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**NEWSPRINT INDUSTRY IN INDIA THROUGH 3½ DECADES
--- A GLIMPSE**

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Abstract :

The author in this paper traces the growth of the newsprint industry in India. World's biggest and expanding democracy starting from early fifties with the coming of first Newsprint mill - National Newsprint/Paper (NEPA) in end 1955 and Sun Paper a mini newsprint mill around mid sixties, latter ventures which got lot of fanfare and publicity but unluckily bogged down with good activities again in early and mid seventies which culminated in coming up of Mysore Newsprint. Hindustan (earlier Kerala) Newsprint both employing the latest technology of pulping hardwood and the last Tamil Nadu Newsprint/Paper bagasse based coming up in 1985, with a total installed annual capacity of 2.8 lakh tons but leaving still a gap between the galloping demand and the production of newsprint, being filled with imports entailing a huge foreign exchange drainage/expenditure annually disturbing country's balance of payments (BOP). Various other bagasse newsprint projects presently on the scene being Uttar Pradesh Newsprint at Kashipur (U.P.), Rashtriya Fertilizers and Chemicals (RCF) in Dist. Nanded (Maharashtra), Punjab Agro Newsprint at Goindwal Sahib (Near Amritsar). Punjab and Bihar Newsprint with a total capacity of 2.8 lakh tons and uptaking the total installed capacity to 5.6 lakh tons annually as against the rising demand expected to be 7-7.5 lakhs tons in 1992-93 and 9.5-10 lakh tons annually in 2000 A.D. The gap shall have to be filled by planning more newsprint mills judiciously or else depending upon imports meaning not only loss of employment (Which in-country production would have given) and also foreign exchange.

Recommends strongly more newsprint mills based on bagasse, Himalayan conifers (softwoods) (in J. & K. and H. Pradesh), Hardwoods/Bamboo (in M. P.), Deinked News and Kenaf based (in the Kenaf-rich Eastern region) etc. planning for which should start right now. Higher newsprint prices available today should certainly egg the private entrepreneurs and big industry houses and even big newspapers to come forward for investment and helping the cause of free press and democracy.

To sustain such a huge newsprint production meeting the demand in 2000 A.D. and beyond the raw materials (Cellulosic) requirements should not be missed sight of and engage the attention of not only newsprint mill but also the Government and idea of a Newsprint Corporation and also an All India Forest Development Corporation is mooted or else the mills will face chronic shortages in years ahead resulting in closures, idling of men, machines and huge investment and more dependence upon costlier imported pulps again entailing exorbitant foreign exchange expenditure which India can ill afford for all times and ages for newsprint imports and a time has come to pause and ponder, less should it be late.

India's (the world's biggest and expanding democracy) newsprint requirement have been rising from year to year and had risen from 42,500 tons in 1947 to 4.8 lakh tons in 1980-81 and estimated at 5.93 lakh tons (As per Registrar of Newspapers of India-RNI) in 1987-88. The rise in newsprint consumption has been due to increasing literacy/leadership, rising standards of life, ever mounting tempo of industrialisation and over and above the exploding population which has risen from 36.16 crores in 1950-51 to about 80 crores in 1988 and expected to touch 100 crores in 2000 A.D. and 151.3 crores in 2050 A.D. (expected beating even China's -145 crores at the present birth rate (present population of China being over 100 crores - World Development Report 1984).

Newsprint Mills on the Scene:

Table No. 1 shows India's various Newsprint mills - At a Glance. and Table 2 shows - Raw materials and Furnish composition - A Glimpse.

India's newsprint story began in the end of 1955 with the coming up of National Newsprint/Paper Mill (NEPA) and remained the first and the only one till July, 1981. Many schemes such as newsprint mills - Softwoods based by M/s. K.C. Thapar and Bros., in H.P./Punjab; bagasse based with a capacity of 200 tons by Dalmias in Karad Maharashtra; bagasse based with capacity of 200 tons per day in at Bodhan (A. P.) got bogged down due to one reason or the other. The mill in Andhra Pradesh was to utilise neutral sulfite A-Z (Aschaffenburg Zell-stofwerke) process pulping Bagasse. The Government after seeing the failure of all the schemes and finding the demand galloping and waiting for 15-16 years decided to go ahead itself in a big way to meet the upsurge of demand in newsprint

especially and also in writing/printing paper by forming Hindustan Paper Corpn (HPC). with Kerala Newsprint as the star project besides the other projects in Nagaland, Nowgong, Cachar and also taking over a sick paper unit - Mandya National Paper at Balagula, Karnataka in 1974. After a big gap of 27 years the second newsprint mill Mysore Paper's newsprint venture went on stream in July, 1981 with imported pulps and with its own pulps plus some imported from October 1982, and Karnataka State Government has really to be bucked up and congratulated for the bold venture, followed up by Kerala Newsprint, A Government of India's Enterprise, starting up in February end 1982 and Tamil Nadu News-print/Paper (bagasse based) Coming up in mid 1985, having been put up in a record period of 36 months and which is Tamil Nadu Government's very daring/bold venture especially in a field newsprint manufacture from bagasse where all the mills put up in Cuba, Louisiana, Peru, Mexico, and Argentina, Indonesia had met with lot of problems/failures and some successes with higher costs and poor product quality such as poor newsprint Capacity, poor printability and show-through problems and usage of fillers/clay and/or imported mechanical pulps (Stone groundwood, Thermo-mechanical pulp etc. etc.) on regular basis.

Sun Paper can be called mini Newsprint mill with a capacity of about 15,000 tpy and located at Cheran Mahadevi (Dist. Tirunelveli, Tamil Nadu) put up in mid sixties, is helping in its own way in alleviating the country's newsprint shortages and the furnish is 45% Chemi Mechanical Pulp (Odai-Hardwood), 20% Chemical Pulp, 15% Waste paper, 10% Gunny Waste/Waste cotton and 5% Fillers.

Other newsprint projects which had been there in the news very much are :

Tirupati Newsprint : is was based on waste newspaper (old) and was to come up at Champa near Bilaspur (Madhya Pradesh) having a capacity of about 80,000 tpy costing Rs. 90 crores and was to go on stream in mid 1986. Beloit International Corporation U.K. were the consultants for this and 40% of the total process engineering and equipment were to be imported from U.K. and balance indigenously. Export Credit and Guarantee Corporation of U.K. was lending Rs. 50 crores towards supplies and services from Great Britain at a concessional rate of interest. The Government had also issued a Letter of Intent but the project unluckily did not come up and was a great set back to furthering of newsprint industry.

Karnataka Newsprint : it was a bagasse based project with a capacity of 9,000 tpy costing Rs. 4.46 crores, and was to come up at Nanjangud (Dist. Mysore) going on stream in mid 1985. It was to use Chemi Thermo Mechanical Pulping (CTMP) process which had been developed by Japanese in collaboration with ASRCT, Thailand and RFD

Ministry of Agriculture and Co-operatives, Bangkok and would have been a new break-through in newsprint technology of especially pulping bagasse but unluckily this also failed to come up.

Century Pulp and Paper- it was to manufacture 20,000 tpy newsprint besides 20,000 tpy rayon grade pulp and 20,000 tpy writing/printing papers. But the scheme of making newsprint was unluckily dropped. It is located at Lalkua, (Dist. Nainital) U. P.

Pudumjee Pulp and Paper : it had also plans of putting up a deinked newsprint mill based on old waste newspapers with a capacity of 30,000 tpy but this also did not materialise.

Somani's Newsprint Project : It was to come up in Baster (M.P.) having a capacity of 50,000 tpy costing Rs. 100 crores and had the backing of M.P. Government but this scheme also failed to come up.

Baroda Rayons Newsprint Project : based on deinked newsprint with a capacity of 50,000 tpy and costing Rs. 65.7 crores and located at Mosru (Dist. Ratnagiri) Maharashtra but it also did not come up after having been in the news for quite a good time.

Very many other proposals for deinked newsprint manufacture at Jalgaon (Maharashtra), in Orissa, in Andhra Pradesh, Tamilnadu, Kerala etc. etc. were there in the news but all these have remained only on paper.

Coming up of all these deinked newsprint schemes mooted from time to time was hindered by non-availability of loans/funds from the financial institutions which is really very surprising as deinking of newsprint is being done worldwide and is an accepted proposition with technology well established and availability at hand of well proven and newer designs equipment and machinery from a number of suppliers such as Sunds Defibrator, Voith, Beloit Tampella, Lamort Krofta etc. etc.

Various other newsprint projects presently on the scene:

Presently four more newsprint projects based on bagasse are very much on the scene and also being followed up vigorously and future 5-7 years shall see them coming up and adding greatly to the snailing newsprint productivity of the country and will go a long way in meeting the mounting demand and substantially reducing the imports and also resulting foreign exchange drain as newsprint prices are being hiked every now and then which would mean a fatter import bill - a big problem needing attention right now.

Rashtriya Chemicals and Fertilizers, Bombay is putting up alongwith Maharashtra Industrial Development Corpn. (MIDC) a newsprint project in Dist. Nanded (Maharashtra) based on bagasse with a capacity of 100,000 tpy costing about Rs. 300 crores as a diversification

campaign and in conjunction with a sugar mill. Sashasayee Paper Board Project and Consultancy Ltd. (SPB-PC) signed up for completing the feasibility study in mid March, 1988.

Utter Pradesh Newsprint Project : is being put up by National Newsprint and paper Mill (NEPA) being located at Kashipur (U.P.) have a capacity of 90,000 tpy at a cost of around Rs. 314 crores and will be going on stream in another 4-5 years. It was earlier to be put up by Hindustan Paper Corpn. (HPC) but latter ministry asked NEPA to follow and execute the project.

It will most probably be based on a newsprint furnish of 60% chemical pulp (bagasse) and 40% chemi mechanical pulp-CMP (Eucalypt-planatation grown) which had been advocated by Sunds defibrator, Stockholm, Sweden after lot of experimentation and research work in their R & D Centre and put forward in their papers : (1) Newsprint from Bagasse Pulp- Limitations and possibilities (2) Newsprint from Bagasse and Hardwood pulps - A Report from a pilot plant Trial and presented at ATCP Meeting in Mexico City in May, 1981 and 1982 (Authors Lowgren, U. Ryrburg K.G. and Falk B.O.) They were of the opinion that this newsprint furnish will give newsprint with satisfactory and fully acceptable strength and quality for breakfree runnability at the paper machine and the high speed printing presses too. But have somewhat higher print through than Scandiavian Newsprint and also higher ink requirement in both letter press and offset. For satisfactory opacity filers clay shall have to be employed on regular and sustained basis which will not be without numerous dis-advantages.

A detailed project report (DPR) made by NEPA had been submitted to the Government. Clearance from the Ministry of Environment and Forests has still not been given as Nainital Dist. had been declared a protected district where no pollution creating industry can be set up. U.P. Government has committed for all the raw materials and power and U.P. State Pollution Control Board has also given a provisional No Objection Certificate for the same.

Newsprint Project in Punjab : Punjab Agro Newsprint is being set up at Goindwal Sahib (near Amritsar) with a capacity of 66,000 tpy costing Rs. 240 crores. Panjab Agro Industries Corporation (PAIC) is behind this venture and it was formally inaugurated by the Prime Minister Shri Rajiv Gandhi on September 21, 1988.

Bihar Newsprint Project : it is expected to be having a capacity of 100,000 tpy and costing Rs. 300 crores. Possibly World Bank aid is being arranged by the State Government. Feasibility study is under way.

Intergration of new newsprint mills (Bagasse) with the sugar mills will be beneficial for both are result in savings, improved efficiencies and energy too and besides will be creating a great potential of employment. In our country luckily ample supplies of Bagasse are available which sugar mills have to spare in return for Coal to be supplied by the Newsprint/Paper Mills

All these bagasse based projects when in full production by 1993-94 will add another 3.56 lakh tons to the already existing newsprint mills production of about 3.0 lakh tons (including 20,000 tons a year from Rayala-seema Paper) uptaking it to the 6.56 lakh tons level annually only and hence arises the dire need of more and more newsprint mills in the country based on a variety of raw material such as bagasse, Himalayan conifers (spruce, Fir and Pine - 100% TMP/CTMP mills), bamboo/hardwoods, deinked news and kenaf based (especially in the eastern ragion as well as Tamilnadu) today or tomorrow sooner or later and earlier the better.

The future newsprint mills so as to meet the demand in 2000 A. D. would require planning right now much in advance and could be :

Raw Material	State	Capacity tpy
Hardwood/ Bamboo	Madhya Pradesh	90,000
Hardwood/ Bamboo	Assam	80,000
Deinked Newsprint	West Bengal	60,000
Deinked Newsprint	Maharashtra	60,000
Deinked Newsprint	Andhra Pradesh	50,000
Kenaf* based	Eastern region	90,000
Deinked Newsprint	At four existing newsprint mills	60,000
Bagasse based	Uttar Pradesh	60,000
Softwood** based	J & K	45,000
Softwood** based	Himachal Pradesh	45,000
		640,000

*3 mills with a capacity of 30,000 tpy.

** 100% TMP/CTMP/ News print mills with 0% long fibres chemical pulp.

All the mills suggested above if followed very closely and put up shall give an annual production of about 6.4 lakh tons newsprint uptaking there by the total installed capacity to about $6.56 + 6.40$ lakh = 12.96 lakh tons and taking the capacity utilisation at 80% would mean a production of 10.37 lakh tons annually by 2000 A.D. with almost the production matching very well the demand and making nil the imports and thereby making the country self sufficient in newsprint eliminating the exorbitant foreign exchange expenditure/drain affecting the balance of payments of the country.

This huge production uptake/capacity addition for the next 12 years shall be requiring a total expenditure of 1200-1250 crores approx. and resources shall have to be provided at the rate of 100-120 crores annually and even foreign aid/World Bank air etc. etc. shall have to be explored and sought for. It would be in the fitness of things to have a Task force for the newsprint sector which is as important as cement, steel, fertilizers, oil etc. etc. being food for the democracy. This stupendous task shall not only require the government efforts but also the private sector and the newspapers for whom the newsprints/shall be meant for and who have been silent all along criticizing the quality of indigenous newsprint and calling the prices as highest in the world without realising the very pangs of the newsprint mills-- sky high projects costs, rising prices of all inputs from A to Z, unavailability of cellulosic raw materials at economic prices and in sustained quantities, rising wage bill and the slim profit margin--high interest rates on the loans and long gestation period etc. etc.

Raw Materials

Raw materials especially the cellulosic--bambee, etc reed hardwoods, etc. etc. the heart of the newsprint mills shall have to be taken care of in view of the present mills already facing the pinch and also the new mills suggested and being planned so as to have enough newsprint the food for newspapers and the newspapers being a must for expanding democracy or else a head-on-collision in the years ahead and in not too distant future - about 2000 A. D. when worldwide famine/crisis of raw materials has been predicted. We shall have to go in for large scale plantation of bamboo, reed, hardwoods and even softwoods especially pine of different varieties as it has a maturing cycle of 20-25 years unlike other softwoods (Spruce, Fir...) which take 70-90 years to mature.

Plantations should no longer continue to be the responsibility of the government but also the user mills which be given enough land for captive plantations and which many of the paper and newsprint mills have been demanding for quite a long time. and we have got luckily enough of land lying un-used and that could be safely used for the plantation and which would not create only the raw materials for the newsprint, but employment too.

Social forestry already taken up in various states and giving dividends need be followed up with more vigour, zeal and efforts. Besides in the forestry sector more intensive and improved/latest silvicultural practices, fertilization of forests etc. etc. can be followed with a view to having not only increased quantity but also improving the quality i.e. super trees.

In order to have enough raw materials for our use and also for the posterity we could go in for

- Large scale plantations of fast growing hardwoods, light density, light colour, which are more suitable for mechanical and chemi mechanical pulping.

- Planting more suitable/desirable species after exhausting the mixed hardwood stands by exploiting mixed hardwoods pulping concept

- Exploiting the Himalayan conifers the A-1 and excellent raw materials for newsprint using the recent, new and novel and revolutionary methods of logging and wood handling- balloon logging, helicopter logging, hydraulic chip pipe lining, cable and aero-crane logging etc., etc., and the newer methods of pulping TMP, CTMP and SCMP and putting up 100% TMP/CTMP mills in Himachal Pradesh and Jammu and Kashmir causing no air pollution and minimal water pollution.

- Utilising Kenaf (*Hibiscus Cannabinus L*) available in plenty in our country for newsprint manufacture. Lot of work in the very regard has been done in USA, Australia and India (CPPRI) too. Besides Voest Alpine, Austria has done lot of research work with Kenaf and come up with either 100% CTMP or 80-90% CTMP Kenaf and 10-20% Kraft as the newsprint furnish.

World's first Kenaf newsprint mills is coming up near McAllen, Texas, U.S.A. having a capacity of 215,000 tpy and cost \$ 405 million. Partner with Kenaf International is bakerfield Californian. Under a joint agreement KI and Canadian Pacific Forest Products have been studying KI based newsprint, running trials at Newspapers in nearly 1988. KI harvesting techniques had been planned for year end 1988. After environment clearance is completed and engineering specifications ready, construction will start late 1989 or early 1990.

Urgent Measures for uptaking Country's Newsprint Productivity:

- Uptaking the productivity of all the existing four newsprint mills on a war footing with no dilly dallying at all.

- Putting up the new newsprint projects - bagasse at utmost possible speed adhering to the set erection/construction schedule using CPM/PERT and a close vigil and a big follow up.

-- Encouraging even mini newsprint project with a capacity of 50-60 or even 100 tpd by sugar mills themselves.

-- Putting up mini Newsprint Mills on the very pattern of Sun Paper Mills (Tamil Nadu).

-- Putting up Kenaf based News print- Mills either mini or maxi.

-- Putting up 100% TMP Newsprint mills softwoods based (spruce fir) in Himachal Pradesh, Jammu and Kashmir and North Bengal.

-- Putting up 100% CTMP Newsprint Mills based on Pines which have been planted in large quantities in many states, or can be planted and the newsprint mills on the very model of Australian Newsprint Mill Albury, Australia.

-- Putting up bagasse based Newsprint Mills in other bagasse, Cane sugar rich states.

-- Putting up 70-75% CMP hardwood and 25% CP bamboo newsprint mills in Madhya Pradesh and Assam too. (A newsprint mill in Assam is a very big must as they have to depend upon the newsprint supplies from extreme south or Madhya Pradesh, Central India). At Nowgong and Chachar Paper Mills one Paper Machine out of the two could be converted to making newsprint and besides a CMP Plant also could be added. Hardwoods could be *eucalypt gmelina arborea*, *aspen*, *poplar*, *willow*, *leucaena leucocephala* (subabul-wonder tree etc. etc.)

-- Making it compulsory for the present newsprint mills to go in for deinking units with a capacity of 50-70 tons per day so as to utilise the incountry available waste and also reducing the pressure/strain on the virgin raw materials besides using imported waste and old news and also using the extra paper making capacity available on their newsprint machines.

-- Putting up deinked newsprint mills with a capacity of 150-200 tpd based not only on indigenous old and waste newspaper but also imported which is cheaper.

In order to have a still more effective control and vigil on the working of the four newsprint mills and also expediting the coming up of the new newsprint projects already in the planning stages-in the pipeline and also to plan much well in advance the other projects suggested herein it would be in the fitness of things that the Government declares newsprint a 'priority sector' forms without any second thoughts a "Newsprint Corporation of India" and also at the same time a "Forest Development Corporation of India" to look after the needs of not only the present but the future newsprint mills. The task is very gigantic, no joke and would require herculean efforts of a very dedicated team working day in and day out and meeting not only the needs of raw materials and also newsprint which is the life line of newspapers and which in turn are the heart and soul of democracy- World's largest and expanding too.

Let us all join hands. The government, the private sector, big industry houses and the newspapers who have been very silent unlike countries abroad and making newsprint production a peoples' movement and mills put up not in public sector but in the joint, co-operative sector too, as newsprint is a commodity consumed by the people.

Newsprint consumption has been rising, is rising and shall continue to rise and it is high time for all of us to rise to the occasion, plan and plan well in time rather in advance, increase newsprint productivity to the level of demand without dilly dallying and any second thoughts and it is a field where we have lagged very much even after 42 years since Independence.

Summing up it can be said from the time - year 1955 when the country's first newsprint mill NEPA came up with a gap of 25-27 years when in eighties beginning and mid three mills came up one after another and the period was very exciting and it is expected that the coming decade shall still be more interesting in case newsprint schemes in hand and various others suggested followed up with utmost vigour and more than 100% efficiency.

TABLE NO. 1

INDIA'S VARIOUS NEWSPRINT MILLS — AT A GLANCE

No. Mill Location	Cost Rs. in crores	Pulping processes	Plant suppliers	Paper Machine	Technical Know-how Consultants	Start up Year
1. National Newsprint/ Paper Mills Ltd. NEPA NAGAR (M.P.)	24 + 65 (for expansion to 84,000 tpy)	Groundwood (Salai) Cold Soda (Bamboo) Chemical Pulp (Bamboo)	Great Northern Grinders USA Voith/Utkal Digesters (Chicago Bridge &Wartsila Iron Co.) Washing/Bleaching IMPCO, USA SUNDS DEFIB- JM Voith GmbH RATOR, Sweden Germany /BHPV Digesters Hindustan Dorr Oliver Washing/ Bleaching. CE BAUER, USA Utkal & LT Hitachi Zosen Japan Hindustan DorrUK. Oliver Beloit, USA Sunds Defibrator Walmsley UK	Pusey & Jones USA (PM I) &Wartsila Finland (PM II)	EBASCO, USA	End 1955
2. Hindustan News- Print Ltd. Newsprint Nagar, Kerala	157.80	Chemi Mechanical Eucalyptus Chemical (Reed/ Bamboo Eucalyptus				
3. Mysore Paper Mills Ltd. Bhadravathi Karnataka	269.0 (incl. Sugar mill cost)	CSRMP Eucalyptus Chemical Pulp (Bamboo) Chemical Pulp (Bagasse) washing & Bleaching			Sandwell USA DCPL Calcutta	End Feb. 1982
4. Tamil Nadu Newsprint/ Paper Ltd. Pugalur Dist. Trichy Tamilnadu	240.0 World Bank aid US \$ 100 million)	TMP/CMP (Bagasse) Chemical Pulp Bagasse Chemical Pulp (Eucalyptus)			Jakko Poyry Finland Beloit Walmsley Beloit Walmsley Beloit Walmsley	1981 Mid' 85

RAW MATERIAL AND FURNISH COMPOSITION OF NEWSPRINT MILLS A GLIMPSE
TABLE No. II

No.	Mill Location	Raw Materials	SGW (Stone Ground-Wood	CS (Cold Soda)	CP (Chemical Pulp)	Paper Cutt-ings	*CMP (CS)	**RMP (CS)	TMP	IMP
1.	National Newsprint/ Paper Mills Ltd. NEPA NAGAR (M.P.)	Bamboo	Salai	a) 60	40					
			(Bosewellia serrata)	b) 50 c) 30	15 28	4				9
			Eucalyptus hybrid/ grindis	a) b)	30 23-24		*70 *76-77			
3.	Mysore Newsprint Bhadravati (Karnataka)	Bamboo	Eucalypt/ hybrid & other hardwoods	a)	30 28		** 70 **36		36	
								50*** (B)		
4.	Tamil Nadu Newsprint/ Paper Mills Ltd. Pugular (Dist.Trichy tamilnadu)	Bagasse	Eucalypt	a)	15-20 (E) 30-35 (B) 18 (E)				15*** (B) 38	
				b)	29 (B)					

Contd.

- B — Bagasse
- E — Eucalypt
- IMP/ — Imported Mechanical Pulp
- ICP — Imported Chemical Pulp
- CS — Cold Soda
- CMP — Chemi Mechanical Pulp
- RMP — Refiner Mechanical Pulp

(IMP is being used by No. 1,2 to a lesser extent and by 3 & 4 Newsprint mills to a greater extent because of shortage of power or some other reasons/ exigencies. ICP is used by No. 3 Newsprint Mill due to shortage of bamboo).

*** TMP + CMP (Bagasse). Tamil Nadu Newsprint is using (and even based on/ designed) about 50% CP i.e. Eucalyptus/Bagasse which is by far the highest and record percentage being used in the newsprint by any newsprint mill in the world, which though would provide better runnability at higher paper machine speeds but would be very costly, delaying returns on the investment (ROI) which is as high as Rs. 240 crores. Increasing of Mechanical Pulp beyond 50% would be the penacea of the old malady not only in terms of improved quality but profitability too.

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