

Availability of Cellulosic Raw Material for Paper and Pulp in Andhra Pradesh—its Problems and Prospects

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Paper Industry is one of the capital intensive industries. There are at present 57 Paper Mills in the country, which produce 7,53,000 tonnes of Paper and Paper Boards and 38,000 tonnes of Newsprint per year. The total annual production as at present falls short even of the present demand. It is expected that by 1975-76 the total likely demand would be of the order of 16,50,000 tonnes, and by 1980-81, it will be of the order of 24,50,000 tonnes. As against these requirements the total production would not be able to keep pace with the demand unless more number of Mills are started in the country. According to the schemes currently under implementation, at best the production may rise by another 45,000 tonnes. The lack of further investment in this industry has been attributed to the low profit it earns (4 to 6 per cent) as against other industries like, sugar, chemicals etc., which earn profits as high as 10—14 per cent.

2. It may also be noted that of the 57 Mills only 12 Mills produce more than 100 tonnes of paper per day and constitute 72% of the total paper production. Six Mills produce 30-100 tonnes of paper per day and constitute 12% and remaining 30 Mills put together produce 16% of the total production of paper.

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3. Andhra Pradesh has at present two Paper Mills viz: Sirpur Paper Mills and Andhra Pradesh Paper Mills which together produce about 80,000 tonnes of paper per year. The main raw material presently being used by these two Paper Mills is 'Bamboo'.

In addition to the two Paper Mills mentioned above, the Government of Andhra Pradesh have leased out to a new Mill viz: M/s. Straw Paper Mills Limited 10,000 tonnes of raw material per annum made up roughly 8,000 tonnes of hard woods and 2,000 tonnes of Soft Woods (e.g., *Boswellia serrate* (2) *Lanmaea grandis* (3) *Dalpergia Paniculata*) for manufacture of liner Paper. This Mill however has not yet started functioning.

Over the last two years the Paper Mills have used Eucalyptus and some hard woods on experimental basis and have plans to use larger quantities of Hard woods.

4. According to an assessment made a few years back the bamboo potentiality of this State was estimated at 2,45,000 tonnes per annum. Out of this, the total bamboo resources earmarked for the two Paper Mills in existence is of the order of, 1,80,000 tonnes and the balance potential of 65,000 tonnes has been set apart for domestic consumption. Any programme of expansion of production in the existing Mills or setting up of new Paper Mills would be possible only if the availability of raw material

is increased. As things stand, the entire bamboo resources (of natural origin) has been completely allocated and there is hardly any scope of getting more bamboo from the existing forests for these two units leaving aside setting up of new Mills.

5. The Pre-investment Survey of Forest Resources has however, indicated that as against the original estimate regarding availability of bamboos of 44,000 tonnes in Nallamalai Forests, the actual availability would be of the order of 1,30,000 tonnes, in this region. This estimated quantity (subject to availability of final figures) is still not adequate for starting another Paper Industry based on bamboos alone as the raw material.

6. From the foregoing it will be clear that any further expansion of these Paper Mills or addition of a third one with the existing bamboo resources is not possible. The only course left for expansion is to:

- (1) Optimise on exploitation so that all naturally available bamboos are exploited by working hither to untapped areas.
- (2) By utilising a variety of mixed hard woods available round about Paper Mills.
- (3) By using Eucalyptus wood from Plantations raised so far.
- (4) By exploiting the mature bamboo plantations raised so far.
- (5) By creating additional resources by raising large scale plantations

of Eucalyptus and other Fast growing species, and Bamboos and possibility of tropical Pines (where suitable).

7. Out of all the sources of raw material it will be seen that the State's total area under existing plantations is not likely to make any substantial contribution to the total availability. The total extent of the Plantations of quick growing species viz: Bamboo, Eucalyptus raised in Andhra Pradesh upto 1971-72 is 16,782 hectares and it is proposed to raise another 5,209 hecs. of the same plantations during the years 1972-73 and 1973-74.

All this still falls short of the total need. The main stay therefore will have to be—

- (1) Using of the existing mixture of hard woods.
- (2) Creating large scale plantations of species yielding maximum volume per hectare (suitable for pulping) in the shortest possible time.

8. One of the major factors, which influences the costing as far as the raw materials is concerned is the transport of the raw material from Forests to Paper Mills. A study conducted recently in the State regarding the leads over which the existing bamboo resources have to travel to the Mills indicates that out of the total committed supply of raw material of 1,80,000 tonnes approximately 35 per cent is obtained within 100 K.Ms.; 40% between 100 to 200 K.Ms., 27% beyond 200 K.Ms., and 30% of raw material comes from beyond 500 K.Ms.

9. These long leads for the Paper Mills have become inevitable and are being absorbed by the Industry

because of the fact that there are no other alternatives for getting long fibred pulp at rates lower than these. Sri P.S. Kothari has rightly pointed out that of all the costs of Paper manufacture, royalty paid to the Government for the raw material is the least important. In fact at present rates of royalty in the State works out to a bare 5% of the total delivered cost of the raw material.

10. The Government happens to be the sole producer of raw material in its natural state. Government has also been a pioneer in raising plantations of bamboos and Eucalyptus in the state. Any expansion of this planting programme is directly linked with availability of funds and the priorities vis-a-vis other end uses of forests. Wedded as the State is for the multiple use forestry, different factors are taken into account while raising plantations of different species within the available funds.

11. There has been criticism in the Legislature about giving the Bamboo leases to the Paper Mills at very low rates. The existing rates of royalty of the Paper Mills are given below:

Sirpur Paper Mills

- (1) Rs. 3/- per tonne.
- (2) Rs. 5/- per tonne.
- (3) Rs. 6.50, per tonne.

Andhra Pradesh Paper Mills: Rs. 5/- per tonne.

These rates are at present being reviewed by the Government and are likely to be revised.

12. It may also be noted that while cost of finished products i.e., Paper and Paper Boards has constantly risen over the past decade the return the Government got in the shape of the royalties for the raw material supplies has remained

static. Unless there is a greater return, there is no possibility of greater investment by the State, based on purely economic considerations. Further the state has to take into consideration totality of the available resources and the demands made on it by different Sectors. There is also a case made out for the Bamboo mat and basket makers etc., and these classes of societies (though consuming a small extent of the total bamboo production) have an appeal to the public and there is always a tussle between their demand and that of the Paper Mills. It is, therefore, quite likely that Paper Mills will have to pay in future a substantially increased royalty, which may alter their cost calculation. The only way out, therefore, is to raise large scale plantations of Bamboos and other fast growing species within economic radius of the Paper Mills. Who should raise these is another question.

13. The next question is what species should be raised. Naturally this would be based on purely economic considerations. Any species giving maximum financial return would be the choice. The existing hard woods available should be utilised by the Paper Mills and subsequently the same land could be put into use for raising plantations. This would no doubt mean that a substantial acreage will be put into single use forestry i.e., for production of pulp wood and that it would not be available for other uses. Research also may have to be taken upto select the best species, and the best technique to raise it.

14. From the foregoing it would be clear that we will have to draw

up a master plan of development of Paper Industry in which the process of creating new resources will have to be given top priority.

15. Reverting to the question, who should raise these plantations it is worthwhile to note the observation made by the National Council of Applied Economic Research in their publication 'Paper Industry: Problems and Prospects'. "While the Forest authorities are aware of this, one may also consider the possibility of inducing the Paper Industry itself to take to commercial plantations on their own as well as to conduct research and development work on new high yielding species. Since such plantation produce is primarily to be consumed by the Paper Industry, this step should deserve serious consideration by them. In other countries the Paper Industry has developed its own plantations on land leased to them by the respective forestry departments. In a way, the adoption of this measure would lead to a desirable vertical integration in the Paper Industry right from the raw material stage (like that, for example, in steel and cement industries) and, the onus of meeting the raw material requirements would rest squarely on the industry itself. From the forestry authorities' viewpoint, the development of single special commercial plantations may not be the most ideally suited forest cover. Yet, if a plantation yielding about 10 m³. per hectare is laid out in a circular area with a 400 tonne per day paper plant in the centre, pulp wood would not have to be transported for more than 15 Kms. The forest area that would have to be leased out to the Industry would only be about 1 per cent of the present total forest

area in the country. Therefore, the Development of such single species plantations may not be as deleterious as is generally supposed".

16. On the same question of who should raise these Forest resource, N.C.A.E.R. has further observed "the solution suggested is to replace a part of the tropical hard wood forests with man-made forests of selected, desirable species such as Eucalyptus and tropical pines. This inevitably leads to the question of management of forests, who will manage the Forests? Government forestry departments or the Industry? There could be debate on this issue. Forestry officials charged with the development of national Forests claim that it is only the State Forest Departments that can discharge this responsibility within the overall forest policy objectives".

17. However, taking into account the area which would be needed for growing pulpable wood enough to meet the country's needs and also considering the limited success of the State Forest Department in regenerating pulpwood resources in the recent past, the N.C.A.E.R. feels that the objective of manufacturing paper at the least cost would be better served if this responsibility is handed over to the Paper Industry. In this connection, the following observation of an American engineer who was associated with a study of India's export potential of wood and wood products is worth quoting. "The forest departments in the States where pulp mills are located must recognize that the Indian Pulp and Paper Industry is their most potentially for improving the productivity of Indian Forest land, provided this Industry is given full responsibility by being allowed to obtain forest land on long term

lease as is now done in many western countries. In my opinion, the Indian Paper and Pulp Industry will never be competitive in the world market either in price or quality until it is vertically integrated so as to be able to plant, grow and harvest its own pulpwood."

18. "Another aspect of Forest Development in relation to Paper manufacturing should also be noted. In spite of all the efforts to plant eucalyptus and tropical pines, the Indian Paper Industry is quite likely to be forced to rely on mixed tropical hard wood to an increasing extent in the coming years. It is reported that Japan has developed suitable methods for pulping hard woods for manufacturing good quality paper. At present Japan uses hard woods to the extent of 60/65 per cent of its pulping raw material need. One alternative can, therefore, be to borrow the technology from Japan.

"Would the Government policy relating to foreign collaboration admit of such a solution? It is for the industry to take the lead in this matter."

For all this the industry will have to come forward with specific proposals indicating what they want to do and what they expect the Government to do. Since most of the Mills are in the Private Sector and since the ultimate profits would be shared by few, State would be within its rights to insist on a better deal so that the fruits of the Industry ultimately reach the common man.

REFERENCES

1. Paper Industry—Problems and aspects by National Council of Applied Economic Research.
2. Royalty on Pulp Wood—by Sri P.S. Kothari.
3. Survey report by Pre-investment Survey of Forest Resources (Unpublished)