

Cess Committee Objective, Focus Areas & Recent Activities

By

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About Cess Committee

- ❑ The Cess Committee , constituted under **Development Council for Pulp, Paper & Allied Industries , Ministry of Commerce and Industry, Government of India** over the years has been supporting various R& D projects and activities being undertaken by various R&D institutes, Paper Mills and Mill Associations.
- ❑ The Cess Committee is chaired by **Hon'ble Joint Secretary, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India**, with representation from various pulp and paper mills, mill associations and R & D institutes.
- ❑ The activities of Cess Secretariat are looked after by **Central Pulp and Paper Research Institute (CPPRI), Saharanpur** with **Director CPPRI** as **Member Secretary**.

Major Focus

The major focus of the Cess funded R & D Projects is to work on industrial relevant and industrially applicable project. In recent times the major projects funded have been in the area of :

- ❑ Raw Material Up Gradation / Preservation,
 - ❑ Energy And Environment,
 - ❑ Technology Development,
 - ❑ Human Resource Development
 - ❑ Waste Paper Recovery and Reuse.etc
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Objective of the Workshop

- ❑ The Development Council for Pulp, Paper and Allied Industries and the Cess Committee observed the need for wide dissemination of information related to outcomes and recommendations of various Cess funded R & D projects for the benefit of pulp and paper mills.
 - ❑ In the same context, a workshop on **Dissemination of Information on Issues Addressed under Cess Supported R & D projects** was organized at Scope Complex, New Delhi in Aug 2011 to disseminate the information related to completed Cess Funded Projects. The workshop attracted over whelming participation from paper Industry.
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Cess Workshop 2011

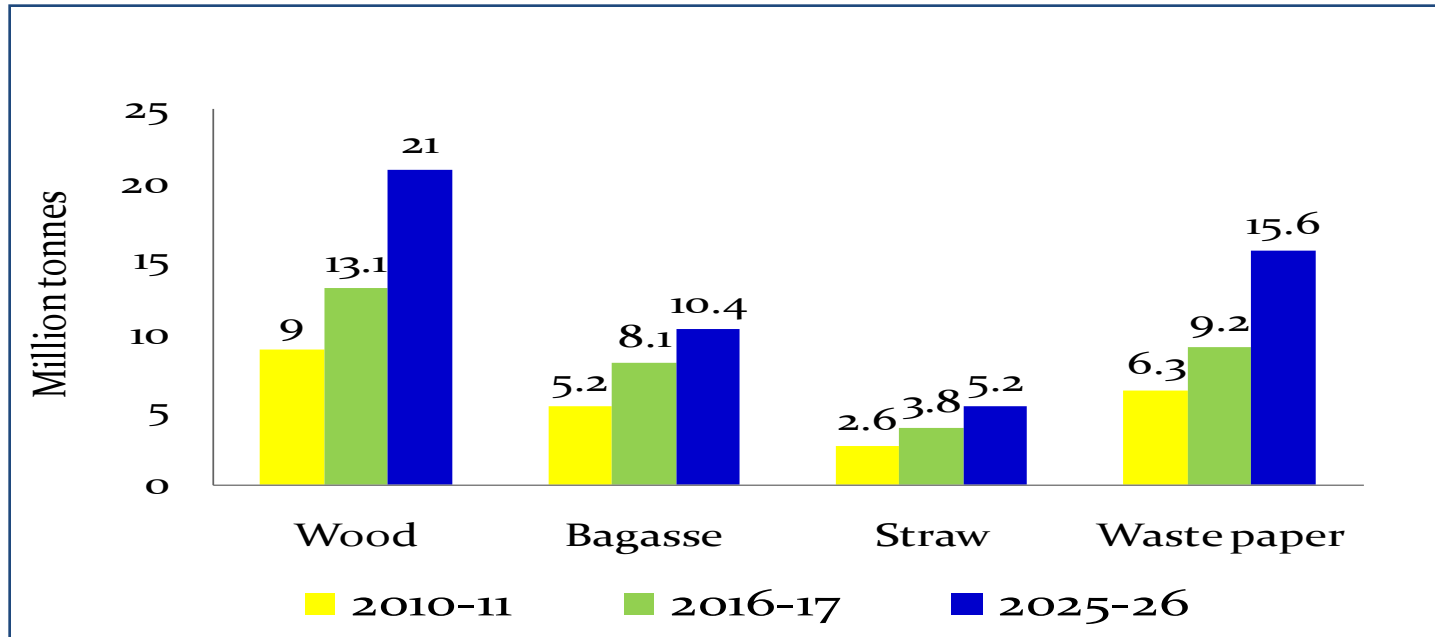


Constitution of Working Group for Pulp & Paper Sector

- ❑ In May 2011, the **Planning Commission of India** constituted a **Steering Committee on the Industry** to draft industries related proposals for the **12th Five Year Plan (2012- 2017)**.

- ❑ Under the Steering Committee (Industry), a sector specific **Working Group for Pulp & Paper** was formed under the Chairmanship of **Secretary (IPP)** to draft suitable **Terms of Reference (TOR)** taking into account the following:
 - The long term goals to be achieved in respect of the sector.
 - The current status of the sector together with problems and focus areas that need to be addressed in order to achieve targets.
 - Strategies for achieving the goals as indicated in the item 1 above.
 - The critical milestones to be achieved within 12th Plan period for attainment of the long term goals.
 - Recommendations on programmes / schemes / measures that are to be initiated, continued or discontinued in the 12th Plan period along with broad budgetary estimates, if any.

Raw material Availability



Requirement of fibrous raw material by Indian Paper Industry up to 2025

Raw material Availability



- ❑ Thrust on revision of forest policy is urgently required so that plantations can be increased by converting around 5-8% of the available degraded land into production forest through corporate involvement and using fast growing species of wood.
 - ❑ Regarding agro based mills, availability of surplus bagasse for paper industry is only 10 million tonnes and difficult to be increased under present operational conditions and policies of sugar mills.
 - ❑ Wheat straw availability is sufficient (22 million tonnes) therefore further expansion should be expected to be based on wheat straw.
 - ❑ Rice straw is available in plenty in various states of the country but appropriate technology needs to be adopted to utilize this raw material.
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- ❑ As per estimates, the Industry imports approx 60-70% of waste paper of its total requirement which needs to be reduced through developing appropriate policy framework to improve the segregation, collection and reuse of waste paper in the country and to evolve a sustainable and workable mechanism for achieving a significant level of recovery of waste paper.

 - ❑ Further there is a need to identify and promote alternate ligno-cellulosic raw materials like groundnut shells, areca nut husk, banana fiber etc. These fibers need to be conditioned to partially replace the imported long fiber/indigenous conventional fibers for manufacturing of different varieties of end products.
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Technology Upgradation / Modernization of Indian Paper Industry



- ❑ The Indian paper industry uses **20 % more raw materials, about 30% more energy, 200% more water & 10% more chemicals** as compared to a modern European mill.
 - ❑ The upgradation in technology and process is therefore necessary for improved competitiveness through quantifiable increase in productivity, quality improvement with reduced cost, improvement in energy efficiency and environmental compliance, safeguards for eco-sustainability of products etc.
 - ❑ Therefore new capacity addition/capacity expansion and revival plan for sick units will be needed to meet the growing demand of paper, paperboard & newsprint in the country.
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- ❑ The cost of expansion and setting up of new units is very high because of the high cost of imported technologies.
 - ❑ The major technology suppliers are located in Europe, Japan and China and the cost of acquiring such machinery, after the addition of substantial custom duties is very high. Therefore leading companies in machinery manufacture should be encouraged to set up plants in India.
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Cess Training Programme on Energy Management- Issues and Challenges, TNPL , November 05-06, 2012





Cess Training programme on Trends in Processing and Papermaking of Recycled Fiber, Kashipur, February 20-21 , 2013.

Energy Conservation and Environmental Compliance



- ❑ The high cost of energy (specially coal) and the proposed stringent revised environmental norms (specially related to fresh water consumption and waste water discharge) likely to be enforced shortly, makes it imperative for the paper industry to adopt energy efficient and eco – friendly technologies, increase automation and control , optimize process operations, increase reuse and recycling of back water and treated effluent, upgrade / modify ETPs , adopt Chemical Recovery System for black liquor management in agro based mills (individual / common) and promote biotechnological applications.
 - ❑ Increased energy efficiency can be achieved by introduction of energy efficient systems at generation, distribution and consumption levels.
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Increasing Trained Manpower Base & Strengthening R & D Infrastructure



- ❑ Based on the current information, the large (wood based) & medium scale (agro based) pulp and paper mills , technical manpower per tonne of paper is around 2.5 on an average while in the small pulp and paper mills (waste paper based) technical manpower per tonne of paper produced is 1.0.
- ❑ The paper industry is presently facing acute shortage of trained manpower particularly in the newly established mills, or mills undergoing expansion and modernisation.
- ❑ Further requirement of manpower for capacity expansion is estimated to be 4% of the existing manpower and another 3% will be required annually to cope with the aging / superannuation of the existing manpower.
- ❑ This translates into requirement of additional skilled manpower in the beginning of 12th Five Year Plan by 3570, which will increase to 4680 by 2017, and 8040 by 2027.

- ❑ As per estimates, about 520 technically trained manpower at the level of B. Tech/ Diploma are needed annually by the Indian Paper industry against which only 316 are made available annually from the existing institutions which conduct various courses in pulp & paper technology in the country.
 - ❑ Thus there is an urgent need for creation of an extensive centre for setting up of infrastructural facilities for HRD & training in the area of pulp & paper to bridge this gap and meet the future manpower requirement of the paper industry.
 - ❑ Further there is a need to infuse adequate financial resources for strengthening of R&D infrastructure and strengthening of capabilities for manufacture of cost effective indigenous machinery or technologies suitable in Indian context.
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Projects Completed Under CESS (57)

- Ecological and Environmental Factors in Paper Industries Vol - I
 - Ecological and Environmental Factors in Paper Industries- Vol- II
 - Ecological and Environmental Factors in Paper Industry – Vol – III
 - Ecological and Environmental Factors in Paper Industries Vol- IV
 - Ecological and Environmental Factors in Paper Industry Vol- V
 - Study on sustained Fiber availability of Paper Industry : Experience of Other developing countries.
 - Biobleaching Enzymatic colour removal from pulp
 - Alkaline Peroxide Mechanical Pulp from Populus Deltoides
 - Data for amendment in stiffness specifications for different paper grade under BIS Standards
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- Evaluation and Improvement of surface properties of newsprint manufactured from recycled fibres
 - Calibration intra-laboratory quality assessment in pulp and paper and allied industries
 - Improving filler loading in the paper manufactured from indigenous fibrous raw materials
 - Development of computer simulation programme for conservation of water in pulp and paper industry by recycling of waste water.
 - Enzymatic improvement in drain ability of wire parts in paper machine
 - Energy performance evaluation and optimization in pulp and paper industry
 - Updating of statistical data for the Indian paper industry
 - Water conservation in pulp and paper industry
 - Utilization of treated effluent from agro based paper mill for crop irrigation
 - Studies on benchmarking / Input Norms for pulp and paper industry
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- Secondary sludge treatment and disposal in pulp and paper industry
 - Demonstration of Enzymatic of pre-bleaching in a pulp and paper mill
 - Colour and TDS Removal and ECF bleach plant effluent
 - Preparation of monograph of different fibrous raw material used by Indian Paper Industry
 - Detoxification of bleach plant effluent for recycle and reuse.
 - Feasibility studies on color removal from mechanical pulping effluents
 - Availability of utilization of waste paper
 - Efficacy of ECF and TCF Bleaching Process on wheat straw bagasse , bamboo and Eucalyptus pulps
 - Technological treatment of waste paper for better utilization
 - Use of Xylanase and ancillary enzymes for pre-bleaching of kraft pulp
 - Studies on socio economic Impact of Agro residue Mills
 - Utilization of lime sludge for value added products and productivity enhancement of lime kilns
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- Participation of Central Pulp and Paper Research Institute in Asian Paper – 2004
 - Oxygen Bleaching study for agro based paper mills
 - Identification of suitable clonal propagated hardwood for higher pulp yield optimum chemical consumption for pulping and suitability for mass multiplication with required advantages
 - Identification clonal multiplication and microbial association of Leucaena Hybrids compared to Eucalyptus and Acacia hybrids for optimizing by land productivity
 - Background and technological trends in Indian paper Industry
 - Global competitiveness of the Indian paper industry
 - Global competitiveness for Indian Paper Industry by Jaakko Poyry
 - Use of wild sugarcane for pulping and paper making commercial and technical feasibility
 - Second dissemination workshop on biotechnological application of enzymes of making paper pulp from green jute kenaf the whole plant
 - Upgradation of quality of bagasse through advance depithing process
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- Implication of the WTO Tariff proposals on Indian Paper and newsprint industry
 - Interaction meet on biotechnology in paper industry - A fresh look
 - Interaction meet on use recycled fibre in paper and newsprint
 - Interaction meet on environmental impact of toxic substances released in pulp and paper industry
 - Demonstration of Enzymatic prebleaching in pulp and paper mill
 - Understanding and control of pitch and deposits in pulp and paper making
 - Optimization of agro residues baling and collection
 - Techno Economic feasibility report of A Central Chemical recovery plant of 240 TPD pulp production for Kashipur Region (U.P)
 - Pulping bleaching and pulp quality
 - Waste paper recycling and energy conservation
 - Utilization of Agro – Residue Fibres in Indian paper industry
 - Sizing and coating
 - Calibration and testing methods
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- Biotechnological applications and environmental management in Pulp & Paper Industry
 - Maintenance & Safety Aspects in Pulp & Paper Industry
 - Development of high ash paper to reduce fiber input as well as cost
 - Development of high fiber *erianthus arundinaceua* (wild cane) clones as alternate sources of fibrous raw material for pulp & paper industry
 - Fiber Modification with enzymes
 - Management of emerging pests and disease of eucalyptus
 - Optimization of alkaline sizing to reduce sizing cost
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