

# Exploration of New Horizon for Paper Industry in India

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**ABSTRACT:**-- *In this era of globalization of Economy Indian Politicians, Social organizations, Ecologists, Foresters, Technocrats & Industrialists have to rise to grab this golden opportunity to promote India as a Leader in Asia in paper production. For this antiquated technology where still we are taking half of the expected pulp yield is to be replaced with economical size integrated paper units-based on social forestry and joint sector plantation on man made forest, utilization of agricultural waste with technological advancement and to make imported waste paper available at reasonable price to mix with indigenous waste paper for more than 200 existing waste paper based units.*

*Factors such as ample available barren land, excessive availability of agricultural waste, tropical climatic conditions suitable for rapid growth of plantation and availability of skilled and unskilled man power, will help to achieve the goal.*

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Prior to the introduction of machine made paper, quite sizable hand made paper industry flourished in our country. However, Industrial production of paper was first commenced in 1867 in India at Serampore in Calcutta. By the end of 2nd world war in 1945 paper production in India was of the order of 1 lac ton per annum. With rapid industrial progress of the country, annual production in India reached to about 22.0 lac metric tonnes. Yet this production is inadequate looking to the vast population, expanding industrial, educational & other development schemes and paper prices have increased more than 50% within last six months. The per capita consumption of paper & paper board in India is 3.2 kg against the world average of 45.6 kg., in which U.S.A. 320 kg., Japan 227 kg., Taiwan 201 kg., Malasiya 161 kg. In per capita paper consumption, we are in the last ten countries of the world.

Development council for Paper, Pulp & Allied Industries & ICICI conducted the study and estimated the deficit of 2.1 Lac tonnes in 1995-96 &

10.2 lac tonnes by 2000-2001. Its very likely that the shortfall in 1995-96 may not be limited to 2.1 lac tonnes but it may be more. The reasons for this excess estimated shortfall are expected export, diversion of light-weight cream wove to newsprint and fall in capacity utilisation due to non availability of raw material.

The availability of the forest base raw material is diminishing all over the world. Even the developed countries with a well planned forestry like U.S.A., Sweden, Canada, are facing the shortage of forest base raw material and their small capacity paper mills are getting closed due to non-availability of raw material, pollution control and uneconomical environments. As a result of this, the paper prices

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in these countries are increasing and therefore India has been able to compete and obtain export orders and can also look forward for handsome increase in export in the coming years.

Due to increase demand of newsprint and decline in import from Russia because of political situation there, sizable quantity of light weight cream wove, may be used as newsprint, contrary to the situation prevailing previously.

In developed countries, the percentage of use of waste paper has increased because of non-availability of forest base material. There, the prices of pulp and waste paper have gone high. Therefore, in India, almost all type of paper mills, even large wood base integrated mills, which were using substantial quantity of imported pulp and waste paper, have to switch-over to local waste paper, while agro based units substituted it with hessian or other suitable pulp. This resulted in low utilization of installed capacity in India.

A country with 90 crores population, still left with 13% forest land, can take a lead to become a leader of the Asia in paper production because of the two fundamental advantages-first the growth cycle of 8 years of tropical plantation against 40 years growth cycle in colder climates and secondly the skilled & unskilled manpower at very low wage structure. But the most gloomy picture is that no big or even small forest base integrated paper unit has come-up in India since last two decade and so would be the case in the decades ahead. The effective installed capacity has stuck up to 10.81 lac tonnes. The reasons for this stagnation are mainly lacunas in forest management, unsuitable forest policy and land-ceiling-act due to which no paper industry can think of its own plantation. Government themselves are also not able to supply the forest base raw material. No State Government and paper unit are able to come out with a solution for constant-supply of raw material either in joint sector, assisted sector or individually on their own. What worst scenario can be thought-of? In the name of ecology and deforestation, politician, social organisation and government segment are not allowing to raise manmade forest, suitable to paper industry. If a suitable and sufficient land is given for social forestry and to industry for plantation and its management is car-

ried-out jointly under State Government's supervision; paper industry will not only get continuous raw material but sufficient employment would be generated to stop the illegal falling of trees. This will make every part of the area, full of greenery with man-made forests, on the land where hardly any tree is seen today. National Newsprint Nepangar has started a programme to assist to raise plantation through social forestry.

Integrated wood base pulp and paper units is a heavy capital investment industry and in India it is in the hands of few big houses who never thought of investing on research for utilising alternatives to bamboo as raw material till it was available to them nor for the alternative to the process where antique pulping & bleaching methods are still adopted for making the paper on imported machines originally designed for long fiber pulp. In 1974-75 when Income Tax slab was 97.7% and Government has given concession on the investment made on Research & Development, some funds was diverted for research by big houses but due importance to this thought was not given by them even at that available opportunity. Still there is no atmosphere in India for Scientist and Technocrats to think to explore in this direction with assured career. What-ever research has been done in India on utilization of alternative raw materials, was forced due to non-availability of bamboo and then later-on even the hard wood. Today the position has become so worse that some of the forest base units are closed down due to uneconomical conditions and remaining once have to go for meeting part of their raw material requirements, from street waste.

When this situation created shortage of paper from 1975 onwards, we had to think of utilising agriculture waste. Consequently many investors, most of them the paper traders found new horizon for investment and resulted in mushroom growth of small & mini paper mills in the country. Another bad luck of the paper industry was that it can be established with a investment as low as Lac rupees and as high as Thousands of Lacs. This created many new investors, consultants and machine manufactures. By 1982, position became so alarming that financial institutions had to stop financing small agro or waste paper based units. But, by that time, more than Rs. 200 crores had already gone in bad debt. Due to

this, there was a lean period for 6 to 7 years, during which many units closed down and no new unit came into being.

In India, which is an agricultural country, so much quantity of wheat, rice sugarcane and others are being grown that even if 5% of its waste is utilised, we can meet not only the requirement of our country but shall be in surplus for export. But due to lack of initiation and absence of research and development work for agro based units either by industries or Government Laboratories; we are not able to extract the best from the fiber, recovery of chemicals, continuous pulping to avoid voluminous handling of raw material and hydrodynamic on wet end of paper machine for cost saving.

Coming on waste paper units, the utilisation of waste paper is low not only in India but all over the world. Now the nature is forcing us to preserve environment and therefore need for greater utilisation is imperative. Thus, the percentage utilisation of waste paper is increased even in forest base countries like U.S.A., Canada, Norway, Sweden etc. and they feel proud of using it. This has resulted in increase in price of imported waste paper in India.

By 1995-96 we estimate to produce about 22% of paper from waste paper including imported waste.

The use of indigenous waste shall remain low and a country like India cannot afford to do so for a long. Low strength due to short fiber length and further reduction in strength, due to unnecessary increasing the brightness of paper are the technical reasons for not able to make good quality of paper with 100% indigenous waste. Small waste paper based units cannot afford to have any provision to mix other pulp except to use imported pulp or imported waste paper but this has become uneconomical due to increase in cost of imports. Today, there is no unit, selling virgin pulp in India which could be used as an alternative.

As stated above there is almost no chance of any wood base unit to come, therefore the total load for increasing the paper production has to be shared by agricultural produce and waste paper. Units based on waste paper pulping required low capital cost and gives rise to minimum pollution, and are economically viable if only substantial supply of raw material is maintained. To encourage these units which are more than 200 in numbers, we have to make the pulp available at reasonable price by import or by putting up a pulp mill to mix some percentage of this with indigenous waste paper to improve the runability and quality of paper.