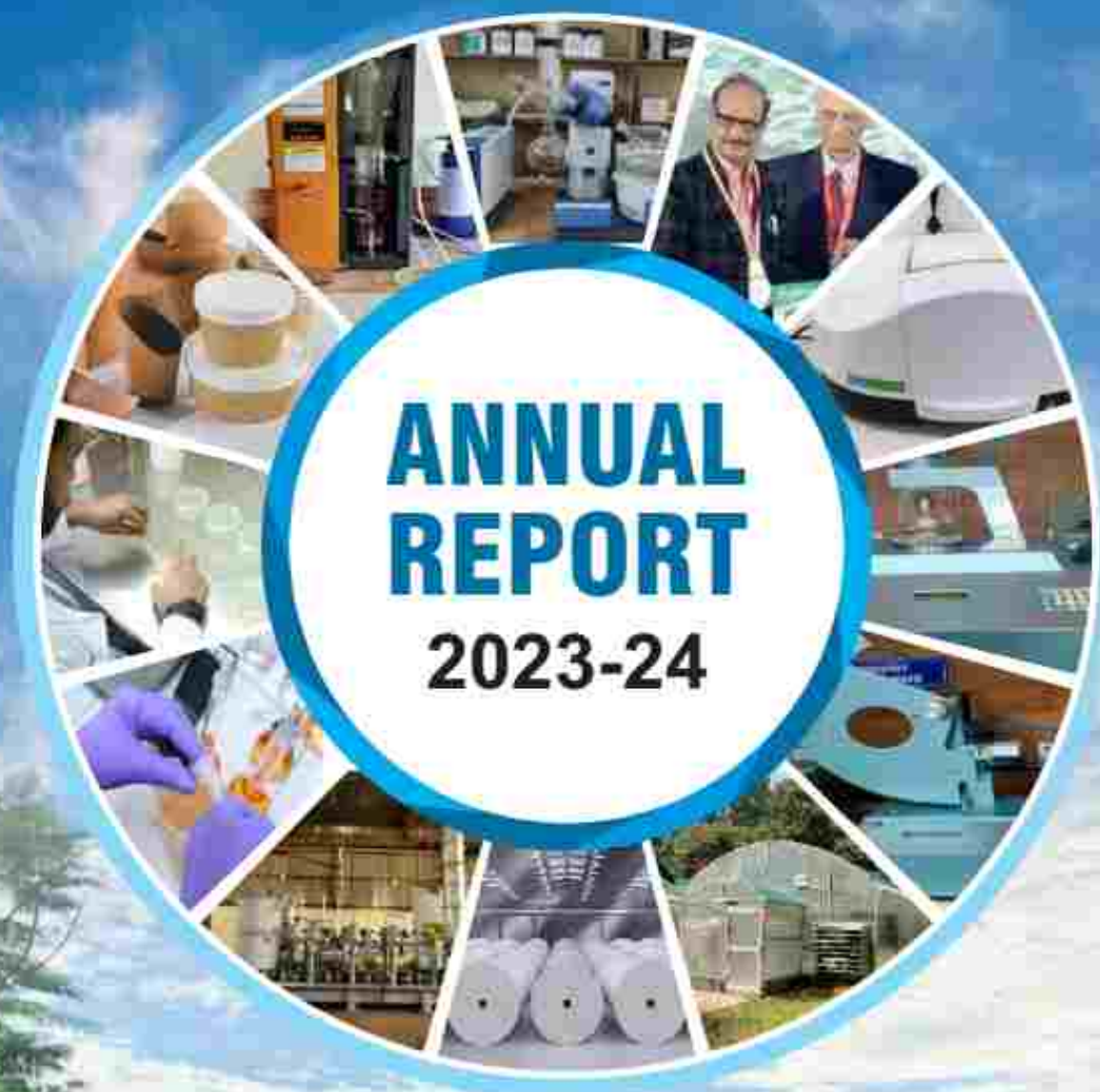




**CENTRAL PULP & PAPER  
RESEARCH INSTITUTE**



# **ANNUAL REPORT**

## **2023-24**





National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**PAPER TESTING LABORATORY AND ENVIRONMENT  
MANAGEMENT DIVISION, CENTRAL PULP AND PAPER  
RESEARCH INSTITUTE**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

PAPER MILL ROAD, HIMMAT NAGAR, SAHARANPUR, UTTAR PRADESH, INDIA

in the field of

**TESTING**

Certificate Number: TC-8658

Issue Date: 19/09/2022

Valid Until:

18/09/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.  
(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Name of Legal Identity: CENTRAL PULP AND PAPER RESEARCH INSTITUTE

Signed for and on behalf of NABL



N. Venkateswaram  
Chief Executive Officer



# ANNUAL REPORT

## 2023-24



**Central Pulp & Paper Research Institute**

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







Message from the Desk of Director	01
Central Pulp and Paper Research Institute: An Introduction	04
Overview of The Indian Paper, Paperboard & Newsprint Industry	11
Major Achievements	19
R & D Activities	27
Project Sponsored by Pulp, Paper and Allied Industries	45
Quality Management System	53
Technical and Consultancy Services	55
Meetings Organized/Attended	64
Workshop/Training Program Organized	68
Participation in Seminar, Workshop and Training Programs	74
Paper Presented and Lecture Delivered	80
Representation in External Committees	87
Publications	89
Reports	91
Visits to Paper Mills and other Organizations	94
M.Sc. and Ph.D. Course Activities	100
Celebration of National and other Important Days	107
Official Language News	113
Mission LiFE	121
Swachhata hi Sewa and Special Campaign 3.0	123
Right to Information (RTI) Act 2005	125
Financial Report	127
Staff List	149







## MESSAGE FROM THE DESK OF DIRECTOR



The Indian pulp and paper industry is a vital sector that plays a significant role in the country's economy by providing raw materials for numerous industries, contributing to employment and supporting sustainable development. As of 2024, the industry has been navigating through various challenges and opportunities that stem from technological advancements, environmental concerns, resource management and shifting consumer preferences. The industry is highly diverse, encompassing large integrated mills, small and medium-sized enterprises and agro-based and recycled fiber mills. This diversity makes the sector resilient but

also calls for continuous innovation and improvement to maintain competitiveness in a global market.

In recent years, the industry has faced several transformative trends, such as the growing emphasis on sustainability, the rising demand for eco-friendly packaging materials and the need for efficient resource utilization. With increased awareness of environmental impact, there is a pressing need to adopt cleaner and greener technologies. The Indian government's policies, such as the ban on single-use plastics, have further accelerated the demand for paper-based packaging solutions, thereby creating new growth avenues for the sector. Additionally, the increasing digitization of communication has altered the demand dynamics for traditional paper products, pushing the industry towards diversification and value-added products. I am pleased to present the fraternity of pulp and paper, government, paper manufacturers associations, scientific institutions and all stakeholders. The Annual Report of CPPRI for the year 2023-24 is a showcase of CPPRI employees efforts, dedication and resilience.

The Central Pulp and Paper Research Institute (CPPRI) serves as a premier research organization dedicated to advancing the Indian pulp and paper industry through focused research, technological innovations, and strategic advisory services established with the vision of fostering sustainable growth and development in the sector, CPPRI plays a pivotal role in addressing the key challenges faced by the industry, such as environmental sustainability, technological upgradation and raw material efficiency.

CPPRI is at the forefront of developing innovative and sustainable technologies for the industry. The institute's research focuses on creating environmentally friendly processes, such as developing green pulping and bleaching methods, water conservation techniques, and effluent treatment processes that minimize environmental impact. Recent advancements include the development of "Borate Autocauticization" technology, which has been recognized as an emerging green technology.

CPPRI Scientist received best paper award for paper presentation on "Borate Autocauticization - An Emerging Green Technology" at 16<sup>th</sup> International Conference and Exhibition on Pulp, Paper and Allied Industries (PAPEREX 2023). CPPRI also assists the industry in adopting zero-liquid discharge (ZLD) solutions, ozone and enzymatic bleaching technology and biobased barrier coaters and other best practices for resource and environment management.

The availability and quality of raw materials are critical for the paper industry. CPPRI has been actively involved in the research and development of alternative raw materials and the



improvement of existing ones. Through collaborative projects with industry partners, CPPRI has developed technologies for producing dissolving-grade pulp from whole jute plants and explored the potential of agricultural residues and non-wood fibers. The institute also works on genetic improvement and the propagation of fast-growing tree species to ensure a sustainable supply of quality raw materials.

CPPRI is supporting Industry through technical and consultancy services by providing a wide range of technical and consultancy services to pulp and paper mills across India. These services include raw material evaluation, process optimization, product quality enhancement, effluent treatment, and pollution control. The institute's expertise in troubleshooting and adequacy assessment of process operations helps mills to improve their efficiency and environmental compliance, contributing to cost savings and sustainable growth.

In the area of Capacity Building and Skill Development CPPRI efforts are commendable. In order to address the industry's need for skilled human resources, CPPRI conducts regular training programs and workshops in various areas, including process optimization, environmental management, quality control, and new product development. These initiatives help build capacity within the industry and promote the adoption of the latest technologies and best practices. During 2023-2024, 10 numbers of training programs were organized by CPPRI in various area of process, quality and human resource development.

CPPRI works closely with various stakeholders, including government bodies, industry associations, and academic institutions, to align research activities with the industry's evolving needs. CPPRI has signed 6 MoU with various organizations in the year 2023-24. The institute collaborates with organizations like the Indian Paper Manufacturers Association (IPMA), The Indian Agro and Recycled Paper Mills Association (IARPMA) and the Central Pollution Control Board (CPCB) to address key policy issues, environmental regulations and sustainable development goals.

In the current scenario, as the Indian pulp and paper industry strives to adapt to global standards of sustainability and efficiency, CPPRI's role as a catalyst for innovation, sustainability and growth is more crucial than ever. Through its comprehensive research, technical support and collaborative approach, CPPRI continues to serve as a backbone for the industry, driving progress and helping it navigate through the challenges of a rapidly changing market environment.

CPPRI would like to place on record its deep appreciation for the guidance and encouragement extended by Shri Rajesh Kumar Singh, IAS, Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India and President, Council of Association(CoA) of CPPRI. His support has been instrumental in the institute's progress.

We also express our gratitude for the guidance and professional leadership provided by Shri Sanjiv IRS, Joint Secretary, Department for Promotion of Industry and Internal Trade, and Chairman, Research Advisory Committee (RAC) of CPPRI and Research Steering Committee of Development Council for Pulp, Paper and Allied Industries (RSC-DCPPAI). His leadership has greatly contributed to our success.



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

We also extend our thanks to the various mill associations including the Indian Paper Manufacturers Association (IPMA), Indian Newsprint Manufacturers Association (INMA), Indian Agro and Recycled Paper Mills Association (IARPMA), Indian Recycled Paper Mills Association (IRPMA) and other regional mill associations, as well as all our valued clients from the pulp, paper, and allied industries for their continued support in various activities and projects executed by CPPRI. Due to the support of clients CPPRI earned IRG of Rs. 343.96 Lacs during the year 2023-2024.

I want to extend my sincere gratitude to all our staff, scientists, partners and stakeholders for their unwavering support and contributions to our success. Together, we have achieved much and together, we will continue to strive for excellence and sustainability in the coming year.

Thank you for your continued support.

Warm regards,

A handwritten signature in blue ink, appearing to read 'Dr. L.P. Singh', is positioned above the printed name.

Dr. L.P. Singh  
Director





### Historical Perspective

The Research and Development was almost neglected in pulp and paper sector till early 1970's, as till then the existing mills which were set up before and after independence were using mostly imported conventional technology and process equipment to process woody / bamboo raw material. Due to limited demand of paper and paperboard, need for Research and Development for the process or use of alternative Raw Materials or development of indigenous technologies was not really felt much.

The turning point came in early 1970's when the country experienced increase in paper demand as well as raw material crisis which resulted in a widening gap in demand and supply of paper and paper products. This led to search for alternative raw materials and soon with Government's support and initiative, a mushroom growth of small scale agro based units took place in various agricultural belts of the country. At this stage the industry felt the need for development of indigenous process technology and evaluation of alternate raw materials, subsequent to which a project on "Identification of Alternate Raw Materials" Sponsored by UNDP (FAO). This was the beginning of recognition of Research and Development activities in Pulp and Paper Sector.

The project became operational in 1975 with the main objectives of identification of alternate raw materials for paper and newsprint manufacture. The activities envisaged upgradation of R & D facilities by acquiring the modern Laboratory and Pilot Plant facilities. During the tenure of this project the qualified manpower picked up from the Industry and Research Institutes was trained in developed countries. Further a number of International consultants played a vital role in designing the R & D programmes under this project. The facilities acquired at that time alongwith well trained manpower and the experience gained through the International experts became the assets which needed to be tapped and utilized even after the completion of the above project. In this perspective, the assets developed under the project were consolidated into an full fledged National level Institute on 11<sup>th</sup> November, 1980 to be known as **Central Pulp and Paper Research Institute (CPPRI)**. The Institute was constituted as an autonomous body under Ministry of Commerce and Industry, Government of India.

CPPRI is a premier research institute dedicated to the service of pulp, paper and allied industry. The institute prides itself of having state of art facilities and equipments and an enthusiastic team of dedicated, well experienced and trained scientists for carrying out quality research work in various areas of pulp and paper making i.e. from raw material to finished product. Over the years, the Institute has carved a niche and is considered at par with the reputed research organizations of developed countries like Sweden, Finland etc.

### Objective of the Institute

- To develop into a centre of excellence for providing Technical and Consultancy Services & carrying out quality research and scientific work dedicated to pulp & paper and allied industries.
- To strive towards improving the overall technological and environmental status, global competitiveness and environmental sustainability of Indian Pulp and Paper Mills.
- Information dissemination related to latest R and D and technological developments in paper industry and impart training to mill personnel for upgradation of knowledge and skill in various aspects of paper making.



## Vision

Develop CPPRI a Centre of Excellence in the area of pulp and paper based research, testing, technical and consultancy services, training and academics with a goal to make Indian Paper Industry sustainable and globally competitive.

## Mission

- Promote research and scientific work connected with pulp & paper industry
- Establish and maintain laboratories, pilot plant for pulp & paper research
- Publish periodicals and documents on the activities having bearing on the industry
- Provide technical & consultancy services to pulp & paper and allied industry
- Strive towards improving the overall technological and environmental status, global competitiveness and environmental sustainability of Indian Pulp and Paper Industry
- Dissemination of information related to latest R and D technological developments in paper Industry
- Impart training to concerned individuals and stakeholders for upgradation of knowledge and skill in various aspects of paper making
- Encourage discovery and acquire patents in the pulp and paper
- Create skilled manpower for pulp and paper industry through running academic courses.
- Collaboration with other academic and research institutes around the world to strengthen the pulp and paper education and research ecosystem

## Quality Policy

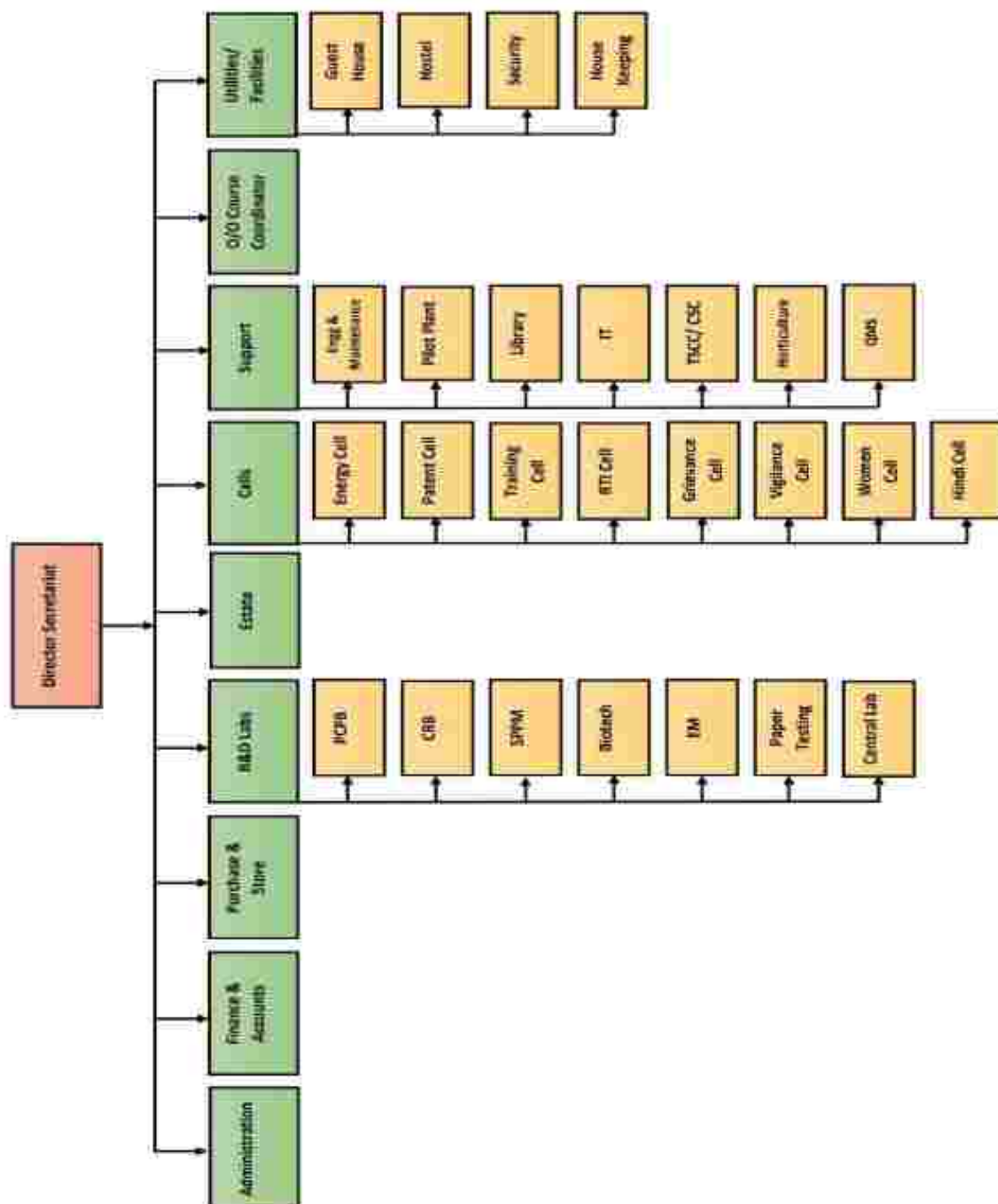
CPPRI is committed to provide "world class" pulp and paper research and development, policy making, testing, human resource development and academic services in the most professional manner possible to its interested parties at National and International level and is committed to do its job "right first time....every time...." in order to provide total customer satisfaction. This commitment is an institutional dedication to continual improvement and customer satisfaction. CPPRI and its personnel, to achieve quality objectives in keeping with this policy, are committed to:

- Maintaining a management system meeting the requirement of Quality Management system ISO 9001:2015 and ISO/IEC/ 17025:2017 consistently.
- Maintaining a working knowledge of the quality systems involved and implementing them in our work.
- Performing all concerned activities competently in conformance with customer requirements and stated test methods.
- Uncompromising attitude towards excellence in all the concerned activities and maintaining impartiality in all the activities.

We, at CPPRI, shall strive to improve our services by reviewing effectiveness of quality management systems for continual improvement.



## Organization Structure Of CPPRI



PCRB: Pulp & Bleaching, CRB: Chemical Recovery & Bio refinery, SPM: Stock Preparation & Paper Making, EM: Environment Management, CSC: Customer Service Cell, TSCC: Technical Services & Consultancy, QMS: Quality Management System



## Infrastructure

The institute has a lush green campus and the constructed area is 10712 square meters, which includes:

- The main building comprising of Administrative Block & Two Laboratory Blocks.
- Pilot Plant
- Library and Documentation Centre
- Hostel Cum Guest House
- Residential Colony with 69 Residential Quarters

The institute renders its services in various areas of pulp and paper making and caters to the need of the paper industry through the following divisions.

- Physical Chemistry, Pulping and Bleaching
- Stock Preparation and Paper Making
- Paper Testing and Energy Management
- Chemical Recovery and Biorefinery
- Biotechnology
- Environmental Management
- Library and Documentation Centre
- Engineering and Maintenance

These divisions are well equipped with state of art equipments and facilities to carry out quality research work and render technical services to pulp, paper and allied industries.

## Management

Central Pulp and Paper Research Institute (CPPRI) is an Autonomous Organization, registered under the Societies Registration Act. The affairs of the institute and its functionalities are executed as per a duly approved Memorandum of Association (MoA), as amended with due procedure from time to time. As per the Section 6 of the MoA of CPPRI, the affairs of the institute are entrusted as required under Section 2 of the Societies Registration Act 1860 to a governing body, now referred to as the Council of Association of CPPRI.

### Council of Association (CoA)

The Council of Association of Central Pulp and Paper Research Institute (CPPRI) is the supreme body consisting of members from Ministry of Commerce and Industry, 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, Indian Paper Manufacturers Association (IPMA), Indian Newsprint Manufacturer's Association (INMA), Indian Agro and Recycled Paper Mills Association (IARPMMA), 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. Shri Rajesh Kumar Singh, IAS, Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India is the present Chair of the Council.





Shri Sanjiv, IRS, Joint Secretary, Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India steers the affairs of the Institute as the Chair of the Research Advisory Committee. The composition of the present council is placed below:

### Members of Council of Association of CPPRI

1.	Secretary Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
2.	Joint Secretary Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
3.	Director /Deputy Secretary (IF Wing) Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
4.	Chairman Development Council for Pulp, Paper and Allied Industries, Government of India
5.	Representative of Department of Science and Technology (DST) Ministry of Science and Technology, Government of India
6.	Representative of Council of Scientific and Industrial Research (CSIR) Council of Scientific and Industrial Research (CSIR) New Delhi
7.	Representative of IIT Roorkee (Saharanpur Campus) Department of Paper Technology, IIT Roorkee (Saharanpur Campus) Saharanpur
8.	Representative of Indian Council of Forestry Research and Education (ICFRE) Indian Council of Forestry Research and Education, (Dehradun) Uttarakhand
9.	Representative of Indian Paper Manufacturers Association (IPMA) Indian Paper Manufactures Association (IPMA), New Delhi
10.	Representative of Indian Newsprint Manufacturers Association Indian Newsprint Manufacturer's Association (INMA), New Delhi
11.	Representative of Indian Agro and Recycled Paper Mills Association (IARPMA) Indian Agro and Recycled Paper Mills Association (IARPMA), New Delhi
12.	Representative of Indian Recycled Paper Mills Association (IRPMA) Indian Recycled Paper Mills Association (IRPMA), Delhi
13.	Representative of Indian Pulp and Paper Technical Association (IPPTA) Indian Pulp and Paper Technical Association (IPPTA), Saharanpur
14.	Representative of Paper Machinery Manufacturers Wires & Fabriks (S.A.) Limited, Kolkata
15.	Director Central Pulp and Paper Research Institute, Saharanpur

MEMBER SECRETARY



## Research Advisory Committee (RAC)

The Research Advisory Committee (RAC) of Central Pulp and Paper Research Institute (CPPRI) comprises of prominent scientists and technologists and also representatives from Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and 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 and Year plan Projects), Shri Sanjiv, IRS, Joint Secretary, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India is the Chairman of RAC at present. The present composition of the RAC is placed below.

### Members of Research Advisory Committee of CPPRI

1.	Additional Secretary/Joint Secretary (Incharge Paper), Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
2.	Director/Deputy Secretary, IF Wing (DPIIT) Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
3.	Director/Senior Development Officer / Deputy Secretary (Paper), Department for Promotion of Industry and Internal Trade (DPIIT) Ministry of Commerce and Industry, Government of India
4.	Representative of Department of Science and Technology Department of Science and Technology, New Delhi
5.	Head Cellulose and Paper Branch, Forest Research Institute, ICFRE, Dehradun
6.	Head Department of Paper Technology (DPT), IIT- Roorkee (Saharanpur Campus), Saharanpur
7.	Member Secretary/ Representative Central Pollution Control Board, Delhi
8.	Central Head CSIR- National Environmental Engineering Research Institute (NEERI), New Delhi
9.	Director / Representative National Institute of Hydrology, Roorkee
10.	Head / Representative CRDT, IIT (Delhi), New Delhi
11.	President or Representative Indian Paper Manufacturers Association (IPMA), New Delhi



12.	President or Representative Indian Agro and Recycled Paper Mills Association (IARPMA), New Delhi
13.	President or Representative Indian Recycled Paper Mills Association (IRPMA), Delhi
14.	President or Representative Indian Newsprint Manufacturers Association (INMA), New Delhi
15.	President or Representative Indian Pulp and Paper Technical Association (IPPTA), Saharanpur
16.	Director / Director Incharge, CPPRI Central Pulp and Paper Research Institute, Saharanpur
	Member Secretary

## Staff

As on 31<sup>st</sup> March 2024, CPPRI's core team consisted of 13 Scientist, 06 Technical Staff and 3 Administrative & Finance Staff including the Director.

Team CPPRI is committed for 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, Policy Matters etc. The list of permanent staff along with qualifications is annexed with this report.



## OVERVIEW OF THE INDIAN PAPER, PAPERBOARD AND NEWSPRINT INDUSTRY

### Brief Profile

It is estimated that there are approximately 850 to 900 pulp and paper mills in India with around 550 currently in operation. These operational mills utilize a diverse range of raw materials, including wood, recycled fibre, bagasse, wheat straw and market pulp. Based on these raw materials, the paper industry can be categorized into wood-based, agro-residue-based and wastepaper or recycled fibre-based mills. However, most wood and agro-based mills today use a mixed furnish, incorporating both wastepaper and imported pulp.



In terms of production, the total output share of wood-based, agro-residue-based and recycled fiber based mills in the country is estimated to be around 18%, 6%, and 74%, respectively.

The industry can also be classified based on end products into writing and printing paper, industrial paper/packaging grade paper, newsprint and specialty grade paper. Overall, the Indian paper industry accounts for about 5-6% of the world's production of paper, paperboard and newsprint, making it the fifth-largest paper producer globally, with an estimated production of around 23 million tonnes per annum.

In India, the per capita consumption of paper is estimated to be about 15-16 kg, which is significantly lower than the world average of 57 kg. This indicates a substantial potential for growth in the paper sector to reach the world average per capita consumption.

The Indian paper industry is interconnected with various allied industries and activities, including agroforestry, chemicals, machinery and equipment, converters, printers, paper traders (both recycled fiber and finished paper), transporters and shipping. The paper value chain encompasses nearly all areas of commerce and trade, providing direct and indirect employment opportunities to a significant portion of the population.

In recent times, with the ban on single-use plastics (SuP's) and a push towards sustainability, the Indian paper industry is diversifying its product profile to include eco-friendly, sustainable and biodegradable paper products such as biodegradable packaging materials and specialty papers. To seize this opportunity, paper industries are increasingly focusing on introducing paper as a potential replacement for plastic packaging and other value-added applications. Today, sustainable paper products are available or being developed with features like oil and water





resistance, moisture and oxygen barriers, and heat-sealing capabilities.

Over the past 1-2 years, the paper market, especially the packaging segment, has experienced volatility and disruptions in the availability and cost of fibrous raw materials, coal and paper demand. One major reason for this has been the capacity expansion undertaken by paper mills during the COVID-19 phase due to a disproportionate increase in paper demand, leading to an oversupply in the market. It is estimated that new paper mills capacities have increased by 30-40% in the last 3-4 years, resulting in overproduction in the kraft paper segment. Additionally, many developed countries have installed recycled paper mills and are offering kraft/package paper at competitive rates, making it challenging for Indian paper mills to compete.

The major challenges facing the Indian paper industry include:

1. Consolidation of the fragmented industry
2. Achieving economies of scale
3. Modernization of mills, productivity improvement, and building new capacities
4. Development of a robust and sustainable raw material base
5. Quality benchmarking
6. Improving global competitiveness
7. Meeting environmental standards and regulatory compliances

## **Environmental Performance / Sustainability**

In recent years, the Indian paper industry has made significant strides in efficient resource management, including sustainable social farm forestry practices, resource conservation and reduced energy and water consumption. Over the past decade, the industry has supported farmer communities by establishing pulpwood plantations on degraded marginal lands. Today, the Indian paper industry generally plants more trees than it harvests, claiming to be both wood and carbon positive.

To comply with environmental norms, Indian paper mills are increasingly investing in technology and process upgrades, energy-efficient technologies and equipment, and measures to reduce energy consumption and greenhouse gas emissions. This includes upgrading effluent treatment plants (ETPs), reusing and recycling backwater/treated effluent and utilizing bio/renewable energy sources. As a result, freshwater consumption has decreased significantly with large integrated pulp and paper mills using less than 50 m<sup>3</sup> per tonne of paper, recycled fiber-based mills using less than 15 m<sup>3</sup> per tonne of writing and printing paper and less than 10 m<sup>3</sup> per tonne of kraft paper. Some recycled fibre-based paper mills are reported to be operating on zero liquid discharge (ZLD) with freshwater consumption below 2 m<sup>3</sup> per tonne of paper. The Indian paper industry has reduced its water consumption by over 70-80% in the last 6-7 years. Water reuse in paper making is a prime example of the circular economy, as approximately 85% of the total water consumed is generated as wastewater and retreated.

With a focus on a low-carbon economy, the paper industry has made significant efforts to reduce specific energy consumption. Under the Perform, Achieve and Trade (PAT) scheme of the National



Mission for Enhanced Energy Efficiency (NMEEE), the paper industry has been one of the top-performing sectors, exceeding stringent targets for reducing specific energy consumption. More than 100 additional paper mills are expected to come under the PAT scheme in the next year. The paper industry has reportedly reduced its energy consumption by 20% in the last five years. Most integrated pulp and paper mills generate 40-50% of their power requirements by incinerating biomass (black liquor) produced during the pulping process. The industry has gradually become more conscious of its environmental impact and the pressing need for responsible resource management, including raw materials, chemicals, energy, water and fuel.

The industry is now utilizing advanced process controls, digital and AI tools and machine learning models to optimize operations, reduce waste and resource consumption and improve overall productivity and supply chain management.

### Import / Export Scenario

Interestingly, while global paper consumption has sharply declined, India has not experienced this trend. Consequently, global players have been reducing paper prices by up to USD 200-300 to offload their excess production in India, impacting the domestic paper industry. The demand for paper and paperboard in the domestic market has largely remained stable. However, the kraft paper segment was significantly affected during 2022-23 due to overproduction and lower export demands. Recently, paper prices have undergone significant corrections due to low global demand, the Russia-Ukraine war and the Israel-Hamas conflict, leading to supply chain disruptions and severely impacting the Indian paper industry in terms of raw material availability, high input costs, and exports.

According to the Directorate General of Commercial Intelligence and Statistics (DGCIS) and the Ministry of Commerce and Industry, during the year 2022-23, a total of 2,058.7 thousand tonnes of major grades of paper, paperboard, and newsprint were imported (valued at INR 16,734 crores or USD 2,078 million), compared to 1,715.5 thousand tonnes (valued at INR 10,406 crores or USD 1,397 million) in the previous year (2021-22), representing about a 20% increase. In terms of USD value, this marks an increase of around 49%.

On the other hand, 1,776.2 thousand tonnes of paper, paperboard, and newsprint (valued at INR 11,591 crores or USD 1,451 million) were exported, compared to 2,856.6 thousand tonnes (valued at INR 14,000 crores or USD 1,880 million) in 2021-22.

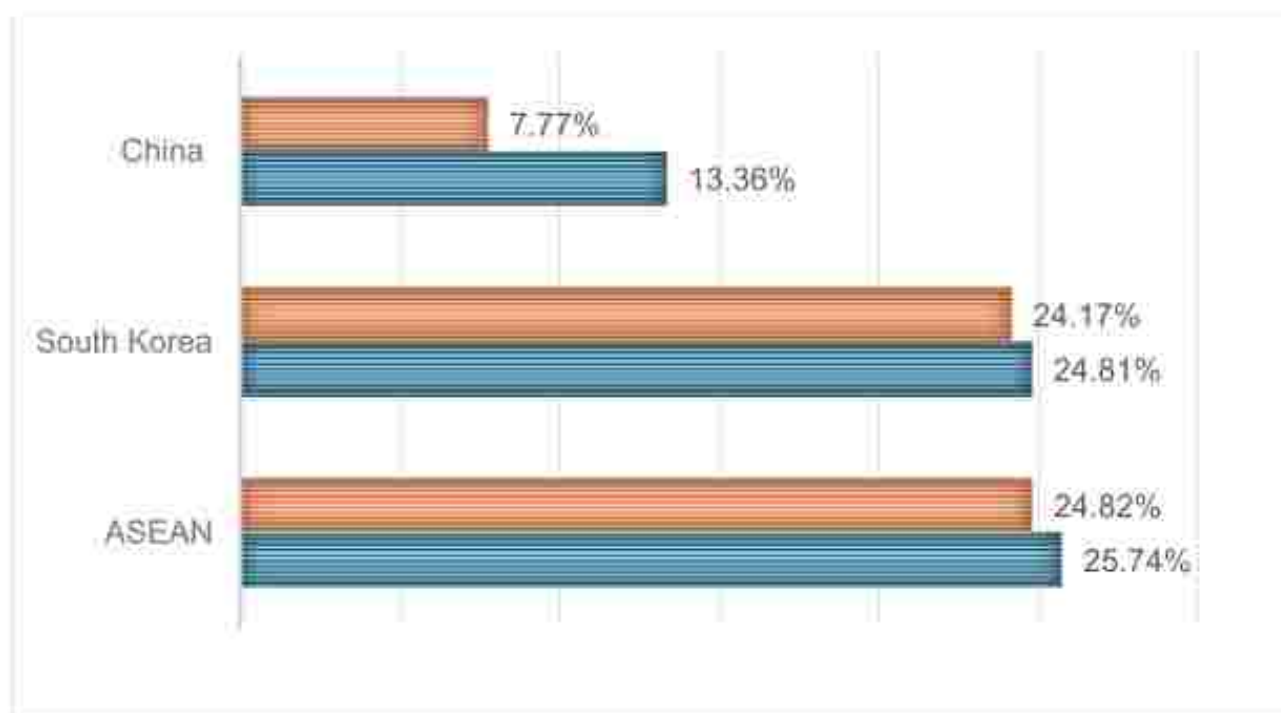
### Paper and Paperboard - Import and Export

The paper and paperboard import data indicates that imports of paper and paperboard (HS Codes 4802, 4803, 4804, 4805, 4808, and 4810) into India have been steadily increasing, despite adequate domestic production capacity. Over the 13 years from 2010-11 to 2023-24, imports have generally been on an upward trajectory, except during 2020-21 and 2021-22 due to the pandemic, geopolitical tensions and supply chain disruptions. Overall, imports have risen at a compound annual growth rate (CAGR) of 11.00% in value terms (from INR 3,411 crores in 2010-11



to INR 13,248 crores in 2023-24) and 10.37% in volume terms (from 0.54 million tonnes in 2010-11 to 1.93 million tonnes in 2023-24).

The data analysis indicates that imports have increased at a much higher rate compared to the increase in domestic production, primarily due to the underutilization of domestic installed capacity. The CAGR of imports from major countries and regions over the last decade is illustrated in Figure 1.



*Fig 1 CAGR of increase in Imports in terms of Volume & Value*

As indicated above, imports of paper and paperboard into India from ASEAN countries over the last decade have grown at a compound annual growth rate (CAGR) of 25.74% in value terms and 24.82% in volume terms. Similarly, imports from South Korea have grown at a CAGR of 28.41% in value terms and 24.17% in volume terms. Imports from China have grown at a CAGR of 13.36% in value terms and 7.77% in volume terms.

The import statistics of major paper grades (HS codes 4802, 4803, 4804, 4805, 4808, and 4810) for the last three years are summarized in Table 1.



**Table 1 : Import Scenario of Major Paper Grades\* from Different Countries**

Country	Year	
	2021- 22	2022-23
Germany	75825.79	62450.46
Indonesia	91812.78	169413.30
South Korea RP	94083.28	115146.80
Thailand	63420.33	88289.20
USA	288401.80	268641.00
Japan	80107.99	100345.70
Canada	19126.45	14836.34
	<b>712778.50</b>	<b>819122.90</b>

**Source: DGCI&S** \* HS codes 4802, 4803, 4804, 4805, 4808 and 4810, etc

The Indian paper industry has enhanced the quality of its products to meet international standards, enabling it to compete with global producers. Consequently, the export of paper from India increased during 2020-21 and 2021-22 for major paper grades (HS Codes 4801, 4802, 4803, 4804, 4805, and 4810). However, a slump was reported in 2022-23, as indicated in Table 2.

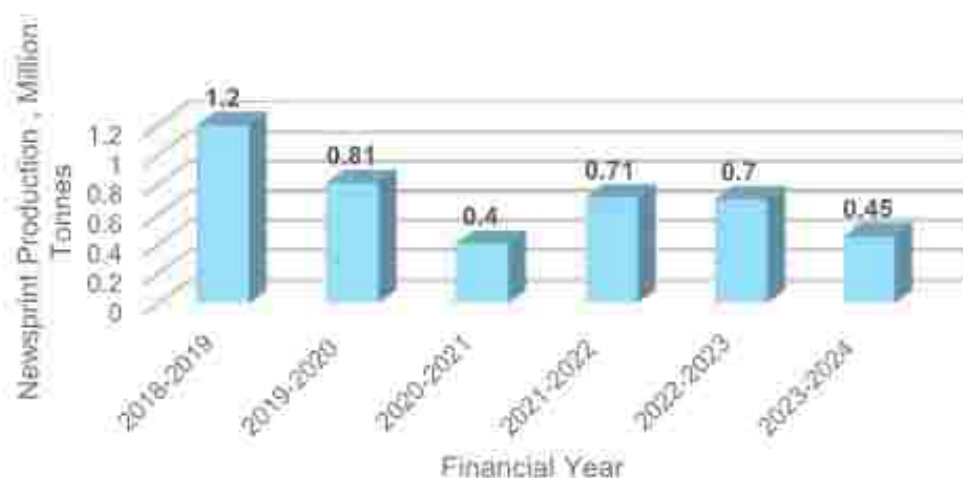
**Table 2 : Paper Exports in 2020- 23**

Year	Export (in Thousand Tonnes)
2020-21	2194.20
2021-22	2856.60
2022-23	1776.20

## Newsprint Sector

The newsprint segment of the paper industry has been most affected by imports, resulting in a significant reduction in the country's newsprint production capacity from 2.5 million tonnes to 0.5 million tonnes. Figure 2 illustrates the decline in newsprint production over the last five years due to the import of newsprint.





**Fig 2 Decline in Domestic Newsprint Production from 2018-19 to 2023-24**

A year-wise comparison of the decline in newsprint production and the increase in imports is summarized in Table 3. Additionally, country-wise imports from major countries are detailed in Table 4.

**Table 3 : Newsprint (HS Code 480100 ) Production & Imports**

Year	Production (Million Tonnes)	Imports (Unit Tonnes)
2018-2019	1.20	1,366,472.95
2019-2020	0.81	1,353,867.36
2020-2021	0.40	662,514.61
2021-2022	0.71	605,693.39
2022-2023	0.70	622,222.12

**Table 4 Details of Newsprint Import From Major Countries (M.T)**

Country	2021-22	2022-23
Australia	-	-
Canada	206665	250411
Russia	234470	191132
European Union	95230	61605
Others	61401	106239
Total	597766	609387



The Government of India has recently introduced the Paper Import Monitoring System (PIMS) to regulate the import of paper and paper products, aiming to prevent the dumping of low-quality and cheap products in the Indian market. This move is expected to provide some relief to the domestic industry.

As indicated in the exports data (Table-2), the global recession, Red Sea Crisis, Russia-Ukraine conflict, and Israel-Hamas war have significantly affected exports from India and other Asian countries to Western nations, leading to a decline in demand for packaging and kraft paper. Due to low exports, export-oriented mills have started pushing their products into the domestic market, resulting in an oversupply of kraft paper in India.

## Policy Interventions

The 2022 Union Budget introduced several policies and legislative changes to encourage and promote agroforestry and private forestry, aiming to increase the green cover in the country. The budget proposed financial support for farmers belonging to Scheduled Castes and Scheduled Tribes who wish to take up agroforestry. Tribal communities, with their vast knowledge of traditional agroforestry systems and practices, can significantly contribute to the rural economy, employment, and poverty alleviation at the local level.

The Ministry of Environment, Forest and Climate Change has issued the Draft Green Credit Programme Implementation Rules 2023. This programme seeks to create a market-based mechanism for providing incentives in the form of Green Credits. One of the identified sectors is tree plantation-based Green Credit, which promotes activities to increase the green cover across the country through tree plantation and related activities.

There is a need for suitable policy interventions to increase the recovery rate of post-consumer recycled fiber/recovered paper in the country through source segregation, effective collection and utilization. Increasing the recovery rate of indigenous recovered paper will help reduce dependence on imports.

The availability of imported recycled fiber is likely to become a concern in the coming years, especially with the EU's proposed legislation on the export of waste, including wastepaper, set to come into force in 2025. This legislation could significantly impact the Indian and global paper industries, particularly mills that rely on imported recycled fiber. Therefore, there is an urgent need to explore alternative raw materials for paper making, increase the recovery of indigenous wastepaper and reduce reliance on imported wastepaper.

## Conclusions

To ensure sustainability, the paper industry must commit to continuous innovation and operational excellence. There is a need to evaluate and optimize process operations to identify opportunities for improvement and innovation, ensuring sustainable operations while meeting stakeholder needs. Recently, integrated pulp and paper mills have invested significantly in technology upgrades, including state-of-the-art pulp mills (new generation pulp washers, oxygen delignification, elemental chlorine-free bleaching), ETP upgrades and modifications, high-speed new generation paper machines, and energy-efficient new generation boilers.





The survival and sustained growth of the Indian paper industry are crucial as it has strong backward linkages with the farming community, generates employment in rural areas, and significantly contributes to the national objective of bringing 33% of India's land mass under tree cover. Additionally, it plays a vital role in achieving national goals related to education and literacy. Despite global disruptions to demand and supply, policy issues and other constraints, India's paper industry, which is strongly based on the domestic market, is expected to navigate this difficult phase and rebound strongly. In fact, reports indicate that the country has emerged as the fastest-growing market for pulp and paper, with current paper consumption around 25 million tonnes per annum. Projections suggest an annual growth rate of 6-7% in paper consumption, leading to an estimated 30 million tonnes by 2030.

Overall, the Indian paper industry needs to continuously evaluate and optimize process operations to identify opportunities for improvement and innovation, ensuring sustainable operations while meeting the requirements of regulatory authorities, customers and other stakeholders.

### **Reference / Acknowledgement**

DGCIS & Ministry of Commerce, IPMA, IARPMA, INMA, Inpaper International, Paper Mart, Pulp & Paper Times



## MAJOR ACHIEVEMENTS

### Renewal of CPPRI Accreditation for ISO 9001: 2015 Certification

The Surveillance Assessment of CPPRI for renewal of ISO 9001: 2015 Certificate was conducted on January 31, 2024. The assessment was conducted by BSCIC Certification Private Limited Faridabad according to the requirements of ISO 9001: 2015. Mr. P.K. Chakrabarty (Lead Auditor) and Mr. Rakesh Kumar (Team Member) from BSCIC performed the assessment.



*CPPRI officials with auditors from BSCIC Certification during ISO 9001: 2015 Surveillance Assessment*

### CPPRI Received Best Paper Award for Presentation of Technical Paper in PAPEREX - 2023

Dr. A. K. Dixit bagged "Best Paper Award-1st Runner-up" for paper presentation on "Borate Autocauticization - An Emerging Green Technology" at 16<sup>th</sup> International Conference and Exhibition on Pulp, Paper and Allied Industries (PAPEREX 2023) held at India Expo Centre, Greater Noida, Delhi -NCR during December 6 – 9, 2023. Other co-authors of the paper were Mr. Kumar Anupam, Mr. Anshu and Dr. M. K. Gupta



*Dr. A. K. Dixit receiving Best paper award at PAPEREX 2023*



## Transfer of Technology by CPPRI to ABSTCL, Mumbai

CPPRI has developed process for preparing dissolving grade pulp from whole jute plant under the National Jute Board sponsored project on Preparation of dissolving grade pulp at pilot scale for viscose rayon fibre. The ABSTCL Mumbai is the industrial partner of the project. CPPRI and ABSTCL worked together on development of technology for production of Rayon Grade Pulp from whole jute. National Jute Board (NJB) organised 'Jute Symposium'- a day long conference at ITDC, The Ashok, New Delhi on December 21, 2023 to create awareness and popularize Jute based technical textiles and other products with special emphasize on Jute Geotextiles. "Know How" document of the Process technology developed by CPPRI was transferred to the Industry Partner ABSTCL in the Jute Symposium.



*Secretary Textile and other Delegates  
in Jute symposium*



*Dr. Priti S. Lal in Jute Symposium  
during Technology Transfer Event*

## NABL, PT Exercises by Environment Management Division

Environmental Management Division successfully completed NABL desktop surveillance audit in two groups viz. Pollution & Environment and Atmospheric Pollution under chemical discipline of testing field in accordance with ISO/IEC 17025:2017 for wastewater pollution parameters (pH, TSS, TDS, COD, BOD, Color, Na, K, Ca, Mg, Oil & Grease and Hardness), ambient air quality parameters (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> & NO<sub>2</sub>) and stack emissions quality parameters (SPM, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>2</sub>, CO<sub>2</sub>, CO and H<sub>2</sub>S).

As per 2 years Proficiency Testing (PT) Plan submitted to NABL, Environment Management Division successfully participated in 6 PT exercises and achieved satisfactory Z score.





*Environmental Management Div Team participating in PT Exercise*

- Environmental Management Division assisted Central Pollution Control Board (CPCB) as third party in monitoring the environmental status of over 125 Grossly Polluting Industries (GPI) located in Ganga River Basin and in Yamuna River Basin of Uttar Pradesh, Uttarakhand, and Haryana.
- Environmental Management Division successfully carried out Water Audit study at Khanna Paper Mills Limited, Amritsar, Punjab.
- Environment Monitoring Studies were successfully conducted under Annual Monitoring Contract awarded by Star Paper Mills Limited, Saharanpur & Trident Limited (Paper and Chemical Division), Barnala, Punjab.
- Environment Management Division of CPPRI was associated as technical institution with CPCB to draft Charter 3.0 for Indian Pulp and Paper Industries in Ganga River Basin.



The Statistical Division of CPPRI successfully completed physical verification and inventorization of Pulp and Paper Mills in Muzaffarnagar, Meerut and Roorkee Cluster.

- The Statistical Division also assisted in providing CPPRI's view to Ministry on various issues / policies matters related to Indian Pulp and Paper Industry.
- The Information Technology Division of CPPRI successfully completed upgradation of CPPRI website as per GIGW 3.0 compliance.
- e-office of NIC was successfully implemented in CPPRI.
- Biotechnology Division of the institute have successfully shown the use of Bacterial cellulose in wet-end and surface sizing applications for enhancing strength properties of paper.

### **Organization of Interactive Workshop-Screening and Production of Quality Raw Material for Indian Pulp, Paper and Panel Industry**

An interactive workshop was organized under the PBS PROJECTS Centre of Excellence for Multiplication of Quality Planting Stock of Selected Tree Species for Indian pulp and Paper Industry. The topic of interactive workshop was "Screening and Production of Quality Raw Material for Indian Pulp, Paper and Panel Industry" and was Organized Jointly by Central Pulp and Paper Research Institute (Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Govt. of India) Saharanpur, Uttar Pradesh and ICFRE-Forest Research Institute (Indian Council of Forestry Research and Education (An autonomous body of the Ministry of Environment, Forest and Climate Change, Govt. of India) Dehradun, Uttarakhand



*Delegates and Participants attending Workshop at FRI Dehradun*



## Patent Filed

Surbhi Sinha, Harsh Baghel, Shubhangi Sharma, Kumar Anupam, A.K. Dixit and Rachna Singh "A Method for Extracting the Route of Lignin from Pulp and Paper Mill Effluents" Application Number 202311030750, April 28 2023.

Rachana Singh, Surbhi Sinha, Kavya Bisaria, A. K. Dixit, Kumar Anupam, Manoj Kumar Gupta. "Sequential Pilot-Scale Remediation of Paper Mill Effluent by Fly Ash and Microbial Consortia and Preparation Method Thereof" Application Number 202311030750, December 20, 2023.

## Memorandum of Understanding (MoU) Signed

During year 2023-24 six numbers of MOU were signed along with following organizations:

- Uttaranchal University, Dehradun in July 2023.
- CSIR-Indian Institute of Petroleum (CSIR-IIP) on July 3, 2023
- CSIR-Indian Institute of Chemical Technology, Hyderabad on Sept. 13, 2023
- ICFRE – Indian Institute of wood science and Technology, Bengaluru Nov 21, 2023.
- GD Goenka University, Gurgaon, Haryana Jan 17, 2024.
- CSIR-NEERI, Nagpur May 1, 2024.

## Training/ Skill Development

11 number of training programs were organized by CPPRI during the year 2023-2024 in various area of process, quality and human resource development.

## Research Paper Published

18 Research papers were published in various Journals, Proceedings of Seminars, Workshops and conferences during the year 2023-2024.

## Reports Prepared

More than 165 Research Reports and Environment Inspection Reports of Grossly Polluting Industries were prepared during the year 2023-2024.

## Nominations

- Nominated as a convenor of ISO/TC 6/SC 2/WG 25 (ISO Committee) for Surface Roughness test method - Mr. Alok Kumar Goel.
- Domain Expert for evaluation of Ideas received during MSME IDEA Hackathon 2.0 (Theme based) under the theme "Eco-friendly & Sustainable furniture" as per the guidelines of MSME Innovative Scheme (Incubation component), Ministry of Micro, Small and Medium Enterprises (MSME), Government of India during April 10 – 14, 2023 - Mr. Kumar Anupam.



## Technical Services

Technical and consultancy services were rendered to various pulp and paper mills and allied industries, technology and chemical suppliers by way of evaluation of raw materials, pulp and paper samples, pulping additives, deinking chemicals, sizing chemicals, stickies control agents, evaluation of suitability of newer grades of imported recycled fiber, characterization and analysis of various fibrous and non-fibrous raw materials, environmental samples, also providing assistance in trouble shooting, adequacy assessment, performance evaluation of various process operations, effluent treatment plant and pollution control equipment. It has lead to internal revenue generation of around Rs. 343.96 Lacs.

## Infrastructure Developed:

Following equipments were procured during the year 2023-2024.



*Atomic Absorption Spectrophotometer*



*Ultra Water Purifier*



*Moisture Analyzer*



*Digital balance*





*Rotary vacuum evaporator*



*FTNIR*



*Quartz cabinet double distillation unit*



*Laboratory Oven*



*Multi purpose vehicle*



*Tensile tester*



*Burst tester*



*Tear tester*





*Mist chamber*



*Heavy duty colour printer*



*Interactive board*



*Microchrom heavy duty printer*



*Lecture Room for students and trainees*



*Valley beater*

## Receipts & Payment

During the year 2023-24 total receipt of the Institute was Rs. 1559.64 Lacs which includes Grant Received Rs.1151.33 Lacs Rs. 494.41 Lacs as Grant in Aid under Project Based Support and Rs. 656.92 Lacs under the head Development Council for Pulp & Paper & Allied Industries.

The total payment during the year was Rs. 1740.35 lacs including payment for procurement of Assets i.e. Rs. 296.11 Lacs.

## Internal Revenue Generation

During the year Institute received Internal Revenue Generation (IRG) of Rs. 343.96 Lacs from various services viz Testing Fee, Consultancy and Training etc. offered by the Institute.



## R & D ACTIVITIES

### (A) RAC funded projects- Schemes Carried Out Under Projects Based Support (PBS)

#### 1. Bio-Pulping of Lignocellulosic Material to Reduce Chemical and Energy Demand in Various Pulping Processes.

##### Objectives

- Screening and characterization of lignin degrading fungi for the use in Biopulping process.
- Investigation of fungal treatment of various raw materials for selective lignin degradation during Biopulping to achieve chemical & energy savings and improvement in paper strength.
- Setting up of pilot plant for validation of laboratory studies with respect to reduction in chemical, energy demand and pulp properties.

##### Highlights

- Screening of the Potential Ligninolytic Fungi based on secretion of various enzymes related to lignin degradation.
- Co-existence studies to assess the potential for co-existence and mutual inhibition among the different fungal strains.
- Biopulping process and Evaluation of fungal treated material- The raw material biotreated with the suitable isolates of potential biopulping fungi and incubation in humid condition for 3 to 6 weeks. Experiments related to optimization of various process parameters are in progress.
- Proximate analysis of fungal treated material is parallelly in progress.

#### 2.0 Setting Up of The State-of the Art Chemical Recovery Laboratory

##### Objectives

- Setting up of the State-of-the-art chemical laboratory in country to provide services to Indian paper industries which they sought from European and other developed countries, thereby saving their time and foreign currency.
- To create empowered workforce in the field of chemical recovery with the help of various schemes and training courses as to support Skill India initiative by Government.
- Development of data bank of black liquor, green liquor, white liquor, lime cake etc. for silica and non-process elements (NPE) rich raw materials. Such data is currently unavailable in the country. Generation of this data bank will assist the Indian paper mills and equipment suppliers to run and design chemical recovery system efficiently.



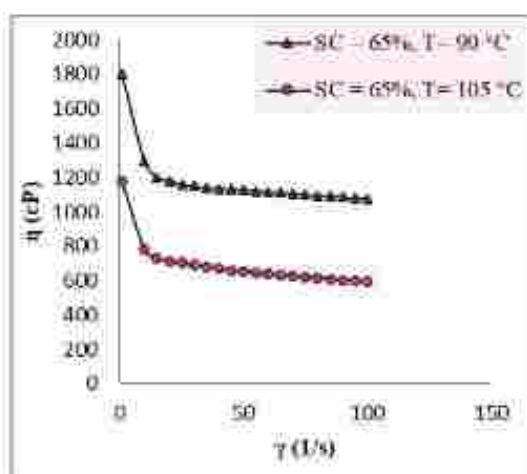
## Highlights

- Data bank has been generated on chemical recovery samples such as black liquor, ESP ash, lime sludge and scales etc.
- Training / troubleshooting services have been provided to various industries such as ITC limited, Naini Paper limited, Sirpur Paper Mill (A unit of J K Papers), Pakka limited, Bilt Ballarpur and Khanna Papers etc.
- Training imparted to mill personnel and students from Pakka skills, Ayodhya; FRI University, Dehradun and Mahamaya Polytechnic of Information Technology, Shamli in the area of chemical recovery.
- Infrastructure development for the state-of-the-art chemical recovery laboratory is under progress

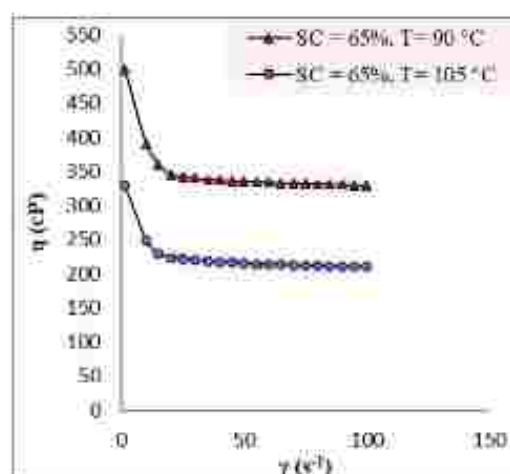
## 2.1 Rheological and Parametric Optimization Studies on Bagasse- Based Heat Treated Kraft Black Liquor

### Rheological study of heat-treated bagasse based kraft black liquor

Heat treatment process of bagasse based kraft black liquor was conducted at laboratory scale. More than 70% reduction in viscosity was achieved against 65% solid concentration (SC) post heat treatment of bagasse black liquor. Rheology study with power law model revealed shear thinning (pseudoplastic) behavior of heat-treated bagasse black liquor as apparent viscosity ( $\eta$ ) was found to be decreasing with increasing shear rate ( $\dot{\gamma}$ ) shown in figures below.

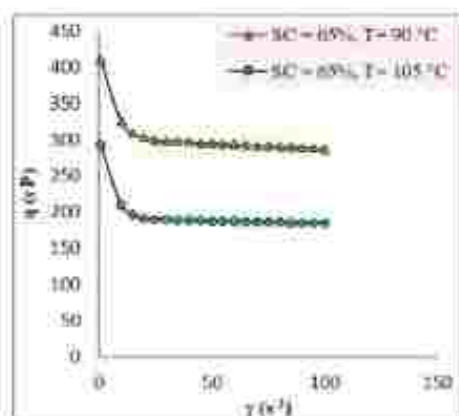


Viscosity of original bagasse based kraft black liquor at 65 % solid concentration and different shear rate

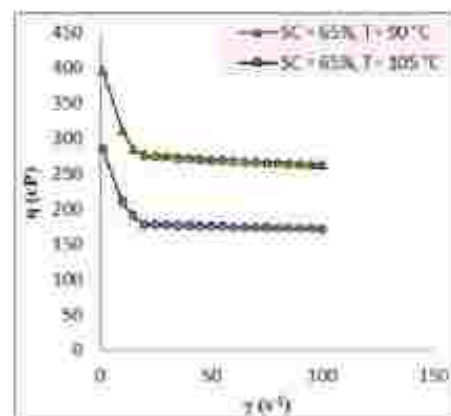


Heat treated bagasse based kraft black liquor (@ 180 °C for 15 min) at 65 % solid concentration





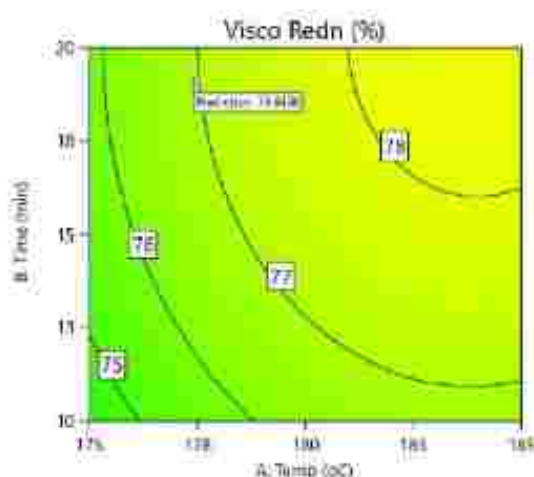
*Heat treated bagasse based kraft black liquor (@ 180 °C for 20 min) at 65 % solid concentration*



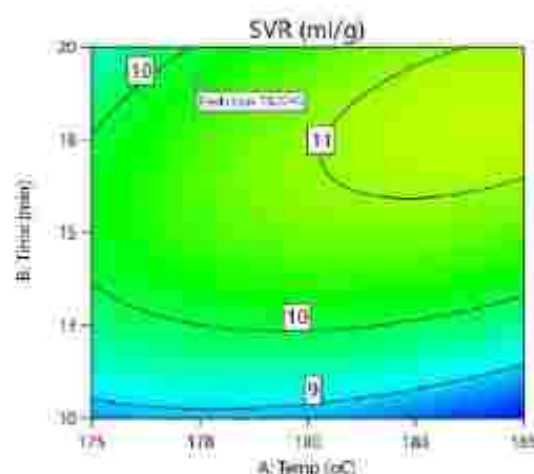
*Heat treated bagasse based kraft black liquor (@ 180 °C for 25 min) at 65 % solid concentration*

## 2.2 Optimization of Heat Treatment Process of Bagasse Based Kraft Black Liquor

Optimization of heat treatment process of bagasse based kraft black liquor was performed using numerical optimization technique. 2-D contour plots were obtained for prediction of viscosity reduction and swelling volume ratio of black liquor after heat treatment at optimal parameters such as treatment temperature, treatment time and residual active alkali.

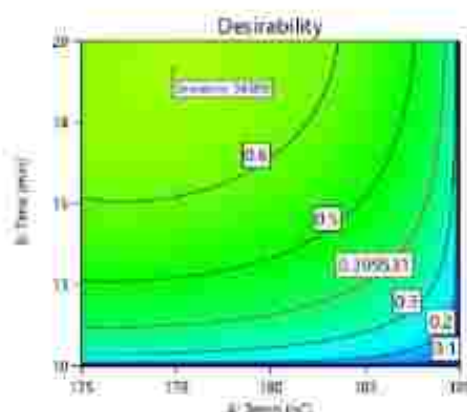


*Contour plot for prediction of viscosity reduction of bagasse based kraft black liquor after heat treatment*



*Contour plot for prediction of swelling volume ratio of bagasse based kraft black liquor after heat treatment*



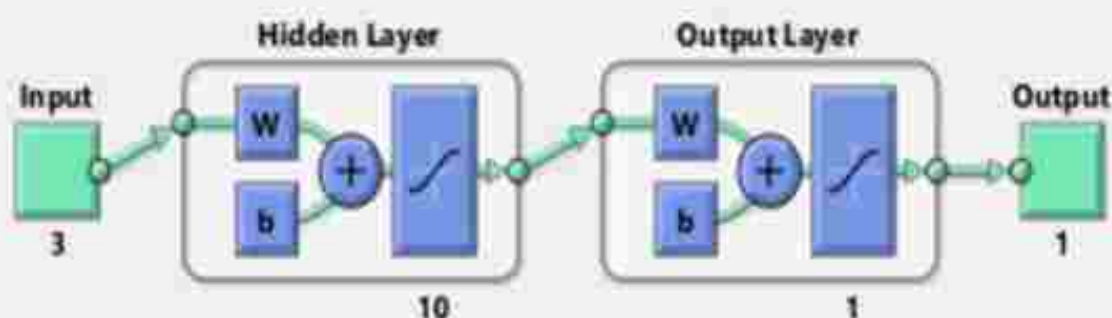


Contour plot for overall desirability of heat treatment process parameters of bagasse based kraft black liquor

## 2.3 Artificial Neural Network Modelling for Liquor Heat Treatment Process

An artificial neural network (ANN) model was developed for optimization of heat treatment process of bagasse based kraft black liquor. Treatment temperature, treatment time and initial residual active alkali level in black liquor were considered as input parameters while viscosity reduction and swelling volume ratio of black liquor were considered as output parameters. This ANN model can efficiently predict the heat treatment output parameters with more than 90% accuracy.

### Neural Network



ANN architecture for bagasse based kraft black liquor heat treatment process

## 2.4. Generation of Physico-chemical Characteristics Data Bank of Chemical Recovery Samples

The agro and wood black liquors collected from northern and southern part of India were evaluated for various parameters such as pH, Total Solids, RAA as  $\text{Na}_2\text{O}$  gpl, Carbon, Hydrogen, Nitrogen, Sulphur, Calcium as Ca, Magnesium as Mg, Sodium as Na, Potassium as K,



Chloride as Cl, Silica as  $\text{SiO}_2$ , Inorganics as NaOH, Organics, and Sulphate as  $\text{Na}_2\text{SO}_4$ , viscosity, gross calorific value and swelling volume ratio. Generated data indicated that potassium (K) content in black liquor has been increased by two times as compared with the data created five years back (2018-2019) in few mills.

The ESP ash samples collected from northern and southern part of India were evaluated for various parameters such as pH (10% Solution), Sulphate as  $\text{Na}_2\text{SO}_4$ , Carbonate as  $\text{Na}_2\text{CO}_3$ , Chloride as NaCl, and Potassium as K. The data of ESP Ash samples for various raw materials indicated that various mills are facing increased deposition rate in superheaters, boiler bank and economizer section of boiler due to rise in chloride and potassium content.

### 3. Setting Up of a Pulp and Paper Mill Based Bio-Refinery Laboratory

#### Objectives

Pulp and paper mills are logical hubs of biorefinery activity. About half the organic mass that enters a traditional pulp and paper mill is incinerated. This is the most conservative use of any biomass. Full integration of the incoming biomass and other raw materials, including energy, for simultaneous production of paper, chemical and energy is the major objective of this bio refinery-based project so that economics of the mills could be improved.

By integrating bio refinery activities mills have the opportunities to produce bioenergy and bio-products along with pulp and paper. It will reduce the dependence on fossil fuels.

#### Highlights

- Data bank generation on extraction and analysis of lignin from black liquors.
- Preparation of biochar from lignin and lignocellulosic biomass.
- Analysis of biogas feedstocks such as poultry litter, cow dung etc.
- FTNIR has been purchased and installed in Chemical Recovery and Biorefinery Division.
- Training imparted to employees of Numaligarh Refinery Limited, Assam in area of biorefinery.
- Infrastructure development for the state-of-the-art biorefinery laboratory is under progress.

#### 3.1 Development of Value-added Products from Banana Pseudo Stems i.e. Tableware Grade Pulp and Liquid Fuel

The banana pseudo stems were investigated for their potential in making tablewares. The strength properties of banana stem pulp matched with or even found superior to the properties of tableware grade pulps available in the market. Use of fillers and sizing agent were also studied which improved strength properties. The liquor generated during the pulping was evaluated for fuel properties which revealed that this liquor may be mixed with waste biomass and can be used as fuel in biomass-fired boiler.

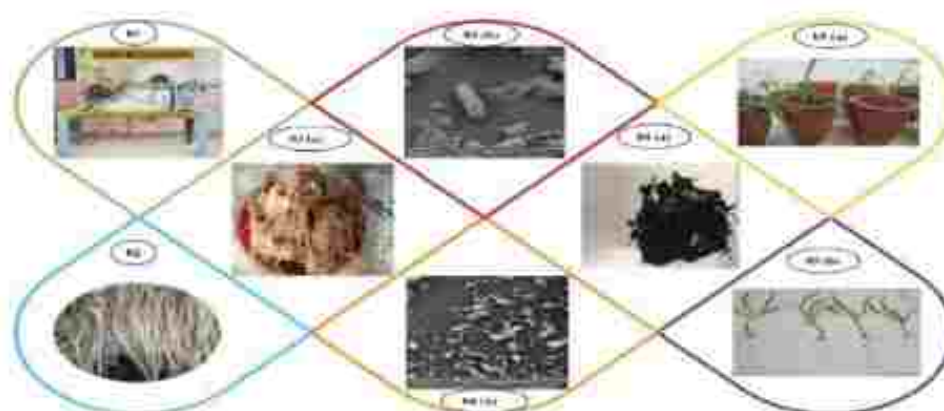




*Schematic of preparation of table grade pulp from banana pseudo stem*

### 3.2 Biochar Prepared from Banana Fiber Extraction Waste (BFEW) for Soil, Water and Energy Application

The waste generated from banana fibre extraction was utilized to prepare biochar through slow pyrolysis process. This biochar was evaluated for proximate analysis (Moisture, Volatile matters, Fixed carbon and Ash), elemental analysis (C, H, N, S and O), surface area, pore volume and pore diameter. The morphology of BFEW and biochar was studied through scanning electron microscopy (SEM) analysis. The prepared biochar was analyzed for its potential application as soil amendment. For this, maize plants were sown in soil mixed with different biochar dose and grown maize plants were evaluated for parameters such as germination rate, shoot height, root length, shoot weight and leaves length. The biochar prepared from BFEW was also utilized as an adsorbent for effective treatment of pulp and paper mill waste water. Lignin, BOD, COD, colour and TDS content in wastewater were reduced significantly after adsorption. The gross calorific value of this biochar revealed that it can be a potential option for alternative solid fuel.



*Schematic of biochar preparation, characterization and application from banana fiber extraction waste for various application*



### 3.3 Extraction of Lignin from Agro and Wood Based Black Liquor and Preparation of Biochar Thereof

The extraction process of lignin from agro and wood black liquors was performed by acid precipitation method which involves lowering the pH of black liquor using acids such as sulfuric acid, leading to lignin precipitation. Further the extracted lignins were evaluated for moisture, ash, purity, silica, sodium, sulphates and chloride content.

Biochar from agro-lignin was prepared using slow pyrolysis process and its analysis for proximate, elemental and other properties is under progress.



*Schematic of lignin extraction and biochar preparation*

### 4.0 Centre of Excellence for Multiplication of Quality Planting Stock of Selected Tree Species for Indian Pulp and Paper Industry

#### Objective

- To select various families and genotypes of Six indigenous tree species with extreme potential as alternate raw material for pulp and paper industry.
- To concurrent realized achievement of long term tree improvement and wood science for selected indigenous tree species with multiplication and deployment of promising genotypes.
- To characterize different genotypes rapidly for physical and chemical properties using conventional and non-destructive technologies using Near-Infrared (NIR) Spectroscopy .
- To develop clonal multiplication areas and production populations for future research and commercial deployment.
- To ultimately establish Centre of Excellence for Multiplication of Quality Planting Materials of selected indigenous tree species with higher productivity .



## Highlights

- The mist chamber (Two Numbers) successfully commissioned and the performance was found satisfactory.
- 20000 square meter land prepared for 600 plants of three species viz casuarina, melia dubia and melina arborea have been planted.
- Recruitment of Project associate -I (1 Nos.) and casual labours (6 Nos.) for various day to day activities related to plantation was completed.
- On suggestion of RAC members an Interactive workshop on "screening and production of quality raw material for Indian pulp, paper and panel industry" was successfully organized jointly by the CPPRI and FRI at the Board Room of ICFRE- FRI main building Dehradun on October 20, 2023. The aim of workshop was to assess the current scenario, practices and difficulties related to sustainable supply of wood to Indian Pulp and Paper Industry. Around 95 participants from various organizations/mills attended the event.
- Procurement of material cocopeat, vermiculite, IBA for multiplication activities has been completed.
- Farmers training room furnishing activities completed.



*Mist Chambers*



*Workshop at FRI*



*Visit of plantation site by  
FRI and CPPRI Scientists*



*LED Installation in  
Farmer's Training Center*





*FRI- CPPRI team in the field*



*Plotting of field*

## 5.0 Setting Up of Waste Paper Recycling Promotion Centre

### Objectives

- Setting up of Waste Paper Recycling Promotion Centre (WPRPC) in Delhi and Chennai, in a step forward to make the waste paper collection sector organized and thus increasing the waste paper collection rate in the country.
- The genesis of the idea of setting up of the (WPRPC) lines in the provision of Solid Waste Management Rules, 2016 and the proposed national material recycling policy.

### Highlights

The activities of the project has wide area across Delhi and Chennai. Due to the distant location of Chennai and shortage of manpower the matter was discussed in meeting of Research Advisory Committee. The project was restructured and as instructed by Research Advisory Committee, blueprint of the project's future activities was prepared and discussed in detail with the Secretary General of IPMA, INMA and IARPMA on September 26, 2023 at IPMA Office, PHD Chamber Delhi.



## 5.1 Recycling & Paper Making Potential and Quality Assessment of Packaging Material Used by Packaging Industry

- To assess the recycling and papermaking potential, the post consumer packaging samples (mainly primary and secondary packaging) were slushed in hydropulper. Two approaches were undertaken for repulping based on pulper types used by mills i.e. low consistency pulping and high consistency pulping. The pulp thus obtained was passed through sommerville vibratory screen having 0.15 mm slot and was evaluated for fibre yield and reject content.
- 60 gsm handsheets were prepared from screened pulp to check optical homogeneity, formation and adhesive content/ stickies.
- Around 130 postconsumer packaging samples (mainly primary and secondary packaging) were evaluated and services were rendered to around 41 Fast Moving Consumer Goods Companies (FMCG) and Paper Mills by adopting above methodology.



*Types of postconsumer packaging samples evaluated under the project activity*



## (B) RSC- DCPPIA Funded Projects

### 1. 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 Pusa, New Delhi)

#### Objectives

The objective of the project being jointly executed by CPPRI & Indian Agricultural Research Institute (IARI) is utilization of treated effluent 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.

#### Highlights

- The field trial using the proposed dilution treatments in the Rabi wheat and mustard crops were carried out
- Information pertaining to irrigation scheduling, crop growth parameters and soil sample for quality is being collected through regular field visits and sample collection and analysis.
- The yield and the possible impacts of dilution treatments on the crop, soil and water will be analyzed by the end of Rabi season.
- Procurement and installation of the irrigation system at Site 2 - Under Progress.
- Pot experiments are also being conducted using the same dilution treatments with wheat, barley and leafy vegetable (Spinach) and a floriculture Calendula flower.



*Field Trials During Rabi Season*





*Pot Experiments under Progress*

- All the relevant information like yield and the possible impacts of dilution treatments on the crop, soil and water pertaining to each dilution effect is being monitored on regular basis.
- The experiments will be continued for three consecutive seasons and results shall be collated.
- The progress of the project activities were presented before Technical Sub Committee of Research Steering Committee of Development Council for Pulp Paper & Allied Industries as well as Research Steering Committee of Development Council for Pulp, Paper & Allied Industries.

## **2. Bacterial Cellulose Production for Diverse Applications in Pulp and Paper Sector**

### **Objective**

- Laboratory Scale Production & Characterization of Bacterial Cellulose (BC).
- Investigation of application of bacterial cellulose in pulp and paper Industry.

### **Highlights**

Surface sizing and Wet-End based application studies of BC to improve strength properties in paper. Addition of BC in oxidised starch(OS) improved the efficiency of OS for surface sizing application. The surface sizing of OS improved the breaking length (MD), tear index (CD) and burst index in comparison to the strength properties of the base paper.

- Addition of BC in cationic starch (CS) improved the efficiency of CS for wet-end application. The wet-end application of CS in wet-end of papermaking improved the breaking length, tear index and burst index in comparison to the strength properties of the paper made using only pulp.



- These samples were also tested for WTR and OTR.

### **3. Studies on Alternate Auto-causticization Process for Conventional and Non-conventional Chemical Recovery Systems**

#### **Objectives**

- Development of improved method for causticizing sodium carbonate containing smelt in conventional chemical recovery system and  $\text{Na}_2\text{CO}_3$  generated in Copeland (LTI) chemical recovery system.
- Reduction in the complexity of conventional causticization process in conventional and non-conventional chemical recovery systems.
- Making chemical recovery operations cost effective and better affordable in small mills.
- Reduction in energy requirements and environmental hazards associated with solid waste and greenhouse gas emission.
- Reduction in lime requirement.

#### **Highlights**

- Various samples including black liquor, green liquor, lime, white liquor, ESP ash etc. were collected from the mill. Analysis was carried out and the results were shared with mill.
- Various instruments such moisture balance analyser, analytical balance and rotary vacuum evaporator were purchased for completing the study of this project.
- 30% and 15-25% autocausticizing levels were considered the most preferable levels of partial autocausticization to get the benefits of initial increase in the causticizing rate in a wood and agro based mill, respectively.

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

#### **Objectives:**

- To screen and select promising provenances, families and genotypes from already established trials.
- To induce juvenility by establishing selected genotypes in vegetative multiplication garden and develop clone specific protocol through macro propagation for mass multiplication.
- To establish field trials for evaluation of superiority for different economic traits over geographical locations and analyze interactions of plants and soil fertility.
- To register selected clones / genotypes as well as release of promising ones for commercial cultivation

#### **Highlights**

After successful completion of experiment and field work, the findings of the project was disseminated by project investigators before Industry representative in RSC-DECPPIAI





Dissemination workshop at scope complex New Delhi on April 28<sup>th</sup> 2023.

## **5. Study on Delignification of Agro Residue Raw Materials using Deep Eutectic Solvents or/ and Ionic Liquids (Joint Project of CPPRI-ACIRD)**

### **Objectives**

- Screening of most suitable/ effective deep eutectic solvent(s) or/and ionic liquid(s)
- Pulping of raw materials using selected deep eutectic solvent(s) or/and ionic liquid(s)
- Characterization of unbleached pulp for different properties
- ECF bleaching of pulp produced using optimized conditions
- Characterization of bleached pulp for different properties

### **Highlights**

The project was completed and report is under preparation.

## **6. Bio-polymeric approach for Improvement of Mechanical and Barrier Properties of Packaging Paper/ Paperboard through Surface Application (CPPRI)**

### **Objectives**

- Upgradation of testing facilities for barrier properties of paper and paperboard.
- Enhancement of mechanical and barrier properties of packaging grades papers/paperboard using bio polymeric formulations through surface application.

### **Highlights**

Sustainable packaging refers to the use of eco-friendly materials for wrapping, storing and shipping products, aiming to avoid any harmful impact on the environment, both in the short and long term. However, biopolymers used in packaging have limitations such as lower strength and poor thermal and barrier properties compared to petroleum-based polymers.

Paper and paper products, naturally hygroscopic, also lack necessary barrier properties against moisture, oil and water. To improve these properties, petroleum-based derivatives are often used, but they reduce the recyclability and biodegradability of paper. Research is underway to replace these synthetic chemicals with biopolymeric alternatives. A project under RSC-DCPPAI is focused on applying biopolymers to paper to enhance its barrier properties against water, oils and moisture. The initial phase involves a literature review of various biopolymers and their evaluation and application methods in the laboratory. Some results are presented below.



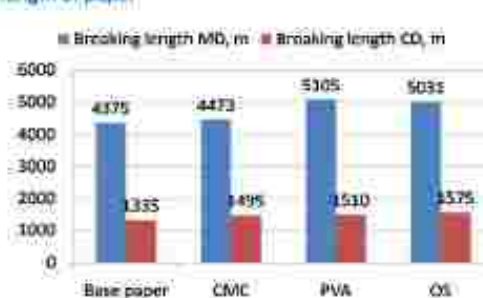
## Impact of Coating of Biopolymer on WVTR of Paper

Parameter	WVTR, g/m <sup>2</sup> .24h
Base paper	706
Paper coated with Biopolymer 1 (1%)	439
Paper coated with Biopolymer 2 (2.5%)	412

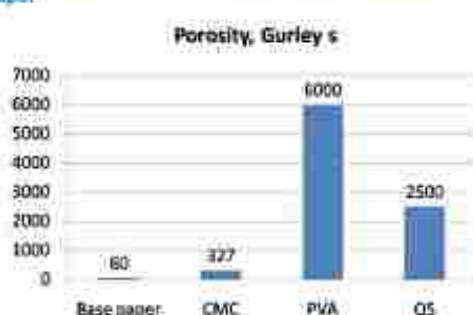
Impact of coating of different Biopolymer on Burst Factor of paper



Impact of coating of different Biopolymer on breaking length of paper



Impact of coating of different Biopolymer on Porosity of paper



## 7. Prefeasibility Report on Availability of Rice Straw and other Agricultural Residues for Setting Up a 300 TPD CTMP Mother Pulp Mill in North India

### Objectives

- To study the potential of utilization of Rice Straw for CTMP pulp production in North India (Punjab, Haryana, Uttar Pradesh and Uttarakhand).
- To generate database on availability of Rice Straw, including other agricultural residues, such as sarkanda, grasses etc.



- To study Techno-economic Feasibility for production of CTMP pulp using Rice straw generally and other agricultural residues, such as sarkanda, grasses etc.
- Identify indigenous manufacturer capabilities to supply the equipment and machinery for CTMP pulp production and study CAPEX & OPEX to utilize Rice Straw.

### Highlights

The kickoff meetings of all stakeholders of the project was organised at CPPRI in order to initiate the activities of the project.

## 8. Census Survey Of Indian Paper Industry (CPPRI)

### Objectives

The objective of the project is to update periodically the data related to inventory of Pulp & Paper Mills in the Country, paper production, paper consumption etc., study imports and export trends and related developments in domestic paper industry



### Highlights

- Under the project activities a comprehensive questionnaire was prepared for fresh collection of data related to Installed capacity, Operational capacity, Raw material used and Consumption, End Products Produced, No. of Paper Machine, Water consumption, Power consumption, Steam consumption etc and sent to various mills and mill associations.
- Successfully completed physical verification, inventORIZATION and collection of relevant data of Pulp & Paper Mills in Muzaffarnagar Cluster, Meerut Cluster and Roorkee Cluster.
- InventORIZATION of Pulp & Paper Mills in Kashipur Cluster is under progress.
- The mill associations like Indian Paper Manufacturer Association (IPMA), Indian Newsprint Manufacturer Association (INMA) and Indian Agro & Recycled Paper Mill Association (IARPMA) were also consulted regarding preparation of questionnaire and survey study methodology etc.





*Consultation with Secretary General of IPMA & INMA regarding Census Survey Study*

MoEF&CC and CPCB were also approached to facilitate sourcing of state wise pulp and paper mills data to whom CTO is issued by respective SPCBs.

## **9. Continuing Education (Training Programme) for Technical Personnel in Pulp and Paper Industry**

### **Objectives**

The main objective of this project is to impart training to shop floor and middle level technical manpower to improve the technical skill by way of providing information on the latest developments in the various areas of pulp and paper making.

### **Highlights**

During 2023-24, Seven offline training programs were successfully organised under this project. Over two hundred technical personnel of pulp, paper & allied industries were provided training in various areas which includes raw material, pulping & bleaching, wet end, papermaking, chemical recovery, environment, packaging, recycled fibre etc. The list of training programs organised in the year 2023-2024 under this project is shown in the chapter training workshop and training program organized. The participants of these training programs had the educational background of Diploma, B.A., M.A., B.Sc., M.Sc., B. Tech., M. Tech., MBA and Ph.D. The name of pulp and paper mills, allied industries, associations, academic institutes and other organizations whose representatives participated in the training programs as well as the designation of these representatives are shown in respective word clouds.





**Word cloud showing different organizations who participated in the above training programs**



**Word cloud showing designations of participants attending RSC-DCPPAI training programs**



## PROJECT SPONSORED BY PULP, PAPER AND ALLIED INDUSTRIES

### 1. Microbial Profiling and Evaluation of Water Circulation System in omsree Papertek Private Limited, Hyderabad for Control of Acidity

#### Objective

Objective of the project was to evaluate the unit operations and water circulation system to identify the source of high acidity and to suggest an effective solution to mitigate high acidity in the water circulation system

#### Work Carried Out

To investigate the possible reasons for the low pH observed in the paper mill effluent, CPPRI made a visit to the mill to make preliminary observations and to finalize points for sample collection for the study. Further, a comprehensive analysis was conducted on the samples received from the paper mill. The study included several key tests to assess various parameters, such as:-

- Microbial analysis was performed to identify microbial load that might be contributing to the pH imbalance
- COD and BOD tests were carried out to evaluate the organic, oxidizable and biodegradable pollutant load in the effluent
- TDS and TSS measurements were taken to determine the concentration of dissolved and suspended particles in the effluent
- Volatile Fatty Acids (VFA) levels were assessed to examine the presence of organic acids.
- The Alkalinity and Chloride content were also measured to understand the buffering capacity and chloride contribution to the pH
- Conductivity, Acetic Acid concentration, and Colloidal charge tests provided further insights into the effluent's chemical composition
- Strength properties of finished paper to check effect of acidic water.
- Sulphide and Chloride content in finished paper
- By conducting these extensive tests, the study aimed to pinpoint the factors responsible for the low pH of the paper mill effluent, laying the groundwork for potential remedial measures and environmental protection efforts

### 2. Setting Up of a Bio-refinery Laboratory – Sponsored by Assam Bio Refinery Privated Limited (ABRPL), Numaligarh

Government of India is promoting various technologies to produce renewable energy and reduce the dependence from fossil fuels. One such initiative is to produce ethanol from non-food feedstocks. Assam Bio Refinery Pvt. Limited (ABRPL) is a joint venture company (promoted by Numaligarh Refinery Limited and two foreign companies Fortum and Chempolis from Finland) in Numaligarh, Assam. ABRPL is established to produce ethanol by bamboo feedstock as bamboo is available in abundance in North-Eastern (NE) states of India and for this ABRPL has



already started the commissioning of bio refinery plant. ABRPL is also installing a biorefinery laboratory at their site. For this, authorities from ABRPL has sponsored a project to Central Pulp and Paper Research Institute (CPPRI), Saharanpur with aim to seek consultancy services from CPPRI for installation of their bio-refinery laboratory.

Chemical Recovery and Biorefinery (CRBR) Division has successfully completed this project "Setting up of a bio refinery laboratory at ABRPL, Numaligarh" sponsored by Assam Biorefinery Pvt Ltd, Assam. CRBR division has provided extensive support for establishing their bio refinery laboratory in terms of preparation of test methods & SOPs, technical specifications for purchasing of equipment, list of equipment suppliers, laboratory space optimization, manpower requirement and onsite consultancy etc.

### **3. Firm-level Demonstration of Technologies and Productivity Enhancement For The Pulp and Paper Industry – Sponsored by United Nations Industrial Development Organization (UNIDO) Demonstration of LHT (Liquid Heat Treatment) Technology in Indian Pulp and Paper Industry**

This project was implemented by United Nations Industrial Development Organization (UNIDO) in close cooperation with CPPRI and the Industry associations, to facilitate technology uptake and firm level innovations leading to increased productivity and competitiveness of Indian paper mills. This project envisaged to demonstrate (on pilot scale at mill level, at multiple locations across the country) liquor heat treatment along with the development of the requisite capacity and process improvement interventions. Successful trials of Liquor Heat Treatment pilot plant have been conducted at Tamil Nadu Newsprint & Paper Ltd., Karur, Yash Pakka Ltd., Ayodhya and Kuantum Papers Limited. The pilot plant trial process has been wrapped up with positive feedback from the mill's personnels on black liquor viscosity reduction. Moreover, UNIDO and CPPRI have collaboratively planned the setup and showcase of liquor heat treatment (LHT) plant PDU at the CPPRI site. The concept is to showcase the functionality of LHT and present the experimental outcomes to visitors from different pulp and paper and allied industries. Within the same framework, the LHT PDU has been reached at CPPRI, and the setup of the shed is currently underway.



*Skid mounted pilot demonstration unit of liquor heat treatment (LHT) plant fabricated under UNIDO-CPPRI joint project*

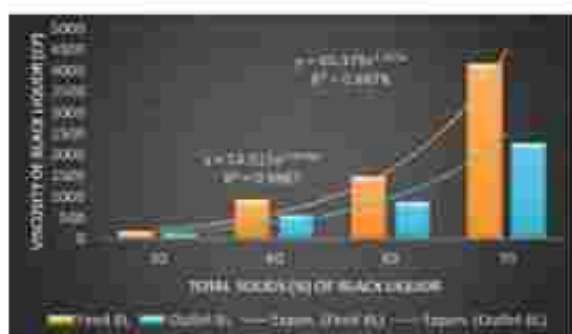




LHT trial result at M/s Tamilnadu Newsprint and Papers Ltd, Karur, Tamil Nadu. 59.6 % viscosity reduction was achieved in bagasse black liquor at 65 % solids concentration after liquor heat treatment.



LHT trial result at M/s Pakka Ltd, Ayodhya, Uttar Pradesh. 56.46 % viscosity reduction was achieved in bagasse black liquor at 60 % solids concentration after liquor heat treatment.



LHT trial result at M/s Kuantum Papers Ltd, Salla Khurd, Punjab. 45.19 % viscosity reduction was achieved in bagasse and wood mixed black liquor at 70 % solids concentration after liquor heat treatment.



#### 4. Demonstration of Membrane Filtration Technology in Indian Pulp and Paper Industry

Based on the successful pre - pilot scale trials carried out at two agro based pulp and paper mills producing writing and printing & kraft grade of paper respectively, a skid mounted containerized pilot scale Membrane filtration pilot demonstration unit was fabricated based on the configuration and specifications finalized by CPPRI & UNIDO jointly. Successful trials were carried out in a recycled fiber based mill producing writing and printing grade of paper, newsprint and paper board, an agro/wood based mill producing writing and printing grade of paper mill and a recycled fiber based paper mill producing writing and printing grade of paper. The results of the trials were encouraging with TDS reduction around 75%, COD reduction around 95% and BOD reduction around 99% and Color reduction around 100%, followed by the successful trials at each site dissemination workshop was also organized at each site to share the results of the trials with stake holders





*CPPRI Team Pilot Scale Membrane Filtration Demonstration Trials Site*

## **5. Monitoring of Grossly Polluting Industries in Ganga & Yamuna River Basin Sponsored Project Central Pollution Control Board (CPCB) Project**

CPPRI successfully completed monitoring of the technological environmental status of over 125 Grossly Polluting Industries (GPI) located in Ganga & Hindon River Basin in the states of Uttar Pradesh (Muzaffarnagar), Uttarakhand (Roorkee) and Haryana (Karnal, Sonapat, Panipat, Yamuna Nagar, Ambala, Kurukshetra) during 2023. The GPI units included from diverse sectors Pulp & Paper Mills (21), Textile units (81), Slaughter House (10) and other units viz electroplating & chemical (13). A comprehensive report of the units inspected by CPPRI was submitted to CPCB and subsequently the outcomes and recommendations were presented before CPCB in a meeting



*Paper Unit*



*Textile Unit*





*Slaughter House*



*Electro Plating Unit*

## 6. Water Audit of Khanna Paper Mills Limited

CPPRI carried out a Water Audit Study at Khanna Paper Mills Limited, Amritsar in collaboration with National Productivity Council, New Delhi. The main objective of the water audit study was to verify the actual fresh water consumption by the mill as well as identify further water saving potential and opportunities through re-use /recycle of treated effluent. The study involved calibration of the existing flow meters at borewell and other key points, water balance based on the information and data provided by the mill, critical analysis of the trends in previous year paper production, raw material consumption, fresh water consumption, waste water discharge etc. A detailed report was submitted to the mill.



*Process Operation at Khanna Paper Mills, Amritsar*



*Water Audit Report Submitted to Khanna Paper Mills Ltd., Amritsar*



## 7. Century Pulp & Paper 2030 – Towards Energy & Environmental Sustainability

Energy and environmental sustainability will be the key drivers for the growth of Indian Industry including Pulp & Paper Industry. The issue has become more relevant in context of India's commitment to reduce its net carbon emissions to at least 45 % by 2030. It is in this perspective this report was commissioned to Central Pulp & Paper Research Institute by Century Pulp & Paper, Lalkuan to identify the areas which can be addressed and technologies which can be adopted so as to contribute towards improving energy and environmental sustainability. The report was prepared based on the latest technological trends, present bench mark environmental practices adopted or being adopted by Indian and global paper industry, interactions with various pulp & paper mills, mill associations and reports/literature available in public domain



*Century Pulp & Paper, Lakua, Uttarakhand*

## 8. Production of Pilot Scale Whole Jute Dissolving Pulp for Viscose Fibre Sponsored by National Jute Board, Kolkatta

The 2nd phase of whole jute pilot plant trial was successfully completed in CPPRI and produced 100 kg pulp adopting different process stages viz. cutting of whole jute in pilot plant chipper, pre-hydrolysis, kraft pulping and DEpD bleaching sequence to get desired pulp properties. The alpha cellulose content was obtained +90% and all other characteristics in the range of dissolving grade pulp requirement. The dissolving pulp was delivered to Aditya Birla Science and Technology Co. Ltd. Mumbai Maharashtra for viscose and fibre preparation.





*Pilot scale unbleached pulp*



*Bleaching reactor*



*Final Bleached Pulp at Pilot plant*



*CPPRI Project Team with NJB officials*

## 9. Study of Pulping and TCF/Ozone Bleaching of Mill De-pithed Bagasse Sponsored by Yash Pakka Limited Ayodhya (UP)

A project on total chlorine free bleaching of mill bagasse pulp was sponsored by Yash pakka Ltd. for study on prospects of TCF bleaching and its adoptability at plant scale.

## 10. Report on Evaluation of BAT for Dissolving Pulp - Sponsored by Fortum India

Report on Project Evaluation of BAT for Dissolving Pulp (for both textile and paper) in India and Supply Chain Development for Dissolving Pulp Plant Submitted to Fortum India Private Limited Gurgaon. The Fortum is Finland based company looking into the fast growing demand of dissolving grade Pulp Fortum sponsored a project to study on evaluation of technology in India for dissolving pulp plant. The study was completed and report submitted to Fortum, Gurgaon.

## 11. Sponsored Projects in Stock Preparation Paper Making and Recycled Fibre Division Evaluation of Wet end Chemicals

Under the above activity 06 samples were evaluated and services has been provided to the following Companies -

- Bindal Paper Mills Limited, Muzaffarnagar, Uttar Pradesh
- Covalent Polymers Pvt. Ltd., Saharanpur, Uttar Pradesh
- Gulshan Polyols Ltd. Muzaffarnagar, Uttar Pradesh





## Study on Recyclability of Paper and Board

Study on Recyclability of paper and board was carried out for a number of recycle paper manufacturers. Some of the valuable customers (FMCG and Paper Mills) to whom services were provided are summarised below.

- Ajit Industries (P) Ltd., Sonapat, Haryana
- Konkan Speciality Polyproducts Pvt. Ltd., Mangalore
- Anna Polymers, Alappuzha, Kerala
- Parijat Paper Mills Ltd., Muzaffarnagar, Uttar Pradesh
- Avon Pacfo Services Pvt. Ltd., Haryana
- PIPL (Pratishthan Industries Private Limited), Aurangabad, Maharashtra
- Bulk MRO Industrial Supply Pvt. Ltd., Mumbai, Maharashtra
- Quinn Facility Management Services Pvt. Ltd., Mumbai, Maharashtra
- Creative Polypack Ltd., West Bengal
- Rathna Packaging India Pvt. Ltd., Tamil Nadu
- Recoh EHS Services, Vadodra, Gujarat
- Chemline India Limited, Sonipat, Haryana
- Cirkla Technologies, Pvt. Ltd. Mumbai, Maharashtra
- Siddhomal Paper Conversion Co. Pvt. Ltd., Ghaziabad, Uttar Pradesh
- Henkel Adhesive Technologies India Pvt. Ltd., Mumbai, Maharashtra
- ITC Ltd., Chennai, Tamilnadu JK Paper Ltd., New Delhi
- ITC Ltd. PSPD, Secunderabad, Telangana
- Intek Tapes Pvt. Ltd., Bangalore, Karnataka
- L'oreal India Private Limited, Mumbai, Maharashtra
- TNPL, Tamil Nadu
- Oryza Fibers Pvt. Ltd., Surat, Gujarat
- OPG Biosolution Pvt. Ltd., Haryana
- Southern Enterprises, Chennai, Tamil Nadu
- Pakka Impact Ltd., Bangaluru, Karnataka
- Sumukha Hitech Products Industry, Puducherry
- Tetra Pak India Pvt. Ltd., Pune, Maharashtra
- Huhtamaki PPL Ltd., Raigad, Maharashtra
- Hindustan Unilever Ltd. Research Centre, Mumbai, Maharashtra
- Sprout Pvt. Ltd., Kannur, Kerala
- Uniliver Industries Pvt. Ltd., Mumbai, Maharashtra
- TCPL Packaging Ltd., Dadar & Nagar Haveli
- Erthe Paper Solutions Pvt. Ltd., Maharashtra
- Green Dot Biopak, Ahmedabad, Gujrat
- Evirocor Packaging India Pvt. Ltd., Bangalore, Karnataka
- Zume India Private Ltd., Mumbai, Maharashtra
- Shubh International, Bengaluru, Karnataka
- Wacker Chemie India Pvt. Ltd., Mumbai, Maharashtra
- Veekay Industries Pvt. Ltd., Gautam Budh Nagar, Uttar Pradesh
- Vacmet India Ltd. Unit-III, Mathura, Uttar Pradesh
- Varsya Innovation Hub, Trivend, Kerala



## QUALITY MANAGEMENT SYSTEM

### NABL Desktop Surveillance

CPPRI successfully completed NABL desktop surveillance for the year 2023-24. Quality Management Division submitted the desktop surveillance documents related to Quality Management System, Paper Testing Laboratory and Environmental Management Division to NABL. Paper Testing Laboratory was assessed in two groups viz. "Paper and Pulp" and "Paper and Paper products" under chemical and mechanical discipline of testing field of paper properties. Environmental Management Division was assessed in two groups viz. "Pollution & Environment" and "Atmospheric Pollution" under chemical discipline of testing field for wastewater pollution parameters, ambient air quality parameters (and stack emissions quality parameters). NABL reviewed the documents submitted and approved continuation of accreditation in accordance with ISO/IEC 17025:2017 in the field of Testing for the discipline of Chemical and Mechanical Testing as per the existing scope. The validity of the accreditation certificate was extended up to September 18, 2024.

### Four Days Training Programme on "Total Quality Management (TQM) for Pulp and Paper Mill Personnel" at Trident Paper Mill, Barnala

Quality Management Division conducted 4 days training programme on "Total Quality Management (TQM) for Pulp and Paper Mill Personnel" at Trident Paper Mill, Barnala during October 10–13, 2023. The objectives of this training programme were to make participants aware about concepts of TQM, basics of QMS - ISO 9001/ISO 9004 and significance of implementing TQM in a pulp and paper mill from the perspectives of maintaining raw material quality, pulp quality, paper quality, stock quality, effluent quality and chemical recovery quality. This training was attended by quality head, quality inspectors, chemists and functional leads from various departments of Trident Paper Mill Barnala. Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, Ms. Anuradha Janbade, Mr. Kumar Anupam, and Dr. Shubhang Bhardwaj delivered lectures in the training programme.



*Participants of Trident Paper Mill, Barnala in TQM Training Programme*





## **Internal Audit, Management Review and Proficiency Testing**

Environment Management Division successfully participated in 6 PT exercises as per 2 years Proficiency Testing (PT) Plan and achieved satisfactory Z score.

All the requirements of ISO/IEC 17025:2017 covering all activities of laboratory are audited in CPPRI at least once a year as per stated guidelines. This year "Internal Audit" of Paper Testing Laboratory and Environmental Management Division was conducted during November 7- 8, 2023.

The top management of CPPRI once in a year conduct a review of the Quality Management System and Technical Activities to ensure their suitability and effectiveness and to introduce any necessary changes or improvements as per the requirements of ISO/IEC 17025:2017. This year "Management Review Meeting" was conducted on December 4, 2023.

## **Renewal of CPPRI Accreditation for ISO 9001: 2015 Certification**

The Surveillance Assessment of CPPRI for renewal of ISO 9001: 2015 Certificate was conducted on January 31, 2024. The assessment was conducted by BSCIC Certification Pvt. Ltd., Faridabad according to the requirements of ISO 9001: 2015. Mr. P.K. Chakrabarty (Lead Auditor) and Mr. Rakesh Kumar (Team Member) from BSCIC performed the assessment. The renewal process included review of quality management system, standard operating procedures, process documents, activity records, internal audit reports, management review records, customer feedback etc. to ensure its alignment with requirements of ISO 9001: 2015. Based on assessment done the auditors found CPPRI successful in developing and maintaining Quality Management System and recommended CPPRI for renewal of certification. The assessment process was coordinated by Dr. A.K. Dixit and Sh. Kumar Anupam.



## TECHNICAL AND CONSULTANCY SERVICES

Technical Services were rendered to the following mills and organizations by analysing various samples of fibrous and non-fibrous raw materials (Pulp, paper, woody & non woody raw materials, black liquor, lime, lime sludge, green liquor, white liquor, effluents, ground water, solid waste etc).

- A 1, Uflex Limited, Jabalpur, Madhya Pradesh
- A. K. Enterprises, Patna, Bihar
- Aaditiya Aswin Paper Mills Private Limited, Coimbatore, Tamil Nadu
- Aarohi Enterprises, Lucknow, Uttar Pradesh
- ACE Leakage Solutions, Jabalpur, Madhya Pradesh
- ACFA Industrial Company for Industry, Riyadh, Saudi Arabia
- Adinath Electronic Security, Jabalpur, Madhya Pradesh
- Aditya Birla Science and Technology Company Private Limited, Raigad, Maharashtra
- Adya Enterprises, Reva, Madhya Pradesh
- Afflux IT Solutions, Jabalpur, Madhya Pradesh
- Aggarwal Zarda Factory Private Limited, Saharanpur, Uttar Pradesh
- Agro Pulping Machinery Private Limited, Chennai, Tamil Nadu
- Ajit Industries Private Limited, Sonapat, Haryana
- All India Institute of Medical Sciences, Bilaspur, Madhya Pradesh
- ALM Industries Limited, Saharanpur, Uttar Pradesh
- Alok Printers, Agra, Uttar Pradesh
- Aman Corporation, Bahraich, Uttar Pradesh
- Amar Ujala Publication Limited, Noida, Uttar Pradesh
- Amber Press Private Limited, Lucknow, Uttar Pradesh
- Amrita Printers, Kanpur, Uttar Pradesh
- Anand Triplex Board Limited, Meerut, Uttar Pradesh
- Andhra Paper Limited, Kolkata, West Bengal
- Andritz Technologies Private Limited, Chennai, Tamil Nadu
- Anjali Art, Etawah, Uttar Pradesh
- Anugraha Raj Research, Pondicherry
- Anupam Prakashan, Mathura, Uttar Pradesh
- Aradhya Traders and Surgicals, Agra, Uttar Pradesh
- Arofine Polymers Private Limited, Pune, Maharashtra
- Asian Paper Products, Karnal, Haryana
- Aspha Board Private Limited, Pune, Maharashtra
- Assam Bio Refinery Private Limited, Golaghat, Assam
- Avery Dennison India Private Limited, Gurgaon, Haryana
- Avon Pacfo Services Private Limited, Faridabad, Haryana
- Bennett Coleman and Company Limited, New Delhi
- Bhagwat Printing Press, Mathura, Uttar Pradesh
- Bhargava Enterprises, Lucknow, Uttar Pradesh
- Bhimrao Ambedkar University, Agra, Uttar Pradesh
- Bhupendra Narayan Mandal University, Madhepura, Bihar
- Bihar Agricultural Management & Extension Training, Patna, Bihar
- Bihar State Aids Control Society, Patna, Bihar
- Bihar State Textbook Publishing Corporation Limited, Patna, Bihar



- Bihar Vidyalya Pariksha Samiti, Patna, Bihar
- Bindals Papers Mills Limited, Muzaffarnagar, Uttar Pradesh
- Bindlas Duplux Limited, Muzaffarnagar, Uttar Pradesh Board of School Education, Bhawani, Haryana
- Brown Overseas Private Limited, Mumbai, Maharashtra
- Bygreen Paperpack, Ambala, Haryana
- Capital Graphics, Lucknow, Uttar Pradesh
- Central Pollution Control Board, New Delhi
- Centre for Indian Bamboo Resource and Technology, New Delhi
- Century Pulp & Paper, Nainital, Uttarakhand
- Chandpur Enterprises Limited, Bijnor, Uttar Pradesh
- Chaudhary Charan Singh University, Meerut, Uttar Pradesh
- Chaudhary Devi Lal University, Sirsa, Haryana
- Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh
- Cirkla Technologies Private Limited, Mumbai, Maharashtra
- Computer Paper Feeds (India), Jammu, Jammu & Kashmir
- Covalent Polymers Private Limited, Saharanpur, Uttar Pradesh
- Cyrix Healthcare Private Limited, Kochi, Kerala
- Dakshin Bihar Gramin Bank, Patna, Bihar
- Deepak Art Printers, Mathura, Uttar Pradesh
- Deepak Printers and Publishers, Nainital, Uttarakhand
- Delhi Bureau of Text Books, Delhi
- Delhi Paper Products Company Private Limited, New Delhi
- Dev Priya Papers Private Limited, Meerut, Uttar Pradesh
- Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh
- Directorate of Printing, Stationery & Publication Odisha, Madhupatna, Cuttack, Odisha
- Dr. APJ Abdul Kalam Technical, University, Lucknow, Uttar Pradesh
- Druck Media Private Limited, Greater Noida, Uttar Pradesh
- Dynamic Textbooks Printers Private Limited, Jhansi, Uttar Pradesh
- Eco Tech Papers, Guwahati, Assam
- Ekta Printing Press, Morena, Madhya Pradesh
- Employment News (Publications Division), New Delhi
- Everest Industries Limited, Bhagwanpur, Uttarakhand
- Excellence International, Mumbai, Maharashtra
- Fatima Reneeth, Pondicherry
- Fibranium Manufacturing Private Limited, Kanchipuram, Tamil Nadu
- Fortum India Private Limited, Gurugram, Haryana
- Galaxy Press, Lucknow, Uttar Pradesh
- Garg Duplex and Paper Mills Private Limited, Muzaffarnagar, Uttar Pradesh
- General Offset Printing Press Private Limited, Prayagraj, Uttar Pradesh
- Genus Paper and Board Limited, Muzaffarnagar, Uttar Pradesh
- Grasim Industries Limited, Raigad, Maharashtra
- Green Dot Biopak, Ahmedabad, Gujarat
- Green World Publication (I) Private Limited, Ahmedabad, Gujarat
- Greenew Future Tech Private Limited, Saharanpur, Uttar Pradesh
- G-Tech Print Works, Mathura, Uttar Pradesh
- Gulshan Polyols Limited, Muzaffarnagar, Uttar Pradesh



- Haryana School Shiksha Pariyojna Parishad, Panchkula, Haryana
- Hemvati Nandan Bahuguna Garhwal University, Pant Nagar, Uttarakhand
- Henkel Adhesives Technologies India Private Limited, Navi Mumbai, Maharashtra
- Hexagon Prints and Pack Private Limited, Santacruz(E) Mumbai, Maharashtra
- Himachal Pradesh Board of School Education, Dharamshala, Himachal Pradesh
- Hindustan Unilever Limited, Bangalore, Karnataka
- Hi-Tech Printers and Publishers, Mathura, Uttar Pradesh
- HT Media Limited, Delhi
- HT Media Limited, Greater Noida
- Huhtamaki India Limited, Raigad, Maharashtra
- I.K. Gujral Punjab Technical University, Kapurthala, Punjab
- Indira Gandhi National Open University, New Delhi
- Indo Lanka Board Private Limited, Daraluwa (NWP), Sri Lanka
- Infinity Advertising Services Private Limited, Faridabad, Haryana
- Intek Tapes Private Limited, Bangalore, Karnataka
- International India, New Delhi
- Irfan Khan Raebareli, Uttar Pradesh
- ITC Limited, Bangalore, Karnataka
- ITC Limited, PSPD Tribeni, West Bengal
- ITC Limited, - PSPD, Secundrabad, Telangana
- ITC Limited, PSPD, Bhadradi, Kothagudem, Telangana
- J K Paper Limited, Rayagada, Odisha
- J.N. Ravanuss India Private Limited, Gurgaon, Haryana
- Jai Aravali Mineral Industries, Unit-3, Nagaur, Rajasthan
- Jai Narayan Vyas University, Jodhpur, Rajasthan
- Jeevika, Bihar Rural Livelihoods Promotion Society State, Patna, Bihar
- Jivandeep Concepts Private Limited, Lakhimpur Kheri, Uttar Pradesh
- JK Paper Limited, Tapi, Gujarat
- JK Paper Limited, New Delhi
- Jolly Board Limited, Aurangabad, Maharashtra
- K.B. Computer Stationery, Dehradun, Uttarakhand
- K.B. Computer Forms, Dehradun, Uttarakhand
- K.C. Printing and Allied Works, Mathura, Uttar Pradesh
- Kailashidevi Pulps and Paper Products, Kashipur, Uttarakhand
- Karnataka Text Book Society (R), Bangalore, Karnataka
- Katayayini Paper Mills Private Limited, Kashipur, Uttarakhand
- Kavach Enterprises, Pratapgarh, Uttar Pradesh
- Kazmi & Associates, Allahabad, Uttar Pradesh
- Kerala Paper Products Limited, Kottayam, Kerala
- Khanna Paper Mills Limited, Amritsar, Punjab
- Konkan Speciality Poly Products Private Limited, Bangalore, Karnataka
- Krishnanchal Pulp and Papers Private Limited, Muzaffarnagar, Uttar Pradesh
- Kuantum Paper Limited, Hoshiarpur, Punjab
- Kumar Printers and Stationers, Saharanpur, Uttar Pradesh
- Kwick Living (I) Private Limited, Andheri East, Mumbai, Maharashtra
- LABEL Enterprises, Varanasi, Uttar Pradesh



- Laxmi Enterprises, Muzaffarpur, Bihar
- Lokmanya Prakashan Mandir, Mathura, Uttar Pradesh
- Lovely Offset Printers Private Limited, Sivakasi, Tamil Nadu
- Lucknow Paper Distributors, Lucknow, Uttar Pradesh
- Lucknow Printers and Publishers, Lucknow, Uttar Pradesh
- M.K. Enterprises, Noida, Uttar Pradesh
- M.L. Paper Converter, Lucknow, Uttar Pradesh
- Anubhav Enterprises, Kanpur, Uttar Pradesh
- Maa Shakumbhari University, Saharanpur, Uttar Pradesh
- Madhya Pradesh Bhoj (Mukt) Vishwavidyalaya, Bhopal, Madhya Pradesh
- Madhya Pradesh Medical Science University, Jabalpur, Madhya Pradesh
- Madhyamik Shiksha Board Rajasthan, Ajmer, Rajasthan
- Madhyamik Shiksha Mandal Madhya Pradesh, Bhopal, Madhya Pradesh
- Mahalaxmi Crafts and Tissues Private Limited, Muzaffarnagar, Uttar Pradesh
- Mahamritunjay Trade and Technology Private Limited, Rewa, Madhya Pradesh
- Maharishi Dayanand University, Rohtak, Haryana
- Makhanlal Chaturvedi National Univ. of Journalism & Communication, Bhopal, Madhya Pradesh
- Manav Contracts and Company, Agra, Uttar Pradesh
- Mangalam Kalpataru Industries LLP, Burhanpur, Madhya Pradesh
- Manish Traders, Jabalpur, Madhya Pradesh
- Manohar Printing Press, Mathura, Uttar Pradesh
- Maya and Sons, Delhi
- Maya Enterprises, Kanpur, Uttar Pradesh
- Meenu Paper Mills Private Limited, Muzaffarnagar, Uttar Pradesh
- Mehali Papers Private Limited, Dahej, Gujarat
- Metro Printers, Lucknow, Uttar Pradesh
- Micronics Computers, Jabalpur, Madhya Pradesh
- Mitra Data Care, Jabalpur, Madhya Pradesh
- Modern Paper Mart Private Limited, Delhi
- Modi Graphics, Kanpur, Uttar Pradesh
- Mudranalay Zila Panchayat Udyog, Banaras, Uttar Pradesh
- Mysore Sales International Limited, Bengaluru, Karnataka
- Naini Papers Limited, Kashipur, Uttarakhand
- National Botanical Research Institute, Lucknow, Uttar Pradesh
- National Council of Education Research and Training, New Delhi
- National Health Mission, Panchkula, Haryana
- National Printers, Ranchi, Jharkhand
- Nav Jyoti Press, Mathura, Uttar Pradesh
- New Lokmanya Press, Mathura, Uttar Pradesh
- New National Offset, Patna, Bihar
- New Ratan Priya, Patna, Bihar
- Nirmal Traders, Ghaziabad, Uttar Pradesh
- North Bihar Power Distribution Company Limited, Patna, Bihar
- O.S.D. Press, Rohtak, Haryana
- Office of the Deputy Commissioner of Customs, Surat, Ahmedabad
- Office of the Director of Printing, Bengaluru, Karnataka



- Omsree Papertek Private Limited, Hyderabad, Telangana
- OPG Biosolutions Private Limited, Sonapat, Haryana
- Orient Board and Paper Mills Private Limited, Muzaffarnagar, Uttar Pradesh
- Orient Paper Mills, Shahdol, Madhya Pradesh
- Orion Paper Tec. Thane, Bhiwandi Road, Maharashtra
- Oryza Fibers Private Limited, Ahmedabad, Gujarat
- Oyster Printers & Publishers Private Limited, Mathura, Uttar Pradesh
- Padcare Labs Private Limited, Pune, Maharashtra
- Pakka Impact Limited, Bengaluru, Karnataka
- Pakka Limited, Bengaluru, Karnataka
- Panchayati Raj Training Institute (PRIT), Lucknow, Uttar Pradesh
- Paswara Papers Limited, Baghpat Road, Meerut, Uttar Pradesh
- Pathya Pustak Adhikari, Lucknow, Uttar Pradesh
- Pi Hemp Private Limited, Solan, Himachal Pradesh
- Pioneer Printers, Agra, Uttar Pradesh
- Pitambra Books Private Limited, Jhansi, Uttar Pradesh
- Pooja Traders, Etawah, Uttar Pradesh
- Prarambhik Shiksha Evam Sarv Shiksha Abhiyan, Bhojpur, Bihar
- Prasar shikshaevamprashikshan bureau, Lucknow, Uttar Pradesh
- Pratibha Pratishthan, New Delhi
- Print Plus Private Limited, Thane, Maharashtra
- Printex India, Allahabad, Uttar Pradesh
- Printing & Stationery Department, Panchkula, Haryana
- Prof. Rajendra Singh (Rajju Bhaiya) University, Allahabad, Uttar Pradesh
- Pulp & Fibre Innovation Centre, Raigad, Maharashtra
- Punjab National Bank, Noida, Uttar Pradesh
- Punjab School Education Board, Mohali, Chandigarh
- Punjab State Lotteries, Chandigarh
- Pushparaj Printing Press, Mathura, Uttar Pradesh
- R.K. Trading Company, Kasganj, Uttar Pradesh
- Raani Durgavati Vishwavidyalaya, Jabalpur, Madhya Pradesh
- Raghav Paper Corporation, Chandigarh
- Raj Printers, Ghaziabad, Uttar Pradesh
- Rajasthan Eligibility Examination for Teachers, Ajmer, Rajasthan
- Rajeev Prakashan, Prayagraj, Uttar Pradesh
- Rajya Bal Snrakshan Samiti, Patna, Bihar
- Rajya Kendriya Mudranalya, Jaipur, Rajasthan
- Rajya PariyojanaNideshak, Lucknow, Uttar Pradesh
- Rama Enterprises, Raebareli, Uttar Pradesh
- Rama Shyama Papers Private Limited, Bareilly, Uttar Pradesh
- Ramco Industries Limited, Arakkonam, Tamil Nadu
- Ramraja Printers and Publishers, Jhansi, Uttar Pradesh
- Relian Data Forms Private Limited, Raipur, Chhattisgarh
- Rishabh Metals and Chemicals Private Limited, Mumbai, Maharashtra
- Ruchi Security Printers Private Limited, Bhopal, Madhya Pradesh
- Ruchira Papers Limited, Sirmaur, Himachal Pradesh



- Sahil Trade Links, Chandigarh
- Sahota Papers Limited, Jaspur, U.S. Nagar, Uttarakhand
- Sai Graphics, Jabalpur, Madhya Pradesh
- Salasar Imaging Systems, Noida, Uttar Pradesh
- Samekit Bal Vikas SewayeNideshalya (ICDS), Patna, Bihar
- Sandeep Paper Mills Private Limited, Noida, Uttar Pradesh
- Sanjay Publicity and Stationers, Kasganj, Uttar Pradesh
- SAP Print Solutions Private Limited, Jabalpur, Madhya Pradesh
- Saral Chemtech LLP, Muzaffarnagar, Uttar Pradesh
- School Shiksha Evam Rajya PariyojnaNideshakKaryalaya, Panchkula, Haryana
- Sh. Surendra Kumar Jain, Agra, Uttar Pradesh
- Shakti Krafts and Tissues Limited, Muzaffarnagar, Uttar Pradesh
- Shanti Enterprises, Varanasi, Uttar Pradesh
- Sharda Offset Printers Private Limited, Raipur, Chhattisgarh
- Sheel Printers, Mathura, Uttar Pradesh
- Sherry Speciality Papers Private Limited, Palghar East, Maharashtra
- Shiv Enterprises, Aligarh, Uttar Pradesh
- Shivam Offset, Kolhapur, Maharashtra
- Shree Bhageshwari Papers Limited, Muzaffarnagar, Uttar Pradesh
- Shree Kela Jee Books Private Limited, Agra, Uttar Pradesh
- Shree Krishna Paper Mills and Industries Limited, New Delhi
- Shree Somnath Offset, Bhavnagar, Gujarat
- Shree Vrindavan Enterprises, Noida, Uttar Pradesh
- Shri Bhairav Baba Enterprises, Agra, Uttar Pradesh
- Shri Prema Enterprises, Noida, G.B. Nagar, Uttar Pradesh
- Shri Ram Enterprises, Noida, Uttar Pradesh
- Shri Swaroop Enterprises, Noida, G.B. Nagar, Uttar Pradesh
- Shri Vinayak Enterprises, Agra, Uttar Pradesh
- Shriram Institute of Industrial Research, New Delhi
- Silverton Papers Limited, Muzaffarnagar, Uttar Pradesh
- Silverton Pulp and Papers Private Limited, Muzaffarnagar, Uttar Pradesh
- Singhal Agencies, Lucknow, Uttar Pradesh
- South Bihar Power Distribution Company Limited, Patna, Bihar
- Southern Enterprises, Chennai, Tamil Nadu
- Sparten Pulp Private Limited, Ahmedabad, Gujarat
- Spray Engineering Devices Limited, Mohali, Punjab
- Sri Luxmi Tulasi Agro Paper Private Limited, Bhadrachalam, Telangana
- SS Enterprises, Dhar, Madhya Pradesh
- Star Paper Mills Limited, Saharanpur, Uttar Pradesh
- State Health Society, Patna, Bihar
- State Society of Ultra Poor and SocialWelfare, Patna, Bihar
- SuchnaAvam Jan SamparkVibhag, Patna, Bihar
- Surat Municipal Corporation, Surat, Gujarat
- T.T.D. Press, Tirupati, Andhra Pradesh
- Tamil Nadu Newsprint and Papers Limited, Trichy, Tamil Nadu
- TCPL Packaging Limited, Dadra & Nagar Haveli



- Techno Prints, Raipur, Chhattisgarh
- Tetra Pak India Private Limited, Pune, Maharashtra
- The Art Gallery, Patna, Bihar
- The Institute of Chartered Accountants of India, Noida, Uttar Pradesh
- The Sandesh Limited, Ahmedabad, Gujarat
- The Sirpur Paper Mills Limited, Kaghaz Nagar Adilabad, Telangana
- The Tribune Trust, Chandigarh
- Tradecom International Private Limited, New Delhi
- Trident Limited, Ludhiana, Punjab
- Trident Limited, Barnala, Punjab
- Uflex Limited, Gautam Buddha Nagar, Uttar Pradesh
- Uma Paper and Allied Industries, Lucknow, Uttar Pradesh
- Unilever Industries Private Limited, Mumbai, Maharashtra
- Unique Enterprises, Bhopal, Madhya Pradesh
- United Nations Industrial Development Organization (UNIDO), New Delhi
- University of Kashmir, Srinagar, Jammu and Kashmir
- Upkar Printers and Publishers, Agra, Uttar Pradesh
- Vacmet India Limited, Mathura, Uttar Pradesh
- Valmet Technologies Private Limited, Chennai, Tamil Nadu
- Veer Narmad South Gujarat University, Surat, Gujarat
- Vikram University, Ujjain, Madhya Pradesh
- Vimala Amalorpavam, Pondicherry
- Visaka Industries Limited, Nalgonda, Telangana
- Vishwa Pariwar, Raipur, Chhattisgarh
- Vishwas Advertisers, Agra, Uttar Pradesh
- Vision Invest Tech Private Limited, Bhopal, Madhya Pradesh
- West Coast Paper Mills Limited, Dandeli, Karnataka
- Whale Stationery Products Limited, Dehradun, Uttarakhand
- Wonder Industries Private Limited, Ahmedabad, Gujarat
- Yash Pakka Limited, Ayodhya, Uttar Pradesh
- Yashwantrao Chavan Maharashtra Open University, Nashik, Maharashtra
- Yogesh Solutions, Raipur, Chhattisgarh
- Yojna Avam Vikas Vibhag, Patna, Bihar
- Zerocircle Alternatives Private Limited, Mumbai, Maharashtra
- Zila Jan Sampark Padadhikari, Chajju Bagh, Patna, Bihar
- Zila Jan Sampark padadhikari, Lakhisarai, Bihar
- Zila Suchna Evam Jansampark Karyalaya, Kaimur, Bihar

## Consultancy Projects /Services

### Adequacy Assessment of Effluent Treatment Plant

- Heart Touch Papers Private Limited, Jaspur, Udham Singh Nagar, Uttarakhand
- ITC Limited, Paperboards & Specialty Papers Division, Unit : Tribeni, PO : Chandarhati West Bengal





*Effluent Treatment Plant at a Pulp & Paper Mill*

- Katyayini Papers Limited, Kashipur, Uttarakhand
- Kailashadevi Papers Limited, Kashipur, Uttarakhand
- Naini Papers Limited, Kashipur, Uttarakhand
- Naini Tissues Limited, Kashipur, Uttarakhand

### **Color Removal Studies**

- Star Paper Mills Limited, Saharanpur, Uttar Pradesh

### **ETP Performance Evaluation**

- Kerala Paper Products Limited, Kotayam, Kerala

### **Microbial Profiling and Evaluation of Water Circulation System**

- Omsree Papertek Private limited, Hyderabad, Telangana

### **Pulping and Bleaching Services**

- Agarwal Hard board, Private Limited, Hisar Road, Fatehabad (Haryana)
- Agro Pulping Machinery Private Limited, Chennai, Tamil Nadu
- Khand Vikas Adhikari, Ekeswar, Garhwal, Uttarakhand
- Kuantum Paper, Hoshiarpur, Punjab
- National Jute Board, Govt. of India, New Delhi
- Naini Papers Limited, Kashipur, Uttarakhand
- Pioneer Panel Products, Rohtak, Haryana
- Pi Hemp Private Limited, Panchkula, Chandigarh
- Yash Pakka Limited, Ayodhya, Uttar Pradesh
- Zero Circles Alternatives, Private Limited, Maharashtra



## **ZLD Feasibility Evaluation**

- Nikita Papers Limited, Shamli, Uttar Pradesh
- Disha Industries Private Limited, Muzaffarnagar, Uttar Pradesh
- Krishnanchal Pulp and Papers Private Limited, Muzaffarnagar, Uttar Pradesh



## MEETINGS ORGANISED / ATTENDED

### (A) Meetings Organized

#### 1. Meeting of CPPRI Research Advisory Committee

CPPRI RAC meeting was held on August 22, 2023 at Udyog Bhawan Room No. 162. The meeting was chaired by Chairman Shri Sanjiv, Joint Secretary DPIIT. The agenda of the meeting was presented by Dr M K Gupta, Director CPPRI. The progress of the 5 RAC projects was observed by chairman and members of the committee. The valuable suggestions on projects were recorded in the minutes and circulated among the members after due approval of the Chairman.

#### 2. Meeting of Research Steering Committee of Development Council for Pulp, Paper and Allied Industries (RSC-DCPPAI)

The meeting of RSC-DCPPAI was held on August 22, 2023 in the Conference Room No. 162 at Udyog Bhawan, New Delhi through hybrid mode. The meeting was chaired by Shri Sanjiv, Joint Secretary, DPIIT. Dr. M.K. Gupta, Director CPPRI presented the Agenda of the Meeting. The Committee reviewed the recommendations of the technical sub committee on various project proposals as well as the progress of ongoing projects.



*Glimpse RAC and RSC-DCPPAI meetings*

#### 3. Meeting of Technical Sub Committee of Research Advisory

CPPRI RAC subcommittee meeting was organised online on January 12, 2024. The members and representative of the newly approved technical subcommittee of RAC joined on-line meeting which was coordinated by Dr. M.K. Gupta Director, CPPRI. The progress of the projects was presented by projects principal investigators and suggestions given by the members were recorded.



#### 4. Meeting of Technical Sub-Committee of Research Steering Committee of Development Council for Pulp, Paper & Allied Industries (RSC- DCPPIAI)

The meeting of Reconstituted Technical Sub-Committee of Research Steering Committee of Development Council for Pulp, Paper and Allied Industries (RSC-DCPPAI) was held on March 1, 2024 via video conference under the Chairmanship of Shri Neehar Agarwal, COO, BGPPL and CEO Bilt Group, Gurugram and Chairman. The other members of the Technical Subcommittee are Dr. Dharam Dutt, Head IIT, Roorkee, Saharanpur Campus; Dr. Vivek Kumar, IIT Delhi, Dr. C.S. Kashikar, COO, Orient Paper & Industries Limited Amlai, M.P., Dr. Suresh Babu, Assistant Vice President, Production, Khanna Paper Mills Limited, Dr. A.K. Naithani, EX Sr. GM (R&D and QC) Shreyans Industries Limited, Ahmedgarh Punjab and Nitin Endlay from CPPRI. The Subcommittee reviewed the progress of on going projects as well as the new project proposals submitted for consideration.

##### (B) Meetings Attended

Meeting on Data/Indicators for Public Dissemination through Website and for Internal Use through the Integrated Internal Dashboard of the Department, Udyog Bhawan, New Delhi, April 5, 2023 - Dr. Nitin Endlay

- Meeting with Representatives of Startup Blue Cat, Bengaluru, April 6, 2023, CPPRI Saharanpur - Dr. Nitin Endlay
- On line Meeting of Technical Subcommittee on CPPRI Upgradation, April 13, 2023- Dr. M.K. Gupta, Dr. A.K. Dixit and Dr. Nitin Endlay
- On line Meeting of Technical Subcommittee on CPPRI Upgradation, May 1, 2023- Dr. M.K. Gupta, Dr. A.K. Dixit & Dr. Nitin Endlay.
- Visited CRDT, IIT Delhi for meeting Prof. Vivek Kumar, HOD on 15 May' 23 to discuss on a joint project on 'Color removal from paper mill effluent' Ms. Anuradha V. Janbade and Dr. Nitin Kumar .
- Meeting with Joint Secretary, Director and Under Secretary, DPIIT, Udyog Bhawan to discuss DCPPIAI Agenda, May 30, 2023- Dr. M.K. Gupta and Dr. Nitin Endlay
- Meeting with Secretary General IPMA and INMA to discuss Agenda Points related to DCPPIAI Meeting, May 30, 2023 and Dr. M.K. Gupta & Dr. Nitin Endlay
- Meeting with Director and Under Secretary, DPIIT, Udyog Bhawan to discuss CPPRI related issues, June 1, 2023 - Dr. M.K. Gupta & Dr. Nitin Endlay
- Online Meeting of CHD 13 Water Quality For Industrial Purposes, June 22, 2023- Dr. Nitin Endlay
- Meeting with NIC Director, DPIIT, Udyog Bhawan to discuss e Office implementation related issues, June 1 and 2, 2023 - Dr. Nitin Endlay
- Meeting with Shri P.K. Rajput, Director NIC, New Delhi to review and discuss e Office implementation related issues, June 14, 2024 - Dr. Nitin Endlay and Mr N.K. Naik



- 4<sup>th</sup> Project Monitoring and Advisory Committee (PMAC) meeting of "MSME Innovative Scheme" a component under MSME Champions Scheme under the chairmanship of AS-DC (MSME), Ministry of Micro, Small & Medium Enterprises, Government of India organized at O/O DC (MSME) Nirman Bhawan, New Delhi on June 26, 2023 - Mr. Kumar Anupam
- Online Meeting on Monitoring of Grossly Polluting Industries in Main Stem States of River Ganga & Yamuna Basin, July 11, 2023 - Dr. Nitin Endlay
- Online Meeting on E-office implementation, organized by DPIIT, July 14, 2023- Dr. Nitin Endlay and Mr. N.K. Naik
- Online Meeting on Monitoring of Grossly Polluting Industries in Main Stem States of River Ganga and Yamuna Basin, July 21, 2023- Dr Nitin Endlay
- Online meeting with TWI Group on Prefeasibility of Setting up Bamboo Based Pulp Mill, July 25 2023- Dr M.K. Gupta, Dr Nitin Endlay and Mohd Salim
- Meeting of Board of Studies of M.Sc Environment Management Programme of Forest Research Institute (Deemed to be University), Dehradun, July 31, 2023- Dr. Nitin Endlay
- Meeting of IPPTA Executive Committee at Muzaffarnagar, July 29, 2023 – Dr. Nitin Endlay
- Meeting with Prof. Vivek Kumar, CRDT, IIT Delhi on August 16, 2023 to discuss on a joint project on "color removal from paper mill effluent" - Ms. Anuradha V. Janbade and Dr. Nitin Kumar
- Joint Meeting of CPCB, IIT Roorkee and CPPRI for drafting of Charter 3.0, August 25, 2023-, Dr. Nitin Endlay
- Online Meeting on e-office implementation, organized by DPIIT, September 29, 2023- Dr. Nitin Endlay and Mr N.K. Naik
- Brainstorming Meet on Utilization of Rice Straw for Production of Packaging Grade of Paper and Paper Board & Rice Straw Pulp for Molded Tableware Products on November 29, 2023 at NEERI New Delhi - Dr. M.K. Gupta, Dr. Nitin Endlay & Mohd Salim





- Meeting of IPPTA Executive Committee Meeting, Expo Center, Greater Noida, December 8, 2023 - Dr Nitin Endlay
- Meeting on Preparing Guidelines for Charter 3.0 organized by CPCB on January 25, 2024 IIT Delhi, New Delhi- Dr Nitin Endlay
- Meeting with Paper Industry at Stakeholders on Charter 3.0 organized by CPCB, on January 27, 2024, Muzaffarnagar - Dr Nitin Endlay
- 31<sup>st</sup> Meeting of Water Quality for Industrial Purposes Sectional Committee, CHD 13, January 24, 2024- Dr Nitin Endlay
- 59<sup>th</sup> AGM of IPPTA Executive Committee at Kolkata, February 22, 2024- Dr Nitin Endlay
- Around 33 Weekly Online Meeting on Monitoring of Grossly Polluting Industries in Main Stem States of River Ganga & Yamuna Basin organised by CPCB between March & July 2024 - Dr. Nitin Endlay & Mohd. Salim
- Dr. Priti S. Lal, Coordinator of RAC and PBS projects, arranged and coordinated RAC meeting held on August 22, 2023 at Udyog Bhawan. The agenda was prepared and submitted to director. Dr. Ashok, Sc G FRI and PI of the project (FRI) and Dr. Priti S. Lal, PI of the Project (CPPRI) jointly presented the findings of the RAC project on Centre of Excellence Plantation Project.
- Meetings with Satia Paper Mills Limited at Muktsar through online on April 28, 2023 and November 03, 2023 and at on-site on February 10, 2024 - Dr. Priti S. Lal
- Meetings with Dr. Ashok Kumar, FRI, Dehradun under PBS project "Centre of Excellence". on dated 8-5-2023 - Dr. Priti S. Lal and Dr. Arvind Sharma
- EMC (10, 11, 12, 13, 14) Meeting of National Jute Board, Kolkata through online on May 9, 2023; July 21, 2023; October 17, 2023; October 27, 2023; January 19, 2024; February 19, 2024- Dr. Priti S. Lal and Dr. Arvind Sharma



## WORKSHOP/TRAINING PROGRAM ORGANIZED

### Workshop Organized

Following Workshop/Training Program organized in the year 2023-2024.

#### Organization of Dissemination Cum Demonstration Workshop of RSC-DCPPAI Supported R & D Projects, Scope Complex , New Delhi.

To disseminate Information related to outcomes and recommendations of various RSC – DCPPAI supported R & D projects for the benefit of pulp and paper mills and other stake holders a one day Dissemination cum Demonstration Workshop of Completed & Ongoing RSC –DCPPAI Supported R & D Projects was organized SCOPE Complex , New Delhi, April 28, 2023

The outcomes and recommendations of the on going, completed RSC -DCPPAI projects were presented by the respective Principal Investigators and project partners

#### Interactive Workshop on Screening and Production of Quality Raw Material for Indian Pulp, Paper and Panel Industry at FRI Dehradun





Under The PBS Project "Centre of Excellence for Multiplication of Quality Planting Stock of Selected Tree Species for Indian Pulp and Paper Industry activities an 'Interactive workshop on Screening and Production of Quality raw material for Indian Pulp, Paper and Panel Industry' was organized jointly by Central Pulp and Paper Research Institute Saharanpur, Uttar Pradesh and ICFRE-Forest Research Institute (Indian Council of Forestry Research and Education Dehradun), Uttarakhand on October 20, 2023 at the Board Room of ICFRE- Forest Research Institute, Dehradun. The Chief Guest of workshop was Dr. Renu Singh, IFS, Director FRI. The key-note address was delivered by expert of raw material Dr. H. D. Kulkarni. The workshop was attended by eminent experts in the area of raw material cultivation, Pulp, Paper and Panel Industry.

## Training Programme Organised Under RSC DCPPI Programme

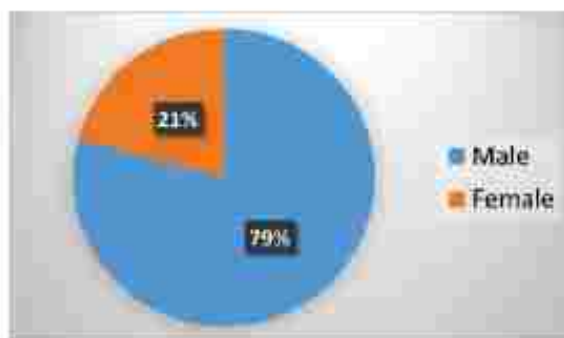
**Details of training programme are as under:**

Continuing education has a routine in developed countries as it contributes significantly to the improvement of individual skills to deal with the new challenges on the shop floor. CPPRI is providing this service to the industry for continuing education of the Indian pulp and paper mill personnel. The main objective of this project is to impart training to shop floor and middle level technical manpower to improve the technical skill by way of providing information on the latest development in the various areas of pulp and paper making. During the year 2023-24, 7 (Seven) offline training programs were successfully organized under this project. In addition to the scientists of CPPRI, The faculties in these training programs were called from different esteemed institutes and industries of the country such as Tamilnadu Newsprint and Papers Ltd., Karur; Indian Institute of Packaging, New Delhi; Seshasayee Paper and Boards (SPB) Ltd., Erode; CSIR-National Environmental Engineering Research Institute, New Delhi; CSIR – Central Leather Research Institute, Chennai; Centre for Rural Development and Technology, Indian Institute of Technology Delhi; Paques India Limited, Chennai; Department of Pulp and Paper Technology, Indian Institute of Technology, Roorkee; Central Pollution Control Board, New Delhi etc.

### List Of Training Programs Organized

S. No.	Title of the training programme	Venue	Duration
1.	Paper based Packaging: An Eco friendly Approach	Central Pulp & Paper Research Institute, Saharanpur, U.P.	March 28, 2024
2.	Fundamentals in Fibrous and Non-Fibrous Analysis of Pulp and Paper	Central Pulp & Paper Research Institute, Saharanpur, U.P.	February 13, 2024
3.	Quality Analysis of Paper	Central Pulp & Paper Research Institute, Saharanpur, U.P.	February 12, 2024
4.	Circular Economy for Sustainable Development of Pulp and Paper Industries	CSIR-National Environmental Engineering Research Institute, Delhi Zonal Centre, New Delhi	January 18, 2024
5.	Environment Management in Pulp and Paper Industry – Upcoming Norms, Challenges and Strategies	Tamil Nadu Newsprint & Papers Ltd., Unit-I, Kallihapuram, Karur, Tamil Nadu	December 27–28, 2023
6.	Aspects of Present Practices Adopted for Collection, Segregation and Supply of Indigenous Recovered Paper and Prospects for Improvement in Present Scenario of Collection of Wastepaper (Recovered Paper)	Indian Institute of Packaging (IIP), Patparganj, New Delhi	August 28, 2023
7.	Futuristic Approach to Develop a Sustainable Mechanism for Collection/ Recovery of Wastepaper with Quality Assurance for Indian paper Industry	Dr. Ambedkar Institute of Productivity, Ambattur, Chennai	May 26–27, 2023





*Pie chart representing percentage of male and female participants in these training programs*



*Participants and faculty in training program at CPPRI, Saharanpur*



*Participants and faculty in training program at CSIR-NEERI, New Delhi*



*Participants and faculty in training program at TNPL, Karur*



*CPPRI scientist in training program at IIP, Patparganj, Delhi*



*Participants and faculty in training program at AIP, Ambattur, Chennai*



## Training Programs Organized For Other Organisation

### Assam Biorefinery Private Limited, Numaligarh

A 4-day training program during March 25 – 29, 2023 was organized for three chemists from Assam Biorefinery Private Ltd. (ABRPL), Numaligarh. The objective of this training program was to provide first-hand experience of Biorefinery based testing facilities at CPPRI and engage in discussions with experts on products of ABRPL including 2G Ethanol. Trainees were imparted preliminary knowledge about the equipment used in processing and testing bamboo and wood in making downstream products. Trainees were also made familiar with all clauses of ISO 17025:2017 and other NABL accreditation guidelines.

### Central Pollution Control Board, New Delhi

CPPRI organised a 3 day – training program on "Complete Manufacturing Process of Pulp & Paper Industries and Best Available Technologies for its Effluent Treatment Management" during March 5–7, 2024 sponsored by Central Pollution Control Board (CPCB). A total twenty participants (17 male and 03 female) from Central Pollution Control Board, New Delhi; State Pollution Control Boards (Gujarat, Karnataka, Odisha, Punjab, Uttar Pradesh, West Bengal), CPCB Regional Directorate (Chandigarh, Shillong), Allied industries (JMC Paper Tech. Pvt. Ltd.) and CPPRI participated in this training program.



*Director CPPRI and faculty members interacting with participants in CPCB training program*

### Training Programme on "Total Quality Management (TQM) for Pulp and Paper Mill Personnel" at Trident Paper Mill, Barnala

CPPRI conducted 4 days training programme on "Total Quality Management (TQM) for Pulp and Paper Mill Personnel" at Trident Paper Mill, Barnala during October 10–13, 2023. The objectives of this training programme were to make participants aware about concepts of TQM, basics of QMS - ISO 9001/ISO 9004 and significance of implementing TQM in a pulp and paper mill.



## Pakka Skills, Ayodhya

A group of one hundred ITI students from Pakka Skills, Ayodhya (A unit of Pakka Ltd., Ayodhya) were provided training on "Fundamentals of pulp and papermaking" in CPPRI during April 1 – May 6, 2023. These students belonged to Fitter, Electrician, Boiler operation, Instrumentation, Fiber molded products operations, Pulp and paper operations trade. Students were provided training in the area of raw materials, physical chemistry, pulping, bleaching, stock preparation, chemical recovery, biorefinery, paper testing, engineering & maintenance and pilot plant.

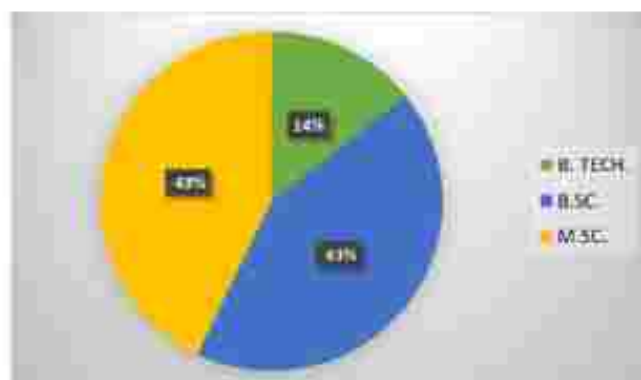


*Pakka Skills students with Dr. Kawaljeet Singh, Sc. F, Dr. A. K. Dixit, Sc. F and Mr. Pankaj Kumar Goley, TO-B*

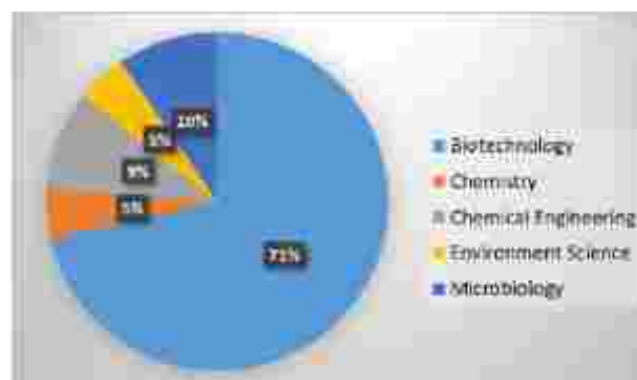
## Academic Training Programs

CPPRI is working towards bridging the gap of unskilled workforce in Indian pulp and paper industry. Conduction of academic training programs for students at various universities is one such step towards this goal. This year a total 21 number of students from different universities across the country completed their training at different divisions of CPPRI. Students came from Gurukul Kangri Vishwavidyalaya, Haridwar; SRM Institute of Science & Technology University, Chennai; Shobhit University, Gangoh; Banasthali Vidhyapith, Tonk Chandigarh Group of Colleges, Landhran, Chandigarh University, Punjab and Dr. Ambedkar Institute of Technology for Handicapped, Kanpur. These students were trained in different fields such as biotechnology, chemical recovery, biorefinery and environment management related pulp and paper sector. Among these, 81% of students completed their training in Biotechnology Division, 14% in Chemical Recovery and Biorefinery Division and 5% in Environmental Management Division of CPPRI. These students were of B.Sc., M.Sc. and B. Tech. courses. 71% of these students studied biotechnology, 10% microbiology, 9% chemical engineering, 5% chemistry and 5% environment sciences. Course-wise, stream-wise, division-wise and institute-wise analysis of academic training programs at CPPRI are shown in the following figures.

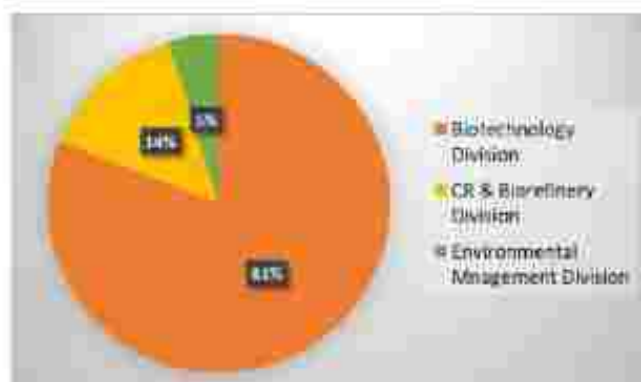




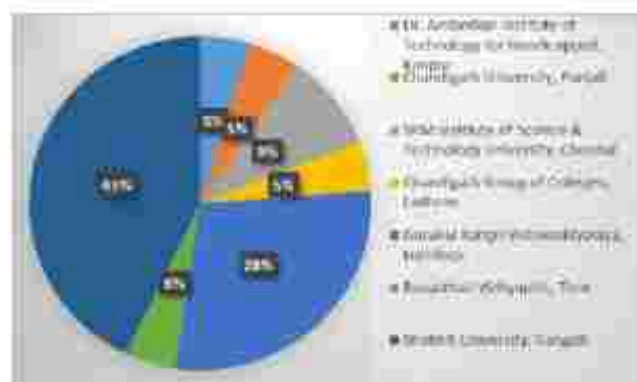
Course wise trainees at CPPRI



Stream wise trainees at CPPRI



Division wise trainees at CPPRI



Institute wise trainees at CPPRI

## Training to Jawahar Navodaya Vidyalaya, Saharanpur

Students of Jawahar Navodaya Vidyalaya, Saharanpur visited CPPRI, Saharanpur on November 7, 2023, Under The "vigyan Jyoti Program" Sponsored by the Department of Science and Technology, Government of India. Students Were Taken on a tour of various laboratories of CPPRI and were made aware of the processes related to pulp and paper production, these students were also made aware about swachh bhara mission 3.0.



## PARTICIPATION IN SEMINAR, WORKSHOP AND TRAINING PROGRAMS

CPPRI scientists attended following Webinars, Conferences, Training Programme and Workshops during the period 2023-24 to update the knowledge about the latest developments on various aspects of pulp and paper technology

- "One Week One Lab" program organized by CSIR-Indian Institute of Petroleum at Dehradun, Uttarakhand on April 19, 2023 - Dr. A. K. Dixit
- Dissemination cum Demonstration Workshop of RSC DCPPI Ongoing & Completed Projects at SCOPE Complex New Delhion April 28, 2023-Dr M.K. Gupta, Dr. A.K. Dixit, Dr. Priti S. Lal, Ms. Anuradha V. Janbade, Dr. Sanjay Tyagi, Dr. Nitin Endlay, Mr. S.D. Negi, Dr. A.K.Sharma, Mohd. Salim, Mr. Pankaj Goley, Dr. Shubhang Bhardwaj and Dr. Nitin Kumar



- "International Conference on Innovative Research in Science and Technology" organized by Shobhit Institute of Engineering and Technology, Meerut during May 23-25, 2023- Ms. Shrutikona Das
- "Getting the Most Out of Your AAS: Best Practices and Strategies" organized by Aanalytik-Jena on May 25, 2023- Dr. Jitender Dhiman
- Futuristic Approach to Develop a Sustainable Mechanism for Collection/ Recovery of Wastepaper with Quality Assurance for Indian paper Industry, Dr Ambedkar Institute of Productivity, Ambattur, Chennai, May 26-27, 2023-Dr. M.K. Gupta, Dr. A.K. Dixit, Dr. Priti S. Lal, Mr. Mohd Salim, Mr. Pankaj Kumar Goley
- IPPTA Zonal Seminar Cum Workshop 2023 "Replacing Single Use Plastic by Paper with Emphasis on Food Packaging" Held at CSIR-Central Food Technological Research Institute, Mysuru, on August 3-4, 2023- Dr. M.K. Gupta, Dr. Arvind Sharma, Dr. Shubhang Bhardwaj, Dr. Nitin Kumar, Ms. Gunjan Dhiman





*Ms. Gunjan Dhiman receiving certificate of merit in IPPTA Zonal Seminar*

- One day RSC-DCPPAI Training Programme on Aspects of Present Practices Adopted for Collection, Segregation and Supply of Indigenous Recovered Paper and Prospects for Improvement in Present Scenario of Collection of Waste Paper (Recovered Paper) at Indian Institute of Packaging (IIP), Patparganj, Delhi, August 28, 2023 -Dr. M.K. Gupta, Dr. A K Dixit, Dr. Priti S. Lal, Dr. Sanjay Tyagi, Mr. Alok Goel, Dr. Nitin Endlay, Mohd Salim, Mr. Kumar Anupam, Dr. Shubhang Bhardwaj, Mr. Amitabh Tripathi and Abhishek Tyagi
- 3<sup>rd</sup> All India Official Language Conference, Sri Chhatrapashivaji Sports Complex, Pune, September 14, 2023 – Dr.M.K.Gupta, Dr. Nitin Endley and Mr. Kumar Anupam
- 17<sup>th</sup> PaperTech Conference 2023 on Make Paper Industry World Class, September 13-14, 2023, HICC Hyderabad – Dr M. K. Gupta and Dr. Nitin Endlay



*Dr. Nitin Endlay Delivering Lecture @ 17<sup>th</sup> Paper Tech, Hyderabad*



- "Basics of Rheology (Rotational & Oscillation), Instrument handling and operation" from M/s Anton Paar India Limited. on September 25, 2023-Ms. Shrutikona Das.
- "International Conference on Recent Advances in Biofuels and Biomaterials" organized by Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab during October 13-14, 2023 Ms. Shrutikona Das.
- 03 days training of High-Pressure ion chromatography (HPIC) at CPPRI on 18-20 October, 2023-Dr. Jitender Dhiman.
- Workshop on "Screening and Production of Quality Raw Material for Indian Pulp, Paper and Panel Industry" jointly organized by CPPRI and FRI Dehradun at FRI Dehradun on October 21, 2023 - Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti S. Lal, Dr. Arvind Kumar Sharma and Mr. Kumar Anupam, Ms. Gunjan and Mr. Deepak Sharma
- Indian Pulp and Paper Technical Association (IPPTA) Zonal Seminar- II on the topic "Efficient Collection & Processing of Recovered Paper for Achieving Improved Yield and Quality" held at Muzaffarnagar, Uttar Pradesh during October 30-31, 2023 – Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Nitin Endlay, Dr. Sanjay Tyagi, Shri Alok Kumar Goel, Mr. S. D. Negi, Dr. Subhang Bhardwaj
- Webinar on "Green voltammetry-A new generation of sensors for mercury-free analysis of heavy metals" organized by Metrohm, November 02, 2023- Dr. Jitender Dhiman.
- "Model Mania" Competition on the theme "Future Gadgets" in an inter-school program VIBGYOR 2023 organized at KLG Public School, Sharda Nagar on November 30, 2023 – Mr. Kumar Anupam, as Jury Member
- Indo-German Joint Symposium organized by Leibniz Institute of Polymer Research (IPF) Dresden, Germany and Department of Polymer and Process Engineering, IIT Roorkee, Saharanpur Campus, Uttar Pradesh during November 20 – 22, 2023-M.Sc. (CPT) and PhD students.



*M.Sc. (CPT) and PhD students in Indo-German Joint Symposium*



- 16<sup>th</sup> CPHI & PMEC India held at India Expo Centre, Greater Noida, Delhi NCR during November 28 – 30, 2023 – Dr. A. K. Dixit and Mr. Kumar Anupam
- 16<sup>th</sup> International Conference and Exhibition on Pulp, Paper and Allied Industries (PAPEREX 2023) held at India Expo Centre, Greater Noida, Delhi-NCR during December 6 – 9, 2023 – Dr. M.K. Gupta, Dr. A. K. Dixit, Dr. Priti S. Lal, Dr. Sanjay Tyagi, Dr. Nitin Endlay, Shri Alok Kumar Goel, Mr. S. D. Negi, Ms. Barnali Shome, Dr. Arvind Kumar Sharma, Mr. Mohd Salim, Mr. Kumar Anupam, Mr. Amitabh Tripathi, Mr. Anjar Jamal, PhD and M.Sc. (CPT) students.



*CPPRI Scientists and students at PAPEREX 2023*

- Capacity Building Programme for BIS Technical Committee Members, NITS (BIS), Noida, December 18, 2023 – Dr. Nitin Endlay and Shri Alok Kumar Goel
- Two-days RSC-DCPPAI Training Programme on Environmental Management in Indian Pulp and Paper Industry- Upcoming Norms, Challenges and Strategies at Tamil Nadu Newsprint and Papers Limited, Unit-I, Karur, Tamil Nadu, December 27-28, 2023 – Dr. M.K. Gupta, Dr A.K. Dixit, Dr Nitin Endlay, Mr. Mohd Salim and Mr. Pankaj Goley



*CPPRI Team @ TNPL*



- MY BHARAT – Viksit Bharat @2047 Declamation Competition at District Level organized by Nehru Yuva Kendra Sangathan, Saharanpur (Ministry of Youth Affairs and Sports, Government of India) at J.V. Jain Degree College Saharanpur on January 10, 2024 - Mr. Kumar Anupam, as Jury Member
- Circular Economy for Sustainable Development of Pulp and Paper Industries CSIR-National Environmental Engineering Research Institute, Delhi Zonal Centre, New Delhi January 18, 2024 - Dr. M.K. Gupta, Dr A.K. Dixit, Dr. Priti S. Lal, Dr. Sanjay Tyagi, Dr Nitin Endlay, Mr Kumar Anupam and Mr. Pankaj Kumar Goley
- Science Exhibition on the occasion of National Science Day 2024 at Star Paper Mills Saraswati Vidya Mandir Inter College, Saharanpur on February 28, 2024 - Mr. Kumar Anupam, Jury Member
- International Conference on Continuous Environment Monitoring Systems, February 20 -21, 2024, New Delhi – Dr. Nitin Endlay, Mr. Mohd Salim & Mr. Amitabh Tripathi
- Startup Mahakumbh (Bharat Innovates) organized collectively by ASSOCHAM, NASSCOM, Bootstrap Incubation & Advisory Foundation, TIE and Indian Venture and Alternate Capital Association (IVCA) at Bharat Mandapam, New Delhi during March 18-20, 2024 - Dr. A. K. Dixit
- One day training program "Paper based packaging: An eco-friendly approach" at CPPRI held on March 18, 2024-Dr. Jitender Dhiman
- Indian Pulp & Paper Technical Association (IPPTA) Zonal seminar on Fostering the Future of Energy and the Environment in the Pulp and Paper Industry., Kolkata, February 23- 24, 2024, Kolkata – Dr M.K. Gupta, Dr A.K. Dixit, Dr. Nitin Endlay, Mr. Kumar Anupam, Dr. Nitin Kumar & Ms. Shrutikona Das



CPPRI Scientists @ GEM India



CPPRI Scientists and Ph.D student in IPPTA AGM and Seminar at Kolkata



- Bharat Tex 2024 (Global Textile Expo) organized by a consortium of 11 Textile Export Promotion Councils and supported by the Ministry of Textiles, Government of India held at Bharat Mandapam, New Delhi on February 26, 2024 - Mr. Kumar Anupam and Ms. Shrutikona Das, JRF
- 7<sup>th</sup>–One Day RSC-DCPPAI Training Program on "Paper Based Packaging: An Ecofriendly Approach", organized by Central Pulp & Paper Research Institute Saharanpur on March 28, 2024 Dr. M.K. Gupta, Dr. A. K. Dixit, Ms. Anuradha V Janbade, Dr. Sanjay Tyagi, Dr. Nitin Endlay, Shri Alok Kumar Goel, Mr. S. D. Negi, Dr. Arvind Kumar Sharma, Mr. Mohd Salim, Mr. Kumar Anupam, Dr Nitin Kumar, Dr Shubhang Bhardwaj and Dr Jitender Dhiman.





## PAPER PRESENTED AND LECTURES DELIVERED

### Paper Presented in Workshops and Seminars

- Dr Priti S.Lal presented the findings of RSC project Demonstration of Ozone Bleaching technology at RSC DCPPIAI dissemination workshop at scope complex New Delhi on April 28, 2023.
- Ms. Shrutikona Das presented a research paper titled "Preparing Materials for Societal Applications from Pulp and Paper Mill Black Liquor" in International Conference on Innovative Research in Science and Technology organized by Shobhit Institute of Engineering and Technology, Meerut during May 23-25, 2023.
- Ms. Gunjan Dhiman presented a research paper titled "Bamboo as a Solution for Food Packaging" in Indian Pulp and Paper Technical Association (IPPTA) Zonal Seminar held at Mysore, Karnataka during August 3-4, 2023.
- Dr. Sanjay Tyagi presented a technical paper on "Application of biopolymers in food grade packaging at technical session cum seminar in Mega Exhibition "PROPACK ODISHA-2023" Organized by OASME at Exhibition ground, Bhubaneswar from September 29, 2023 to October 2, 2023.
- Ms. Shrutikona Das presented a research paper titled "Physicochemical, Rheological and Thermal Characterization of Pulp and Paper Mill Black Liquor for Energy Generation" in International Conference on Recent Advances in Biofuels and Biomaterials, organized by Department of Chemical Engineering, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab during October 13-14, 2023.
- Dr. Priti S.Lal presented paper on Accomplishments in Addressing Demands of Raw Material in Pulp and Paper Industry at FRI during Interactive workshop on Quality Planting Raw material. held on October 20, 2023

### Poster Presented In The 16th International Conference and Exhibition on Pulp, Paper and Allied Industries (paperex 2023) Held at India Expo Centre, Greater Noida, Delhi-NCR during December 6-9, 2023.

- Ms. Gunjan Dhiman presented a poster "Utilization of Various Species of Bamboo as Pulp and Paper Making Fibre"
- Mr. Deepak Sharma, "Hemp as Potential Source for Pulp and Paper Making Fibre"
- Ms. Shrutikona Das presented two posters titled "Characterization and utilization of electrostatic precipitator (ESP) ash produced in the pulp and paper mill chemical recovery boilers" and "Dual stage pilot scale pulp and paper mill effluent treatment using microbes and fly-ash nanoparticles"





*Glimps of poster presented at PAPEREX 2023*

- Ms. Parkhi Agarwal presented a poster titled "Combustion of black liquor"
- Mr. Bhima Hankare presented a poster titled "Gradation and Management of Recycled Paper"
- Mr. Amit Shekhawat presented a poster titled "TCF Bleaching of Indigenous Raw Material Pulp"

### **Lectures Delivered In Training Programs Under RSC-DCPPAI Project on HRD**

**Futuristic Approach to Develop a Sustainable Mechanism for Collection/Recovery of Wastepaper with Quality Assurance for Indian Paper Industry at Dr Ambedkar Institute of Productivity on May 26-27, 2023**

- Dr. A. K. Dixit delivered lecture on "Status of Process Manpower availability & Efforts on meeting the same"
- Dr. Priti S. Lal Scientist delivered a lecture on "WPRPC" project.
- Sh. Satya Dev Negi Scientist delivered a lecture on "Stickies Management in RCF Based Mills"
- Mohd. Salim delivered lecture on "Closing the Water Circuit in RCF Based Kraft Paper Mills-Techniques and Impacts"



### **Aspects of Present Practices Adopted for Collection, Segregation and Supply of Indigenous Recovered Paper and Prospects for Improvement In Present Scenario of Collection of Wastepaper (recovered Paper) at Indian Institute of Packaging Delhi, Patparganj, on August 28, 2023.**

- Dr. A. K. Dixit delivered lecture on "Raw Materials, Manufacturing Processes and Application"
- Dr. Sanjay Tyagi delivered lecture on "BIS Standard Invoked for Paper Industry"
- Shri Alok Kumar Goel delivered Lecture on "Recycling and resource recovery of Recovered Paper"
- Sh. Satya Dev Negi delivered a lecture on "Stickies Management in RCF Based Mills"
- Mohd Salim delivered a lecture on "Environmental Issues in Recycled Fibre Based Paper Mills".



*CPPRI Faculty & Organizing Team of RSC-DCPPAI Training Programme at Indian Institute of Packaging, New Delhi*

### **Total Quality Management (TQM) for Pulp and Paper Mill Personnel Trident Paper Mill, Barnala on October 10-13, 2023**

- Dr. A. K. Dixit delivered lecture on "Black Liquor Properties"
- Dr. Priti S. Lal delivered lectures during training program on "Quality Improvement".
  - a) Quality Management in Raw material Section
  - b) The Variables associated with Quality of Unbleached Pulp
  - c) Fundamentals of Bleaching Technology
  - d) Modifications in bleaching technologies
  - e) Issues related to bleaching



- Ms. Anuradha V Janbade delivered a lecture titled "Biotechnology for Quality Improvement".
- Mr. Kumar Anupam delivered lecture on "Total Quality Management in the Pulp and Paper Industry".
- Dr. Shubhang Bharadwaj delivered 3 lectures on internal sizing, Wet-end additives and retention chemistry and the influence of environment on paper properties respectively.

### **Environment Management in Pulp And Paper Industry – Upcoming Norms, Challenges And Strategies at Tamil Nadu Newsprint & Papers Ltd On December 27–28, 2023**

- Dr. A. K. Dixit delivered lecture on "Resource Management in India Paper Industry – Challenges & Prospective".
- Dr. Nitin Endlay delivered lecture on "Environmental Sustainability in Indian Paper Sector - Overview of the Challenges, Strategies, Opportunities, Policies Interventions & Financial Incentives".
- Mohd. Salim delivered lecture on "Feasibility of Zero Liquid Discharge in RCF Based Kraft Paper Mills".



*Dr. Nitin Endlay at TNPL Training Programme*

### **Circular Economy for Sustainable Development of Pulp and Paper Industries at CSIR-National Environmental Engineering Research Institute, Delhi Zonal Centre, Naraina, New Delhi, India on January 18, 2024.**

- Dr. A. K. Dixit, delivered lecture on "Attaining Circular Economy in Indian Paper Industry through Biorefinery Approaches".
- Dr. Priti S. Lal presented paper in RSC DCPPI training program on Circular economy and presented paper on Value addition to Agro-residues and other Non-Conventional Raw Materials in current scenario of steps towards circular economy on January 18, 2024



- Dr. Sanjay Tyagi delivered lectures titled "Circular Economy based approach for Energy Conservation & Energy efficiency".
- Dr. Priti S. Lal presented paper in RSC DCPPI training program on Circular economy and presented paper on Value addition to Agro-residues and other Non-Conventional Raw Materials in current scenario of steps towards circular economy on January 18, 2024
- Dr. Priti S. Lal was invited by IWST Bangalore for presentation at National Bamboo Mission Workshop on 'Improving Manufacturing of Bamboo Products to Advance the Bamboo Sector in India' at IWST, Bangalore and delivered lecture on "Utilization of bamboo for production of Pulp, Paper and board through MSME Route" on February 2, 2024
- Dr. A. K. Dixit delivered lecture on "Quality Management Practices in Pulp and Paper Industry" in Training programme Quality Analysis of Paper at Central Pulp and Paper Research Institute on February 12, 2024

### **Complete Manufacturing Process of Pulp & Paper Industries and Best Available Technologies for its Effluent Treatment Management at Central Pulp and Paper Research Institute on March 06, 2024 - Sponsored by CPCB New Delhi**

- Dr. A. K. Dixit delivered lecture on "Chemical Recovery Process – Processing of Black Liquor (Causticization and Lime Kiln)".
- Dr. Priti S. Lal delivered two lectures titled "Raw material preparation, storage and cleaning" and "Pulping Technology-Variables".
- Ms. Anuradha V Janbade delivered a lecture titled "Generation & Management of Solid Waste in Paper Mills".
- Mr. Kumar Anupam, delivered lecture on "Chemical Recovery Process – Processing of Black Liquor".
- Dr. Nitin Endlay delivered lecture in "Monitoring of Grossly Polluting Industries (GPIs) – Paper, Textile, Slaughter House & Others in Ganga & Yamuna River Basin (February 2023 – May 2023)".
- Dr. Nitin Endlay & Shri JS Karmotra, Ex Member Secretary, CPCB delivered lecture on "Indian Paper Industry – Journey from Polluting to Environmentally Sustainable".
- Dr. Nitin Endlay delivered lecture on "Air Pollution Control Systems in Pulp & Paper Industry".
- Mohd Salim delivered lecture on "Wastewater Treatment Systems and Water Balance in Pulp and Paper Mills".
- Mr. Kumar Anupam delivered lecture on "Chemical Recovery Process – Processing of Black Liquor".



## BEE

- Dr. Sanjay Tyagi delivered 02 lectures on "Energy efficient technologies in Pulp & Paper Sector" Organized by BEE, Ministry of Power at National Power Training Institute (NPTI), Badarpur, Mathura Road, New Delhi on February 28-29, 2024.

## UNIDO

- Dr. Nitin Endlay delivered a lecture on "Performance Evaluation of Trials with Skid Mounted Membrane Filtration Pilot Demonstration Unit" in Dissemination Workshop on Pilot Demonstration of Membrane Filtration Technology in Indian Paper Mills organized by UNIDO at Balasore at Emami Paper Mills Limited, Balasore, Odhisha on June 7, 2023.

## OTHER

- Dr. Nitin Endlay delivered a lecture on "Development of Protocol for Evaluating the Feasibility of Zero Liquid Discharge in RCF based Pulp & Paper mills" and "Census Survey of Indian Paper Industry" in Dissemination cum Demonstration Workshop of Completed & Ongoing RSC-DCPPAI Supported R & D Projects, SCOPE Complex, New Delhi on April 28, 2023.
- Mr. Mohd. Salim delivered lecture on "Findings of MF Pilot Plant Trials Carried out at Different Category of Paper Mills in India" in Technical cum Dissemination Workshop on Advanced Technologies for Waste Water Treatment in Indian Paper Mills Through Application of Membrane Filtration Technology Hotel Palm Regency, Vapi, Gujarat, India on August 09, 2023.
- Dr. Nitin Endlay delivered lecture on "Water Management in Pulp & Paper Industry – Need, Current Trends & Practices" in 17th Paper Tech Conference 2023 on Make Paper Industry World Class, HICC Hyderabad on September 13-14, 2023.
- Mr. Kumar Anupam, delivered lecture on "Chemical Recovery Operations to Mitigate Environmental Pollution" at Department of Chemical Engineering, M.K. Government Polytechnic, Jattal, Panipat on October 6, 2023.
- Dr. Nitin Endlay delivered lecture on "Plastic Waste Disposal in Recycled Fiber Based Pulp & Paper Mills – Recent Technological Developments" IPPTA Zonal Seminar on Efficient Collection & Processing of Recovered Paper for Achieving Improved Yield & Quality, Muzaffarnagar on October 30-31, 2023.



*Dr. Nitin Endlay at IPPTA Zonal Seminar, Muzaffarnagar*



- Dr. Nitin Endlay delivered lecture on "Recent Green Initiatives, Policies Interventions & Financial Incentives – Overview of the Challenges, Strategies and Opportunities for Indian Pulp & Paper Sector" in 16th International Conference on Pulp, Paper & Allied Industries on Paper Industry, G. Noida on December 6-8, 2023.



*Dr. Nitin Endlay @ Paperex 2023*



## REPRESENTATION IN EXTERNAL COMMITTEES

CPPRI scientists were the members of the following various external committees, Institutional and mills during the year 2023-2024

### Ministry of Environment, Forest and Climate Change (MOEF&CC), Government of India

- Member, Environment Appraisal Committee (EAC) Industry, Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India - Dr. M.K. Gupta

### Development Council for Pulp, Paper and Allied Industries

- Member-Secretary, Development Council for Pulp, Paper and Allied Industries - Dr. M.K. Gupta

### Research Steering Committee of Development Council for Pulp, Paper and Allied Industries

- Member-Secretary, Research Steering Committee of Development Council for Pulp, Paper and Allied Industries (Formerly Cess Committee) - Dr. M.K. Gupta

### Bureau of Indian Standards (BIS), New Delhi

- Member of Sectoral Advisory Group (SAG) for supporting Bureau of Energy Efficiency in identification and implementation of low carbon / Energy efficient Technologies in BEE scheme-Dr. S. Tyagi.
- Principal member of CHD 15 Committee of BIS for paper & paper product-Dr. S. Tyagi.
- Technical member of CHD 16 Committee of BIS for paper & paper board-Dr. S. Tyagi.
- Convener of CHD 15: P1 panel for identifying & adopting ISO test methods in BIS standards-Dr. S. Tyagi.
- Representing India in ISO technical committee TC-6 on "Measurement of surface roughness Sheffield method"-Dr. S. Tyagi.
- Convener of alert panel of CHD 15: P3 panel-Dr. S. Tyagi.
- Member of CHD 15 P-4 panel for revision of toilet paper standard-Dr. S. Tyagi.
- Member of CHD 15: P7 panel on cellulosic nanomaterials-Dr. S. Tyagi.
- Member of CHD 15: P8 panel on modification of specifications of thermal paper-Dr. S. Tyagi.
- Convenor of CHD 15: P9 Panel- Shri Alok Kumar Goel.
- Technical member of CHD 15 Committee of BIS for paper & paper product-Mr. Alok Kumar Goel.
- Principal Member of Bureau of Indian Standards (BIS) Committee: Water Quality for Industrial Purposes Sectional Committee (CHD 13)-Dr. Nitin Endlay.





- Chairman Alert Panel of BIS CHD 13:P2 Water Treatment Chemicals of Water Quality for Industrial Purposes – Dr. Nitin Endlay.

### **Satia Industries Limited**

- Represented CPPRI as Independent Director in Satia Paper mill Board of Directors  
Dr.Priti Shivhare Lal

### **Others**

- Represented CPPRI and nominated by FRI, Dehradun for an expert in Interview Board of Scientist B Dr.Priti Shivhare Lal.
- Life Member of Indian Association for Air Pollution Control, New Delhi - Dr Nitin Endlay.
- Life Member of Indian Pulp & Paper Technical Association (IPPTA) –Dr. Nitin Endlay & Mr.Mohd Salim.
- Life Member of Indian Pulp & Paper Technical Association (IPPTA) –Dr.Priti Shivhare Lal.
- Life Member of Society of Tropical Agriculture, New Delhi –Dr. Nitin Endlay
- Member Screening Committee of the Biotechnology Incubation Center, Himachal Pradesh University (BIC-HPU) – Dr. Nitin Endlay.
- Expert Member of the Committee of Board of Studies for M.Sc (Environmental Management Course) of FRI ( Deemed to be University) – Dr. Nitin Endlay.
- Member Executive Committee Indian Pulp & Paper Technical Association–Dr. Nitin Endlay.



## PUBLICATIONS

List of publications published during the year 2023-2024 is as under:

- Bhardwaj, S.; Bhardwaj, N. K.; Negi, Y. S. "Efficacy of Biodegradable Chitosan Polymer for Simultaneous Improvement in Ash and Strength Properties of Paper." *Journal of Natural Fibers*, Volume 20 (2), 2023, 2237672.
- Bhardwaj, S.; Dhiman, A.; Sharma, K. K.; Negi, S. D.; Tyagi, S.; Goel, A. K.; Gupta, M. K. "A Review on the Application of Biopolymers in Food-Grade Packaging." *IPPTA Journal*, Volume 35 (2), 2023, pages 53-58.
- Bhardwaj, S.; Kaur, P.; Bhardwaj; Negi, Y. S. "Surface Application of Different Concentrations of Chitosan on Recycled Paper and its Impact on Packaging Properties." *Journal of Coatings Technology and Research*, 2023. Volume 20 (4), pages 1285-1298
- Bhardwaj, S.; Panwar, M. K.; Sharma, K. K.; Negi, S. D.; Tyagi, S.; Goel, A. K.; Gupta, M. K. "Application of Water-Soluble Chitosan Derivative in Surface Sizing and Wet-End of Papermaking." *Inpaper International Journal*, Volume 26 (1), 2023, pages 121-127.
- Chatterjee, T.; Negi, S. D.; Janbade, A.; Tyagi, S.; Gupta, M. K.; Bhardwaj, S.; Kaur, P. "Application of Polysaccharide-Based Modified Ground Calcium Carbonate in Wet-End of Papermaking." *Journal of Applied Polymer Science*, Volume 140 (46), 2023, e54681.
- Das, S.; Anshu; Aggrawal, R; Anupam, K; Dixit, A.K. "Investigating Heat-Treated Bagasse. Based Kraft Black Liquor for Physicochemical and Rheological Properties." *Iran Journal of Chemistry and Chemical Engineering*, Volume 42 (11), 2023, pages 3812-3823.
- Dhiman, G.; Sharma, D.; Sharma, A.; Bhardwaj, S.; Lal, P. S.; Gupta, M. K. "Bamboo as a Solution for Food Packaging." *IPPTA Journal*, Volume 35 (2), 2023, pages 65-70.
- Dhiman, J.; Anupam, K.; Kumar, V.; Saruchi. "Bio-based Superabsorbent Polymers: An Overview." In: Pradhan, S.; Mohanty, S. (eds). *Bio-based Superabsorbents: Recent Trends, Types, Applications and Recycling*. Springer Nature Singapore, Singapore, 2023, pages 1-27
- Dhiman, J.; Anupam, K.; Kumar, V.; Saruchi. "Varieties, Characteristics, and Applications of Nanofillers in Pulp and Paper Industry." In: Mallakpour, S.; Hussain, C.M. (eds). *Handbook of Nanofillers*. Springer, Singapore, 2024, pages 1-32
- Dixit, A. K.; Anupam, K; Anshu; Gupta, M. K. "Borate Autocauticization - An Emerging Green Technology." In *Proceedings of the 16<sup>th</sup> International Conference and Exhibition on Pulp Paper and Allied Industries (PAPEREX 2023)*, 2023, pages 199-201.
- Elanchezhian; Ahmad, F.; Salim, M.; Endlay, N.; Gupta, M. K. "Revolutionizing Green Practices: Role of Bio-Methanation Technology's Transformative Role in Pulp & Paper Mills for Net Zero Emissions and Sustainable Future." *IPPTA*, Volume 36 (1), 2024, pages 139-144.



- Endlay, N.; Salim, M.; Garg, A.; Jhanji, N.; Gupta, M. K. "Plastic Waste Disposal in Recycled Fiber Based Pulp & Paper Mills – Recent Technological Developments." IPPTA, Volume 35 (3), 2023, pages 95-99.
- Endlay, N.; Salim, M.; Gupta, M. K. "Recent Green Initiatives, Policies, Interventions & Financial Incentives – Overview of the Challenges, Strategies, and Opportunities for Indian Pulp & Paper Sector." In Proceedings of the International Conference on Pulp and Paper Industry, 2024, pages 20-27.
- Jain, R.K.; Srikant, Shraddha; Farrukhbeq, A; Endlay, N; Salim, M; Gupta, M. K. "Innovation in Wastewater Treatment in the Indian Paper Industry: UNIDO's Approach to Facilitating Uptake of Membrane Filtration" Proceedings of 16th International Technical Conference on Pulp, Paper & Allied Industries, 6-9 December 2023, Pages 37-48
- Kumar, N.; Janbade, A.; Bharadwaj, S.; Gupta, M. K. "Exploring the Potential of Bacterial Cellulose as a Reinforcing Additive for Enhanced Strength in Food Packaging Papers." IPPTA: Quarterly Journal of Indian Pulp and Paper Technical Association, Volume 35 (E2), 2023, pages 92-96.
- Kumar, N.; Zaidi, S.; Endlay, N.; Janbade, A.; Gupta, M. K. "Significance & Role of Biotechnological Applications in Environmental & Energy Sustainability in Pulp & Paper Industry. An Overview." IPPTA: Quarterly Journal of Indian Pulp and Paper Technical Association, Volume 36 (E1), 2023, pages 149-154.
- Salim, M.; Endlay, N.; Thapliyal, B. P.; Gupta, M. K. "Application of Response Surface Methodology to Optimize Zero Liquid Discharge (ZLD) Process in Waste Paper Based Kraft Paper Mills." In paper International Journal, Volume 26 (1), 2023, pages 110-116.
- Tyagi, S.; Manoj; Bisht, S.; Shivani, M.; Negi, S. D.; Bhardwaj, S.; Goel, A. K.; Gupta, M. K. "Fiber Fractionation: A New Approach for Value Addition in Packaging Grade Paper." In Proceedings of the 16th International Technical Conference on Pulp Paper & Allied Industries, Indian Expo Centre Greater Noida Delhi – NCR, December 6-9, 2023, pages 185-194.



## REPORTS

During the year 2023-2024 various reports were prepared. Details are as under:

### Adequacy Assessment of Effluent Treatment Plant

- Katyayani Papers Limited, Kashipur, Uttarakhand
- Kailashadevi Papers Limited, Kashipur, Uttarakhand
- Heart Touch Papers Private Limited, Jaspur, Udham Singh Nagar, Uttarakhand
- Naini Papers Limited, Kashipur, Uttarakhand
- Naini Tissues Limited, Kashipur, Uttarakhand
- ITC Limited, Paperboards & Specialty Papers Division, Unit: Tribeni, Chandarhati, West Bengal

### Chemical Recovery

- Annual contract auditing of chemical recovery: Sirpur Paper Mills (A Unit of J K Papers) Sirpur Telangana
- Annual contract auditing of chemical recovery: ITC Limited, Bhadrachalam
- Liquor heat treatment pilot plant trials results under UNIDO-CPPRI joint project: Tamilnadu Newsprint and Papers Limited Tamilnadu, Pakka Limited Ayodhya, Kuantum Papers Limited Punjab
- Chloride and potassium study: BILT Graphic Paper Products Limited Ballarpur, Maharashtra
- Laboratory scale liquor heat treatment study on bagasse black liquor samples: Pakka Limited Ayodhya
- Utilization of Banana Stem in Pulp Making and Characterization of Liquor and Pulp Produced: Avon Pacfo Services Private Limited Faridabad, Haryana

### Color Removal Studies

- Star Paper Mills Limited, Saharanpur, Uttar Pradesh

### Energy And Environmental Sustainability Study

- Century Pulp and Paper, Lalkuan, Uttarakhand

### ETP Performance Evaluation

- Kerala Paper Products Limited, Kottayam, Kerala

### GPI Study

- GPI Inspection Reports of 125 units were prepared by the different scientists of CPPRI in the year 2023-2024.

### Microbial Profiling and Evaluation Of Water Circulation System

- Omsree Papertek Private Limited, Hyderabad





## RSC -DCPPAI Project Reports

- Screening of Parents for Clonal Forestry and Hybridization for Higher Productivity Eucalyptus
- Creation of Testing Facilities for Food packaging Paper& Board and Development of Testing Protocol for Microbial Property
- Development of Protocol for Evaluating the Feasibility of Zero Liquid Discharge in RCF Based Pulp & Paper Mills
- Demonstration of Ozone Treatment Technology of Indigenous Raw Material Pulp at Pilot Scale
- Development and Application of Microfibrillated Cellulose for Quality Improvement of Paper, Paperboard and Newsprint
- A Synergistic and Economical Approach for Treatment of Pulp and Paper Mill Effluent System Using Microbes and Fly ash Nano Particle to Achieve Minimum / Zero Waste Discharge
- Continuing Education (Training Programme) for Technical Personnel in Pulp and Paper Industry

## Raw Material, Pulping and Bleaching

- Production of 5 kg bleached pulp From Whole Hemp: Agro Pulping Machinery Private Limited, Chennai
- Ozone bleaching for wood/non-wood pulp: Kuantum Paper Hoshiarpur Punjab
- Study of Soda and kraft pulping and ECF bleaching of mixed hardwood sample: Naini Papers Limited, Kashipur
- Production of Pilot Scale Whole Jute Dissolving Pulp for Viscose Fiber: National Jute Board Govt. of India New Delhi
- Chemi Thermo Mechanical Pulping of Hardwood & Pin chips for Pulp Making: Pioneer Panel Products, Rohtak
- Chemi Thermo Mechanical Pulping of Pine needle kala bass and Lantana for Pulp Making: Khand Vikas Adhikari Ekeswar, Garhwal
- Chemi Thermo Mechanical Pulping of rice straw and Seaweed: Rice straw (50:50) for Pulp Making: Zerocircle Alternatives Private Limited Maharashtra
- Chemi Thermo Mechanical Pulping of Lantana for Pulp Making: Pi Hemp Private Limited, Panchkula Chandigarh
- Optimization of process for conversion of hardboard unit into molded grade pulp from rice straw: Agarwal Hard Board Private Limited Hisar Road, Fatehabad
- Study of pulping and TCF/ozone bleaching of mill De-pithed bagasse: Yash Pakka Limited, Ayodhya
- Study on Ozone bleaching of unbleached mill pulp: Yash Pakka Limited, Ayodhya



### **UNIDO (IC-ISID) Project**

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

### **Water Audit**

- Khanna Paper Mills Limited, Punjab

### **ZLD Feasibility Evaluation**

- Nikita Papers Limited, Shamli, Uttar Pradesh
- Disha Industries Private Limited, Muzaffarnagar, Uttar Pradesh
- Krishnanchal Pulp and Papers Private Limited, Muzaffarnagar, Uttar Pradesh





## VISITS TO PAPER MILLS AND OTHER ORGANIZATIONS

CPPRI scientists and other staffs have visited following paper mills and other organisations during April 2023-March 2024

- Dr. Nitin Endlay visited Delhi to attend a meeting organized by Data and Strategy Unit (DSU) and DPIIT on April 5, 2023.
- Shri S. D. Negi visited Delhi to attend a DPIIT meeting at Udyog Bhawan on April 5, 2023.
- Dr. M. K. Gupta, Dr. Sanjay Tyagi, and Shri Alok Kumar Goel visited Delhi to attend a meeting at BIS Manak Bhavan from April 10-11, 2023.
- Dr. Nitin Endlay visited Kochi to evaluate the capacity of the ETP at Kerala Paper Products Limited from April 10-12, 2023.
- Dr. A. K. Dixit visited Delhi to attend an official meeting at DPIIT on April 18, 2023.
- Dr. M. K. Gupta visited Dehradun to attend a workshop on April 19, 2023.
- Dr. A. K. Dixit visited Dehradun to participate in the One Lab One Week program at IIP on April 19, 2023.
- Dr. Priti Shivhare Lal visited at FRI Dehradun for official work on April 24, 2023.
- Shri Alok Kumar Goel, Shri S. D. Negi, and Dr. Shubhang Bhardwaj visited Delhi to discuss the WPRPC project with the General Secretary of INMA, IPMA, and IARPMA at the IPMA office on April 24, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Smt. Anuradha Janbade, Dr. Priti Shivhare Lal, Dr. Nitin Endlay, Dr. Sanjay Tyagi, Shri S. D. Negi, Dr. Arvind Kumar Sharma, Shri Pankaj Goley, Shri Mohd. Salim, Dr. Shubhang Bhardwaj, and Dr. Nitin Kumar visited Delhi to attend the RSC-DCPPAI Dissemination cum Demonstration Workshop at Scope Complex, New Delhi from April 26-29, 2023.
- Dr. A. K. Dixit visited Muzaffarnagar to attend a meeting at Bindal Paper Mill on May 2, 2023.
- Dr. M. K. Gupta and Shri S. D. Negi visited Dehradun to gather information on the Waste Plastic Handling System at IIP on May 10, 2023.
- Dr. A. K. Dixit visited Fatehabad to conduct research on Agro Pulp and Black Liquor at APBAI on May 11, 2023.
- Smt. Anuradha Janbade and Dr. Nitin Kumar visited Delhi to attend a meeting on a project with Prof. Vivek Kumar at IIT Delhi on May 12, 2023.
- Dr. M. K. Gupta visited Noida to attend a BIS workshop from May 15-16, 2023.
- Dr. Nitin Endlay visited Amritsar for a joint water audit at Khanna Paper Mills Limited. with NPC Delhi from May 17-19, 2023.
- Dr. M. K. Gupta and Shri S. D. Negi visited Delhi to attend a Chintan Shivir at the Ministry of Commerce and Industry from May 19-20, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, Shri S. D. Negi, Shri Pankaj Goley, and Shri Mohd. Salim visited Chennai to organize a RSC-DCPPAI training program at National Productivity Council from May 23-28, 2023.
- Smt. Anuradha Janbade and Dr. Nitin Kumar visited Delhi and Hyderabad to visit DPIIT New Delhi and Omshree PaperTek Private Limited Hyderabad from May 23-26, 2023.
- Dr. Nitin Endlay visited Delhi to attend a meeting with the Joint Secretary at Vanijya Bhawan on May 30, 2023.
- Shri N.K. Naik visited Delhi to discuss e-file implementation at the Ministry and e-office implementation regarding DPIIT from May 11-12, May 17-20, May 24-25, and May 31 to June 3, 2023.



- Dr. M. K. Gupta and Dr. Nitin Endlay visited Delhi to attend meetings at the Ministry from June 1-3, 2023.
- Dr. M. K. Gupta visited Delhi, Kolkata, Balasor, and Mumbai to attend a UNIDO workshop and an international conference from June 5-10, 2023.
- Dr. Sanjay Tyagi visited Jalandhar for GEM inspection at Ladhar Paper Mill from June 7-9, 2023.
- Dr. A. K. Dixit and Smt. Anuradha Janbade visited Delhi for recruitment-related meetings from June 8-9, 2023.
- Dr. Priti Shivhare Lal and Dr. Arvind Kumar Sharma visited Dehradun for discussions on project activities on June 9, 2023.
- Shri Kumar Anupam visited Nagpur and Sirpur for the Annual Mill Visit of JK Paper Sirpur from June 11 to June 15, 2023.
- Smt. Anuradha Janbade visited Delhi to meet with the Joint Secretary at Vanijya Bhawan on June 16-17, 2023.
- Dr. A. K. Dixit visited Hyderabad and Bhadrachalam to conduct a Chemical Recovery Study at ITC Bhadrachalam from June 18-23, 2023.
- Smt. Anuradha Janbade visited Delhi to attend a meeting with the U/S Dept of Disabilities on June 23, 2023.
- Shri N.K. Naik visited Delhi to discuss e-office information regarding DPIIT from June 29 to July 1, 2023.
- Dr. A. K. Dixit and Smt. Anuradha Janbade visited Delhi for a meeting on restructuring CPPRI from July 2-3, 2023.
- Dr. M. K. Gupta visited Dehradun for signing an MoU with IIP on July 3, 2023.
- Shri S. D. Negi visited Delhi to attend a meeting at Udyog Bhawan on July 4-5, 2023.
- Dr. M. K. Gupta visited Delhi to attend an RSC meeting at IIP and to review the progress of projects (RSC-DCPPAI) at NEERI and IARI from July 7-8, 2023.
- Dr. M. K. Gupta visited Delhi to attend a meeting at Vanijya Bhawan and to give a presentation at a CII workshop on July 11-15, 2023.
- Dr. Priti Shivhare Lal visited Delhi to attend a meeting at Vanijya Bhawan regarding ICC on July 11-15, 2023.
- Dr. A. K. Dixit and Smt. Anuradha Janbade visited Delhi to attend meetings at DPIIT and SPV for restructuring CPPRI from July 19-21, 2023.
- Dr. Sanjay Tyagi visited Jalandhar for GEM inspection at Ladhar Paper Mill from July 19-20, 2023.
- Dr. M. K. Gupta and Dr. Nitin Endlay visited Delhi to attend a meeting on Charter 3.0 at IIT Delhi from July 21-22, 2023.
- Smt. Anuradha Janbade visited Delhi for recruitment-related meetings with NPC from July 25-26, 2023.
- Dr. M. K. Gupta visited Delhi to participate in the inauguration of the International Conference Hall at Pragati Maidan from July 26-27, 2023.
- Shri S. D. Negi and Dr. Shubhang Bhardwaj visited Delhi to attend meetings for WPRPC project activities from July 27-29, 2023.
- Shri N.K. Naik visited Delhi to discuss e-office information regarding DPIIT from July 27-29, 2023.
- Dr. A. K. Dixit visited Muzaffarnagar to conduct a Chemical Recovery Study at Bindal Paper Ltd. on August 1, 2023.
- Dr. M. K. Gupta, Dr. Arvind Kumar Sharma, Dr. Shubhang Bhardwaj, and Dr. Nitin Kumar visited Mysuru to attend a zonal seminar organized by the CFTRI from August 1-7, 2023.



- Shri S. D. Negi visited Delhi to attend a meeting regarding WPRPC project activities from August 2-4, 2023.
- Dr. A. K. Dixit visited Delhi to attend a State Holder Meeting on August 3-4, 2023.
- Dr. A. K. Dixit, Dr. Priti Shivhare Lal, and Dr. Arvind Kumar Sharma visited Fatehabad to study Rice Straw Pulping at Aggarwal Paper & Board and discuss the use of rice husk in paper making on August 9, 2023.
- Smt. Anuradha Janbade and Dr. Nitin Kumar visited Delhi for a project-related meeting with Prof. Vivek Kumar at IIT Delhi from August 16-17, 2023.
- Shri N.K. Naik visited Delhi to discuss e-office matters at NIC, DPIIT Udyog Bhawan from August 16-19, 2023.
- Dr. M. K. Gupta visited Muzaffarnagar for discussions with Shri Ankur Mittal regarding the RSC DCPPI meeting on August 19, 2023.
- Dr. A. K. Dixit and Dr. Priti Shivhare Lal visited Ghaziabad to attend meetings at IPMA and DPIIT (RAC) from August 20-23, 2023.
- Dr. M. K. Gupta visited Delhi to visit Udyog Bhawan and Vanijya Bhawan and attend RAC/ RSC DCPPI meetings at Udyog Bhawan along with Dr. Nitin Endlay, Smt. Anuradha Janbade, Shri Alok Kumar Goel, and Shri S. D. Negi from August 18-25, 2023.
- Dr. M. K. Gupta visited Delhi to attend a meeting at IARPMA related to BEE on August 24-25, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, Dr. Nitin Endlay, Shri Alok Kumar Goel, Shri S. D. Negi, Dr. Shubhang Bhardwaj, Shri Kumar Anupam and Shri Mohd. Salim visited Delhi and Gurugram to organize and participate in the RSC DCPPI training program at IIP from August 27-29, 2023.
- Shri Alok Kumar Goel and Shri N.K. Naik attended the Chintan Shivir at India International Convention and Expo Centre (IICC), New Delhi, from September 1-3, 2023.
- Shri Mohd. Salim visited Bamala for environmental monitoring at Trident Limited from September 4-7, 2023.
- Dr. Priti Shivhare Lal and Dr. Arvind Kumar Sharma visited Dehradun to discuss workshops with Dr. Ashok Kumar, Scientist, on September 6, 2023.
- Dr. M. K. Gupta and Dr. A. K. Dixit visited Dehradun to attend meetings at FRI Dehradun on September 8, 2023.
- Dr. Priti Shivhare Lal visited Dehradun to discuss a workshop on Plantation at FRI on September 8 and 12, 2023.
- Dr. M. K. Gupta and Dr. A. K. Dixit visited Ludhiana to attend a meeting on September 9, 2023.
- Dr. M. K. Gupta and Dr. Nitin Endlay visited Hyderabad and Pune to attend the Paper Tech Conference and the All India Hindi Sammelan from September 10-18, 2023.
- Dr. M. K. Gupta and Dr. A. K. Dixit visited Dehradun to attend meetings and workshops at FRI Dehradun on September 12, 19, and 27, 2023.
- Shri Kumar Anupam participated in the Pune Akhil Bhartiya Hindi Sammelan from September 13-16, 2023.
- Dr. Priti Shivhare Lal visited Ghaziabad to attend PM Vishwa Karma and conduct interviews of AO and SO from September 16-19, 2023.
- Dr. M. K. Gupta and Dr. Nitin Endlay visited Chandigarh for discussions at Nachiketa Paper Mill on September 22, 2023.
- Smt. Anuradha Janbade visited Delhi for recruitment-related meetings at NPC from September 25-26, 2023.



- Dr. M. K. Gupta, Dr. Priti Shivhare Lal, and Shri Alok Kumar Goel visited Delhi to participate in the CSIR Foundation Day program, discuss the WPRPC Blueprint with the Secretary General of IPMA and ENMA, and attend the CHD-15 meeting from September 26-29, 2023.
- Dr. Sanjay Tyagi and Shri Alok Kumar Goel visited Bhubaneswar and Delhi to attend the BIS CHD-15 meeting and deliver an invited lecture from September 28-October 1, 2023.
- Dr. Nitin Endlay visited Kolkata for an ETP Adequacy Assessment at ITC PSPD Unit Tribeni from October 3-6, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, Smt. Anuradha Janbade, Shri Kumar Anupam, and Dr. Shubhang Bhardwaj visited Barnala to organize a training module program at Trident Ltd. from October 9-13, 2023.
- Dr. M. K. Gupta and Dr. Nitin Endlay visited Delhi to attend meetings at DPIIT and NEERI on October 10-11, 2023.
- Dr. Nitin Endlay visited Delhi to attend meetings at DPIIT and NEERI on October 18-19, 2023.
- Dr. Shubhang Bhardwaj visited Delhi to attend a workshop at IIP on October 19, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, and Dr. Arvind Kumar Sharma visited Dehradun to attend workshops at FRI from October 17-21, 2023.
- Dr. M. K. Gupta, Dr. Nitin Endlay, and Shri Kumar Anupam visited Srinagar (Jammu & Kashmir) to attend the DPIIT Hindi Samanvay Samiti meeting from October 25-28, 2023.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Nitin Endlay, Shri Alok Kumar Goel, Shri S. D. Negi, Shri Mohd. Salim, and Dr. Shubhang Bhardwaj visited Muzaffarnagar to attend the IPPTA Zonal Seminar and Executive Committee meeting from October 29-31, 2023.
- Dr. A. K. Dixit visited Lucknow and Ayodhya to conduct a CR Field Study at Yash Pakka Ltd. from November 2-5, 2023.
- Dr. M. K. Gupta visited Dehradun for signing an MoU with Uttaranchal Technological University on November 16, 2023.
- Dr. M. K. Gupta and Smt. Barnali Shome visited Bengaluru and Mysuru to sign an MoU with IWST and to organize a training program at CFTRI from November 20-24, 2023.
- Dr. Nitin Endlay and Shri Mohd. Salim visited Kashipur for an ETP Adequacy Assessment of GPI units from November 21-23, 2023.
- Shri Alok Kumar Goel visited Delhi to attend the CHD-16 meeting from November 27-28, 2023.
- Dr. M. K. Gupta visited Delhi for a site visit to Udyog Bhawan from November 24-28, 2023.
- Dr. A. K. Dixit and Shri Kumar Anupam visited Noida and Lucknow to attend the CPHI Exhibition and observe the CPPRI Recruitment Exam from November 30 to December 5, 2023.
- Dr. M. K. Gupta visited Delhi to attend a meeting at CSIR Foundation Day and a workshop at NEERI from November 29-30, 2023.
- Dr. M. K. Gupta and Shri Mohd. Salim visited Lucknow, Maharajganj, and Noida to evaluate projects assigned by CPPRI from December 1-11, 2023.
- Dr. A. K. Dixit, Dr. Nitin Endlay, Dr. Priti Shivhare Lal, Dr. Sanjay Tyagi, Smt. Anuradha Janbade, Shri Alok Kumar Goel, Shri S. D. Negi, Dr. Arvind Kumar Sharma, Shri Mohd. Salim, and Smt. Barnali Shome visited Noida to attend Paperex 2023 from December 5-9, 2023.
- Dr. M. K. Gupta visited Delhi to attend a meeting at BVI and to discuss with newly appointed officers from December 13-18, 2023.
- Dr. Nitin Endlay attended the CPCB GPI workshop, Dr. Sanjay Tyagi attended meetings at BEE, Sewa Bhawan, and Shri Alok Kumar Goel attended a training program in Delhi from December 15-18, 2023.



- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Nitin Endlay, Shri Mohd. Salim and Shri Pankaj Goley visited Coimbatore to attend and organize a training program at TNPL under the RSC-DCPPAI project from December 25-29, 2023.
- Dr. Priti Shivhare Lal and Dr. Arvind Kumar Sharma visited Delhi to attend the Jute Symposium on December 20-21, 2023.
- Shri S. D. Negi visited Roorkee to discuss repair work at CPPRI with the Executive Engineer at CPCB on December 22, 2023.
- Shri Alok Kumar Goel visited Delhi for a meeting at DPIIT from January 1-2, 2024.
- Dr. M. K. Gupta, Shri Mohd. Salim, and Dr. Arvind Kumar Sharma visited Lucknow, Maharajganj, and Ayodhya to discuss the use of paper in various projects from January 1-4, 2024.
- Dr. M. K. Gupta, Dr. Sanjay Tyagi, and Shri Alok Kumar Goel visited Delhi to attend a BIS program at Bharat Mandapam from January 5-6, 2024.
- Shri S. D. Negi visited Roorkee to discuss scrap disposal and purchase of goods with the Purchase Officer at CBRl on January 5, 2024.
- Dr. M. K. Gupta and Shri Alok Kumar Goel visited Ramnagar to attend a training program related to RTI from January 8-11, 2024.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Priti Shivhare Lal, Dr. Nitin Endlay, Dr. Sanjay Tyagi, Shri Pankaj Goley, and Shri Kumar Anupam visited Gurugram and Delhi to organize and attend a training program at NEERI from January 17-18, 2024.
- Dr. M. K. Gupta visited Jaipur and Delhi to participate in the Worldclass Research Program and the KNHP R&D Committee meeting at IIP from January 20-24, 2024.
- Shri Shubhang Bhardwaj visited Delhi to attend a workshop at IIP on January 20, 2024.
- Dr. Nitin Endlay visited Delhi to engage in activities related to DPIIT, CPCB, and IIT from January 23-25, 2024.
- Dr. Nitin Endlay visited Muzaffarnagar for meetings with various paper mills, IIT, and UPPCB from January 27-29, 2024.
- Dr. Sanjay Tyagi visited Delhi to submit a paper at DPIIT, Udyog Bhawan from January 28-29, 2024.
- Dr. A. K. Dixit visited Delhi to attend a meeting on the CPCB Training Program from January 28-29, 2024.
- Dr. M. K. Gupta, Dr. Priti Shivhare Lal, and Dr. Arvind Kumar Sharma visited Bengaluru to attend workshops and training programs organized by IWST from January 29 to February 5, 2024.
- Dr. A. K. Dixit visited Ludhiana to conduct a Chemical Recovery Study at Shreyans Ind. from February 1-3, 2024.
- Dr. M. K. Gupta and Dr. A. K. Dixit visited Delhi to attend a UNIDO session and a BEE meeting at Udyog Bhawan on February 6-7, 2024. Dr. A. K. Dixit also visited Muzaffarnagar to conduct training programs at various mills on February 7, 2024.
- Shri KVK Satya Sai visited Delhi to visit the PFMS office and Epaper section at DPIIT Udyog Bhawan from February 8-9, 2024.
- Dr. Nitin Endlay visited Noida for meetings with IPMA/DPIIT/BIS from February 10 to February 13, 2024.
- Shri S. D. Negi and Shri KVK Satya Sai visited Lucknow to attend meetings regarding investments in UP Cooperative Spinning Mills Federation Limited from February 11-13, 2024.



- Dr. M. K. Gupta, Dr. A. K. Dixit, and Dr. Sanjay Tyagi visited Amritsar to attend a workshop at Khanna Paper Mill and on energy efficiency organized by BEE from February 12-14, 2024.
- Dr. Arvind Kumar Sharma visited Bengaluru to attend a three-day training program from February 13-17, 2024.
- Shri Kumar Anupam visited Siprur for the IK Paper Siprur Annual Mill Visit from February 15 to February 20, 2024.
- Dr. Nitin Endlay and Shri Mohd. Salim visited Ghaziabad and Delhi to attend the CEM India 2024 conference from February 19-22, 2024.
- Dr. Priti Shivhare Lal and Dr. Arvind Kumar Sharma visited Dehradun to discuss Project Activities on February 23, 2024.
- Dr. M. K. Gupta, Dr. A. K. Dixit, Dr. Nitin Endlay, Shri Kumar Anupam, and Dr. Nitin Kumar visited Kolkata to attend the IPPTA Conference from February 21-26, 2024.
- Dr. M. K. Gupta and Dr. A. K. Dixit visited Delhi to attend a training session at IIP and other related activities from February 27-March 1, 2024. Dr. Sanjay Tyagi gave a lecture in a training program at NPTC Faridabad from February 27-28, 2024.
- Shri Shubhang Bhardwaj visited Ghaziabad and Delhi to attend a workshop at IIP on February 29, 2024.
- Dr. M. K. Gupta visited Delhi and Ballabgarh for meetings at Udyog Bhawan and NCCBM from March 6-7, 2024.
- Dr. M. K. Gupta visited Bengaluru and Kumarapattanam for discussions on Harihar Polyfiber from March 7-14, 2024.
- Dr. A. K. Dixit and Smt. Anuradha Janbade visited Delhi to attend a meeting at NPC New Delhi from March 11-12, 2024.
- Smt. Bamali Shome visited Delhi to meet with NPC officials from March 11-12, 2024.
- Dr. Nitin Endlay visited Delhi to attend meetings at CPCB and DPIIT from March 12-14, 2024.
- Dr. M. K. Gupta and Dr. Nitin Endlay visited Delhi to attend a meeting at Udyog Bhawan on March 19, 2024. Dr. A. K. Dixit also visited Delhi to attend the Startup Mahakhumbh organized by DPIIT on March 20, 2024.
- Dr. Nitin Endlay visited Delhi to attend a meeting at Udyog Bhawan on March 19, 2024.
- Dr. M. K. Gupta visited Delhi to organise DCPPIA meeting and also visited Bengaluru to attend IWST meeting from March 22-28, 2024.
- Dr. Nitin Endlay, Shri S. D. Negi, Dr. Arvind Kumar Sharma, Shri Mohd. Salim, Dr. Shubhang Bhardwaj, Dr. Nitin Kumar, Dr. Jitender Dhiman, Shri Amitabh Raj Tripathi Shri Kuldeep Sharma, Shri Ajay Parmar, Shri Deepak Sharma, and Shri Ajay Kumar visited various industries under CPCB-GPI study.





## M.Sc. and Ph.D. COURSE ACTIVITIES

### • Prelude

CPPRI runs M.Sc. (Cellulose and Paper Technology) and PhD courses in collaboration with Forest Research Institute (Deemed to be University), Dehradun. The first year of M.Sc. (CPT) course is conducted at Forest Research Institute (Deemed to be University) Dehradun while the second year is conducted at CPPRI. At CPPRI, these students are trained in the areas of chemical recovery, bleaching technology, material & energy balance, paper properties, secondary fibre technology, specialty paper and environmental pollution.

### • List of M. Sc. (CPT) Students

The total strength of the 2022 - 2024 M.Sc. (CPT) batch was 17 out of which there were 8 female and 9 male students. In this batch, students from different states of the country viz. Uttarakhand, Madhya Pradesh, Bihar, Uttar Pradesh, Kerala, Assam, Telangana, West Bengal and Rajasthan were enrolled. The name of students of this batch are as follows: Ms. Anamika Kukreti, Mr. Aman Agrahari, Mr. Amit Shekhawat, Mr. Angala Aniruth Goud, Mr. Hankare Bhima, Ms. Devika C N, Ms. Dikshita Sarma, Mr. Putta Kartik, Mr. Harsh Raj, Ms. Parkhi Agarwal, Ms. Priyanka Kumari, Mr. Ravula Pruthvi, Ms. Swati Yadav, Ms. Shalini Dutta, Mr. Sohan Dam, Ms. Saniya Tarannum and Mr. Utsav Kurchania.

### • List of PhD Students

Currently four students are enrolled in PhD Programme at CPPRI. CPPRI is the designated Research Centre of Forest Research Institute (Deemed to be University), Dehradun. Details of these students along with their supervisor, Co-supervisor and research topic are mentioned below in the table.

Name of PhD Student	Research Topic	Supervisor & Co-Supervisor
Mr. Mohd. Salim	Studies on Physico & Chemical Techniques for Treatment of Backwater to Achieve Near Zero Liquid Discharge in Recycled Fibre based Kraft Paper Mills	Dr. B. P. Thapliyal - Supervisor Dr. Nitin Endlay } Co-Supervisor Dr. S Mishra
Mr. Kanishk Salwan	Preparation of Micro fibrillated and Nano fibrillated Cellulose from Melia dubia and its potential in paper making	Dr. B.P. Thapliyal - Supervisor Dr. Ravi Datt Godiyal } Co-Supervisor Dr. S.Tyagi
Ms. Shrutikona Das	Rheological Study of Wood and Non & Wood Black Liquor	Dr. A. K. Dixit - Supervisor
Ms. Gunjan Dhiman	Study on valorization of Bamboo for Production of various grades of pulp and paper	Dr. Priti S Lal - Supervisor Dr. A.K. Sharma. Co-Supervisor



## • List of Faculty

All the administrative work related to M.Sc. (CPT) and PhD courses at CPPRI are coordinated by Office of Course Coordinator- CPPRI scientists and laboratory staff take all the theoretical and practical classes of M.Sc. (CPT) course. Sometimes eminent persons from pulp, paper and allied industries are also invited as Guest Faculty to deliver expert lectures on topics of industrial relevance. The details of faculties involved in M.Sc. (CPT) course activities are given below in the table.

### Details of Faculty Involved In M.Sc. (CPT) Course Activities

<b>Office of Course Coordinator</b>	
Course Coordinator	Dr. A. K. Dixit, Sc. F
Deputy Course Coordinator	Kumar Anupam, Sc. B
<b>Details of Subject Wise Faculties</b>	
Chemical Recovery (PP - 211)	Dr. A. K. Dixit, Sc. F & Sh. Kumar Anupam, Sc. B
Bleaching Technology (PP - 212)	Dr. Priti S Lal, Sc. EII & Dr. Arvind Kumar Sharma, Sc. B
Material & Energy Balance (PP - 213)	Dr. A. K. Dixit, Sc. F & Sh. Kumar Anupam, Sc- B
Paper Properties (PP - 214)	Dr. Sanjay Tyagi, Sc. EII
Secondary Fibre Technology) PP - 215)	Dr. Sanjay Tyagi, Sc. EII & Satya Dev Negi, Sc. EI
Practical (PP - 216)	Faculties of concerned Division
Specialty Paper (PP - 221)	Dr. Sanjay Tyagi, Sc. EII
Environmental Pollution Control (PP-222)	Dr. Nitin Endlay, Sc. EII & Mohd. Salim, Sc. B
Project Work (PP - 223)	Students carry out their project works under the supervision of CPPRI Scientists
In Plant Training (PP - 224)	At paper mill under the supervision of mill personnel/ CPPRI Scientists
Practical (PP - 225)	Faculties of Concerned Division

## • Project Work of M. Sc. (CPT) students

Each student of M.Sc. (CPT) course is given a project assignment at the beginning of the 4th semester under the supervision of CPPRI scientists. Students are required to work on projects related to pulp and paper technology including environmental and energy aspects based on the theoretical and for experimental studies. Students work on the project independently and submit a detailed project report and make an oral presentation on the project. The project work details of M.Sc. (CPT) Students of 2022 – 2024 batch are given below in the table.



## Project Work Details of M.Sc. (CPT) Students (2022 – 2024)

S. No.	Student Name	Title of Project	Guide and Co-Guide
1	Ms. Anamika Kukreti	Study of pulping ECF and TCF bleaching of mill bagasse sample	Dr. Priti S Lal & Dr. Arvind Sharma
2	Mr. Aman Agrahari	Impact of surface sizing on paper with various types of chemicals	Dr. Sanjay Tyagi
3	Mr. Amit Shekhawat	The effect of ECF and TCF bleaching on matured bamboo raw material's pulp properties	Dr. Priti S Lal & Dr. Arvind Sharma
4	Mr. Angala Aniruth Goud	Refining and strength properties	Dr. Sanjay Tyagi
5	Mr. Bhima Hankare	Treatment of secondary effluent for colour reduction	Dr. Nitin Endlay
6	Ms. Devika CN	Improvement in properties of paper by pigment coating	Dr. Sanjay Tyagi
7	Ms. Dikshita Sarma	Performance evaluation of effluent treatment plant (ETP) in wood-based pulp and paper mill	Dr. Nitin Endlay
8	Mr. Harsh Raj	The effect of ECF and TCF bleaching on matured bamboo raw material's pulp properties	Dr. Priti S Lal & Dr. Arvind Sharma
9	Mr. Karthik Putta	Effect of blending, recycled with softwood	Dr. Sanjay Tyagi
10	Ms. Priyanka Kumari	Chemical, thermal & rheological properties of black liquor at different solid concentration and temperature	Dr. A. K. Dixit & Sh. Kumar Anupam
11	Mr. Pruthvi Ravula	Repulping of Egg tray	Dr. Sanjay Tyagi
12	Ms. Parkhi Agarwal	Extraction and characterization of lignin from wood based black liquor	Dr. A. K. Dixit & Sh. Kumar Anupam
13	Ms. Swati Yadav	Study of ECF and TCF bleaching of mill bagasse sample	Dr. Priti S Lal & Dr. Arvind Sharma
14	Ms. Shalini Dutta	Analysis of lime	Dr. A. K. Dixit & Sh. Kumar Anupam
15	Mr. Sohan Dam	Analysis of black liquor of Indian paper mills	Dr. A. K. Dixit & Sh. Kumar Anupam
16	Ms. Saniya Tarannum	Enhancing paper properties through pigment coating	Dr. Sanjay Tyagi
17	Mr. Utsav Kurchania	Extraction and characterization of lignin from wood based black liquor	Dr. A. K. Dixit & Sh. Kumar Anupam

### • In Plant Training of M.Sc. (CPT) Students

M.Sc. (CPT) students are sent to mills in 4<sup>th</sup> Semester of the course for two months training. The aim of this course is to provide the students with an opportunity to understand the actual working environment of a mill- Each student submits a consolidate mill training report after completion of In&plant training. The details of In & plant training of M.Sc. (CPT) Students of 2022 – 2024 batch are given below in the table.



## In & Plant Training Details of M.Sc. (CPT) Students (2022 – 2024)

Sr. No.	Student Name	Name of Companies where students went Industrial Training
1.	Anamika Kukreti	Orient Paper Mills, Amlai, Madhya Pradesh
2.	Aman Agrahari	JMC Papertech Private Limited, Ahmedabad, Gujarat
3.	Amit Shekhawat	ITC Limited, Bhadrachalam, Telangana
4.	Angala Anirudh Gaud	Proklean Technologies Private Limited, Chennai, Tamil Nadu
5.	Bhima Hankare	Sirpur Paper Mills Limited (JK Paper Ltd.), Kagaznagar, Telangana
6.	Devika CN	JMC Papertech Private Limited, Ahmedabad, Gujarat
7.	Dikshita Sarma	ITC Limited, Bhadrachalam, Telangana
8.	Karthik Putta	Proklean Technologies Private Limited, Chennai, Tamil Nadu
9.	Harsh Raj	ITC Limited, Bhadrachalam, Telangana
10.	Parkhi Agarwal	Pakka Limited, Ayodhya, Uttar Pradesh
11.	Priyanka Kumari	Sirpur Paper Mills Limited (JK Paper Limited), kagaznagar Telangana
12.	Ravula Pruthvi	Central Pulp and Paper Research Institute, Saharanpur, Uttar Pradesh
13.	Swati Yadav	Orient Paper Mills, Amlai, Madhya Pradesh
14.	Shalini Datta	JMC Papertech Private Limited, Ahmedabad, Gujarat
15.	Sohan Dam	ITC Limited, Bhadrachalam, Telangana
16.	Saniya Tarannum	Surpur Paper Mills Limited (JK Paper Limited), Kagaznagar, Telangana
17.	Utsav Kurchania	Pakka Limited, Ayodhya, Uttar Pradesh

### • Scholarships and Awards

M.Sc. (CPT) students Ms. Parkhi Agarwal and Mr. Harsh Raj, first & year toppers in the girl and the boy category respectively, received scholarship of ₹ 25,000/- from Star Paper Mills Limited, Saharanpur, Uttar Pradesh.

M. Sc. (CPT) students Mr. Sohan Dam received "Best Student Attendee Award" (A cash prize of ₹ 5,000/-), Ms. Shalini Dutta received "Best Student Attendee Award. First Runner up" (A cash prize of ₹ 3,000/-) and Mr. Utsav Kurchania and Ms. Swati Yadav jointly received "Best Student



Attendee Award. Second Runner up" (A cash prize of ₹2,000/- each) from Indian Agro & Recycled Paper Mills Association in 16<sup>th</sup> International Technical Conference on Pulp, Paper and Allied Industries (PAPEREX 2023) held at India Expo Centre, Greater Noida, Delhi & NCR during December 6-9, 2023.



*M.Sc. (CPT) and PhD students with Dr. B. P. Thapliyal, Secretary General Indian Agro & Recycled Paper Mills Association during Award function in PAPEREX 2023*

#### • Visit of Experts and Guest Lecture

Shri Rajesh Kumar Singh, Joint Secretary (Administration), DPIIT, Govt. of India, during "Swachhata Hi Seva" (SHS) campaign 3.0 visit to CPPRI Saharanpur on September 29, 2023, interacted with M.Sc. (CPT) students. Highlighting the importance of Swachhata in life, he motivated students to take & up the task of cleaning the surrounding areas and actively participate in cleanliness drive through "shramdaan" and make "Garbage Free India".



*Shri Rajesh Kumar Singh, Joint Secretary (Administration) interacting with M.Sc. (CPT) students*





*Shri Devesh Kumar Singhal delivering online lecture to M.Sc. (CPT) students*

### • Campus Placement Activities

CPPRI has achieved a record year with 100% placement and increased compensation compared to the previous year. M.Sc. (CPT) students were offered packages in the range ₹ 4- 6.5 lakh (CTC) per annum. Various pulp, paper and allied companies were invited by CPPRI for campus placement to provide employment opportunities to M. Sc (CPT) students. The details of placement of students are provided in the following table.

### Placement Details of M.Sc. (CPT) Students (2022-2024)

Sr. No.	Student Name	Name of Companies where Placed
1.	Anamika Kukreti	Orient Paper Mills, Amlai, Madhya Pradesh
2.	Aman Agrahari	JMC Papertech Private Limited, Ahmedabad, Gujarat
3.	Amit Shekhawat	ITC Limited, Bhadrachalam, Telangana
4.	Angala Aniruth Goud	Proklean Technologies Private Limited, Chennai, Tamil Nadu
5.	Bhima Hankare	Sirpur Paper Mills Limited (JK Paper Limited), Kagaznagar, Telangana
6.	Devika CN	JMC Papertech Private Limited, Ahmedabad, Gujarat
7.	Dikshita Sarma	ITC Limited, Bhadrachalam, Telangana
8.	Karthik Putta	Proklean Technologies Private Limited, Chennai, Tamil Nadu
9.	Harsh Raj	ITC Limited, Bhadrachalam, Telangana



10.	Parkhi Agarwal	JMC Papertech Private Limited, Ahmedabad, Gujarat
11.	Priyanka Kumari	Sirpur Paper Mills Limited (JK Paper Limited ), Kagaznagar, Telangana
12.	Ravula Paruthvi	Sirpur Paper Mills Limited (JK Paper Limited), Kagaznagar, Telangana
13.	Swati Yadav	Orient Paper Mills, Amlai, Madhya Pradesh
14.	Shalini Datta	JMC Papertech Private Limited, Ahmedabad, Gujarat
15.	Sohan Dam	ITC Limited, Bhadrachalam, Telangana
16.	Saniya Tarannum	Sirpur Paper Mills Limited (JK Paper Limited), Kagaznagar, Telangana
17.	Utsav Kurchania	Not opted for placement



*M.Sc. (CPT) students appearing for online campus placement examination conducted by  
M/S The Sirpur Paper Mills (A unit of JK Paper Mills Limited)*



*ITC Bhadrachalam & Naini Papers Limited officers interacting with M.Sc. (CPT) students during  
placement drive at CPPRI Saharanpur*



## CELEBRATION OF NATIONAL AND OTHER IMPORTANT DAYS

### Independence Day

On August 15, 2023, the Central Pulp and Paper Research Institute (CPPRI) celebrated Independence Day with great enthusiasm and patriotic fervor. The event, held at the institute's sprawling campus in Saharanpur, was marked by the spirit of national pride and collective achievement. The day commenced with the traditional flag hoisting ceremony, presided over by Dr. M.K. Gupta, Director of CPPRI. As the tricolor flag was unfurled, the National Anthem resonated across the institute, with staff and students standing in solemn reverence. Dr. Gupta's address was a poignant reminder of the sacrifices made by freedom fighters and the ongoing commitment to excellence in research and development in the field of pulp and paper technology.

### Republic Day

On January 26, 2024, the Central Pulp and Paper Research Institute (CPPRI) celebrated Republic Day with a grand celebration that showcased the institute's commitment to National pride and unity. The event, held at the CPPRI campus in Saharanpur, was a vibrant reflection of India's democratic values and cultural richness. The day began with the ceremonial flag hoisting, as the national flag was unfurled amidst the morning breeze, the gathering of CPPRI staff and students stood in respect while the National Anthem, "Jana Gana Mana," filled the air. Dr. Gupta's address emphasized the significance of Republic Day in upholding the principles of justice, liberty, and equality enshrined in the Indian Constitution.



Glimpses of Republic Day

### World Environmental Day

CPPRI honored Swachhagrahis and Environment Friends on the occasion of Environment Day Celebration. The 50<sup>th</sup> World Environment Day was organized on 05.06.2023 at Central Pulp and Paper Research Institute. Dr.R.C. Rastogi, Chief Managing Director, Khatima Fibers was present as the Chief Guest of the program. Dr. Rastogi, in his speech, made the public aware about the environmentally friendly methods being adopted in the paper industries. He also drew attention to the changes in the daily activities adopted in human life which can have a positive impact on the environment. Dr. Dharam Dutt, Head of the Department of Paper Technology, IIT Roorkee, also present at the program, threw light on recycled fiber, role of paper in replacing single used



plastic and environmentally friendly aspects of the paper

During the function, all the Swachhagrahis and environment friendly employees of the garden and sanitation department of the institute were honored by the director by draping them with shawls and giving them mementos. Their contribution in keeping the institute green and clean was praised by everyone. Dr. A.K. Dixit appealed to all the people to reduce the use of plastic under the Beat Plastic Pollution scheme of the Government of India. He described excessive exploitation of the earth and nature as destructive. At the end of the programme, all the dignitaries and participants planted trees in the CPPRI campus. Saharanpur's renowned social worker Mrs. Neena Dhingra and representatives of Delmond Inter School, St- Mary's School, Gyankalash International School, Government Girls Inter College, Arya Kanya Inter College, Spring Bells School, Munna Lal and Jayanarayan Khemka Girls College and social organization Seva were present in the programme.



*Celebration of World Environment Day*

## International Yoga Day

On June 21, 2023, the Central Pulp & Paper Research Institute (CPPRI) celebrated International Yoga Day with a series of events aimed at promoting physical wellness, mental clarity, and holistic well & being among its staff. The event held on the institute's picturesque campus in Saharanpur, highlighted the importance of integrating yoga into daily life as a means to foster a healthy and balanced lifestyle.

The day's activities began with an opening ceremony that set a serene tone for the celebration. The event was inaugurated by Dr. Sanjay Tyagi, CPPRI, who delivered a welcoming address emphasizing the significance of Yoga Day. Dr. Tyagi spoke about the transformative power of yoga in enhancing overall health and productivity, aligning with the institute's commitment to the well-being of its community.

A central feature of the Yoga Day celebration was the group yoga session, led by Dr. Sanjay Tyagi. The session took place on the institute's lush green lawns, providing an ideal backdrop for the practice. Participants, including staff and their family engaged in a series of yoga asanas (postures), pranayama (breathing exercises), and meditation techniques. The session was designed to accommodate all levels of experience, from beginners to seasoned practitioners.



Dr. Tyagi guided participants through a series of poses aimed at improving flexibility, strength, and balance. Emphasis was placed on correct posture and breathing, fostering a deeper connection between mind and body. The session concluded with a period of guided meditation, allowing participants to experience a sense of inner peace and relaxation.

The Yoga Day celebration at CPPRI was a resounding success, reflecting the institute's commitment to promoting a healthy and balanced lifestyle among its community members. The event not only encouraged physical fitness and mental well-being but also fostered a sense of unity and collective purpose. By integrating yoga into daily routines, CPPRI aims to enhance the overall quality of life for its staff and students, aligning with the broader goals of health and wellness.



## Teacher's Day

### *Celebration of International Yoga Day*

The M.Sc (CPT) students celebrated Teacher's Day with great enthusiasm and creativity, marking the occasion with a vibrant array of activities.

The celebration kicked off with a warm opening ceremony, where students expressed their gratitude through speeches and performances. This was followed by a series of engaging activities, including musical performances, and interactive games. A special segment was dedicated to showcasing student talent, with poetry recitations and dance performances adding a personal touch to the festivities. The day was a memorable celebration of the invaluable role that teachers play in their lives marked by joy, respect and appreciation.



*Students along with faculty members in Teachers Day Celebration*



## Vigilance Awareness Week

The Central Vigilance Commission (Govt. of India) adopts several strategies in effective implementation of its mandate to fight corruption. Observance of vigilance awareness week remains one of the primary tools of preventative vigilance with the focus on building awareness and re-affirming the commitment of everyone to uphold integrity in public governance. The Central Vigilance Commission observes Vigilance Awareness Week every year in the week in which the birthday of Sardar Vallabhbhai Patel falls. This year Vigilance Awareness Week 2023 was observed from October 30-November 5, 2023.

CPPRI observed Vigilance Awareness Week from October 30, November 5, 2023. As a part of the campaign and with a view to creating awareness amongst the Institute staff, a pledge ceremony was organized in the auditorium on November 1, 2023. The pledge was administered by Dr. A. K. Dixit, Chief Vigilance Officer, CPPRI. During the Vigilance Awareness Campaign, the following lectures were organized for the officers and staff working in the Institute.

Topic of Lecture	Expert
Public Interest Disclosure and Protection of Informers (PIDPI) Resolution	Dr. Kawaljeet Singh, Former Sc. F and CVO CPPRI
System and Procedure of the Organization	
System and Procedure of Procurement	Sh. Dinesh Kumar, Stores and Purchase Officer, CSIR & IIP, Dehradun
Capacity Building Program (IO/PO Training)	Sh. Ram Swaroop, Former Sr. Dy. Secretary (Admin), CSIR New Delhi
Identification and Implementation of Systemic Improvement Measures	



CPPRI Staff During The Training

Dr. A. K. Dixit, Chief Vigilance Officer, CPPRI with Sh. Dinesh Kumar Officer, CSIR & IIP, Dehradun and other CPPRI staff during training session on System and Procedure of Procurement.



## Run For Unity/Rashtriya Ekta Diwas

CPPRI celebrated Ekta Diwas with enthusiasm and dedication, underscoring the significance of national unity and integrity. The day began with a solemn pledge of unity, where employees reaffirmed their commitment to the values of national integration and solidarity.

Overall, Ekta Diwas 2023 at CPPRI served as a powerful reminder of the importance of unity and inclusiveness in building a strong, harmonious society. The event was a resounding success, reflecting the organization's commitment to these core values and its dedication to contributing positively to the community. The entire staff member's participated in this event under the guidance of Director Dr. M.K.Gupta.



Glimpes of Rashtriya Ekta Diwas

## Vishwakarma Puja

On 17 September, 2023 CPPRI celebrated Vishwakarma Pooja with vibrant enthusiasm and reverence, reflecting the organization's appreciation for craftsmanship and innovation. The celebration honored Bhagwan Vishwakarmaji, the divine architect and craftsman, symbolizing creativity, precision, and excellence.

The day commenced with a traditional pooja ceremony where staff gathered to offer prayers and seek blessings for prosperity and success in their professional endeavors. The ceremony was marked by the ritualistic cleaning and decorating of workspaces, acknowledging the importance of maintaining a respectful and productive work environment.



Glimpes of Vishwakarma Puja



## Saraswati Pooja

On 14 February, 2024 Saraswati Pooja celebrated with great reverence and enthusiasm, honoring Saraswati, the goddess of knowledge, wisdom, and learning. It was a significant occasion for the library staff and patrons, reflecting the institution's commitment to promoting educational and intellectual growth.

The celebration commenced with a solemn pooja ceremony conducted in the library, where the staff gathered to offer prayers and seek the goddess's blessings for continued success and enlightenment. The library's space was elegantly decorated with flowers and traditional Rangoli, creating an auspicious atmosphere for the event by M.Sc (CPT) students.

The ceremony featured the traditional ritual of placing books and educational materials before the goddess's idol, symbolizing the reverence for knowledge and learning. Staff members participated in the ritual by reciting hymns and prayers, reinforcing the cultural and educational values that Saraswati represents.

The Saraswati Pooja celebration at the CPPRI Library was a meaningful and inspiring event, highlighting the library's dedication to fostering a rich learning environment and celebrating the pursuit of knowledge. The Saraswati Pooja was co-ordinated by Shri Alok Kumar Goel and Smt. Sarita Sharma.



*Glimpes of Saraswati Pooja*



## OFFICIAL LANGUAGE NEWS

### • Organization of First Half Yearly Meeting of Town Official Language Implementation Committee in CPPRI

The first half yearly meeting of the member offices of the Town Official Language Implementation Committee (TOLIC) was held on May 29, 2023 in the auditorium of the Central Pulp and Paper Research Institute (CPPRI). Representatives of 20 member offices and institutions of the Central Government located in Saharanpur participated in this meeting. In the meeting, Postal Training Center working under Saharanpur, Joint Income Tax Commissioner, Nehru Yuva Kendra, Navodaya Vidyalaya, Kendriya Vidyalaya, regional offices of State Bank of India, Bank of Baroda, Canara Bank, Indian Bank, Union Bank of India, Central Bank of India, Divisional Offices Punjab National Bank, United India Insurance Ltd., National Insurance Ltd., Divisional Offices The Oriental Insurance Ltd., The New India Assurance Ltd., Food Corporation of India, and Power Grid Corporation of India representatives of were present.

In the meeting, the member offices were informed about the working system and objectives of TOLIC and the review of compliance with the official language in these offices and the half yearly report were discussed. The meeting was presided over by Dr. Manoj Kumar Gupta, President of TOLIC, Saharanpur and Director CPPRI, Dr. Gupta urged the representatives of all offices to do maximum work under the Official Language Acts. Vice President of TOLIC and senior scientist of CPPRI, Dr. Nitin Endlay called upon all the member offices to work unitedly and in coordination for the progress of the official language in the city. The meeting was conducted by Scientist Shri Kumar Anupam, Member & Secretary of TOLIC and Official Language Officer of CPPRI.

Shri Ajay Kumar Chaudhary, Assistant Director (Implementation), Department of Official Language, Ministry of Home Affairs, Regional Implementation Office, Ghaziabad was present as a special guest in the meeting. Shri Chaudhary described the meeting as very important for the implementation of the official language and appealed to the member offices to work as per the official language policy of the Union. On this occasion, senior scientists from CPPRI Dr. Kawaljit Singh, Dr. Ashwani Dixit, Dr. Preeti Shivhare Lal etc. were also present in the meeting.



*First half yearly meeting of Town Official Language Implementation Committee conducted in CPPRI*



- **Participation in the First Meeting of the Hindi Advisory Committee of the Department for Promotion of Industry and Internal Trade.**

The first meeting of the Hindi Advisory Committee was held on August 03, 2023 at Vaniya Bhawan, New Delhi under the chairmanship of Honorable Commerce and Industry Minister, Shri Piyush Goyal. On behalf of CPPRI, Official Language Officer of the Institute Shri Kumar Anupam, participated in the meeting. In the presence of the Honorable Chairman, a meaningful discussion was held on encouraging easy use of the official language. In the meeting, the status of original Hindi correspondence, bilingualization of the website, purchase of Hindi books, filling of vacant posts of official language cadre, incentive schemes to ensure maximum use of Hindi etc. were prominently discussed.



*Shri Kumar Anupam along with Honorable Commerce and Industry Minister Shri Piyush Goyal and other members of the committee in the meeting.*

- **Participation in Hindi Day Celebration 2023 and Third Official Language Conference, Pune**

02-days Hindi Day celebrations and Third All India Official Language Conference was jointly organized by the Department of Official Language, Ministry of Home Affairs, Government of India on 14 and 15 September 2023 at "Shri Shiv Chhatrapati Sports Complex, Balebari", Pune. In this conference, apart from the main session, many parallel educational sessions were organized on various subjects related to Hindi. On behalf of CPPRI, Director of the Institute and Chairman of Official Language Dr. Manoj Kumar Gupta, Vice President of Official Language Dr. Nitin Endlay, and Official Language Officer Mr. Kumar Anupam participated in the conference.





*Dr. Manoj Kumar Gupta, Dr. Nitin Endle and Mr. Kumar Anupam in Hindi Day and Third All India Official Language Conference.*

#### • Organization of Official Language Hindi General Knowledge Competition

Under the aegis of CPPRI, Official Language Hindi General Knowledge Competition was organized through online medium on September 27, 2023 by Canara Bank for the continuous promotion, dissemination and use of the official language for the offices under NARAKAS Saharanpur. In this competition by NARAKAS Saharanpur. First, second, third and two incentive prizes were given. In this competition, Mr. Siddharth Shrestha, Area Manager, Punjab National Bank, Saharanpur, got the first prize. Mr. Anupam, Bindal, Chief Manager, Bank of Baroda, Saharanpur got the second prize, Mr. Anshu, project associate of CPPRI, got the third prize, Mr. Vineet Kumar, Junior Engineer of Power Grid Corporation of India, Saharanpur and Mr. Bhanu Pratap, Deputy Manager of Union Bank of India, Saharanpur, got the incentive awards.



*Dr. Manoj Kumar Gupta and Mr. Ajay Kumar Chaudhary honoring Mr. Siddharth Shrestha, Area Manager of Punjab National Bank, Saharanpur, who won the first prize in the Official Language Hindi General Knowledge Competition.*



## • Hindi Fortnight Program and Prize Distribution Ceremony at CPPRI

Hindi Fortnight program and prize distribution ceremony was organized at CPPRI from 16-30 September 2023. In the program, the Director of the Institute, Dr. Manoj Kumar Gupta shared with the employees of the Institute the experiences acquired in the 3<sup>rd</sup> All India Official Language Conference organized in Pune on September 14-15, 2023. Addressing the program, he said that the use of Hindi should be promoted in the paper and pulp sector. Also informed everyone about the software Kanthastha 2.0 and Hindi Shodh Sindhu dictionary developed by the Department of Official Language to simplify translation in Hindi. Dr. Nitin Endlay, Vice President of the Official Language Cell, in his address also called upon everyone to promote disseminate and implement the official language Hindi. The program was conducted by the Official Language Officer of the Institute, Shri Kumar Anupam. For the first time, the project work was conducted in Hindi language for Dixit and Salamuddin, diploma students of Pulp and Paper Technology course (Mahamaya Polytechnic of Information Technology, Shamli, Uttar Pradesh), who came to the institute for training. For this, these students and scientists Dr. Ashwani Kumar Dixit and Mr. Kumar Anupam were honored for their supervision and co-supervision. Technical Officer Shri Narendra Kumar Naik from Odisha working in the institute, was honored with a cash prize and a memento for successfully passing the Hindi Language Long Term Proficiency Course Examination from the Central Hindi Training Institute. As part of the programme, Hindi essay, speech and poster competitions were organized in the institute to promote the use of Hindi language in the daily work of the institute. Families of the institute's employees and MSc students took part in these competitions. Parkhi Agarwal, Aman Agrahari and Salamuddin were winners in the essay competition. Utsav Khurchaniya, Dixit and Shalini Dutta were winners in the speech competition. Parkhi Agarwal, Shalini Dutta and Priyanka Kumari were winners in the poster competition. Hooriya, Mimansa Rajput, Hemant Gole, Sara and Shambhavi Sharma also praised the glory of Hindi language through their posters. Dr. Preeti Shivhare Lal, Dr. Nitin Endlay and Mr. Alok Goel, members of the committee formed to evaluate the contestants, were also honored for their contribution. The employees and students of the institute participated with great enthusiasm in the program and pledged to do maximum work in Hindi to promote and spread the Hindi language.



*Students, officers and scientists participated in the Hindi Fortnight program and prize distribution ceremony organized at CPPRI.*



- **Participation in the Second Meeting of the Hindi Advisory Committee of the Department for Promotion of Industry and Internal Trade**

The second meeting of the Hindi Advisory Committee of the Department for Promotion of Industry and Internal Trade was held under the chairmanship of Honorable Minister of State for Commerce and Industry, Shri Som Prakash on October 27, 2023 at Taj Vivanta Hotel, Srinagar, Jammu and Kashmir. On behalf of CPPRI, Director of the Institute and Chairman of Official Language Dr. Manoj Kumar Gupta, Vice President of Official Language Dr. Nitin Endlay, and Official Language Officer Mr. Kumar Anupam, participated in the meeting. In the presence of the Honorable Chairman, the said committee discussed the progressive use of the official language Hindi in the functioning of the department. During the meeting, suggestions were invited from the members to strengthen the use of the official language. In the meeting, the status of original Hindi correspondence, bilingualization of website, purchase of Hindi books, filling of vacant posts of official language cadre, publication of house magazine, Hindi note drafting cash award scheme etc. were discussed.



*In the meeting, Honorable Minister of State for Commerce and Industry Shri Som Prakash, Honorable Lok Sabha MP Shri Ram Kripal Yadav and other members of the committee along with Dr. Manoj Kumar Gupta, Dr. Nitin Endlay and Shri Kumar Anupam.*

- **Inspection of offices of TOLIC, Saharanpur by Assistant Director (implementation), Regional Implementation Office (North-2), Ghaziabad**

Inspection conducted by Assistant Director (Implementation) Shri Ajay Kumar Chaudhary Department of Official Language, Ministry of Home Affairs, Regional Implementation Office (North-2), Ghaziabad on November 20, 2023 to the Offices under Town Official Language Implementation Committee, Saharanpur. The said inspection program was attended by Mr. Kumar Anupam, Member & Secretary of Town Official Language Implementation Committee, Saharanpur.





*During official language inspection Manager of Canara Bank, Saharanpur along with Assistant Director (Implementation) Shri Ajay Kumar Choudhary and Shri Kumar Anupam*



*National Insurance Company Limited during official language inspection, Saharanpur Senior Branch Manager of Assistant Director (Implementation) Mr. Ajay Kumar Choudhary and Mr. Kumar Anupam along with Mr. Nirdeish Giri and other officers.*

## • **Second Half Meeting of Town official Language Implementation Committee at CPPRI**

The second half yearly meeting of the member offices of the Town Official Language Implementation Committee (TOLIC), functioning under the Ministry of Home Affairs, Government of India] under the chairmanship of CPPRI, was organized on November 30, 2023. Representatives of 15 member offices of the Central Government located in Saharanpur participated in this meeting and the compliance of the official language in these offices was reviewed. In the meeting, Postal Training Center working under Saharanpur, Indian Telecommunication Corporation, Joint Income Tax Commissioner, Navodaya Vidyalaya, Kendriya Vidyalaya, Bank of Baroda, Canara Bank, Indian Bank, Divisional Office Punjab National Bank, National Insurance Co. Ltd., The New Representatives of India Insurance Co. Ltd., Air Force Station, Food Corporation of India, and Power Grid Corporation of India were present. In the meeting, the winners of the Official Language General Knowledge Competition organized by Canara Bank under the aegis of TOLIC Saharanpur were awarded, The meeting was presided over by Dr. Manoj Kumar Gupta, President of TOLIC, Saharanpur and Director



of CPPRI. Vice President of TOLIC and senior scientist of CPPRI, Dr. Nitin Endlay called upon all the member offices to ensure action on the targets given under the annual program for the progress of the official language in the city and to work as per the guidelines for compliance as required. The meeting was conducted by Scientist Shri Kumar Anupam, Member Secretary of TOLIC and Official Language Officer of CPPRI. Shri Ajay Kumar Chaudhary, Assistant Director (Implementation), Department of Official Language, Ministry of Home Affairs, Regional Implementation Office (North-2), Ghaziabad was present as a special guest in the meeting. In the meeting, publication of annual magazine Sanyukta Issue 5 of TOLIC Saharanpur, creation of Facebook/Youtube page of TOLIC, updating of webpage of TOLIC, organization of inter office programs based on official language, regular submission of quarterly and half yearly reports by TOLIC member offices, topics like implementation of official language in member offices, visit to CPPRI Official Language Cell for guidance etc. were discussed.



*Second half meeting of Town Official Language Implementation Committee conducted in CPPRI*

#### • **Invited Lecture at Power Grid Corporation of India, Saharanpur**

A one day Hindi workshop on the topic "Official Language Policy of the Government of India" was organized by Power Grid Corporation of India, Saharanpur at their office on March 23, 2024. Official Language Officer of CPPRI, Shri Kumar Anupam, was invited to give a lecture in the workshop. In the workshop, Shri Kumar Anupam informed all the participants about the rules and guidelines of the official language such as the constitutional provision for the official language, Official Language Act 1963, Presidential Order 1960, Official Language Resolution 1968 and Official Language Rules 1976. In the workshop, usefulness and importance of official language, use of simple Hindi, enabling Unicode in computer, Google input tool, Hindi Indic and voice typing were also discussed, so that the target set by the Official Language Department could be achieved 100 percent.

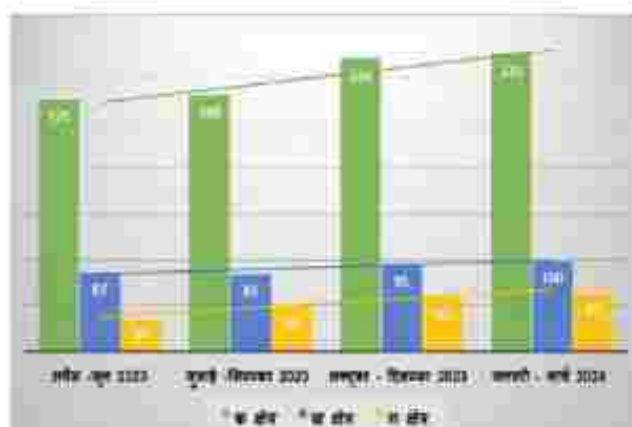




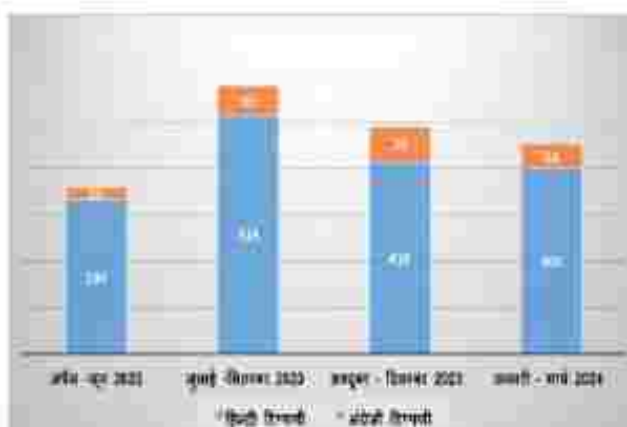
*Shri Kumar Anupam with participants from Power Grid Corporation of India, Saharanpur in the workshop*

## • Hindi Quarterly Report and Annual Hindi Evaluation Report

CPPRI sent quarterly progress report to the DPIIT, Ministry of Commerce and Industry, Government of India. A progress report and an annual report are sent. The details of original letters and comments written on files / documents sent by CPPRI in Hindi during the year are shown in the pictures given on the side. After reviewing the quarterly progress report, the Official Language Department of the Department of Industry Promotion and Internal Trade is informed about the shortcomings and suggestions and it is ensured that necessary action is taken on the mentioned shortcomings and suggestions. The progress and activities of Hindi in CPPRI have been found satisfactory by the department, but it has been suggested to ensure some urgent works like organizing a workshop regularly in every quarter, inspection related to official language of sections of CPPRI, making the website of CPPRI completely bilingual etc.



*Details of Original Letter sent in HINDI by CPPRI during the year*



*Details of comments written on files / documents in CPPRI during the year*



## MISSION LIFE

### Introduction

Mission LIFE was introduced by Hon'ble Prime Minister Sh. Narendra Modi at COP26 in Glasgow on November 1, 2021, as a mass movement for "mindful and deliberate utilization instead of mindless and destructive consumption" to protect and preserve the environment. It aims to nudge individuals and communities to practice a lifestyle that is synchronous with nature and does not harm it. Those who practice such a lifestyle are recognised as "Pro Planet People". In CPPRI, Shri Kumar Anupam has been nominated as Nodal Officer for Mission LIFE activities under the guidance of Dr. Nitin Endlay. Following Mission LIFE activities were carried out by CPPRI in the financial year 2023-2024.

### Sensitization Workshops

CPPRI organized two sensitization workshops at KLG Public School, Saharanpur and Delhi Public School, Saharanpur on May 25-26, 2023 respectively to create awareness among students about LIFE Mission objectives, activities, e - waste recycling and wastepaper recycling. The students were gifted with notebooks prepared from wastepaper and agricultural waste. Around 180 students participated in two workshops and pledged to adopt Mission LIFE objectives and activities for clean and green India.



*Dr. Nitin Endlay in Mission LIFE  
Sensitization Workshop at  
KLG Public School, Saharanpur*



*Dr. Shubhang Bhardwaj in Mission LIFE  
Sensitization Workshop at  
Delhi Public School, Saharanpur*

### AWARENESS LECTURE

Sh. Kumar Anupam delivered an awareness lecture on Mission LIFE in "Yuva Utsav: Bharat @2047", programme organized by Nehru Yuva Kendra, Saharanpur at Asha Modern International School, Saharanpur on 27-05-2023 which was attended by 100 participants. The participants were informed about Mission LIFE objectives, activities, e-waste recycling, wastepaper recycling etc.





Mission LIFE Posters put up in CPPRI campus



## SWACHHATA HI SEWA AND SPECIAL CAMPAIGN 3.0

### Historical Perspective

CPPRI celebrated the Swachhata Hi Sewa and Special Campaign 3.0 from 02<sup>nd</sup> -15<sup>th</sup> September 2023. To monitor the activities being carried out in CPPRI under SHS 3.0 preparatory phase, a field visit by Shri Rajesh Kumar Singh, Joint Secretary (Administration), DPIIT, Govt. of India was undertaken on September 29, 2023. He held meetings with CPPRI Officials and mobilized them to take up the activities for Swachhata Hi Sewa (SHS) and Special Campaign 3.0. He visited various laboratories and offices and took a closer look at the identified files/records for review and weeding. Dr. A.K. Dixit Nodal Officer SHS Campaign 3.0 presents the action plan of SHS Campaign 3.0. Joint Secretary appreciated the shredding mechanism being practiced at CPPRI for weeding out the identified files/records.

CPPRI officials, ground staff, safai mitra and School teachers were mobilized for the SHS Campaign 3.0. Cleanliness drive was performed at a Government Primary School, Saharanpur and at CPPRI. One hour one date drive was performed at office campus and at a Government Primary School- Pledge on Swachhta Hi Sewa and against single use plastic was taken by CPPRI Staff, Research Scholars, M.Sc. Cellulose and Technology Students of CPPRI-Pledge, Government Primary School, Saharanpur, Students of School, Guests from Village, parents of School children, Safaimitra and cook of school. Poster Competition of M.Sc. Students was organized at CPPRI. Safaimitra of CPPRI and Primary School were Felicitated on 2<sup>nd</sup> October 2023. Notebooks manufactured from non & woodpulp was distributed to Students of Primary School. Two Separate dust bins system was placed for dry and Wet garbage separation at site in the school. Plantation drive was executed at Government Primary School. Old Newspapers, Old Magazines and Shredded Office waste was disposed of under the Special Campaign 3.0.







*Interaction of Shri Rajesh Kumar Singh, Joint Secretary (Administration), DPIIT, Govt. of India with CPPRI Staff and Visit of laboratories and shredding room during the visit*



*Interaction of JS with M.Sc. (Cellulose and Paper Technology) students of CPPRI during the visit*



*Felicitation of Safaimitra of CPPRI & Primary School*



*Plantation drive at school*



*Disposal of Old Newspapers, Old Magazines and Shredded Office waste under the Special Campaign 3.0*



## RIGHT TO INFORMATION ACT 2005

### Introduction

The Central Pulp and Paper Research Institute (CPPRI) is committed to promoting transparency and accountability in its operations- In line with the Right to Information (RTI) Act, 2005, CPPRI ensures timely dissemination of information to the public. This chapter outlines the RTI activities, compliance status, and initiatives undertaken by CPPRI during the financial year 2023-2024.

### RTI Cell @ CPPRI, Saharanpur

To facilitate the effective implementation of the RTI Act-2005 CPPRI has designated Dr. M.K. Gupta, Director CPPRI as First Appellate Authority (FAA), Shri Alok Kumar Goel is the Public Information Officer (PIO), who is assisted by Smt. Sarita Sharma, Assistant Public Information Officer (APIO). Dr. Nitin Endlay is the nodal officer.

### RTI Applications and Responses

During the financial year 2023 - 2024, CPPRI received total 63 RTI applications and 4 appeals.

### Types of Information Requested

The RTI applications received by CPPRI covered a broad spectrum of topics, including but not limited to:

- Research and Development projects
- Human resources and staffing details
- Institutional policies and guidelines

### Proactive Disclosure

In accordance with Section 4(1) (b) of the RTI Act, CPPRI has taken significant steps to proactively disclose key information on its official website. Third party audit of Proactive disclosure has been done by Indian Rubber Manufacturers Research Association, Mumbai last year and it's uploaded in the website of the Institute.

### Training Program Attended

To ensure effective implementation of the RTI Act, following training program is attended by Dr. M.K. Gupta, FAA and Shri Alok Kumar Goel, Public Information Officer.

- 3 days training programme on "Right to Information Act for CPIO and Appellate authorities" from January, 8 -10 2024 at Jim Corbett, Uttarakhand.





*Sh. Alok Kumar Goel during the programme*

## Quarterly Report

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

## Conclusion

The Central Pulp and Paper Research Institute remains dedicated to upholding the principles of transparency and accountability as enshrined in the RTI Act. The institute's efforts in 2023 & 2024 reflect its commitment to providing timely and accurate information to the public. Moving forward, CPPRI will continue to enhance its RTI framework to better serve the interests of stakeholders and the general public.



## FINANCIAL REPORT

Deepak Saini & Associates  
Chartered Accountants



6/130, Madho Vihar Colony  
Bhuleshwar Mandir Road, Saharanpur  
Contact - 91-8439025973

### DEEPAK SAINI & ASSOCIATES Chartered Accountants

### INDEPENDENT AUDITOR'S REPORT

To  
The Members of  
CENTRAL PULP & PAPER RESEARCH INSTITUTE

#### Report on the Audit of the Standalone Financial Statements Opinion

We have audited the standalone financial statements of CENTRAL PULP & PAPER RESEARCH INSTITUTE, which comprise the balance sheet as at 31st March 2024, and the Statement of Profit and Loss, for the year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information.

#### Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India except for the matter discussed in Basis for Opinion para of the state of affairs of the institute as at 31st March 2024 and its loss for the year ended on that date.

#### Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) specified by the ICAI. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the institute in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics





**Deepak Saini & Associates**  
Chartered Accountants



6/130, Madho Vihar Colony  
Bhuleshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

## **DEEPAK SAINI & ASSOCIATES** **Chartered Accountants**

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information; we are required to report that fact. We have nothing to report in this regard.

### **Key Audit Matters**

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### **Responsibilities of Management and Those Charged with Governance for the Standalone Financial Statements**

The Institute's Management is responsible with respect to the preparation of these standalone financial statements that give a true and fair view of the financial position, financial performance, of the Institute in accordance with the accounting principles generally accepted in India. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding of the assets of the Institute and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Management is responsible for assessing the Institute's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Management either intends to liquidate the Institute or to cease operations, or has no realistic alternative but to do so. Those Management are also responsible for overseeing the institute's financial reporting process.



Deepak Saini & Associates  
Chartered Accountants



6/130, Madho Vihar Colony  
Bhuleshwar Mandir Road, Saharanpur  
Contact - 91-8439025973

## DEEPAK SAINI & ASSOCIATES Chartered Accountants

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

### Report on Other Legal and Regulatory Requirements

- a. We have sought and obtained all the information and explanation which to the best of our knowledge and belief were necessary for the purposes of our audit.
- b. In our opinion, proper books of account as required by law have been kept by the institute so far as it appears from our examination of those books.

For Deepak Saini & Associates  
Chartered Accountants



CA. Ayush Mittal  
(Partner)  
Membership No.: 447239  
UDIN: 24447239BKEYRX2673

Place: Saharanpur  
Date: 19th AUGUST, 2024





**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuleshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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**  
**BALANCE SHEET AS AT 31.03.2024**

PARTICULARS	Schedule	Amount (Rs.)	
		Current Year 2023-24	Previous year 2022-23
<b><u>CAPITAL FUND AND LIABILITIES</u></b>			
CAPITAL FUND	1	143267323.16	124059379.66
UN-UTILISED SP. PROJECT & CONSULTANCY	2	1124.25	1124.25
UNUTILISED GRANTS	3	36350792.96	58983049.96
CURRENT LIABILITIES AND PROVISIONS	4	50996679.54	51272487.14
<b>TOTAL</b>		<b>230615919.91</b>	<b>234316041.01</b>
<b><u>ASSETS</u></b>			
FIXED ASSETS	5	105900130.71	89636944.71
CURRENT ASSETS, LOANS, ADVANCES ETC.	6	124715789.20	144679096.30
<b>TOTAL</b>		<b>230615919.91</b>	<b>234316041.01</b>

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

As per our separate report of even date.  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

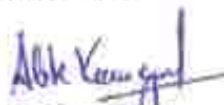
  
(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239

PLACE: SAHARANPUR  
Date: 19-08-2024



**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
DIRECTOR

  
HEAD ( F&A)



**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31.03.2024**

Amount (Rs.)			
PARTICULARS	SCHEDULE	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
<b>A: INCOME</b>			
Income from Institutional & Consultancy fee	7	31764109.58	32675874.97
Grants from Govt. of India	8	82552564.00	76527439.89
Fees/Subscription	9	339500.00	992250.00
Interest earned	10	4504360.00	1991217.73
Other income	11	784917.06	619946.79
Closing Stock-Store Spares & Stationery		3747592.81	2867873.28
<b>TOTAL (A)</b>		<b>123693043.45</b>	<b>115674602.66</b>
<b>B: EXPENDITURE</b>			
Opening Stock		2867873.28	2740065.80
Establishment expenses	12	56240827.00	60449960.00
Administrative Expenses etc.	13	59332049.67	48106626.65
Depreciation for current year	5	13725610.00	12089370.00
<b>TOTAL (B)</b>		<b>132166359.95</b>	<b>123386022.45</b>
Excess of Expenditure over Income (B-A)		8473316.50	7711419.79
Excess of Income over Expenditure(A-B)		0.00	0.00

The Schedules referred above form an integral part of the Income and Expenditure Account

As per our separate report of even date.

**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**


(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-08-2024

**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
DIRECTOR

  
HEAD ( F&A)



Deepak Saini & Associates Chartered Accountants		8/138, Madhe Vihar Colony Bhuteshwar Mantle Road, Saharanpur Contact - 91- 8439029973			
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 RECEIPT & PAYMENT ACCOUNT FOR THE YEAR ENDED 31.03.2024					
RECEIPTS	CURRENT YEAR	PREVIOUS YEAR	PAYMENTS	CURRENT YEAR	PREVIOUS YEAR
<b>Opening Balance:</b>			<b>Establishment Expenses:</b>		
To Bank Balance in current account	3284910.48	288328.85.60	By Salary & Allowances	44719057.00	42322100.00
To Deposit Accounts/Margin money against bill of Credit	2500000.00	2340000.00	By CPE Contribution	4155848.00	4372100.00
To Deposit Accounts	8018804.88	57216177.88	By Enrichment of Loans	3043604.00	4402500.00
<b>Grant Received:</b>			By Quality paid	4852628.00	5546253.00
To Grant in Aid MCR CPE	708132813.00	68716840.00	By Reimbursement of Medical Exp.	301940.00	421220.00
To Grant in Aid Development account	3000000.00	12500000.00	<b>Other Administrative Expenses:</b>		
<b>Interest Received:</b>			By Lab & Plant Maintenance	4045711.00	480025.00
To Int. from Staff on Curvas, inv & RPA	31602.00	28000.00	By Carriage & Freight	6380.00	7300.00
To Interest received from bank	400014.00	2645765.00	By Electricity and water	7684138.00	7670710.00
<b>Other Income:</b>			By Repair & Maintenance of Assets	15438108.00	14754708.00
To Training fee	16012507.48	1728420.94	By Rent & Taxes	1236664.00	1182800.00
To Consultancy fees	962622.00	1506700.75	By Postage & Telephone & communication	106874.00	712000.00
To Med. Course Fee	119000.00	85700.00	By Printing & Stationery	2003707.00	1811788.00
To Library Fee	80000.00	17000.00	By Travelling & Conveyance Exp.	5462167.00	2723888.00
To Training fees & expenses etc.	133000.00	373000.00	By Equip. Seminar & Workshop	44800.00	200000.00
To Membership fee & Taxes etc.	6330.00	71000.00	By Membership & Subscription	0.00	58200.00
To Lease Rent	62900.00	80980.00	By Audit fees	68870.00	47300.00
To Rental fee	307700.00	240100.00	By Hospitality Expenses	301982.00	251853.00
To Miscellaneous Receipt	75404.45	552.70	By Legal & Professional Exp.	118801.00	274787.40
To License Fee	263000.00	285744.00	By News Paper	48455.00	30100.00
<b>Advances</b>			By Training Exp.	1013282.00	7901.00
To House Building Advance	07800.00	07800.00	By Watch & Ward	8851137.82	7073432.06
To Computer Advance	0.00	2000.00	By Bank charges	7788.17	8152.00
To Computer Advance	37185.00	32180.00	By Advertisement	886818.00	82000.00
<b>Other Receipt:</b>			By Training Fee paid	4400.00	167180.00
To SSGT	821072.45	782899.07	By Staff CPE Maintenance	89075.00	544241.00
To CGST	821072.45	782899.07	By Hotel Dinner Exp. - Yoga Day	9880.00	182177.00
To KGT	3038328.50	4420000.96	By Swarth Staff Advance Exp.	2815722.79	1890113.08
To Security Received	0.00	10000.00	By Software Expenditure on IT	821672.00	1001140.20
To Subscription for M.Sc. Student	0.00	90000.00	By Paper etc.	141962.00	17562.00
To Advance to Supplier	48700.00	0.00	By Expenditure on RPA	88378.00	184126.00
To L.L. Recovery	15942.00	0.00	By Grant in Aid to Participating Agency	2770000.00	1864000.00
To Sale of Publication	10000.00	30400.00	By Honourarium	180000.00	28400.00
To Banked Money Received	0.00	283810.00	By National Festival	47807.00	70022.00
To Income Tax ECFE Trust	0.00	80.00	By Planning & Consulting	415801.00	50782.00
To Govt. Aid Recovery	270018.00	85000.00	By Electric Consumption	889421.00	288117.00
To T.A. & A.M. Recovery	2680.00	10402.00	By Consultancy fee paid	2127300.00	100000.00
To RPA old Yonal Paper	28448.00	0.00	By Interest Paid on TDS	0.00	4658.00
To Amount Recoverable	4142.00	0.00	By scholarship for M.Sc. Student	0.00	700000.00
To Performance Guarantee	780746.00	0.00	<b>Fixed Assets/ Capital work in Progress</b>	26111024.20	1680300.42
<b>TOTAL</b>	<b>252936403.47</b>	<b>236211743.85</b>	<b>Other Payments:</b>		
			By T.G.S. (Patent)	167587.00	125877.00
			By TDS - GET	74730.48	41988.00
			By CGST	658370.00	73880.00
			By CGST	738172.00	738880.00
			By GST	4083265.00	3812805.00
			By Advance to Staff	34500.00	342220.00
			By Refund of Security	0.00	64560.00
			By Advance to Suppliers	140320.00	88888.00
			By Advance for Computer	0.00	3200.00
			By Refund of Dam	1484188.00	78200.00
			By Current Liability	0.00	134280.00
			By Grant Forwarded to FRI	800000.00	7754710.00
			By Advance Paid on Director. FRI	0.00	3048290.00
			By Income Tax ECFE Trust	40.00	0.00
			By Banked Money Received	283810.00	0.00
			<b>Closing Balance:</b>		
			By Bank Balance in current account	11887088.25	13264810.48
			By Deposit A/c/Margin money against L.C.	2137995.00	2388995.00
			By Deposit Accounts	84198350.00	80788542.00
<b>TOTAL</b>	<b>252936403.47</b>	<b>236211743.85</b>	<b>TOTAL</b>	<b>252936403.47</b>	<b>236211743.85</b>
As per our certificate report of even date.		FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE			
FOR DEEPAK SAINI & ASSOCIATES					
CHARTERED ACCOUNTANTS					
(CA Ayush Mittal)					
A.C.A., B.Com					
M. No. 447238					
PLACE: SAHARANPUR					
Date: 18-04-2024					



**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuleshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024**  
**SCHEDULE 1 - CAPITAL FUND**

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	2023-24		2022-23	
<b>CAPITAL FUND</b>				
Balance as at the beginning of the year	124059379.66		123424938.45	
<b>Add:-</b>				
Cess Project (Capital Purpose)	8858742.00		3450616.00	
Plan Project (Capital Purpose)	18822518.00		4895245.00	
	151740639.66		131770799.45	
<b>less:-</b>				
Balance of net expenditure transferred from the income & expenditure account	8473316.50	143267323.16	7711419.79	124059379.66
<b>BALANCE AS AT THE YEAR - END</b>		<b>143267323.16</b>		<b>124059379.66</b>

As per our separate report of even date.  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-06-2024

**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD ( F&A )**





**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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**

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2024

**SCHEDULE - 2 - DETAILS OF UN-UTILIZED AMOUNT SPONSORED PROJECT/CONSULTANCY**

Sl. No	NAME OF PROJECT	CURRENT YEAR	PREVIOUS YEAR
		2023-24	2022-23
		AMOUNT	AMOUNT
1	DBT-Technological improvevt of Process	1124.25	1124.25
		<b>1124.25</b>	<b>1124.25</b>

As per our separate report of even date  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**


(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-08-2024

**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD ( F&A)**









**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact :-91- 8439025973

**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 31-03-2024**  
**SCHEDULE 4 - CURRENT LIABILITIES AND PROVISIONS**

S.No	PARTICULARS	CURRENT YEAR 2023-24		PREVIOUS YEAR 2022-23	
A.	<b>CURRENT LIABILITIES AND PROVISIONS</b>				
	<b>CURRENT LIABILITIES:</b>				
	<u>Other Liabilities</u>				
1	Retention Money received	32792.00		32792.00	
2	Security Received from Contractors	20652.00		20652.00	
3	Earnest money received	93900.00		377716.00	
4	Advance received for services	214855.00		214855.00	
5	Security received from students	33000.00		33000.00	
6	Security Received from Staff	20000.00		20000.00	
7	SGST	68266.97		81177.42	
8	CGST	68266.97		81177.42	
9	IGST	420749.96		652882.26	
10	Amount Payable to Staff	672.00	973154.90	672.00	1514924.10
	<b>TOTAL (A)</b>		<b>973154.90</b>		<b>1514924.10</b>
B.	<b>PROVISIONS:</b>				
1	Expenses payable	25975.00		25975.00	
2	Pro for gratuity & encashment of leave	48640583.00		49423390.00	
3	Audit fee payable	0.00		41500.00	
4	Performance Bank Guarantee	812063.00		31317.00	
5	Fellow Ship payable	13000.00		13000.00	
6	Income Tax (TDS) Payable:	234197.00		147567.00	
7	GST (TDS) Payable	288706.64		74774.04	
8	Income Tax ECPF Trust	0.00	50023524.64	40.00	49757563.04
	<b>TOTAL (B)</b>		<b>50023524.64</b>		<b>49757563.04</b>
	<b>TOTAL (A+B)</b>		<b>50996679.54</b>		<b>51272487.14</b>

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

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-08-2024

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

  
DIRECTOR

  
HEAD (F&A)



**CENTRAL PULP & PAPER RESEARCH INSTITUTE**  
An autonomous organization 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, SANKARAMPUR**  
**SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2024**  
**SCHEDULE - 8 - FIXED ASSETS**

Sl. No.	PARTICULARS	GRAND BLOCK		MT VALUE ON 1.4.2023	ACCRETION DURING THE YEAR			COST AT THE YEAR END	AGE OF DEP.	DEPRECIATION FOR 2023-24	NET BLOCK	
		INITIAL COST AS ON 1.4.2023	TOTAL ADDITIONS		FIXED ASSET	SECOND HAND	SALES DURING THE YEAR				AS AT THE 31.3.2024 YEAR END	AS AT THE 31.3.2023 YEAR END
<b>A. FIXED ASSETS</b>												
1	Land	10072204.10	0.00	10072204.10			0.00	10072204.10	1%	0.00	10072204.10	10072204.10
2	Land Survey Map in Progress	407684.45	0.00	407684.45			0.00	407684.45	10%	40768.45	407684.45	407684.45
3	Building	118173547.34	1008913171.96	2483283.28	41071.00		0.00	120283283.58	10%	740123.18	2481133.28	2261133.28
4	Office Equipment	10152775.36	13516484.04	475480.94	994405.00		0.00	5372241.30	10%	537224.13	423501.96	4771893.96
5	Furniture & Fixtures	3428705.30	7731723.31	1016080.01	93542.00		0.00	2725923.07	10%	272592.31	2408401.01	1007080.01
6	Leased Furniture	484288.08	450000.81	3081.25			0.00	7867.25	10%	786.73	881.25	881.25
7	Vehicle	2931118.84	2639401.05	24727.94	215285.00		0.00	2444412.84	10%	244441.28	276022.94	24777.84
8	Plant Machinery & Lab Equipment	310291513.47	222455233.47	5458363.34	448847.00		0.00	71641403.84	10%	944907.10	41581453.84	5458363.34
9	Print & Machinery at HPL	1000000.00	5701849.29	34103.71			0.00	31193.71	10%	3119.37	2677.71	31193.71
10	Equipment with SCMP	50000.00	430234.14	8465.88			0.00	6365.88	10%	636.59	5400.00	8465.88
11	Microprocessor (Laser)	53000.00	81072.11	2312.38			0.00	2312.38	10%	231.24	17960.88	2312.38
12	Peripherals	21032.13	21011.88	231.44			0.00	221.44	10%	22.14	182.44	231.44
13	IT Software	2094916.88	2074814.56	20011.88	225162.00		0.00	30067.00	10%	3006.70	17907.68	20011.88
14	IT Hardware & Computer	1035415.72	2807184.28	1144758.28			0.00	1415520.80	10%	211988.10	121032.88	1144758.28
15	Networked Hard & Software	523422.59	3124195.79	200028.81			0.00	3002338.41	10%	314684.10	178430.81	300028.81
16	Books and Periodicals	1122928.27	10591327.85	11037.42	271.00		0.00	954375.42	40%	15400.00	21870.42	21037.42
17	Computers	2140007.09	1970011.04	1007407.85	60800.00		0.00	4845261.85	40%	142200.00	342305.85	1007407.85
18	Child Care Program	165125.00	0.00	98125.00			0.00	98125.00	10%	9812.50	98125.00	98125.00
19	Child Welfare Program	251200.00	24120.00	35027.00			0.00	270377.00	10%	27037.70	231360.20	250277.00
20	Human Resource Program	371028.08	275457.05	35027.00	90000.00		0.00	985546.10	15%	14803.00	385514.00	350277.00
21	Travel & Transport	5298554.06	57185.18	178417.50	5087.00		0.00	728817.22	10%	72881.72	55464.82	5298554.06
22	Software	0.00	0.00	0.00	44800.00		0.00	143000.00	40%	28720.00	114280.00	0.00
<b>TOTAL OF CURRENT YEAR</b>		55236801.70	44727281.02	68110944.71	3345740.80		0.00	11204749.71		117204.00	12008230.71	68110944.71
<b>TOTAL OF PREVIOUS YEAR</b>		52236801.70	4388888.10	57125689.80	330803.00		0.00	12122033.71		12003100.00	20610884.71	57125689.80

As per our inspection report of every date  
FOR Deepak Sahni & Associates  
CHARTERED ACCOUNTANTS



ICA Ayush Mittal  
A.C.A., B.Com  
M. No. 44729  
PLACE: SANKARAMPUR  
Date: 19-08-2024

FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

*Signature*  
HEAD (P&A)

*Signature*  
DIRECTOR





Deepak Saini & Associates  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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**  
**SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.03.2024**

**SCHEDULE - 0 - CURRENT ASSETS, LOANS, ADVANCES ETC.**

S.No.	PARTICULARS	CURRENT YEAR 2023-24		PREVIOUS YEAR 2022-23	
	<b>A: CURRENT ASSETS:</b>				
1	<u>Inventories:</u>				
a.	Store & Spares	2966098.79		2223537.78	
b.	Stationery & Misc. Store	781894.02	3747582.81	644335.62	2667873.28
2	<u>Bank Balances (With Scheduled Banks)</u>				
a.	On Current Accounts		11697068.25		33564919.48
b.	On Deposit Accounts (margin money against letter of credit)		2137995.00		2340995.00
c.	FDR for Bank Guarantee to UPNEDA	114794.00		109614.00	
d.	On Deposit Accounts on SDR	64051562.66	64166356.66	60058428.86	60166042.66
	<b>B: LOANS, ADVANCES AND OTHER ASSETS:</b>				
	<u>Loan to Staff:</u>				
1	<u>Interest bearing Advances</u>				
a.	House Building Advance	580800.00		638400.00	
b.	Advances for computer	60955.00		88120.00	
c.	Accrued Interest on Advances	410339.00	1042094.00	382582.00	1109112.00
2	<u>Advances and other amounts recoverable in cash or in kind or for value to be received</u>				
	<b>ADVANCES:</b>				
a.	Purchase of Machinery and other work	10658800.94		11385652.44	
b.	Advance Paid to DBT for Biological S.L. Project	50.00		50.00	
c.	Advance to UPRNN	350000.00	11208850.94	350000.00	11735702.44
3	<u>Amounts recoverable in cash or in kind</u>				
a.	Amount Recoverable	0.00		4142.00	
b.	T.D.S	11261112.42		9832707.42	
c.	Conveyance - Education Cess	1334.00		1334.00	
d.	Conveyance - H Education Cess	290.00		290.00	
e.	Conveyance - K. K. Cess	4999.00		4999.00	
f.	Sundry Debtors	13327918.17		11545077.07	
g.	Plant Equipment of CPCB	2694641.00		2694641.00	
h.	Lab Equipment-IPMA/Dev. Council	1350682.00		1350682.00	
i.	Earnest Money Deposit	50.00		50.00	
j.	N.P.C.	708.75		708.75	
k.	Imprest	27418.70		27418.70	
l.	Advance to CPPRI Staff	21434.50		517158.50	
m.	Security Deposits	1849206.00		1849206.00	
n.	Telephone deposit under QYT	39139.00		39139.00	
o.	DCPPRI	27000.00	30605831.54	27000.00	27894451.44
4	<u>Advance paid to PBS Plan / DCPPRI Projects</u>		110000.00		0.00
5	<u>GRANT FORWARD AS AN ADVANCE</u>				
a.	PBS Plan Grant forward as an advance		0.00		5000000.00
	<b>TOTAL</b>		<b>124715789.20</b>		<b>144679096.30</b>

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

(CA Ayush Mittal)  
A.C.A. B.Com  
M. No. 447229

PLACE: SAHARANPUR  
Date: 19-08-2024



FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE

*Deepak*  
DIRECTOR

*Abh K...*  
HEAD (F&A)



**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024

**SCHEDULE - 7 - INCOME FROM INSTITUTIONAL AND CONSULTANCY FEE**

S.No.	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
1	Testing fee	19532964.58	18511741.97
2	Consultancy fee.	10879645.00	13784133.00
3	Library Fee	68000.00	17000.00
4	M.Sc. Course Fee	1283500.00	363000.00
	<b>TOTAL</b>	<b>31764109.58</b>	<b>32675874.97</b>

As per our separate report of even date.

**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239

PLACE: SAHARANPUR  
Date: 19-08-2024



**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

**DIRECTOR**

**HEAD (F&A)**





**Deepak Saini & Associates**  
Chartered Accountants

6130, Madha Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024  
**SCHEDULE - 8 - GOVERNMENT GRANT RECEIVED**

S.No.	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
1(a)	Government of India - Plan	15410154.00	11553019.00
(b)	Swatch Action Plan	2305847.00	2411232.00
2(a)	Government of India through Development Council for Pulp, Paper & Allied Industries-Non Plan	53761544.00	56155743.00
(b)	Core Secretariate for Development Council PP&A Industry	952977.00	1037620.00
3	Government of India through Development Council for Pulp, Paper & Allied Industries for Cess Projects		
(a)	Continuous Education Training of Tech Personal	1621916.00	127919.75
(b)	Statistical Data collection Cell for Indian Pulp & Paper Industry /Census survey	1415846.00	13500.00
(c)	Creation of Testing Facilities for Food Packaging paper	0.00	272470.00
(d)	A Synergistic and Economical Approach for Treatment of Pulp & Paper Mill	0.00	178474.00
(e)	Screening of Parents for Clonal Forestry & Hybridization for Higher Productivity	0.00	255142.14
(f)	Demonstration of Ozone Treatment Technology	0.00	226243.00
(g)	Biopolymeric approach for improvement of	510055.00	390903.00
(h)	Study on Delignification of Agro residu	833210.00	2273282.00
(i)	Bacterial cellulose production for Driver	782617.00	451857.00
(j)	Land Application of treated effluent	3198084.00	537779.00
(k)	Studied on Alternate Auto Causticization	385643.00	642256.00
(l)	Organization Distemination	274671.00	0.00
(m)	Finanical Assistance for Prefeasibility	1100000.00	0.00
	<b>TOTAL</b>	<b>82552564.00</b>	<b>76527439.89</b>

As per our separate report of even date.  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-08-2024

**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

*(Signature)*  
**DIRECTOR**

*(Signature)*  
**HEAD (F&A)**



**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024

**SCHEDULE - 9 - FEES/SUBSCRIPTION'S**

S.No.	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
1	Membership fees	65500.00	72500.00
2	Training fees	274000.00	919750.00
	<b>TOTAL</b>	<b>339500.00</b>	<b>992250.00</b>

As per our separate report of even date,  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239



PLACE: SAHARANPUR  
Date: 19-08-2024

**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD (F&A)**





**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024**

**SCHEDULE - 10 - INTEREST EARNED**

Sl. No.	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
	<b>INTEREST EARNED</b>		
1	On Term Deposite with schedule Bank	4444931.00	1923664.73
2	On Loan to staff	59429.00	67553.00
	<b>TOTAL</b>	<b>4504360.00</b>	<b>1991217.73</b>

As per our separate report of even date,  
**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**


(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239

PLACE: SAHARANPUR  
Date: 19-08-2024



**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD (F&A)**



**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024

**SCHEDULE - 11 - OTHER INCOME**

Sl.No.	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
	<b>OTHER INCOME</b>		
1	Hostel rent	339750.00	260150.00
2	Lease rent	62500.00	62500.00
3	Licence fee	263360.00	266744.00
4	Miscellaneous income	79461.06	552.79
5	Sale of Publication	10000.00	30000.00
6	Sale old Scrap Paper	29846.00	0.00
	<b>TOTAL</b>	<b>784917.06</b>	<b>619946.79</b>

As per our separate report of even date.

**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**

(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239

PLACE: SAHARANPUR  
Date: 19-08-2024



**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD (F&A)**





**Deepak Saini & Associates**  
Chartered Accountants

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

**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 31-03-2024**

**SCHEDULE - 12 - ESTABLISHMENT EXPENSES**

S.No	PARTICULARS	CURRENT YEAR 2023-24	PREVIOUS YEAR 2022-23
	<b>ESTABLISHMENT EXPENSES</b>		
1	Salary & Allowances	44748314.00	47170659.00
2	CPF Contribution	4168648.00	4372158.00
3	Gratuity Paid	4671420.00	3806259.00
4	Encashment of leave	2260505.00	4479664.00
5	Reimbursement of medical expenses	391940.00	821220.00
	<b>TOTAL</b>	<b>56240827.00</b>	<b>60449960.00</b>

As per our separate report of even date.

**FOR Deepak Saini & Associates**  
**CHARTERED ACCOUNTANTS**


(CA Ayush Mittal)  
A.C.A., B.Com  
M. No. 447239

PLACE: SAHARANPUR  
Date: 19-08-2024







**FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE**

  
**DIRECTOR**

  
**HEAD (F&A)**



Deepak Saini & Associates		6/130, Madho Vihar Colony	
Chartered Accountants		Bhuteshwar Mandir Road, Saharanpur	
		Contact - 91- 8439025973	
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 31-03-2024			
SCHEDULE - 13 - ADMINISTRATIVE EXPENSES ETC			
S.No	PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
		2023-24	2022-23
	OTHER ADMINISTRATIVE EXPENSES ETC.		
1	To Lab & Plant Maintenance	4812363.00	4614765.00
2	To Cartage & Freight	6960.00	75926.00
3	To Electricity and water	7834158.00	7670710.00
4	To Repair & Maintenance of Assets	15765707.00	14794473.00
5	To Rent & Taxes	1346144.00	1201880.00
6	To Postage & Telephone & Communication	106974.00	112030.10
7	To Printing & Stationery	2026378.00	1911759.00
8	To Travelling & Conveyance Exp.	3456671.00	2723428.69
9	To Exp.on Seminar & Workshop	457105.00	233009.00
10	To Membership subscription	0.00	59000.00
11	To Audit fees	0.00	41500.00
12	To Hospitality Expenses	301982.00	251353.00
13	To Legal & Professional Exp.	137449.00	405179.00
14	To News Paper Exp.	48453.00	30138.00
15	To Training Expenses	1115118.00	8055.00
16	To Watch & Ward	8277728.00	7093778.00
17	To Bank charges	7760.17	9152.66
18	To Advertisement	701457.00	65000.00
19	To Testing Fee Paid	4400.00	165180.00
20	To Staff Car Maint.	987575.00	944541.00
21	To Hindi Diwas Exp.	66922.00	180177.00
22	To Swachh Bharat Abhiyan Exp.	2630323.00	1968229.00
23	To Software Exp. / Expenditure on IT	725408.00	1025704.20
24	To Paper Ex	269854.00	17942.00
25	To Expenditure on NABL	137263.50	185086.00
26	To Grant in Aid Paid	3770000.00	1664000.00
27	To Honorarium	190000.00	26400.00
28	To National Festival	47973.00	79322.00
29	To Plantation & Gardening / Horticulture	415503.00	55762.00
30	To Interest paid on TDS	0.00	4610.00
31	To International Yoga Day	0.00	2000.00
32	To Electrical Consumable	555421.00	386537.00
33	To Consultancy Fee Paid	3129000.00	100000.00
	TOTAL	59332049.67	48106626.65
As per our separate report of even date.			
FOR Deepak Saini & Associates		FOR CENTRAL PULP & PAPER RESEARCH INSTITUTE	
CHARTERED ACCOUNTANTS			
			
(CA Ayush Mittal)		DIRECTOR	
A.C.A., B.Com			
M. No. 447239		HEAD (F&A)	
			
PLACE: SAHARANPUR			
Date: 19-8-2024			





**Deepak Saini & Associates**  
**Chartered Accountants**

6/130, Madho Vihar Colony  
Bhuteshwar Mandir Road, Saharanpur  
Contact - 91- 8439025973

## **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.)

### **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. 4671420.00 and for leave encashment is Rs. 22,60,505.00 payable to them based on accrual basis done by Central Pulp & Paper Research Institute, Saharanpur

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 31.3.2024 is Rs. 11208850.94 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. 27681260.00 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.29988796.00 Regarding more capital expenditure of Rs. 2307536.00 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**



**Head (Finance & Accounts)**



**(DIRECTOR)**

Date: 19-08-2024  
Place: Saharanpur

**For Deepak Saini & Associates  
Chartered Accountants**



**(CA Ayush Mittal)**  
A.C.A., B.Com.  
M. No. 447239



## STAFF LIST

### SCIENTIFIC STAFF

Scientist F	<ul style="list-style-type: none"> <li>- Dr. K. Singh, M.Sc, Ph.D (Voluntary Retirement as on 31.05.2023)</li> <li>- Dr. A.K. Dixit, M.Sc. Ph. D</li> </ul>
Scientist E-II	<ul style="list-style-type: none"> <li>- Dr. Priti Shivhare Lal, M.Sc., Ph.D.</li> <li>- Smt. Anuradha V. Janbade, M.Sc.</li> <li>- Dr. Nitin Endlay, M.Sc. PGDIPM (PG Diploma in Industrial Pollution Management), Ph.D.</li> <li>- Dr. Sanjay Tyagi, B.E, M.E, Ph.D., Accredited Energy Auditor</li> <li>- Shri Alok Kumar Goel, M.Sc., Certified Energy Manager</li> </ul>
Scientist E-I	<ul style="list-style-type: none"> <li>- Shri Satya Dev Negi, M.Sc., PGDPPT (PG Diploma in Pulp &amp; Paper Technology)</li> </ul>
Scientist B	<ul style="list-style-type: none"> <li>- Dr. Arvind Kumar Sharma, M.Sc, PGDPPT ( PG Diploma in Pulp and Paper Technology), Ph.D</li> <li>- Mohd. Salim, M.Sc.</li> <li>- Shri Kumar Anupam, B.Tech., M.Tech.</li> <li>- Dr. Shubhang Bhardwaj, B.Tech., M.Tech., Ph.D.</li> <li>- Dr. Nitin Kumar, B.Tech, M.Tech., Ph.D.</li> <li>- Dr. Jitender Dhiman, M.Sc., Ph.D.</li> </ul>

### TECHNICAL AND SUPPORTING STAFF

Technical Officer E-I	<ul style="list-style-type: none"> <li>- Shri N.K. Naik , Diploma in Engineering (Industrial Electronics)</li> </ul>
Technical Officer-B	<ul style="list-style-type: none"> <li>- Shri Pankaj Kumar Goley, B. Tech., (Electrical Engineering)</li> </ul>
Library Officer-B	<ul style="list-style-type: none"> <li>- Smt. Sarita Sharma, M.A, MLISc.</li> </ul>
Technical Grade VI	<ul style="list-style-type: none"> <li>- Shri R.K. Kapoor (Superannuated on 31.8.2023)</li> <li>- Shri Dushyant Kumar</li> <li>- Shri Gopal Singh</li> </ul>

### ADMINISTRATIVE AND FINANCE STAFF

Director	<ul style="list-style-type: none"> <li>- Dr. M.K. Gupta, M.Sc., Ph.D. (Superannuated on May 31, 2024)</li> <li>- Dr. L.P. Singh, M.S., Ph.D. (WEF May 28, 2024)</li> </ul>
Administrative Officer	<ul style="list-style-type: none"> <li>- Ms. Barnali Shome, B. Tech. (Chemical Engg.), Graduate Diploma in Material Management (GDMM) Date of joining 23.10.2023</li> </ul>
Section Officer (Finance)	<ul style="list-style-type: none"> <li>- Shri K.V.V.K. Satya Sai, B.Com, C.A Inter (Date of joining 10.11.2023)</li> </ul>



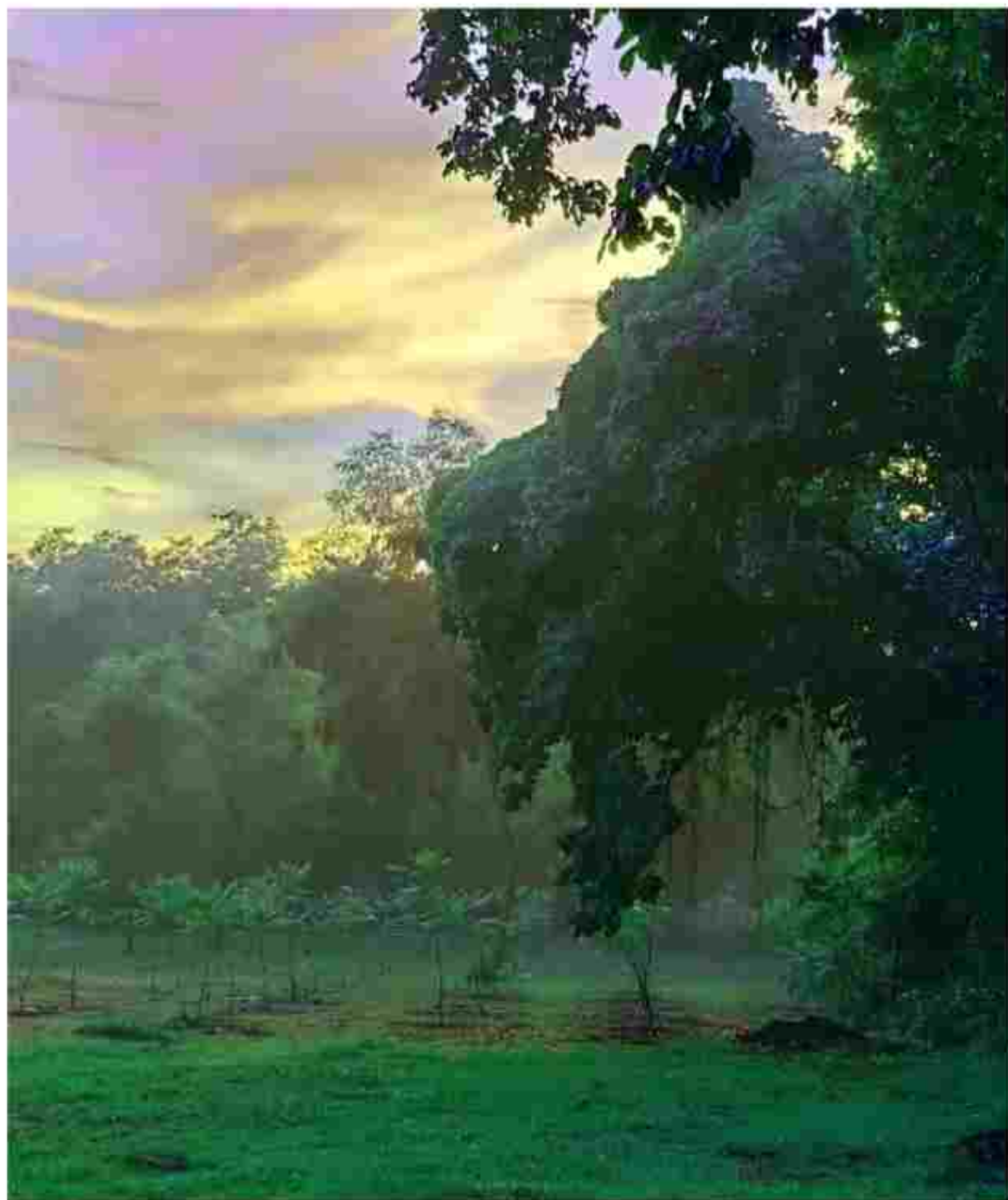


Published by  
**Central Pulp and Paper Research Institute**  
 Saharanpur-247001

**Technical Review**  
 Dr. L.P. Singh

**Compilation and Editing**  
 Dr. Priti Shivhare Lal  
 Smt. Sarita Sharma  
 Dr. Nitin Kumar  
 Dr. Jitender Dhiman





**For further information please contact**  
**CENTRAL PULP & PAPER RESEARCH INSTITUTE**

**DIRECTOR**

**Paper Mill Road, Himmat Nagar, Saharanpur-247001**

**Tel.: (0132) 2714061, 2714062**

**Website : [www.cppri.res.in](http://www.cppri.res.in)**

**E-mail: [director.cppri@gmail.com](mailto:director.cppri@gmail.com)**