

Table II-2 GDP IN THE WORLD (1963-95) (2)

(Unit: Billion in 1975 US\$)

COUNTRY	BASE YEARS										1983 AND PROJECTIONS			ANNUAL GROWTH 1975/83
	1963/65	1966/68	1969/71	1972/74	1975/77	1978/80	1981	1982	1983	1988	1995			
<b>EAST EUROPE</b>	688.0	788.2	893.7	1078.8	1161.9	1253.9	1284.0	1302.8	1334.4	1550.8	1918.3	3.1%		
Bulgaria	11.1	13.5	15.3	17.3	19.8	20.6	21.4	22.4	23.0	27.0	35.0	3.5%		
Czechoslovakia	37.7	42.2	46.0	50.8	55.5	59.1	60.1	60.0	61.3	72.0	87.5	3.0%		
East Germany	45.9	50.4	55.3	60.7	67.3	72.3	77.6	79.5	83.0	95.0	119.0	3.0%		
Hungary	17.6	19.8	21.0	23.1	24.9	26.6	27.4	28.1	28.1	32.5	41.5	3.3%		
Poland	49.3	57.2	63.2	77.2	89.1	93.2	80.2	75.8	79.3	101.0	130.0	4.2%		
Romania	21.0	28.1	29.9	38.3	43.7	49.6	50.7	52.0	53.8	65.0	84.0	3.8%		
USSR	465.6	556.1	636.0	731.7	824.6	887.9	918.9	937.3	957.9	1100.0	1345.0	2.9%		
Yugoslavia	19.2	21.9	25.9	30.5	35.6	42.9	45.7	45.9	46.0	56.0	73.0	3.9%		
Other East Europe	0.6	0.8	1.0	1.2	1.4	1.7	1.8	1.8	1.9	2.3	3.3	4.5%		
<b>AFRICA-MIDEAST</b>	180.3	211.7	261.9	331.9	400.3	448.8	477.4	485.5	493.2	579.8	801.0	4.1%		
Egypt	7.9	9.1	9.8	10.7	13.5	17.3	20.7	21.6	21.4	24.4	42.0	4.6%		
South Africa	22.2	26.3	30.7	34.6	37.9	41.3	46.2	45.6	45.6	52.0	69.0	3.5%		
Israel	5.2	6.2	8.4	11.1	12.3	13.5	14.5	14.6	14.8	16.5	21.0	3.0%		
Turkey	17.9	21.8	26.1	32.2	39.6	41.0	42.7	44.6	46.8	54.0	75.0	4.0%		
Other Africa-Mideast	127.1	148.4	186.8	243.3	297.0	335.7	353.3	358.0	361.7	427.3	594.0	4.2%		
<b>ASIA</b>	435.3	549.3	712.9	860.7	981.8	1170.4	1285.6	1328.7	1383.4	1674.6	2264.1	4.2%		
China	77.1	91.3	119.7	152.2	176.9	222.7	245.2	254.9	265.0	345.0	510.0	5.6%		
India	59.7	63.9	75.0	79.4	96.4	106.9	118.2	120.6	128.4	150.0	185.0	3.1%		
Indonesia	15.4	16.8	20.8	26.7	32.8	41.1	48.1	49.2	51.2	62.0	84.0	4.2%		
Japan	209.1	288.9	391.9	477.5	525.2	610.8	666.3	688.1	712.1	830.0	1085.0	3.6%		
Malaysia	4.8	5.7	6.6	8.5	10.3	13.0	15.0	15.7	16.5	21.0	30.0	5.1%		
Philippines	7.2	8.3	9.6	10.5	12.0	14.3	16.4	17.5	18.3	23.0	33.0	5.0%		
Polistan	8.8	10.2	11.8	13.9	16.8	20.2	22.1	22.7	22.9	28.0	39.0	4.5%		
South Korea	2.2	2.4	3.1	4.1	5.2	6.7	8.1	8.4	8.4	10.0	13.0	5.0%		
Taiwan	5.7	7.6	10.2	14.0	17.3	23.4	28.3	27.3	29.2	38.0	65.0	5.0%		
Thailand	6.4	8.3	10.4	12.8	15.9	20.0	22.4	22.4	24.7	32.5	46.0	5.3%		
Other Asia	33.9	38.9	43.8	48.0	54.9	66.2	73.8	75.9	78.5	98.6	134.1	4.6%		
<b>OCEANIA</b>	63.2	72.7	86.1	98.4	106.2	113.6	120.7	120.7	121.4	137.0	172.8	3.0%		
Australia	52.6	60.9	73.0	82.9	90.1	97.4	103.6	103.6	103.8	117.5	150.0	3.1%		
New Zealand	9.4	10.3	11.4	13.1	13.8	14.4	14.4	14.4	14.8	16.3	18.5	1.9%		
Other Oceania	1.3	1.5	1.8	2.4	2.3	2.6	2.7	2.7	2.8	3.2	4.3	3.6%		

Source: WORLD-Product-CASTS SUMMARY-ECONOMIC OUTLOOK

Table II-2 GDP IN THE WORLD (1963-95) (3)

(Unit: Billion in 1975 US\$)

COUNTRY	BASE YEARS										1983 AND PROJECTIONS			ANNUAL GROWTH 1995/83
	1963/65	1966/68	1969/71	1972/74	1975/77	1978/80	1981	1982	1983	1988	1995			
WORLD	1178	1502	1413	1541	1607	1706	1718	1696	1703	1832	2110	1.8%		
NORTH AMERICA	5659	6344	6652	7199	7432	8026	8095	7843	8014	9001	10763	2.5%		
Canada	4965	5570	6123	7002	7459	7961	8165	7711	7730	8969	10893	2.9%		
United States	5729	6424	6707	7220	7430	8033	8088	7857	8044	9004	10749	2.4%		
LATIN AMERICA	739	861	962	1058	1208	1310	1330	1282	1245	1227	1392	2.1%		
Argentina	1127	1291	1443	1533	1556	1556	1452	1360	1366	1375	1549	3.1%		
Brazil	833	668	814	1034	1284	1420	1405	1388	1363	1404	1824	2.5%		
Chile	840	904	931	931	867	1042	1152	970	961	1089	1444	3.5%		
Colombia	413	439	483	574	574	634	647	641	645	708	868	2.5%		
Mexico	1029	1149	1257	1389	1466	1661	1845	1771	1656	1724	2075	1.9%		
Peru	708	749	777	851	889	855	846	829	709	791	962	2.6%		
Venezuela	1900	1987	2081	2178	2411	2436	2288	2239	2130	2171	2429	1.1%		
Other Latin America	687	712	755	810	839	882	869	836	618	654	977	1.5%		
EUROPEAN COMMUNITY	3708	4097	4682	5173	5440	5930	5976	5984	6013	6789	8278	2.7%		
Belgium	4239	4664	5419	6264	6557	7066	7137	7188	7181	8100	10049	2.8%		
Denmark	5444	6280	6933	7515	7801	8374	8379	8433	8491	9493	11207	2.1%		
France	4217	4763	5484	6247	6893	7310	7397	7495	7500	8167	9882	2.4%		
Greece	1241	1487	1848	2202	2395	2652	2635	2606	2592	2990	3879	3.4%		
Ireland	1824	1987	2290	2532	2660	2902	2971	2971	2952	3397	4103	2.8%		
Italy	2370	2717	3185	3456	3577	3971	4048	4023	3956	4717	5798	3.2%		
Luxembourg	4843	5112	5821	6763	6647	7174	7131	7040	6954	7973	9857	3.0%		
Netherlands	4212	4678	5400	5975	6606	6989	6871	7040	6820	7517	8910	2.3%		
United Kingdom	3299	3532	3757	4089	4260	4516	4402	4472	4546	5044	6000	2.3%		
West Germany	4971	5380	6200	6785	7092	7867	8035	7954	8066	9344	11681	3.1%		
WEST EUROPE (excl. EC)	3020	3359	3842	4369	4539	4781	4899	4900	4941	5413	6660	2.5%		
Austria	3218	3590	4181	4877	5248	5747	5959	6025	6077	7105	8874	3.2%		
Finland	3512	3843	4617	5678	6800	8394	8800	8834	8979	10000	12644	3.0%		
Norway	4789	5367	5822	6556	7475	8460	8627	8748	8731	10119	12644	3.1%		
Portugal	897	1072	1306	1638	1632	1825	1906	1961	1958	2297	2909	3.4%		
Spain	1759	2039	2380	2798	3005	3110	3111	3132	3171	3350	4286	2.5%		
Sweden	6448	6957	7739	8336	8795	9059	9208	9247	9409	10180	12411	2.5%		
Switzerland	7071	7492	8376	8948	8522	8932	9358	9125	9100	10076	11729	2.1%		
Other West Europe (excl. EC)	1893	2167	2359	2683	3264	3760	3946	3859	3706	4466	6136	4.3%		

Source: WORLD-Product-CASTS SUMMARY-ECONOMIC OUTLOOK

Table II-2 GDP IN THE WORLD (1963-95) (4)

(Unit: Billion in 1975 US\$)

COUNTRY	BASE YEARS										1983 AND PROJECTIONS			ANNUAL GROWTH 1995/83
	1963/65	1966/68	1969/71	1972/74	1975/77	1978/80	1981	1982	1983	1988	1995			
<b>EAST EUROPE</b>	1917	2195	2425	2721	2997	3158	3187	3208	3261	3662	4327	2.4%		
Bulgaria	1366	1424	1601	2003	2257	2333	2413	2458	2492	2784	3365	2.5%		
Czechoslovakia	2111	2978	3212	3485	3719	3884	3929	3902	3975	4571	5401	2.6%		
East Germany	2893	2864	3239	3573	4004	4319	4636	4751	4867	5723	7212	3.5%		
Hungary	3736	1922	2040	2210	2346	2484	2561	2622	2633	2995	3773	3.0%		
Poland	1583	1790	1937	2312	2592	2643	2235	2092	2168	2444	3250	3.4%		
Romania	1109	1368	1476	1744	2037	2249	2269	2312	2375	2766	3394	3.0%		
USSR	2041	2356	2619	2928	3211	3371	3433	3471	3519	3901	4844	2.2%		
Yugoslavia	995	1103	1273	1456	1652	1935	2034	2026	2020	2373	2949	3.2%		
Other East Europe	358	407	462	511	569	638	643	647	654	692	867	2.4%		
<b>AFRICA-MIDEAST</b>	466	506	575	671	743	766	768	758	747	768	884	1.4%		
Egypt	273	293	294	299	355	420	477	505	532	571	700	2.3%		
South Africa	1866	1266	1367	1424	1449	1449	1533	1471	1432	1444	1405	1.0%		
Israel	2099	2278	2875	3403	3483	3577	3663	3644	3630	3708	4200	1.2%		
Turkey	587	664	739	846	966	941	942	963	988	1029	1240	1.9%		
Other Africa-Mideast	415	448	516	618	691	715	709	696	682	700	805	1.4%		
<b>ASIA</b>	247	294	354	401	432	489	520	528	540	600	725	2.5%		
China	103	116	141	169	188	227	243	250	256	313	430	4.4%		
India	126	127	139	138	157	167	175	175	182	191	203	0.9%		
Indonesia	149	155	174	207	238	282	320	322	328	363	438	2.4%		
Japan	2136	2882	3764	4392	4657	5371	5663	5809	5974	6694	8378	2.9%		
Malaysia	540	581	634	746	798	937	1044	1082	1095	1254	1579	3.1%		
Pakistan	150	154	160	158	164	179	194	201	204	221	264	2.2%		
Philippines	285	302	319	347	387	432	446	448	441	475	557	2.0%		
South Korea	260	314	406	506	648	791	820	850	911	1081	1368	3.4%		
Taiwan	463	570	692	900	1051	1339	1448	1478	1556	1845	2304	3.3%		
Thailand	213	252	287	322	370	432	466	476	472	586	719	3.2%		
Other Asia	188	201	209	213	228	257	274	276	280	317	374	2.5%		
<b>OCEANIA</b>	3745	4048	4569	4907	5047	5224	5406	5312	5252	5584	6373	1.6%		
Australia	4643	5072	5783	6179	6418	6708	6940	6831	6743	7165	8333	1.8%		
New Zealand	3626	3790	4041	4415	4436	4417	4601	4557	4689	5000	5441	1.3%		
Other Oceania	426	459	518	654	591	631	633	618	619	652	750	1.6%		

Source: WPRD-Product-CASTS SUMMARY-ECONOMIC OUTLOOK

Table II-3 WORLD SUPPLY/DEMAND OF PAPER AND  
PAPAERBOARD(1971-1982)

(Unit: 1,000 MT)

	Production	Import	Export	Consumption
1971	128,557	23,867	23,526	128,898
1972	137,582	25,175	25,247	137,510
1973	147,118	27,009	27,522	146,605
1974	149,356	28,937	29,962	148,331
1975	130,709	23,002	25,479	128,232
1976	147,265	26,551	27,092	146,724
1977	151,895	27,733	28,293	151,335
1978	158,178	30,346	30,326	158,198
1979	170,447	32,181	33,341	169,287
1980	172,301	33,574	35,088	170,787
1981	172,471	33,804	35,559	170,716
1982	165,360	33,498	33,767	165,091

Source: Yearbook of Forest Products, 1982

Table II-4. WORLD SUPPLY/DEMAND OF WOODPULP  
(1971-1982)

(Unit: 1,000 MT)

	Production	Import	Export	Consumption
1971	102,147	14,589	14,928	101,808
1972	108,018	16,361	16,456	107,923
1973	114,311	18,019	18,494	113,836
1974	117,851	18,899	19,164	117,586
1975	102,932	14,718	15,113	102,537
1976	115,189	16,620	16,948	114,861
1977	116,695	16,691	17,105	116,281
1978	121,502	18,662	19,057	121,107
1979	123,504	20,001	20,203	123,302
1980	126,031	20,579	21,222	125,388
1981	126,609	19,562	20,236	125,935
1982	120,517	18,093	18,477	120,133

Source: Yearbook of Forest Products, 1982

Table II-5 WORLD SUPPLY/DEMAND OF PULPWOOD  
(1971-1982)

(Unit: 1,000 CUM)

	Production	Import	Export	Consumption
1971	309,002	23,847	24,110	308,739
1972	303,542	22,879	23,071	303,350
1973	326,171	28,801	29,208	325,764
1974	358,182	33,914	32,980	359,116
1975	322,668	31,445	31,876	322,237
1976	323,349	31,886	33,858	321,377
1977	315,612	36,158	35,121	316,649
1978	332,012	33,914	32,669	333,257
1979	356,501	38,658	36,416	358,743
1980	371,629	42,329	41,101	372,857
1981	382,395	42,384	39,939	384,840
1982	368,483	36,585	34,712	370,356

Source: Yearbook of Forest Products, 1982

Table II-6 WASTE PAPER RECYCLING STATISTICS

(Unit: 1,000 MT)

	Amount Recovered	Amount Consumed	Amount Imported	Amount Exported	Amount of Paper and Paperboard Produced	Amount of Paper and Paperboard Consumed	Total Pulp Production	Utilized Rate for Waste Paper	Recovered West Paper Yield
Norway									
1977	110	85	9	7	1,186	497	1,432	7%	22%
1980	116	105	15	33	1,373	497	494	8%	23%
1983	108	99	25	36	1,368	531	1,640	7%	20%
Finland									
1977	172	161	2	11	4,620	869	5,247	3%	20%
1980	244	214	1	31	5,915	1,163	7,234	4%	21%
1983	288	268	9	17	6,388	1,182	7,163	4%	24%
Sweden									
1977	505	482	81	102	5,060	1,496	7,656	10%	34%
1980	576	673	205	83	6,189	1,842	8,699	11%	31%
1983	665	661	136	106	6,350	1,858	8,668	10%	36%
Canada									
1977	-	84	330	123	12,441	4,218	18,168	1%	-
1980	-	1,192	510	113	13,389	4,549	19,944	9%	-
1983	901	1,329	533	156	13,353	4,691	19,221	10%	19%
U.S.A.									
1977	14,835	12,960	83	1,372	56,267	60,445	45,364	23%	25%
1980	16,304	13,537	79	2,417	56,836	60,550	46,025	24%	27%
1983	16,753	14,065	91	2,335	58,849	63,216	47,661	24%	27%
W. Germany									
1977	2,798	2,767	344	381	6,604	8,435	1,862	42%	33%
1980	3,298	3,168	412	527	7,580	9,642	1,995	42%	34%
1983	3,568	3,492	472*	536	8,272	9,822	2,081	42%	36%
France									
1977	1,786	1,670	200	303	4,722	5,598	1,935	35%	32%
1980	1,710	1,906	196	0	5,151	6,220	1,829	37%	27%
1983	1,818	2,035	217	0	5,261	6,516	1,862	39%	28%
England									
1977	29	2,084	121	44	4,083	6,913	306	51%	0.4%
1980	2,187	2,009	32	210	3,793	6,837	286	53%	32%
1983	1,993	1,827	27	193	3,209	7,070	173	57%	28%
Italy									
1977	1,343	1,952	610	1	4,288	4,219	1,190	46%	32%
1980	1,551	2,200	650	1	4,935	5,244	1,075	45%	30%
1983	-	-	-	-	4,259	4,854	787	-	-
U.S.S.R.									
1977	-	2,100	-	-	9,090	8,674	9,100	23%	-
1980	1,500	-	0	200	8,732	8,731	8,950	-	17%
1983	1,600	1,600	0	200	9,556	9,455	7,913	17%	17%
Japan									
1977	6,703	6,552	125	63	15,702	15,239	9,437	42%	44%
1980	8,079	7,857	224	20	18,088	17,926	9,788	43%	45%
1983	8,996	9,110	277	2	18,442	18,389	8,860	49%	49%
R. Korea									
1977	516	813	398	-	1,170	1,082	130	69%	48%
1980	593	1,160	598	0	1,693	1,561	186	69%	38%
1983	684	1,259	574	0	1,982	1,935	242	64%	35%
Taiwan									
1977	-	223	223	-	966	1,033	729	23%	-
1980	691	1,247	556	0	1,479	1,412	276	84%	49%
1983	-	-	-	-	1,720	1,704	300	-	-
Thailand									
1977	-	141	-	-	221	346	33	64%	-
1980	99	258	159	-	355	471	63	73%	21%
1983	120	230	110	0	360	517	50	64%	23%
India									
1977	-	250	-	-	1,067	1,359	820	23%	-
1980	295	295	3	0	1,088	1,488	34**	27%	20%
1983	420	470	50	-	1,337	1,517	850	35%	28%
Brazil									
1977	-	750	-	-	2,234	2,472	1,617	34%	-
1980	-	1,450	-	-	3,468	3,496	3,507	42%	-
1983	-	-	-	-	3,420	3,271	2,917	-	-

Notes: \* Including from E. Germany

\*\* Market Pulp Only

Source: PPI

Table II-7 RATE OF WOODPULP CONSUMPTION TO PAPER AND PAPERBOARD PRODUCTION  
IN THE WORLD BY REGION (1972-1982)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
World Average	0.78	0.77	0.79	0.78	0.78	0.77	0.77	0.72	0.73	0.73	0.73
North America	0.85	0.85	0.86	0.86	0.89	0.88	0.90	0.82	0.81	0.82	0.84
Latin America	0.57	0.55	0.59	0.55	0.57	0.58	0.56	0.49	0.53	0.53	0.53
EEC Total	0.62	0.60	0.61	0.60	0.57	0.56	0.58	0.56	0.57	0.56	0.54
Scandinavian 3	0.99	0.92	0.95	1.12	1.00	0.89	0.86	0.90	0.92	0.93	0.90
Other W. Europe	0.66	0.66	0.67	0.71	0.62	0.66	0.67	0.62	0.60	0.59	0.58
East Europe	0.89	0.89	0.92	0.91	0.90	0.89	0.90	0.88	0.88	0.87	0.86
Asia	0.67	0.64	0.65	0.60	0.60	0.58	0.56	0.55	0.55	0.55	0.54
Oceania	0.82	0.89	0.94	0.88	0.86	0.82	0.81	0.78	0.77	0.78	0.79
Africa	0.51	0.54	0.53	0.54	0.48	0.50	0.49	0.55	0.80	0.82	0.84

Note: "Woodpulp Apparent Consumption (metric tons)"/"Paper and Paperboard Production (metric tons)"  
(Based on the figures in FAO's Yearbook of Forest Products, 1982)



Table II-8 RATE OF PULPWOOD CONSUMPTION TO WOODPULP PRODUCTION  
IN THE WORLD BY REGION (1972-1982)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
World Total	2.81	2.85	3.05	3.13	2.79	2.71	2.74	2.90	2.96	3.04	3.07
North America	2.40	2.40	2.60	2.48	2.19	2.09	2.18	2.32	2.40	2.54	2.56
Latin America	4.39	4.02	3.83	4.82	4.59	4.35	5.51	7.08	6.29	6.43	6.27
EEC Total	3.49	3.57	4.23	4.39	4.04	4.21	4.02	4.21	4.46	4.12	4.10
Scandinavian 3	3.08	2.90	3.19	3.89	3.38	3.00	2.87	3.01	2.90	3.40	3.41
Other W. Europe	4.25	4.29	4.22	4.65	4.66	4.73	4.48	4.49	4.79	4.53	4.51
East Europe	4.00	4.65	4.54	4.16	3.75	3.67	3.55	3.66	3.69	3.62	3.82
Asia	2.31	2.39	2.66	2.52	2.51	2.80	2.74	2.78	2.96	2.61	2.55
Oceania	2.30	2.39	1.42	3.05	2.00	1.91	1.92	1.76	1.64	1.90	1.78
Africa	4.84	4.73	4.62	4.94	5.48	5.04	4.97	4.30	3.45	3.34	3.36

Note: "Pulpwood Apparent Consumption (cubic meters)"/"Woodpulp Production (metric tons)"  
(Based on the figures in FAO's Yearbook of Forest Products, 1982)

Table II-9 ESTIMATED AVERAGE COSTS OF PRODUCING  
BLEACHED KRAFT PAPER-GRADE MARKET  
PULP (US\$/AIR DRY TON)

Softwood	First half 1982	First half 1981	Hardwood	First half 1982	First half 1981
Western Canada	(8,008C\$/ US\$)	(8,375C\$/ US\$)	Brazil	(160.686cruz/ US\$)	(93.96cruz/ US\$)
Fiber	\$138	\$138	Fiber	60	43
Chemicals	37	32	Labor	29	32
Wages and salaries	55	49	Energy	25	22
Energy	38	-	Chemicals	36	25
Other direct	37	70*	Total direct	150	122
Total direct	305	289	Supplies, capital, misc.	177	191
Interest	24	25	Total	327	313
Depreciation	16	16	US South		
Other indirect	12	12	Fiber	101	96
Total	357	357	Chemicals	32	30
Sweden	(5.90SKr/ US\$)	(5.54SKr/ US\$)	Wages and salaries	58	55
Fiber	212	189	Energy	51	64
Wages and salaries	85	78	Other direct	46	42
Energy and chemicals	85	87	Total direct	288	287
Total direct	382	354	Interest	20	20
Capital and misc.	101	99	Depreciation	18	18
Total	483	453	Other indirect	17	17
US South			Total	343	342
Fiber	116	108			
Chemicals	45	43			
Wages and salaries	58	54			
Energy	41	46			
Other direct	47	43			
Total direct	307	294			
Interest	20	20			
Depreciation	18	18			
Other indirect	17	17			
Total	362	349			

Note: \* Includes Energy

Source: Mead Corp. Estimates

Table II-10 EXCHANGE RATE OF EC COUNTRIES, SCANDINAVIAN COUNTRIES AND CANADA

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
W.Germany	3.202	2.703	2.410	2.622	2.362	2.105	1.828	1.731	1.959	2.255	2.376	2.724
France	5.125	4.708	4.445	4.486	4.970	4.705	4.190	4.020	4.516	5.748	6.725	8.347
Italy	582.50	607.92	649.43	683.55	875.00	871.55	829.75	804.00	930.50	1200.0	1370.0	1659.5
Netherlands	3.226	2.824	2.507	2.688	2.457	2.280	1.969	1.905	2.129	2.468	2.624	3.064
Belux	44.06	41.32	36.12	39.53	35.98	32.94	28.80	28.047	31.522	38.460	46.920	55.640
U.K.	0.4259	0.4304	0.4258	0.4942	0.5874	0.5247	0.4915	0.450	0.419	0.524	0.619	0.689
Ireland	0.4263	0.4305	0.4263	0.4941	0.5874	0.5232	0.4915	0.466	0.527	0.633	0.716	0.881
Denmark	6.843	6.290	5.650	6.178	5.788	5.788	5.090	5.365	6.015	7.325	8.384	9.875
Greece	30.00	29.70	30.00	35.65	37.03	35.51	36.005	38.283	46.535	57.630	70.570	98.670
Finland	4.17	3.85	3.55	3.85	3.77	4.02	3.926	3.711	3.840	4.357	5.291	5.810
Norway	6.64	5.73	5.21	5.58	5.18	5.14	5.022	4.926	5.180	5.807	7.054	7.742
Sweden	4.743	4.588	4.081	4.386	4.126	4.670	4.295	4.146	4.373	5.571	7.294	8.001
Canada	0.9956	0.9958	0.9912	1.0164	1.0092	1.0944	1.186	1.168	1.195	1.186	1.229	1.244

Sources: Monthly Bulletin of Statistics, July 1979, Oct. 1984 (UN)

Table II-11 WORLD PULP, PAPER AND PAPERBOARD  
CAPACITY, 1969-84 (1)

	(Unit: Million MT)			
	1969	1974	1979	1984
Total Woodpulp, Paper Grades	101.0	123.8	137.0	155.1
Mechanical*	26.4	30.0	33.0	38.7
Semichemical**	8.2	10.1	10.5	11.7
Chemical	66.4	83.7	93.5	104.7
Other Fiber Pulp	7.3	7.9	11.0	13.4
Dissolving Pulp	5.3	5.9	6.0	6.5
Total Paper, Paperboard	132.9	166.8	192.2	221.5
Newsprint	23.1	24.4	27.2	34.1
Printing, Writing	26.4	36.9	44.9	53.8
Other Paper and Board	83.4	105.5	120.1	133.6

Notes: \* Including Thermomechanical Pulp  
\*\* Including Chemigroundwood

Table II-11 ANNUAL RATE OF INCREASES IN WORLD PULP, PAPER  
AND PAPERBOARD CAPACITY, 1979-84 (2)

	1979-80	1980-81	1981-82	1982-83	1983-84
Total Woodpulp, Paper Grades	3.0%	2.7%	3.5%	2.2%	1.2%
Mechanical*	4.1	3.7	4.9	2.7	0.8
Semichemical**	1.1	3.8	1.9	3.0	1.3
Chemical	2.8	2.2	3.1	2.0	1.3
Other Fiber Pulp	7.3	3.6	3.1	3.2	2.9
Dissolving Pulp	0.8	2.0	1.5	1.7	1.0
Total Paper, Paperboard	3.1	3.6	3.5	2.4	1.8
Newsprint	4.4	6.0	5.7	3.9	3.0
Printing, Writing	4.7	4.4	3.9	3.0	2.5
Other Paper and board	2.3	2.7	2.7	1.8	1.3

Notes: \* Including Thermomechanical Pulp  
\*\* Including Chemigroundwood

Source: PULP & PAPER WEEK/Sep. '80

Table II-12 WORLD PULP, PAPER AND PAPERBOARD  
CAPACITY, 1973-88 (1)

	(Unit: Million MT)			
	1973	1978	1983	1988
Total Woodpulp, Paper Grades	119.8	134.9	144.0	154.8
Mechanical*	28.9	32.6	35.5	38.5
Semichemical**	9.9	10.5	9.6	10.1
Chemical	81.1	91.9	98.6	105.8
Other Fiber Pulp	8.2	10.4	9.2	10.6
Dissolving Pulp	5.9	6.1	6.1	6.3
Total Paper and Paperboard	160.7	167.6	205.9	224.1
Newsprint	24.7	26.4	30.8	33.5
Printing and Writing	35.7	42.8	51.3	57.4
Other Paper and Paperboard	100.3	118.4	123.8	133.1

Notes: \* Including Thermomechanical Pulp

    \*\* Including Chemigroundwood

Source: PULP & PAPER WEEK/Aug. '84

Table II-12 CAPACITY INCREASES TO 1988: WORLD  
PAPER WOODPULP (2)

	Capacity (1,000 MT)		Average Annual Increase (%)	
	1983	1988	1978-83	1983-88
World Total	144,007	154,773	1.3%	1.5%
Dev'ed Mkt. Economic	118,426	126,545	1.9	1.3
Northern America	72,749	76,415	1.7	1.0
Japan	12,006	12,158	-0.1	0.3
Western Europe	30,518	33,689	-0.6	2.0
Oceania	2,326	2,670	2.2	2.8
Others	827	1,613	3.9	14.3
Dev'ing Mkt. Economic	8,415	10,450	7.3	4.4
Africa	724	815	15.4	2.4
Latin America	5,800	7,113	5.6	4.2
Asia	1,891	2,522	10.7	5.9
Centrally Planned				
Economic	17,166	17,778	1.7	0.7
Asia	1,167	1,282	-13.8	1.9
Eastern Europe	4,354	4,446	3.5	0.4
U.S.S.R.	11,645	12,050	3.8	0.7

Source: PULP & PAPER WEEK/Aug. '84

Table II-12 CAPACITY INCREASES TO 1988: WORLD  
PAPER AND PAPERBOARD (3)

	Capacity (1,000 MT)		Average Annual Increase (%)	
	1983	1988	1978-83	1983-88
World Total	205,933	224,079	1.9%	1.7%
Dev'ed Mkt. Economic	161,377	174,338	1.7	1.6
Northern America	81,219	85,200	1.9	1.0
Japan	23,198	24,908	1.9	1.4
Western Europe	52,770	59,148	1.1	2.3
Oceania	2,509	2,807	1.8	2.3
Others	1,681	2,275	6.6	6.2
Dev'ing Mkt. Economic	18,783	22,583	6.6	3.8
Africa	924	1,115	5.4	3.8
Latin America	10,240	12,659	5.3	4.3
Asia	7,619	8,809	8.8	2.9
Centrally Planned				
Economic	25,773	27,158	0.1	1.1
Asia	5,837	6,284	-7.7	1.5
Eastern Europe	6,436	6,874	1.8	1.3
U.S.S.R.	13,500	14,000	4.2	0.7

Source: PULP & PAPER WEEK/Aug. '84

Table II-13 NUMBER OF PLANT AND CAPACITY OF PAPER AND PAPERBOARD

(Unit of Yearly cap.: 1,000 MT)

	1978		1979		1979-1978 Difference		1980		1980-1979 Difference		1981		1981-1980 Difference		1982		1982-1981 Difference		1983		1983-1982 Difference		1983-1978 Difference	
	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.	No. Factory	Yearly Cap.
World Total	4,649	182,093	4,462	185,343	-187	3,250	5,590	193,485	1,128	8,142	6,007	201,470	417	7,985	5,971	198,528	-36	-2,942	5,991	198,072	20	-456	1,342	15,979
EC	1,166	28,223	1,118	28,420	-48	197	1,100	28,658	-18	238	1,047	28,806	-53	148	1,010	27,385	-37	-1,421	981	27,405	-29	-20	-185	-818
Scandinavia	143	15,065	141	15,160	-2	95	138	15,425	-3	265	127	15,535	-11	110	126	15,740	-1	205	125	16,470	-1	730	-18	1,405
Other W. Europe	433	5,655	424	5,905	-9	250	416	6,246	-8	341	385	6,699	-31	453	367	6,846	-18	147	356	6,945	-11	99	-77	1,290
East Europ	367	16,233	367	17,612	0	1,379	368	16,477	1	1,135	291	16,573	-77	96	292	15,594	1	-979	290	16,029	-2	435	-77	-204
North America	835	78,603	775	77,386	-60	-1,217	792	76,892	17	-494	724	81,607	-68	4,715	691	78,952	-33	-2,655	688	79,639	-3	687	-147	1,036
Asia	1,230	27,760	1,155	28,944	-75	1,184	1,258	30,352	103	1,408	1,317	31,817	59	1,465	1,357	32,184	40	367	1,414	33,155	57	971	184	5,395
Oceania	22	1,450	22	2,295	0	845	22	2,495	0	200	22	2,528	0	33	21	2,546	-1	18	22	2,547	1	1	0	1,097
Latin America	394	7,603	399	7,812	5	209	435	9,548	36	1,736	425	9,617	-10	69	430	10,181	5	564	438	10,490	8	309	44	2,887
Africa	59	1,501	61	1,809	2	308	61	1,892	0	83	69	1,988	8	96	77	2,250	8	262	77	2,112	0	-138	18	611

Note: Excluding China in Asia Area  
Source: PPI

Table II-14 NUMBER PLANT AND CAPACITY OF PULP

(Unit of Yearly cap.: 1,000 MT)

	1978		1979		1979-1978 Difference		1980		1980-1979 Difference		1981		1981-1980 Difference		1982		1982-1981 Difference		1983		1983-1982 Difference		1983-1978 Difference	
	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly	No.	Yearly
	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.	Factory	Cap.
World Total	1,576	142,445	1,666	143,882	90	1,437	1,287	146,663	-379	2,781	1,449	154,434	162	7,771	1,426	151,974	-23	-2,460	1,392	147,941	-34	-4,033	-184	5,496
EC	185	7,113	170	7,040	-15	-73	159	6,973	-11	-64	138	6,662	-21	-311	115	6,580	-23	-82	109	6,245	-6	-335	-76	-868
Scandinavia	168	21,655	161	20,780	-7	-875	157	20,835	-4	55	143	20,080	-14	-755	137	20,175	-6	95	135	20,485	-2	310	-33	-1,170
Other W. Europe	87	3,925	116	3,935	29	10	124	4,120	8	185	70	4,328	-54	208	68	4,348	-2	20	61	4,159	-7	-189	-26	234
East Europ	185	14,200	184	15,428	-1	1,228	182	13,954	-2	-1,474	167	14,005	-15	51	163	12,466	-4	-1,539	164	13,646	1	1,188	-21	-554
North America	390	73,192	459	71,224	69	-1,968	262	70,401	-197	-823	284	76,080	22	5,679	227	74,131	-57	-1,949	229	74,404	2	273	-161	1,212
Asia	376	14,865	400	16,077	24	1,212	241	15,213	-159	-864	470	16,758	229	1,545	535	16,657	65	-101	515	15,016	-20	-1,641	139	151
Oceania	21	750	21	2,171	0	1,421	21	2,221	0	50	22	2,260	1	39	26	2,376	4	116	24	2,467	-2	91	3	1,717
Latin America	132	5,695	128	5,520	-4	-175	117	7,034	-11	1,514	126	6,764	9	-270	127	7,347	1	583	123	7,455	-4	108	-9	1,760
Africa	32	1,230	27	1,707	-5	477	24	1,912	-3	205	29	1,897	5	-15	28	1,924	-1	27	32	1,864	4	-60	0	634

Note: Excluding China in Asia Area  
Source: PPI





Table II-15 PRODUCTION CAPACITY/PRODUCTION/OPERATIONAL RATE

	1978			1979			1980			1981			1982			1983		
	Capacity	Production	Operational Rate	Capacity	Production	Operational Rate	Capacity	Production	Operational Rate	Capacity	Production	Operational Rate	Capacity	Production	Operational Rate	Capacity	Production	Operational Rate
<b>North America</b>																		
Paper & Paperboard	78,603	71,401	0.91	77,386	72,370	0.94	76,892	70,235	0.91	81,607	71,295	0.87	78,952	66,539	0.84	79,639	72,202	0.91
Pulp	73,192	55,291	0.76	71,224	64,819	0.91	70,401	65,812	0.93	76,080	66,432	0.87	74,131	61,774	0.83	74,404	66,862	0.90
<b>Scandinavia</b>																		
Paper & Paperboard	15,065	12,072	0.80	15,160	13,418	0.89	15,425	13,474	0.87	15,535	13,639	0.88	15,740	13,127	0.83	16,470	14,106	0.86
Pulp	21,655	16,019	0.74	20,780	17,649	0.85	20,835	14,427	0.69	20,080	17,468	0.87	20,175	15,942	0.79	20,485	17,471	0.85

Source: PPI

Table II-16 PRODUCTION/IMPORT/EXPORT/APARENT CONSUMPTION OF PAPER AND PAPERBOARD TOTAL  
IN THE WORLD BY REGION (1)

(Unit: 1,000 MT)

Region	Item	Share (%)					Average Growth Rate (%/y)				
		1972	1977	1980	1981	1982	1972	1977/72 1982/77			
World Total	Produc.	137,582	151,895	172,301	172,471	165,360	100.0	100.0	2.0	1.7	
	Import	25,175	27,733	33,574	33,804	33,498	100.0	100.0	2.0	3.8	
	Export	25,247	28,293	35,088	35,559	33,767	100.0	100.0	2.3	3.6	
	Consump.	137,510	151,335	170,787	170,716	165,091	100.0	100.0	1.9	1.8	
EC	Produc.	21,415	22,634	24,686	24,285	23,341	15.6	14.9	14.1	1.1	0.6
	Import	10,408	11,406	13,648	14,101	14,024	41.3	41.1	41.9	1.8	4.2
	Export	2,926	4,071	5,347	5,631	5,651	11.6	14.4	16.7	6.8	6.8
	Net Imp.	7,482	7,335	8,301	8,470	8,373					
	Consump.	28,897	29,969	32,967	32,675	31,714	21.0	19.8	19.2	0.7	1.1
	SS-Rate	74	76	75	74	74					
Scandinavian 3	Produc.	10,861	10,866	13,474	13,722	13,128	7.9	7.2	7.9	0.0	3.9
	Import	241	292	399	414	424	1.0	1.1	1.3	3.9	7.7
	Export	8,289	8,390	10,542	10,646	10,375	32.8	29.7	30.7	0.2	4.3
	Net Imp.	-8,048	-8,098	-10,143	-10,232	-9,951					
	Consump.	2,813	2,768	3,331	3,490	3,177	2.0	1.8	1.9	-0.3	2.8
	SS-Rate	386	393	405	393	413					
Other W. Europe	Produc.	3,798	4,810	5,559	5,665	5,764	2.8	3.2	3.5	4.8	3.7
	Import	697	810	965	1,094	1,141	2.8	2.9	3.4	3.1	7.1
	Export	728	1,212	1,428	1,696	1,716	2.9	4.3	5.1	10.7	7.2
	Net Imp.	-31	-402	-463	-602	-575					
	Consump.	3,767	4,408	5,096	5,063	5,189	2.7	2.9	3.1	3.2	3.3
	SS-Rate	101	109	109	112	111					
Total W. Europe	Produc.	36,074	38,310	43,639	43,592	42,233	26.2	25.2	25.5	1.2	2.0
	Import	11,346	12,508	15,012	15,609	15,589	45.1	45.1	46.5	2.0	4.5
	Export	11,943	13,673	17,317	17,973	17,742	47.3	48.3	52.5	2.7	5.3
	Net Imp.	-597	-1,165	-2,305	-2,364	-2,153					
	Consump.	35,477	37,145	41,334	41,228	40,080	25.8	24.5	24.3	0.9	1.5
	SS-Rate	102	103	106	106	105					
Eastern Europe	Produc.	12,260	15,348	15,390	15,569	15,630	8.9	10.1	9.5	4.6	0.4
	Import	1,527	1,835	2,133	2,084	2,089	6.1	6.6	6.2	3.7	2.6
	Export	1,269	1,733	1,789	1,838	1,833	5.0	6.1	5.4	6.4	1.1
	Net Imp.	258	102	344	246	256					
	Consump.	12,518	15,450	15,734	15,815	15,886	9.1	10.2	9.6	4.3	0.6
	SS-Rate	98	99	98	98	98					

Table II-16 PRODUCTION/IMPORT/EXPORT/APARENT CONSUMPTION OF PAPER AND PAPERBOARD TOTAL  
IN THE WORLD BY REGION (2)

(Unit: 1,000 MT)

Region	Item	Share (%)					Average Growth Rate (%/y)				
		1972	1977	1980	1981	1982	1977/72	1982/77			
North America	Produc.	62,859	64,946	72,847	74,066	67,471	45.7	40.8	0.7	0.8	
	Import	7,143	7,017	8,118	7,595	7,303	28.4	25.3	-0.4	0.8	
	Export	10,981	11,232	13,675	13,134	11,931	43.5	39.7	0.5	1.2	
	Net Imp.	-3,838	-4,215	-5,557	-5,539	-4,628					
	Consump.	59,021	60,731	67,290	68,527	62,843	42.9	40.1	38.1	0.6	0.7
	SS-Rate	107	107	108	108	107					
Latin America	Produc.	4,246	5,536	7,727	7,434	7,697	3.1	3.6	4.7	5.4	6.8
	Import	1,805	2,066	2,343	2,435	2,386	7.2	7.4	7.1	2.7	2.9
	Export	110	222	410	575	476	0.4	0.8	1.4	15.1	16.5
	Net Imp.	1,695	1,844	1,933	1,860	1,910					
	Consump.	5,941	7,380	9,660	9,294	9,607	4.3	4.9	5.8	4.4	5.4
	SS-Rate	72	75	80	80	80					
Asia	Produc.	19,533	24,491	28,986	27,948	28,454	14.2	16.1	17.2	4.6	3.0
	Import	2,219	2,832	4,253	4,246	4,256	8.8	10.2	12.7	5.0	8.5
	Export	695	939	1,244	1,318	1,170	2.8	3.3	3.5	6.2	4.5
	Net Imp.	1,524	1,893	3,009	2,928	3,086					
	Consump.	21,057	26,384	31,995	30,876	31,540	15.3	17.4	19.1	4.6	3.6
	SS-Rate	93	93	91	91	90					
Oceania	Produc.	1,546	1,890	2,104	2,151	2,197	1.1	1.2	1.3	4.1	3.1
	Import	505	660	751	748	807	2.0	2.4	2.4	5.5	4.1
	Export	202	302	418	447	340	0.8	1.1	1.0	8.4	2.4
	Net Imp.	303	358	333	301	467					
	Consump.	1,849	2,248	2,437	2,452	2,664	1.3	1.5	1.6	4.0	3.5
	SS-Rate	84	84	86	88	83					
Africa	Produc.	1,064	1,374	1,608	1,712	1,678	0.8	0.9	1.0	5.2	4.1
	Import	630	815	965	1,088	1,068	2.5	2.9	3.2	5.3	5.6
	Export	47	193	235	274	276	0.2	0.7	0.8	32.6	7.4
	Net Imp.	583	622	730	814	792					
	Consump.	1,647	1,996	2,338	2,526	2,470	1.2	1.3	1.5	3.9	4.4
	SS-Rate	65	69	69	68	68					

Source: Yearbook of Forest Products, 1982 (FAO)

Notes: 1. SS-Rate: Self-sufficiency Rate (%)

2. Includes Newsprint, Printing and Writing Paper and Other Paper and Paperboard.

Table II-17 PRODUCTION/IMPORT/EXPORT/APARENT CONSUMPTION OF TOTAL WOODPULP  
IN THE WORLD BY REGION (1)

(Unit: 1,000 MT)

Region	Item	1972	1977	1980	1981	1982	Share (%)			Average Growth Rate (%/y)	
							1972	1977	1982	1977/72	1982/77
World Total	Produc.	108,018	116,695	126,031	126,689	120,517	100.0	100.0	100.0	1.5	0.6
	Import	16,361	16,691	20,579	19,562	18,093	100.0	100.0	100.0	0.4	1.6
	Export	16,456	17,105	21,222	20,236	18,477	100.0	100.0	100.0	0.8	1.6
	Consump.	107,923	116,281	125,388	125,935	120,133	100.0	100.0	100.0	1.5	0.7
EC	Produc.	5,601	5,522	5,455	5,323	5,348	5.2	4.7	4.4	-0.3	-0.6
	Import	8,165	7,705	9,103	8,627	7,765	49.9	46.2	42.9	-1.2	0.2
	Export	443	508	584	501	492	2.7	3.0	2.7	2.8	-0.6
	Net Imp.	7,722	7,197	8,519	8,126	7,273					
	Consump.	13,323	12,719	13,974	13,449	12,621	12.3	10.9	10.5	-0.9	-0.2
	SS-Rate	42	43	39	40	42					
Scandinavian 3	Produc.	16,598	14,411	17,427	17,482	15,943	15.4	12.3	13.2	-2.8	2.0
	Import	251	226	438	395	371	1.5	1.4	2.1	-2.1	10.4
	Export	6,130	4,968	5,520	5,131	4,439	37.3	29.0	24.0	-4.1	-2.2
	Net Imp.	-5,879	-4,742	-5,082	-4,736	-4,068					
	Consump.	10,711	9,669	12,345	12,746	11,875	9.9	8.3	9.9	-2.0	4.2
	SS-Rate	155	149	141	137	134					
Other W. Europe	Produc.	2,418	2,951	3,421	3,483	3,440	2.2	2.5	2.9	4.1	3.1
	Import	694	763	808	774	784	4.2	4.6	4.3	1.9	0.5
	Export	592	547	913	929	889	3.6	3.2	4.8	-1.6	10.2
	Net Imp.	102	216	-105	-155	-105					
	Consump.	2,520	3,167	3,316	3,328	3,335	2.3	2.7	2.8	4.7	1.0
	SS-Rate	96	93	103	105	103					
Total W. Europe	Produc.	24,609	22,884	26,303	26,288	24,731	22.8	19.6	20.5	-1.4	1.6
	Import	9,110	8,694	10,349	9,796	8,920	55.7	52.1	49.3	-0.9	0.5
	Export	7,165	6,023	7,017	6,551	5,820	43.5	35.2	31.5	-3.4	-0.7
	Net Imp.	1,945	2,671	3,332	3,235	3,100					
	Consump.	26,554	25,555	29,635	29,523	27,831	24.6	22.0	23.2	-0.8	1.7
	SS-Rate	93	90	89	89	89					
Eastern Europe	Produc.	10,653	13,196	13,025	13,150	13,303	9.9	11.3	11.0	4.4	0.2
	Import	995	1,311	1,439	1,323	1,258	6.1	7.9	7.0	5.7	-0.8
	Export	688	787	983	996	1,090	4.2	4.6	5.9	2.7	6.7
	Net Imp.	307	524	456	327	168					
	Consump.	10,950	13,720	13,481	13,477	13,471	10.2	11.8	11.2	4.6	-0.4
	SS-Rate	97	96	97	98	99					

Table 11-17 PRODUCTION/IMPORT/EXPORT/APARENT CONSUMPTION OF TOTAL WOODPULP  
IN THE WORLD BY REGION (2)

(Unit: 1,000 MT)

Region	Item	Share (%)					Average Growth Rate (%/y)			
		1972	1977	1980	1981	1982	1977	1977/72	1982/77	
North America	Produc.	57,321	62,255	66,124	66,880	62,151	53.3	51.6	1.7	0.0
	Import	3,455	3,794	3,824	3,824	3,442	21.2	19.0	0.5	-0.6
	Export	7,581	8,509	10,636	10,874	9,183	49.7	49.7	2.3	1.5
	Net Imp.	-4,126	-4,964	-6,842	-6,250	-5,741				
	Consump.	53,195	57,291	59,282	60,630	56,410	49.3	47.0	1.5	-0.3
	SS-Rate	108	109	112	110	110				
Latin America	Produc.	1,977	3,133	4,652	4,516	4,574	1.8	2.7	3.8	9.6
	Import	707	501	753	784	756	4.3	4.2	-6.7	8.5
	Export	262	433	1,306	1,362	1,287	1.6	2.5	7.0	24.3
	Net Imp.	445	68	-553	-578	-531				
	Consump.	2,422	3,201	4,099	3,938	4,043	2.2	2.8	3.4	5.7
	SS-Rate	82	98	114	115	113				
Asia	Produc.	11,391	12,328	12,459	12,194	12,185	10.5	10.1	1.6	-0.2
	Import	1,702	2,143	3,654	3,275	3,185	10.4	12.8	17.6	4.7
	Export	102	182	134	182	138	0.6	1.1	0.7	12.3
	Net Imp.	1,600	1,961	3,520	3,093	3,047				
	Consump.	12,991	14,289	15,979	15,277	15,232	12.0	12.3	12.7	1.9
	SS-Rate	88	86	78	80	80				
Oceania	Produc.	1,127	1,712	1,819	1,908	1,887	1.0	1.5	1.6	8.7
	Import	247	282	285	287	264	1.5	1.7	1.5	2.7
	Export	114	452	475	518	421	0.7	2.6	2.3	31.7
	Net Imp.	133	-170	-190	-231	-157				
	Consump.	1,260	1,542	1,629	1,677	1,730	1.2	1.3	1.4	4.1
	SS-Rate	89	111	112	114	109				
Africa	Produc.	941	1,188	1,649	1,682	1,686	0.9	1.0	1.4	4.8
	Import	145	216	307	273	268	0.9	1.3	1.5	8.3
	Export	544	719	670	543	540	3.3	4.2	2.9	5.7
	Net Imp.	-399	-503	-363	-270	-272				
	Consump.	542	685	1,286	1,412	1,414	0.5	0.6	1.2	4.8
	SS-Rate	174	173	128	119	119				

Source: Yearbook of Forest Products, 1982 (FAO)

Note: SS-Rate: Self-sufficiency Rate (%)

Table II-18 PRODUCTION/IMPORT/EXPORT/APPEARANT CONSUMPTION OF PULPWOOD  
IN THE WORLD BY REGION (1)

Region	Item	Share (%)					Average Growth Rate (%/y)				
		1972	1977	1980	1981	1982	1977/72	1982/77			
(Unit: 1,000 CUM)											
World Total	Produc.	303,542	315,612	371,629	382,395	368,483	100.0	100.0	0.8	3.1	
	Import	22,879	36,158	42,329	42,384	36,585	100.0	100.0	9.6	0.2	
	Export	23,071	35,121	41,101	39,939	34,712	100.0	100.0	8.8	-0.2	
	Consump.	303,350	316,649	372,857	384,840	370,356	100.0	100.0	0.9	3.2	
EC	Produc.	16,487	21,648	22,517	21,608	22,025	5.4	6.9	6.0	5.6	0.3
	Import	5,438	6,645	7,664	6,895	6,660	23.8	18.4	18.2	4.1	0.0
	Export	2,384	5,060	5,849	6,552	6,761	10.3	14.4	19.5	16.2	6.0
	Net Imp.	3,054	1,585	1,815	343	-101					
	Consump.	19,541	23,233	24,332	21,951	21,924	6.4	7.3	5.9	3.5	-1.2
SS-Rate	84	93	93	98	100						
Scandinavian 3	Produc.	49,541	37,392	45,515	49,265	46,435	16.3	11.8	12.6	-5.5	4.4
	Import	4,672	7,605	8,457	13,909	10,187	20.4	21.0	27.8	10.2	6.0
	Export	3,078	1,772	3,411	3,681	2,276	13.3	5.0	6.6	-10.5	5.1
	Net Imp.	1,594	5,833	5,046	10,228	7,911					
	Consump.	51,135	43,225	50,561	59,493	54,346	16.9	13.7	14.7	-3.3	4.7
SS-Rate	97	87	90	83	85						
Other W. Europe	Produc.	9,654	12,941	14,253	14,016	13,947	3.2	4.1	3.3	6.0	1.5
	Import	1,048	1,481	3,240	2,463	2,233	4.6	4.1	6.1	7.2	8.6
	Export	419	462	1,110	686	667	1.8	1.3	1.9	2.0	7.6
	Net Imp.	629	1,019	2,130	1,777	1,566					
	Consump.	10,283	13,960	16,383	15,793	15,513	3.4	4.4	4.2	6.3	2.1
SS-Rate	94	93	87	89	90						
Total W. Europe	Produc.	75,682	71,981	82,285	84,889	82,407	24.9	22.8	22.4	-1.0	2.7
	Import	11,158	15,731	19,361	23,267	19,080	48.8	43.5	52.2	7.1	3.9
	Export	5,881	7,294	10,370	10,919	9,704	25.5	20.8	28.0	4.4	5.9
	Net Imp.	5,277	8,437	8,991	12,348	9,376					
	Consump.	80,959	89,418	91,276	97,237	91,783	26.7	25.4	24.8	-0.1	2.7
SS-Rate	93	90	90	87	90						
Eastern Europe	Produc.	48,728	58,490	57,495	57,348	58,925	16.1	18.5	16.0	3.7	0.1
	Import	2,121	2,426	3,130	2,902	2,755	9.3	6.7	7.5	2.7	2.6
	Export	8,229	12,436	12,510	12,642	10,812	35.7	35.4	31.1	8.6	-2.8
	Net Imp.	-6,108	-10,010	-9,380	-9,740	-8,057					
	Consump.	42,620	48,480	48,115	47,608	50,868	14.0	15.3	13.7	2.6	1.0
SS-Rate	114	121	119	120	116						

Table II-18 PRODUCTION/IMPORT/EXPORT/APARENT CONSUMPTION OF PULPWOOD  
IN THE WORLD BY REGION (2)

(Unit: 1,000 CUM)

Region	Item	Share (%)					Average Growth Rate (%/y)				
		1972	1977	1980	1981	1982	1977/72	1982/77			
North America	Produc.	142,366	136,788	166,323	175,915	163,620	46.9	43.3	44.4	-0.8	3.6
	Import	2,081	2,273	2,249	2,348	2,000	9.1	6.3	5.5	1.8	-2.5
	Export	6,768	8,710	9,887	8,382	6,605	29.3	24.8	19.0	5.2	-5.4
	Net Imp.	-4,687	-6,437	-7,638	-6,034	-4,605					
	Consump.	137,679	130,351	158,685	169,881	153,015	45.4	41.2	42.9	-1.1	4.1
	SS-Rate	103	105	105	104	103					
Latin America	Produc.	9,056	13,667	29,264	29,076	28,697	3.0	4.3	7.8	8.6	16.0
	Import	0	0	35	24	24	0.0	0.0	0.1	-	-
	Export	382	53	53	53	53	1.7	0.2	0.2	-32.6	0.0
	Net Imp.	-382	-53	-18	-29	-29					
	Consump.	8,674	13,614	29,246	29,047	28,668	2.9	4.3	7.7	9.4	16.1
	SS-Rate	104	100	100	100	100					
Asia	Produc.	19,519	19,827	20,305	18,977	19,285	6.4	6.3	5.2	0.3	-0.6
	Import	7,514	15,728	17,553	13,843	12,726	32.8	43.5	34.8	15.9	-4.1
	Export	763	1,033	1,003	1,000	1,009	3.3	2.9	2.9	6.2	-0.6
	Net Imp.	6,751	14,695	16,550	12,843	11,726					
	Consump.	26,270	34,522	36,855	31,820	31,011	8.7	10.9	8.4	5.6	-2.1
	SS-Rate	74	57	55	60	62					
Oceania	Produc.	3,640	8,767	10,178	10,395	9,717	1.2	2.8	2.6	19.2	2.1
	Import	0	0	0	0	0	0.0	0.0	0.0	-	-
	Export	1,047	5,497	7,195	6,771	6,365	4.5	15.7	18.3	39.3	3.0
	Net Imp.	-1,047	-5,497	-7,195	-6,771	-6,365					
	Consump.	2,593	3,270	2,983	3,624	3,352	0.9	1.0	0.9	4.7	0.5
	SS-Rate	140	268	341	287	290					
Africa	Produc.	4,551	6,092	5,779	5,795	5,832	1.5	1.9	1.6	6.0	-0.9
	Import	5	0	0	0	0	0.0	0.0	0.0	-	-
	Export	1	100	84	173	173	0.0	0.3	0.5	151.2	11.6
	Net Imp.	4	-100	-84	-173	-173					
	Consump.	4,555	5,992	5,695	5,622	5,659	1.5	1.9	1.5	5.6	-1.1
	SS-Rate	100	102	101	103	103					

Source: Yearbook of Forest Products, 1982 (FAO)

Note: SS-Rate: Self-sufficiency Rate (%)



Table II-19 WORLD SUPPLY/DEMAND OF PAPER AND PAPERBOARD  
BY KIND IN 1972 AND 1982

(Unit: 1,000 MT)

		1972	Share (%)	1982	Share (%)	Ave. Growth Rate during 1982/72 (%/y)
Paper & Paperboard Total	Produc.	137,582	100.0	165,360	100.0	1.9
	Import	25,175	100.0	33,498	100.0	2.9
	Export	25,247	100.0	33,767	100.0	3.0
	Consump.	137,510	100.0	165,091	100.0	1.8
Newsprint	Produc.	21,678	15.8	25,966	15.7	1.8
	Import	11,175	44.4	12,409	37.0	1.1
	Export	10,752	42.6	11,559	34.2	0.7
	Consump.	22,101	16.1	26,816	16.2	2.0
Printing & Writing Paper	Produc.	29,733	21.6	42,103	25.5	3.5
	Import	3,655	14.5	7,108	21.2	6.9
	Export	4,268	16.9	7,786	23.1	6.2
	Consump.	29,120	21.2	41,425	25.1	3.6
Other Paper & Paperboard	Produc.	86,172	62.6	97,292	58.8	1.2
	Import	10,346	41.1	13,981	41.7	3.1
	Export	10,227	40.5	14,422	42.7	3.5
	Consump.	86,291	62.8	96,851	58.7	1.2
Household & Sanitary Paper	Produc.	6,863	5.0	8,817	5.3	2.5
	Import	253	1.0	335	1.0	2.8
	Export	272	1.1	383	1.1	3.5
	Consump.	6,844	5.0	8,769	5.3	2.5
Wrapping & Packing Paper & Paperboard	Produc.	59,438	43.2	68,294	41.3	1.4
	Import	5,230	20.8	8,442	25.2	4.9
	Export	4,808	19.0	10,083	29.9	7.7
	Consump.	59,860	43.5	66,653	40.4	1.1
Paper & Paperboard NES	Produc.	10,453	7.6	8,696	5.3	-1.8
	Import	2,653	10.5	4,568	13.6	5.6
	Export	1,503	6.0	3,703	11.0	9.4
	Consump.	11,603	8.4	9,561	5.8	-1.9

Notes: 1. "Paper & Paperboard Total" includes "Newsprint", "Printing & Writing Paper" and "Other Paper & Paperboard".

2. "Other Paper & Paperboard" includes "Household & Sanitary

Sources: Yearbook of Forest Products, 1972-1982

Table II-20 WORLD SUPPLY/DEMAND OF WOODPULP  
BY KIND IN 1972 AND 1982

(Unit: 1,000 MT)

		1972	Share (%)	1982	Share (%)	Ave. Growth Rate during 1982/72 (%/y)
Woodpulp Total	Produc.	108,018	100.0	120,517	100.0	1.1
	Import	16,361	100.0	18,093	100.0	1.0
	Export	16,456	100.0	18,477	100.0	1.2
	Consump.	107,923	100.0	120,133	100.0	1.1
Mechanical Woodpulp	Produc.	24,330	22.5	26,566	22.0	0.9
	Import	1,245	7.6	1,090	6.0	-1.3
	Export	1,143	6.9	1,004	5.4	-1.3
	Consump.	24,432	22.6	26,652	22.2	0.9
Semi-chemical Woodpulp	Produc.	7,953	7.4	6,652	5.5	-1.8
	Import	132	0.8	150	0.8	1.3
	Export	128	0.8	95	0.5	-2.9
	Consump.	7,957	7.4	6,707	5.6	-1.7
Chemical Woodpulp	Produc.	70,718	65.5	82,976	68.9	1.6
	Import	13,505	82.5	15,650	86.5	1.5
	Export	13,309	80.9	16,003	86.6	1.9
	Consump.	70,914	65.7	82,623	68.8	1.5
Unbleached Sulphite Pulp	Produc.	6,734	6.2	5,333	4.4	-2.3
	Import	642	3.9	445	2.5	-3.6
	Export	882	5.4	505	2.7	-5.4
	Consump.	6,494	6.0	5,273	4.4	-2.1
Bleached Sulphite Pulp	Produc.	5,635	5.2	4,298	3.6	-2.7
	Import	2,243	13.7	2,025	11.2	-1.0
	Export	1,806	11.0	1,282	6.9	-3.4
	Consump.	6,072	5.6	5,041	4.2	-1.8
Unbleached Sulphate Pulp	Produc.	29,132	27.0	31,376	26.0	0.7
	Import	1,622	9.9	1,353	7.5	-1.8
	Export	1,914	11.6	2,131	11.5	1.1
	Consump.	28,840	26.7	30,598	25.5	0.6
Bleached Sulphate Pulp	Produc.	28,114	26.0	40,084	33.3	3.6
	Import	8,109	49.6	11,127	61.5	3.2
	Export	8,322	50.6	12,062	65.3	3.8
	Consump.	27,901	25.9	39,149	32.6	3.4
Dissolving Woodpulp	Produc.	5,018	4.6	4,324	3.6	-1.5
	Import	1,480	9.0	1,204	6.7	-2.0
	Export	1,876	11.4	1,377	7.5	-3.0
	Consump.	4,622	4.3	4,151	3.5	-1.1
Other Fiber Pulp	Produc.	6,010	5.6	8,626	7.2	3.7
	Import	147	0.9	193	1.1	2.8
	Export	176	1.1	139	0.8	-2.3
	Consump.	5,981	5.5	8,680	7.2	3.8

Notes: 1. Woodpulp Total Includes Mechanical Pulp, Semi-Chemical Pulp, Chemical Pulp and Dissolving Pulp.

2. Chemical Woodpulp Includes Unbleached Sulphite Pulp, Bleached Sulphite Pulp, Unbleached Sulphate Pulp, Bleached Sulphate Pulp and Other Chemical Pulp.

Source: Yearbook of Forest Products, 1977,1982 (FAO)

Table II-21 RELATION BETWEEN ECONOMIC SITUATION AND PAPER/PULP INDUSTRY

	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Pulp (BKP)																
Quantity		6	6	14	4	7	12	19	133	466	766	762	758	933	-	-
Export from Brazil <sup>1)</sup>	-	919	1,045	1,117	1,389	1,377	1,288	1,332	1,355	1,578	2,263	2,254	2,196	2,373	-	-
Export from U.S.A. <sup>1)</sup>	-	2,078	2,269	2,482	2,594	2,029	2,423	2,474	2,869	2,762	2,762	2,765	2,576	-	-	-
Import to U.S.A. <sup>1)</sup>	-	2,195	1,868	3,008	2,726	2,348	2,465	2,519	3,288	3,305	3,235	3,200	2,797	-	-	-
Export from N.W. <sup>1)</sup>	-	4,858	4,743	4,588	4,081	4,386	4,126	4,670	4,295	4,146	4,373	5,571	7,294	8,001	8,802	-
Exchange Rate of Sweden Krona to US\$	-	(100)	97.6	94.4	84.0	90.3	84.9	96.1	88.4	85.3	90.0	114.7	150.1	164.7	-	-
Change Rate in Index (1971=100)																
Pulp	104	103	98	107	142	137	130	105	112	116	133	119	104	90	124	-
Constant Price Indexes <sup>2)4)</sup>																
Paper	96	95	94	93	92	93	94	95	93	93	90	90	94	87	91	-
Constant Price Indexes <sup>3)4)</sup>																
Market Pulp Inventories <sup>1)4)</sup>	-	-	-	1,190	550	1,175	2,430	3,000	3,800	1,000	730	1,100	1,680	1,560	1,000	1,750
Rate of Pulp Consump. to Paper MT/MT	-	-	0.78	0.77	0.79	0.78	0.78	0.77	0.77	0.72	0.73	0.73	0.73	-	-	-
Production <sup>1)</sup>																
Pulp	-	102,147	108,018	114,311	117,851	102,932	115,189	116,695	121,502	123,504	126,031	126,609	-	-	-	-
Difference Rate(%)	-	-	5.7	5.8	3.1	-12.7	11.9	1.3	4.1	1.6	2.0	0.5	-	-	-	-
Paper and Paperboard	-	128,557	137,582	147,118	149,356	130,709	147,265	151,892	158,178	170,447	172,301	172,471	165,360	-	-	-
Difference Rate(%)	-	-	7.0	6.9	1.5	-12.5	12.7	3.1	4.1	7.6	1.1	0.1	-4.1	-	-	-
Capacity <sup>1)</sup>	-	-	-	160,700	166,800	175,002	-	-	187,600	192,200	198,001	-	-	205,900	-	-
Capacity Growth Rate	'61-'70	-	-	5.5	-0.6	-0.7	-	-	4.5	2.4	'71-'80	2.1%	-	'81-'83	2.4%	-
GNP World	3,895	3,594	5,418	5,902	6,039	6,152	6,471	6,760	7,201	7,445	7,586	7,711	7,726	-	-	-
U.S.A. in 1975 <sup>5)</sup>	1,561	1,010	1,478	1,560	1,550	1,539	1,614	1,701	1,778	1,820	1,815	1,856	1,812	-	-	-
U.S.A. GDP Growth Rate(%)	-	-25.8	46.3	5.5	-0.6	-0.7	4.9	5.4	4.5	2.4	-0.3	2.3	-2.4	3.7	7.3	4.0

Notes: 1) Unit: 1,000 MT  
 2) Price of 1972  
 3) Price of 1967  
 4) Prices in Quarter of Each Year  
 5) Billion US\$

Source: PPI

Table II-22 PROJECTION OF PAPER & PAPERBOARD  
PRODUCTION AND WOODPULP CONSUMPTION  
IN THE WORLD

Year	GDP in 1975 US\$ (billion)	Paper & Paperboard Consumption (1,000 MT)	Paper & Paperboard Production (1,000 MT)	Woodpulp Consumption (1,000 MT)
<b>Actual</b>				
1972	5,418	137,510	137,582	107,923
1973	5,902	146,605	147,118	113,836
1974	6,039	148,331	149,356	117,586
1975	6,152	128,232	130,709	102,537
1976	6,471	146,724	147,265	114,861
1977	6,760	151,335	151,895	116,281
1978	7,201	158,198	158,178	121,107
1979	7,445	169,287	170,447	123,302
1980	7,586	170,787	172,301	125,388
1981	7,723	170,716	172,471	125,935
1982	7,754	165,091	165,360	120,133
<b>Forecast</b>				
1988	9,272	188,146	188,146	136,406
1990	9,969	195,628	195,628	140,852
1995	11,948	212,304	212,304	150,736
2000	14,321	224,886	224,886	157,420
<b>Annual Average Growth Rate (%)</b>				
1988/1982	3.03	2.20	2.18	2.14
1990/1988	3.69	1.97	1.97	1.62
1990/1982	3.19	2.14	2.12	2.01
1995/1990	3.69	1.65	1.65	1.37
2000/1995	3.69	1.16	1.16	0.87
2000/1982	3.47	1.73	1.72	1.51

Notes (Projection Method):

1. Paper & Paperboard Consumption:

Regression Formula:

$$-0.279498x$$

$$y = K / (1 + 3.67931 e^{\dots})$$

Where: y = Paper & Paperboard Consumption (1,000 MT)

(See Table )

x = GDP in 1975 US\$ (1,000 billion)

(See Table )

K = Ceiling Value (240,000,000 MT)

2. "Paper & Paperboard Production" = "Paper & Paperboard Consumption"

3. Woodpulp Consumption:

Ratio of Woodpulp Consumption to Paper & Paperboard Production:

1988	1990	1995	2000
0.725	0.72	0.71	0.70

4.

No.	Regression Formula	Correlation Factor
1.	$-0.279498x$	
	$y = K / (1 + 3.67931 e^{\dots})$ K=240000	0.891304
2.	$y = 50279.8 + 15308.6x$	0.886700
3.	$y = -37692.6 + 100551 \log x$	0.877523
4.	$\log y = 11.2628 + 0.100063x$	0.875567
5.	$\log y = 10.6871 + 0.657601 \log x$	0.866975

Notes:

y = Paper & Paperboard Consumption  
(1,000 MT)

x = GDP in 1975 US\$

(No.1: in 1,000 billion, No.2-5: in billion)

K = Ceiling Value (1,000 MT)

Table II-23 COMPARISON OF PAPER CONSUMPTION FORECASTS

	FAO Industry Working Party 1977					FAO 1977	Valmet 1982	Jaakko Poyry 1982	Our Forecast 1983
	Pessi- mistic	Medium	Opti- mistic						
Quantities (1,000 T)									
1975 Trend	146,200	146,200	146,200	146,200	146,200	146,200	146,200	146,200	146,200
1980 Trend	-	-	-	-	-	-	174,560	174,560	174,560
Forecast	169,900	180,200	189,800	182,500	182,500	-	-	-	-
1985 Forecast	190,600	271,700	246,300	223,900	223,900	-	(200,700)	188,700	188,700
1990 Forecast	211,400	259,300	316,300	280,450	280,450	235,000	(235,000)	207,700	207,700
1995 Forecast	-	-	-	-	-	267,500	276,000	217,000	217,000
Growth Rates (%)									
1970-75 Trend	2.8	2.8	2.8	2.8	2.8	(4.3)	(4.3)	(4.3)	(4.3)
1975-80 Trend	-	-	-	-	-	3.6	3.6	3.6	3.6
Forecast	5.1	6.4	7.5	6.6	6.6	-	-	-	-
1980-85 Forecast	2.9	3.6	5.3	4.2	4.2	(3.0)	(3.2)	1.6	1.6
1985-90 Forecast	1.5	3.5	5.1	4.6	4.6	(3.0)	(3.2)	1.9	1.9
1990-95 Forecast	-	-	-	-	-	(2.7)	(3.2)	0.9	0.9
1978-95 Forecast	-	-	-	-	-	3.0	3.2	1.5	1.5

Source: PPI/May '83

Table 11-24 SUPPLY/DEMAND OF PAPER AND PAPERBOARD IN THE EC COUNTRIES (1)

(Unit: 1,000 MT)

	Share (%)						Average Growth Rate (%/y)			
	1972	1977	1980	1981	1982	1977/72 1982/77				
<b>EC Total</b>										
Produc.	21,415	22,634	24,606	24,205	23,341	15.6	14.9	14.1	1.1	0.6
Import	10,408	11,406	13,648	14,101	14,024	41.3	41.1	41.9	1.8	4.2
Export	2,926	4,071	5,347	5,631	5,651	11.6	14.4	16.7	6.8	6.8
Net Imp.	7,482	7,335	8,301	8,470	8,373					
Consump.	28,897	29,969	32,907	32,675	31,714	21.0	19.8	19.2	0.7	1.1
SS-Rate	74	76	75	74	74					
<b>West Germany</b>										
Produc.	5,959	6,604	7,580	7,796	7,796	4.3	4.3	4.7	2.1	3.4
Import	2,983	3,147	3,740	3,733	3,713	11.8	11.3	11.1	1.1	3.4
Export	825	1,315	1,692	1,942	2,234	3.3	4.6	6.6	9.8	11.2
Net Imp.	2,158	1,832	2,048	1,791	1,479					
Consump.	8,117	8,436	9,628	9,567	9,275	5.9	5.6	5.6	0.8	1.9
SS-Rate	73	78	79	81	84					
<b>France</b>										
Produc.	4,530	4,642	5,152	5,156	5,067	3.3	3.1	3.1	0.5	1.8
Import	1,498	1,611	2,109	2,070	2,084	6.0	5.8	6.2	1.5	5.3
Export	507	735	1,064	1,082	1,051	2.0	2.6	3.1	7.7	7.4
Net Imp.	991	876	1,045	988	1,033					
Consump.	5,521	5,518	6,197	6,144	6,100	4.0	3.6	3.7	0.0	2.0
SS-Rate	82	84	83	84	83					
<b>Italy</b>										
Produc.	3,723	4,288	4,934	4,854	4,323	2.7	2.8	2.8	2.9	0.2
Import	502	448	861	816	859	2.0	1.6	1.6	-2.3	13.9
Export	356	445	501	619	449	1.4	1.6	1.6	4.6	0.2
Net Imp.	146	3	360	197	410					
Consump.	3,869	4,291	5,294	5,051	4,733	2.8	2.8	2.8	2.1	2.0
SS-Rate	96	100	93	96	91					
<b>Netherlands</b>										
Produc.	1,571	1,625	1,701	1,590	1,590	1.1	1.1	1.0	0.7	-0.4
Import	763	1,071	1,435	1,434	1,411	3.0	3.9	4.2	7.0	5.7
Export	476	693	953	936	891	1.9	2.4	2.6	7.8	5.2
Net Imp.	287	378	482	498	520					
Consump.	1,858	2,003	2,183	2,088	2,110	1.4	1.3	1.3	1.5	1.0
SS-Rate	85	81	78	76	75					
<b>Belux</b>										
Produc.	783	743	864	864	864	0.6	0.5	0.5	-1.0	3.1
Import	796	856	983	968	1,011	3.2	3.1	3.0	1.5	3.4
Export	435	398	484	484	484	1.7	1.4	1.4	-1.8	4.0
Net Imp.	361	458	499	484	527					
Consump.	1,144	1,201	1,363	1,348	1,348	0.8	0.8	0.8	1.0	3.0
SS-Rate	68	62	63	64	62					

Table 11-24 SUPPLY/DEMAND OF PAPER AND PAPERBOARD IN THE EC COUNTRIES (2)

(Unit: 1000 MT)

	Share (%)						Average Growth Rate (%/y)		
	1972	1977	1980	1981	1982	1977	1982	1977/72	1982/77
<b>United Kingdom</b>									
Produc.	4,338	4,145	3,788	3,379	3,186	3.2	2.7	1.9	-0.9
Import	3,054	3,394	3,510	4,034	3,887	12.1	12.2	11.6	2.1
Export	246	388	466	357	334	1.0	1.4	1.0	9.5
Net Imp.	2,808	3,006	3,044	3,677	3,553				-3.0
Consump.	7,146	7,151	6,832	7,056	6,739	5.2	4.7	4.1	0.0
SS-Rate	61	58	55	48	47				-1.2
<b>Ireland</b>									
Produc.	115	131	55	52	20	0.1	0.1	0.0	2.6
Import	168	186	222	231	237	0.6	0.7	0.7	3.1
Export	36	27	22	24	12	0.1	0.1	0.0	-5.6
Net Imp.	124	159	200	207	225				-15.0
Consump.	239	290	255	259	245	0.2	0.2	0.1	3.9
SS-Rate	48	45	22	20	8				-3.3
<b>Denmark</b>									
Produc.	236	243	225	227	229	0.2	0.2	0.1	0.6
Import	514	564	625	640	647	2.0	2.0	1.9	1.9
Export	37	56	121	144	153	0.1	0.2	0.5	8.6
Net Imp.	477	508	504	496	494				22.3
Consump.	713	751	729	723	723	0.5	0.5	0.4	1.0
SS-Rate	33	32	31	31	32				-0.3
<b>Greece</b>									
Produc.	160	213	307	287	266	0.1	0.1	0.2	5.9
Import	138	129	163	175	175	0.5	0.5	0.5	-1.3
Export	8	14	44	43	43	0.0	0.0	0.1	11.8
Net Imp.	130	115	119	132	132				25.2
Consump.	298	328	426	419	398	0.2	0.2	0.2	2.5
SS-Rate	55	65	72	68	67				3.9

Source: Yearbook of Forest Products, 1982 (FAO)

Notes: 1. SS-Rate: Self-sufficiency Rate (%)

2. Share: EC total or each country's share to world total

3. In this table, EC includes above ten countries though United Kingdom, Ireland and Denmark joined in 1973 and Greece joined in 1981.

Table II-24 SUPPLY/DEMAND OF PAPER AND PAPERBOARD IN THE LATIN AMERICAN COUNTRIES (3)

(Unit: 1,000 MT)

		1972	1977	1980	1981	1982	Average Growth Rate (%/y)	
							1977/72	1982/77
Latin America	Produc.	4,246	5,536	7,727	7,434	7,697	5.4	6.8
Total	Import	1,805	2,066	2,343	2,435	2,386	2.7	2.9
	Export	110	222	410	575	476	15.1	16.5
	Net Imp.	1,695	1,844	1,933	1,860	1,910		
	Consump.	5,941	7,380	9,660	9,294	9,607	4.4	5.4
	SS-Rate	71	75	80	80	80		
Mexico	Produc.	981	1,463	1,979	1,893	1,914	8.3	5.5
	Import	189	570	588	625	625	24.7	1.9
	Export	2	6	9	13	13	24.6	16.7
	Net Imp.	187	564	579	612	612		
	Consump.	1,168	2,027	2,558	2,505	2,526	11.7	4.5
	SS-Rate	84	72	77	76	76		
Argentina	Produc.	748	539	713	669	745	-6.3	6.7
	Import	220	181	247	208	95	-3.8	-12.1
	Export	11	26	15	9	7	18.8	-23.1
	Net Imp.	209	155	232	199	88		
	Consump.	957	694	945	868	833	-6.2	3.7
	SS-Rate	78	78	75	77	89		
Bolivia	Produc.	1	1	1	1	1	0.0	0.0
	Import	13	16	18	18	18	4.2	2.4
	Export	0	0	0	0	0	-	-
	Net Imp.	13	16	18	18	18		
	Consump.	14	17	19	19	19	4.0	2.2
	SS-Rate	7	6	5	5	5		
Brazil	Produc.	1,345	2,135	3,352	3,103	3,228	9.7	8.6
	Import	255	270	266	242	225	1.2	-3.6
	Export	10	39	191	329	270	31.3	47.3
	Net Imp.	245	231	75	-87	-45		
	Consump.	1,590	2,366	3,437	3,016	3,183	8.3	6.1
	SS-Rate	85	90	98	103	101		
Chile	Produc.	281	296	374	327	317	1.0	1.4
	Import	12	0	0	0	0	-	-
	Export	47	100	89	65	73	16.3	-6.1
	Net Imp.	-35	-100	-89	-65	-73		
	Consump.	246	196	285	262	244	-4.4	4.5
	SS-Rate	114	151	131	125	130		



Table 11-24 SUPPLY/DEMAND OF PAPER AND PAPERBOARD IN THE LATIN AMERICAN COUNTRIES (4)

(Unit: 1,000 MT)

		1972	1977	1980	1981	1982	Average Growth Rate (%/y)	
							1977/72	1982/77
Colombia	Produc.	250	281	351	407	366	2.4	5.4
	Import	80	74	151	213	186	-1.5	20.2
	Export	6	1	43	106	68	-30.1	132.5
	Net Imp.	74	73	108	107	118		
	Consump.	324	354	459	514	484	1.8	6.5
	SS-Rate	2	1	1	1	1		
Ecuador	Produc.	13	34	26	31	34	21.2	0.0
	Import	163	67	65	66	66	-16.3	-0.3
	Export	0	0	0	0	0		
	Net Imp.	163	67	65	66	66		
	Consump.	176	101	91	97	100	-10.5	-0.2
	SS-Rate	7	34	29	32	34		
Paraguay	Produc.	0	1	13	13	13	0.0	67.0
	Import	6	13	16	13	13	16.7	0.0
	Export	0	0	0	0	0		
	Net Imp.	6	13	16	13	13		
	Consump.	6	14	29	26	26	18.5	13.2
	SS-Rate	0	7	45	50	50		
Peru	Produc.	155	149	205	272	357	-0.8	19.1
	Import	73	62	19	47	54	-3.2	-2.7
	Export	21	12	2	2	2	-10.6	-30.1
	Net Imp.	52	50	17	45	52		
	Consump.	207	199	222	317	409	-0.8	15.5
	SS-Rate	75	75	92	86	87		
Uruguay	Produc.	37	35	52	44	44	-1.1	4.7
	Import	14	13	25	26	26	-1.5	14.9
	Export		4	9	7	7	0.0	11.8
	Net Imp.	14	9	16	19	19		
	Consump.	51	44	68	63	63	-2.9	7.4
	SS-Rate	73	80	76	70	70		
Venezuela	Produc.	276	464	479	479	479	10.9	0.6
	Import	132	196	226	226	226	8.2	2.9
	Export	0	0	0	0	0		
	Net Imp.	132	196	226	226	226		
	Consump.	408	660	705	705	705	10.1	1.3
	SS-Rate	68	70	68	68	68		

Source: Yearbook of Forest Products, 1982 (FAO)  
 Note: SS-Rate: Self-sufficiency Rate (%)

Table II-25 PRODUCTION/IMPORT/EXPORT/APPARENT CONSUMPTION OF PAPER AND PAPERBOARD BY KIND IN MEXICO

(Unit: 1,000 MT)

		1972	1977	1980	1981	1982	Ave. Growth Rate (%/y)	
							1977/72	1982/77
Paper & Paperboard Total	Produc.	981	1,463	1,979	1,893	1,914	8.3	5.5
	Import	189	570	588	625	625	24.7	1.9
	Export	2	6	9	13	13	24.6	16.7
	Net Imp.	187	564	579	612	612		
	Consump.	1,168	2,027	2,558	2,505	2,526	11.7	4.5
	SS-Rate	84	72	77	76	76		
Newsprint	Produc.	40	90	116	129	125	17.6	6.8
	Import	55	297	200	351	351	40.1	3.4
	Export	0	0	0	0	0	-	-
	Net Imp.	55	297	200	351	351		
	Consump.	95	387	316	480	476	32.4	4.2
	SS-Rate	42	23	37	27	26		
Printing & Writing Paper	Produc.	141	304	526	427	452	16.6	8.3
	Import	125	233	65	46	46	13.3	-27.7
	Export	0	0	0	0	0	-	-
	Net Imp.	125	233	65	46	46		
	Consump.	266	537	591	473	498	15.1	-1.5
	SS-Rate	53	57	89	90	91		
Other Paper & Paperboard	Produc.	800	1,069	1,337	1,337	1,337	6.0	4.6
	Import	8	39	322	228	228	37.3	42.4
	Export	2	6	9	13	13	24.6	16.7
	Net Imp.	6	33	313	215	215		
	Consump.	806	1,102	1,650	1,552	1,552	6.5	7.1
	SS-Rate	99	97	81	86	86		
Household & Sanitary Paper	Produc.	71	126	184	224	248	12.2	14.5
	Import	0	0	0	0	0	-	-
	Export	0	0	0	0	0	-	-
	Net Imp.	0	0	0	0	0		
	Consump.	71	126	184	224	248	12.2	14.5
	SS-Rate	100	100	100	100	100		
Wrapping & Packing Paper & Paperboard	Produc.	616	881	1,109	1,120	1,106	7.4	4.7
	Import	0	35	250	177	177	-	38.3
	Export	0	0	0	0	0	-	-
	Net Imp.	0	35	250	177	177		
	Consump.	616	916	1,359	1,297	1,283	8.3	7.0
	SS-Rate	100	96	82	86	86		
Paper & Paperboard NES	Produc.	113	44	44	51	55	-17.2	4.6
	Import	0	4	72	50	50	-	65.7
	Export	0	0	0	0	0	-	-
	Net Imp.	0	4	72	50	50		
	Consump.	113	48	116	101	105	-15.7	16.9
	SS-Rate	100	92	38	50	52		

Table II-26 WORLDWIDE PAPER AND BOARD CAPACITY ADDITION, 1982-85 (1)

(Unit: 1,000 MT)

	Newsprint	Pr/Wr	Pkg.Paper	Tissue	Other Paper	Case-making	Board	Total
Firm Projects								
Africa	285	189	80	8	0	190	0	752
Asia	550	617	82	96	43	475	33	1,896
Australia	180	0	0	0	0	40	0	220
Europe	760	1,433	84	404	59	195	284	3,219
Latin America	406	552	378	165	48	341	109	1,999
North America	1,603	1,763	210	91	38	771	40	4,516
Total	3,784	4,554	834	764	188	2,012	466	12,602
Advanced Planning Stage*								
Asia	140	150	180	25	30	344	59	928
Australasi	0	0	80	0	0	0	0	80
Europe	330	620	220	75	0	255	118	1,618
Latin America	0	84	48	45	0	53	140	370
North America	470	135	500	0	0	0	0	1,105
Total	940	989	1,028	145	30	652	317	4,101

Note: \* No African Pulp Project Falls in This Category.

Table II-26 WORLDWIDE PULP CAPACITY ADDITIONS, 1982-85 (2)

(Unit: 1,000 MT)

	Bl.Kraft	Unbl.Kraft	Sulfite	Mechanical	TMP	Semi-chem.	Other	Total
Firm Projects								
Africa	400	115	0	245	0	0	50	810
Asia	480	363	0	80	45	0	417	1,385
Australasia	0	140	0	109	265	0	0	514
Europe	1,170	120	330	600	280	110	0	2,610
Latin America	747	473	0	70	97	121	226	1,734
North America	1,715	195	39	555	1,426	100	0	4,030
Total	4,512	1,406	369	1,659	2,113	331	693	11,083
Advanced Planning Stage*								
Africa	0	0	0	0	0	0	300	300
Asia	716	0	66	0	0	0	20	802
Europe	320	195	50	0	80	0	0	645
Latin America	134	34	0	0	0	0	0	168
North America	70	410	0	0	125	0	0	606
World Total	1,240	639	116	0	205	0	320	2,520

Note: \* No Australasian Pulp Project Falls in This Category.

Source: PULP &amp; PAPER WEEK/May '82

Table II-27 PROJECTION OF PAPER & PAPERBOARD  
PRODUCTION AND WOODPULP CONSUMPTION  
IN THE WORLD

Year	GDP in 1975 US\$ (billion)	Paper & Paperboard Consumption (1,000 MT)	Paper & Paperboard Production (1,000 MT)	Woodpulp Consumption (1,000 MT)
<b>Actual</b>				
1972	5,418	137,510	137,582	107,923
1973	5,902	146,605	147,118	113,836
1974	6,039	148,331	149,356	117,586
1975	6,152	128,232	130,709	102,537
1976	6,471	146,724	147,265	114,861
1977	6,760	151,335	151,895	116,281
1978	7,201	158,198	158,178	121,107
1979	7,445	169,287	170,447	123,302
1980	7,586	170,787	172,301	125,388
1981	7,723	170,716	172,471	125,935
1982	7,754	165,091	165,360	120,133
<b>Forecast</b>				
1988	9,272	188,146	188,146	136,406
1990	9,969	195,628	195,628	140,852
1995	11,948	212,304	212,304	150,736
2000	14,321	224,886	224,886	157,420
<b>Annual Average Growth Rate (%)</b>				
1988/1982	3.03	2.20	2.18	2.14
1990/1988	3.69	1.97	1.97	1.62
1990/1982	3.19	2.14	2.12	2.01
1995/1990	3.69	1.65	1.65	1.37
2000/1995	3.69	1.16	1.16	0.87
2000/1982	3.47	1.73	1.72	1.51

Notes (Projection Method):

1. Paper & Paperboard Consumption:

Regression Formula:

$$y = K / (1 + 3.67931 e^{-0.279498x})$$

Where: y = Paper & Paperboard Consumption (1,000 MT)  
(See Table )

x = GDP in 1975 US\$ (1,000 billion)  
(See Table )

K = Ceiling Value (240,000,000 MT)

2. "Paper & Paperboard Production" = "Paper & Paperboard Consumption"

3. Woodpulp Consumption:

Ratio of Woodpulp Consumption to Paper & Paperboard Production:

1988	1990	1995	2000
0.725	0.72	0.71	0.70

Table II-28 SUPPLY/DEMAND OF WOODPULP IN THE EC COUNTRIES (1)

	Share (%)					Average Growth Rate (%/y)	
	1972	1977	1980	1981	1982	1977/72	1982/77
(Unit: 1,000 MT)							
EC Total							
Produc.	5,601	5,522	5,455	5,323	5,348	5.2	4.4
Import	8,165	7,705	9,103	8,627	7,765	49.9	42.9
Export	443	508	584	501	492	2.7	2.7
Net Imp.	7,722	7,197	8,519	8,126	7,273	12.3	10.5
Consump.	13,323	12,719	13,974	13,449	12,621	10.9	10.5
SS-Rate	42	43	39	40	42		
West Germany							
Produc.	1,707	1,862	1,996	2,021	2,021	1.6	1.7
Import	1,709	1,927	2,435	2,415	2,397	10.4	13.2
Export	95	110	116	111	102	0.6	0.6
Net Imp.	1,614	1,817	2,319	2,304	2,295	3.1	3.2
Consump.	3,321	3,679	4,315	4,325	4,316	3.1	3.5
SS-Rate	51	51	46	47	47		
France							
Produc.	1,913	2,017	1,815	1,793	1,843	1.8	1.5
Import	1,321	1,339	1,755	1,708	1,469	8.1	8.1
Export	143	158	187	153	152	0.9	0.8
Net Imp.	1,178	1,181	1,568	1,555	1,317	2.9	2.6
Consump.	3,091	3,198	3,383	3,348	3,160	2.9	2.6
SS-Rate	62	63	54	54	58		
Italy							
Produc.	927	736	688	696	764	0.9	0.6
Import	1,309	1,190	1,760	1,541	1,362	8.0	7.1
Export	3	2	1	14	20	0.0	0.0
Net Imp.	1,306	1,188	1,759	1,527	1,342	2.1	1.7
Consump.	2,233	1,924	2,447	2,223	2,046	2.1	1.7
SS-Rate	42	38	28	31	34		
Netherlands							
Produc.	172	152	201	200	200	0.2	0.2
Import	636	596	651	585	530	3.9	2.9
Export	4	6	8	4	4	0.0	0.0
Net Imp.	632	590	643	581	526	0.7	0.6
Consump.	804	742	844	781	726	0.7	0.6
SS-Rate	21	21	24	26	28		
Belux							
Produc.	405	372	358	358	358	0.4	0.3
Import	382	363	423	423	423	2.3	2.3
Export	117	137	143	143	143	0.7	0.8
Net Imp.	265	226	280	280	280	0.6	0.5
Consump.	670	598	638	638	638	0.6	0.5
SS-Rate	60	62	56	56	56		

Table 11-28 SUPPLY/DEMAND OF WOODPULP IN THE EC COUNTRIES (2)

(Unit: 1,000 MT)

	Share (%)					Average Growth Rate (%/y)					
	1972	1977	1980	1981	1982		1972	1977	1982	1977/72	1982/77
<b>United Kingdom</b>											
Produced	357	306	286	168	144	0.3	0.3	0.1	-3.0	-14.0	
Import	2,598	2,152	1,857	1,727	1,390	15.8	12.9	7.7	-3.6	-8.4	
Export	3	22	36	15	15	0.0	0.1	0.1	49.0	-7.4	
Net Imp.	2,587	2,130	1,821	1,712	1,375						
Consump.	2,944	2,436	2,107	1,880	1,519	2.7	2.1	1.3	-3.7	-9.0	
SS-Rate	12	13	14	9	10						
<b>Ireland</b>											
Produced	36	19	19	0	0	0.0	0.0	0.0	-12.0	-	
Import	41	25	33	34	9	0.3	0.1	0.0	-9.4	-18.5	
Export	0	26	31	0	1	0.9	0.2	0.0	-	-47.9	
Net Imp.	41	-1	2	34	8						
Consump.	77	18	21	34	8	0.1	0.0	0.0	-25.2	-15.0	
SS-Rate	47	106	91	0	0						
<b>Denmark</b>											
Produced	84	58	64	65	57	0.1	0.0	0.0	-7.1	-0.3	
Import	93	56	97	112	103	0.6	0.3	0.6	-9.6	13.0	
Export	78	47	62	61	55	0.5	0.3	0.3	-9.6	3.2	
Net Imp.	15	9	35	51	48						
Consump.	99	67	99	116	105	0.1	0.1	0.1	-7.5	9.4	
SS-Rate	85	87	65	56	54						
<b>Greece</b>											
Produced	0	0	28	22	21	0.0	0.0	0.0	-	-	
Import	84	57	92	82	82	0.5	0.3	0.5	-7.5	7.5	
Export	0	0	0	0	0	0.0	0.0	0.0	-	-	
Net Imp.	84	57	92	82	82						
Consump.	84	57	120	104	103	0.1	0.0	0.1	-7.5	12.6	
SS-Rate	0	0	23	21	20						

Source: Yearbook of Forest Products, 1982 (FAO)

Notes: 1. SS-Rate: Self-sufficiency Rate (%)

2. Share: EC total or each country's share to world total

3. In this table, EC includes above ten countries though United Kingdom, Ireland, and Denmark joined in 1973 and Greece joined in 1981.

Table II-29 SUPPLY/DEMAND OF PULP BY KIND IN LATIN AMERICA (1)

(Unit: 1,000 MT)

							Share (%)		Average Growth Rate (%/y)		
		1972	1977	1980	1981	1982	1972	1977	1982	1977/72	1982/77
Woodpulp Total	Produc.	1,977	3,133	4,652	4,516	4,574	1.8	2.7	3.8	9.6	7.9
	Import	707	501	753	784	756	4.3	3.0	4.2	-6.7	8.6
	Export	262	433	1,306	1,362	1,287	1.6	2.5	7.0	10.6	24.3
	Net Imp.	445	68	-553	-578	-531					
	Consump.	2,422	3,201	4,099	3,938	4,043	2.2	2.8	3.4	5.7	4.8
	SS-Rate	82	98	114	115	113					
Mechanical Woodpulp	Produc.	387	359	418	407	410	1.6	1.3	1.5	-1.5	2.7
	Import	34	19	51	102	96	2.7	1.6	8.8	-11.0	38.3
	Export	7	2	4	4	5	0.6	0.2	0.5	-22.2	20.1
	Net Imp.	27	17	47	98	91					
	Consump.	414	376	465	505	501	1.7	1.4	1.9	-1.9	5.9
	SS-Rate	94	96	90	81	82					
Semi-chemical Woodpulp	Produc.	205	205	304	312	293	2.6	2.8	4.4	0.0	7.4
	Import	5	3	9	6	6	3.8	2.2	4.0	-9.7	14.9
	Export	0	0	0	0	0	0.0	0.0	0.0	-	-
	Net Imp.	5	3	9	6	6					
	Consump.	210	208	313	318	299	2.6	2.8	4.5	-0.2	7.5
	SS-Rate	98	99	97	98	98					
Chemical Wood- pulp	Produc.	1,384	2,517	3,883	3,750	3,824	2.0	3.3	4.6	12.7	8.7
	Import	597	439	666	660	638	4.4	3.1	4.1	-6.0	7.8
	Export	256	431	1,302	1,358	1,282	1.9	3.0	8.0	11.0	24.4
	Net Imp.	341	8	-636	-698	-644					
	Consump.	1,725	2,525	3,247	3,052	3,180	2.4	3.3	3.8	7.9	4.7
	SS-Rate	80	100	120	123	120					
Unbleached Sulphite Pulp	Produc.	65	64	104	97	101	1.0	1.1	1.9	-0.3	9.6
	Import	8	1	3	1	1	1.2	0.2	0.2	-34.0	0.0
	Export	6	1	1	1	2	0.7	0.2	0.4	-30.1	14.9
	Net Imp.	2	0	2	0	-1					
	Consump.	67	64	106	97	100	1.0	1.1	1.9	-0.9	9.3
	SS-Rate	97	100	98	100	101					
Bleached Sulphite Pulp	Produc.	91	103	120	107	120	1.6	2.0	2.8	2.5	3.1
	Import	22	9	7	9	9	1.0	0.4	0.4	-16.4	0.0
	Export	0	1	1	2	3	0.0	0.0	0.2	0.0	24.6
	Net Imp.	22	8	6	7	6					
	Consump.	113	111	126	114	126	1.9	2.1	2.5	-0.4	2.6
	SS-Rate	81	93	95	94	95					

Table II-29 SUPPLY/DEMAND OF PULP BY KIND IN LATIN AMERICA (2)

(Unit: 1,000 MT)

							Share (%)			Average Growth Rate (%/y)	
		1972	1977	1980	1981	1982	1972	1977	1982	1977/72	1982/77
Unbleached Sulphate Pulp	Produc.	608	1,188	1,427	1,685	1,684	2.1	3.7	5.4	14.3	7.2
	Import	104	57	64	59	55	6.4	3.6	4.1	-11.3	-0.7
	Export	123	236	318	391	314	6.4	10.6	14.7	13.9	5.9
	Net Imp.	-19	-179	-254	-332	-259					
	Consump.	589	1,009	1,173	1,353	1,425	2.0	3.2	4.7	11.4	7.1
	SS-Rate	103	118	122	125	118					
Bleached Sulphate Pulp	Produc.	603	1,114	2,177	1,798	1,856	2.1	3.4	4.6	13.1	10.7
	Import	157	131	202	188	177	1.9	1.4	1.6	-3.6	6.2
	Export	6	194	983	964	962	0.1	2.1	8.0	100.4	37.7
	Net Imp.	151	-63	-781	-776	-785					
	Consump.	754	1,051	1,396	1,022	1,071	2.7	3.3	2.7	6.9	0.4
	SS-Rate	80	106	156	176	173					
Dissolving Woodpulp	Produc.	0	52	47	47	47	0.0	1.1	1.1	-	-2.0
	Import	72	39	27	16	16	4.9	2.9	1.3	-11.5	-16.3
	Export	0	0	0	0	0	0.0	0.0	0.0	-	-
	Net Imp.	72	39	27	16	16					
	Consump.	72	91	74	63	63	1.6	2.1	1.5	4.8	-7.1
	SS-Rate	0	57	64	75	75					
Other Fiber Pulp	Produc.	492	662	746	805	807	8.2	8.9	9.4	6.1	4.0
	Import	1	1	1	2	1	0.7	0.5	0.5	0.0	0.0
	Export	4	9	0	0	0	2.3	4.0	0.0	17.6	-
	Net Imp.	-3	-8	1	2	-1					
	Consump.	489	654	747	807	808	8.2	8.8	9.3	6.0	4.3
	SS-Rate	101	101	100	100	100					

- Notes: 1. Produc.: Production  
 Net Imp.: Net Import = Import - Export  
 Consump.: Apparent Consumption = Production + Import - Export  
 SS-Rate: Self-sufficiency Rate (%)
2. Share: Share to world total
3. "Woodpulp Total" includes "Chemical Woodpulp", "Mechanical Woodpulp", "Semi-chemical Woodpulp" and "Dissolving Woodpulp".
4. "Chemical Woodpulp" includes "Unbleached Sulphite Pulp", "Bleached Sulphite Pulp", "Unbleached Sulphate Pulp", "Bleached Sulphate Pulp", and other chemical woodpulp.



Table 11-29 SUPPLY/DEMAND OF WOODPULP IN THE LATIN AMERICAN COUNTRIES (3)

(Unit: 1,000 MT)

		1972	1977	1980	1981	1982	Average Growth Rate (%/y)	
							1977/72	1982/77
Latin America Total	Produc.	1,977	3,133	4,652	4,516	4,574	9.6	7.9
	Import	707	501	753	784	756	-6.7	8.6
	Export	262	433	1,306	1,362	1,287	10.6	24.3
	Net Imp.	445	68	-553	-578	-531		
	Consump.	2,422	3,201	4,099	3,938	4,043	5.7	4.8
	SS-Rate	82	98	113	115	113		
Mexico	Produc.	328	437	447	462	457	5.9	0.9
	Import	113	70	208	223	214	-9.1	25.0
	Export	0	0	0	0	0	-	-
	Net Imp.	113	70	208	223	214		
	Consump.	441	507	655	685	671	2.8	5.8
	SS-Rate	74	86	68	67	68		
Argentina	Produc.	239	265	309	254	308	2.1	3.1
	Import	149	86	116	128	148	-10.4	11.5
	Export	0	0	0	0	0	-	-
	Net Imp.	149	86	116	128	148		
	Consump.	388	351	425	382	456	-2.0	5.4
	SS-Rate	62	75	73	66	68		
Brazil	Produc.	974	1,649	2,911	2,833	2,929	11.1	12.2
	Import	148	68	60	33	15	-14.4	-26.1
	Export	141	95	890	951	825	-7.6	54.1
	Net Imp.	7	-27	-830	-918	-810		
	Consump.	981	1,622	2,081	1,915	2,119	10.6	5.5
	SS-Rate	99	102	140	148	138		
Chile	Produc.	345	599	763	743	667	11.7	2.2
	Import	7	3	0	0	0	-15.6	0.0
	Export	121	339	416	411	462	22.9	6.4
	Net Imp.	-114	-336	-416	-411	-462		
	Consump.	231	263	347	332	205	2.6	-4.9
	SS-Rate	149	228	220	224	325		
Colombia	Produc.	70	110	123	126	115	9.5	0.9
	Import	52	20	52	66	55	-17.4	22.4
	Export	0	0	0	0	0	-	-
	Net Imp.	52	20	52	66	55		
	Consump.	122	130	175	192	170	1.3	5.5
	SS-Rate	57	85	70	66	68		

Table II-29 SUPPLY/DEMAND OF WOODPULP IN THE LATIN AMERICAN AMERICAN COUNTRIES (4)

(Unit: 1,000 MT)

		1972	1977	1980	1981	Average Growth Rate (%/y)		
						1982	1977/72	1982/77
Ecuador	Produc.	0	0	0	0	0	-	-
	Import	0	2	8	57	57	-	95.4
	Export	0	0	0	0	0	-	-
	Net Imp.	0	2	8	57	57	-	95.4
	Consump.	0	2	8	57	57	-	95.4
	SS-Rate	0	0	0	0	0	-	-
Peru	Produc.	0	13	15	15	15	-	2.9
	Import	43	39	32	24	24	-1.9	-9.3
	Export	1	0	0	0	0	-	-
	Net Imp.	42	39	32	24	24	-	-
	Consump.	42	52	47	39	39	4.4	-5.6
	SS-Rate	0	25	32	38	38	-	-
Uruguay	Produc.	5	14	24	24	24	22.9	11.4
	Import	9	8	9	7	7	-2.3	-2.6
	Export	0	0	0	0	0	-	-
	Net Imp.	9	8	9	7	7	-	-
	Consump.	14	22	33	31	31	9.5	7.1
	SS-Rate	36	64	73	77	77	-	-
Venezuela	Produc.	16	46	56	56	56	23.5	4.0
	Import	133	151	173	173	173	2.6	2.8
	Export	0	0	0	0	0	-	-
	Net Imp.	133	151	173	173	173	-	-
	Consump.	149	197	229	229	229	5.7	3.1
	SS-Rate	11	23	24	24	24	-	-

Source: Yearbook of Forest Products, 1982 (FAO)

Note: SS-Rate: Self-sufficiency Rate (%)

Table II-30 WORLD ESTIMATED DEMAND ON THE FOREST  
FOR INDUSTRIAL SOFTWOOD (1)

	(Unit: Million m <sup>3</sup> )				
	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
<u>Sawlog Demand</u>					
Sawnwood & Sleepers					
Product Volume	252.1	300.6	329.5	368.6	399.4
<u>Residuals Created</u>	<u>222.3</u>	<u>262.0</u>	<u>293.5</u>	<u>341.8</u>	<u>387.9</u>
Gross Wood in the Rough	474.4	562.6	623.0	710.4	787.3
Solidwood Panels					
Product Volume	10.0	18.7	24.3	30.6	34.5
<u>Residuals Created</u>	<u>11.8</u>	<u>21.5</u>	<u>28.2</u>	<u>35.3</u>	<u>40.2</u>
Gross Wood in the Rough	22.1	40.3	52.5	66.0	74.7
Dom. Sawlog Demand	496.4	602.9	675.5	776.4	862.0
Sawlog Trade-Exp(Imp)	-	-	-	-	-
<u>Total Sawlog Demand</u>	<u>496.4</u>	<u>602.9</u>	<u>675.5</u>	<u>776.4</u>	<u>862.0</u>
<u>Fiberlog Demand</u>					
Reconstituted Panels	12.0	35.0	61.4	81.0	100.7
Other Ind. Roundwood	74.4	66.9	68.5	67.7	67.7
<u>Pulp</u>	<u>187.6</u>	<u>314.0</u>	<u>379.5</u>	<u>477.3</u>	<u>631.0</u>
Subtotal Demand	274.0	415.9	509.4	626.0	799.4
Less:					
Residuals Reused	49.1	97.6	157.7	207.8	249.0
Dom. Fiberlog Demand	224.9	318.3	351.7	418.2	550.4
Fiberlog Trade-Exp(Imp)	-	-	-	-	-
<u>Total Fiberlog Demand</u>	<u>224.9</u>	<u>318.3</u>	<u>351.7</u>	<u>418.2</u>	<u>550.4</u>
<u>Total Demand for Industrial Softwoods</u>	<u>721.3</u>	<u>921.2</u>	<u>1,027.2</u>	<u>1,194.6</u>	<u>1,412.4</u>

Source: FAO FORESTRY PAPER, 1982/World Forest Products Demand and Supply 1990 and 2000

Table II-30 WORLD ESTIMATED DEMAND ON THE FOREST  
FOR INDUSTRIAL HARDWOOD (2)

	(Unit: Million m <sup>3</sup> )				
	1960	1970	1980	1990	2000
<u>Sawlog Demand</u>					
Sawnwood & Sleepers					
Product Volume	73.5	91.2	99.3	123.9	143.1
Residuals Created	<u>62.8</u>	<u>76.1</u>	<u>79.7</u>	<u>93.3</u>	<u>106.8</u>
Gross Wood in the Rough	136.3	167.3	179.0	217.2	249.9
Solidwood Panels					
Product Volume	6.8	17.3	24.1	29.6	35.0
Residuals Created	<u>7.5</u>	<u>18.8</u>	<u>26.2</u>	<u>30.1</u>	<u>35.1</u>
Gross Wood in the Rough	14.3	36.1	50.3	59.3	70.0
Dom. Sawlog Demand	150.6	203.4	229.3	276.5	319.9
Sawlog Trade-Exp(Imp)	-	-	-	-	-
Total Sawlog Demand	<u>150.6</u>	<u>203.4</u>	<u>229.4</u>	<u>276.5</u>	<u>319.9</u>
<u>Fiberlog Demand</u>					
Reconstituted Panels	7.2	19.9	32.9	44.1	55.2
Other Ind. Roundwood	69.4	77.3	81.5	83.6	88.3
Pulp	<u>39.8</u>	<u>91.7</u>	<u>132.0</u>	<u>187.1</u>	<u>263.6</u>
Subtotal Demand	116.4	188.9	246.4	314.8	407.1
Less:					
Residuals Reused	<u>9.9</u>	<u>22.5</u>	<u>32.3</u>	<u>44.5</u>	<u>53.8</u>
Dom. Fiberlog Demand	106.5	166.4	214.1	270.3	353.3
Fiberlog Trade-Exp(Imp)	-	-	-	-	-
Total Fiberlog Demand	<u>106.5</u>	<u>166.4</u>	<u>214.1</u>	<u>270.3</u>	<u>353.3</u>
<u>Total Demand for Industrial Softwoods</u>	<u>257.0</u>	<u>369.8</u>	<u>443.4</u>	<u>546.8</u>	<u>673.2</u>

Source: FAO FORESTRY PAPER, 1982/World Forest Products Demand and Supply 1990 and 2000

Table II-31 CONSUMPTION OF FIBER LOGS (1)

(Unit: Million m<sup>3</sup>)

	1 9 6 0			1 9 7 0			1 9 8 0			1 9 9 0			2 0 0 0		
	Domestic Net Imports		Fiber Logs	Domestic Net Imports		Fiber Logs	Domestic Net Imports		Fiber Logs	Domestic Net Imports		Fiber Logs	Domestic Net Imports		Fiber Logs
	Supply	(Exports)	Consumed	Supply	(Exports)	Consumed	Supply	(Exports)	Consumed	Supply	(Exports)	Consumed	Supply	(Exports)	Consumed
North America															
Softwoods	103.5	3.9	103.0	141.6	3.2	140.0	135.6	-	135.6	154.0	-	154.0	181.2	-	181.2
Hardwoods	29.1	-	29.1	64.9	-	64.9	64.0	-	64.0	85.4	-	85.4	119.2	-	119.5
Canada															
Softwoods	38.8	2.2	36.6	52.8	2.3	50.5	45.5	-	45.5	50.7	-	50.7	52.5	-	52.5
Hardwoods	1.8	-	1.8	4.2	-	4.2	7.1	-	7.1	8.9	-	8.9	10.5	-	10.5
United States															
Softwoods	64.7	1.7	66.4	88.8	0.9	89.5	90.1	-	90.1	103.3	-	103.3	128.7	-	128.7
Hardwoods	27.3	-	27.3	40.7	-	40.7	56.9	-	56.9	76.5	-	76.5	109.0	-	109.0
Western Europe															
Softwoods	49.5	5.4	51.5	75.4	7.9	83.3	88.4	4.1	92.5	103.1	4.4	107.1	126.5	3.2	129.7
Hardwoods	18.7	0.1	18.8	33.0	-	33.0	42.2	5.3	43.1	51.7	5.6	53.1	63.8	6.2	65.4
France															
Softwoods	2.8	0.5	3.3	4.8	0.4	5.2	6.2	-	6.2	8.1	0.2	8.3	10.4	0.2	10.6
Hardwoods	1.8	-	1.8	3.3	-	3.3	5.6	0.4	5.2	8.2	0.5	7.7	11.5	0.7	10.6
West Germany															
Softwoods	4.2	1.3	5.5	5.9	1.6	7.5	9.8	-	9.8	12.3	-	12.3	14.5	-	14.5
Hardwoods	3.5	-	3.5	4.1	-	4.1	6.1	0.6	5.5	6.4	0.4	6.0	7.1	0.4	6.7
United Kingdom															
Softwoods	1.0	0.3	1.3	0.9	0.3	1.2	1.4	-	1.4	1.7	-	1.7	4.2	-	4.2
Hardwoods	-	-	-	0.3	-	0.3	0.8	0.3	0.5	0.8	0.3	0.5	0.8	0.3	0.5
Other EC Countries															
Softwoods	1.6	1.6	3.2	3.7	2.7	6.4	3.9	4.1	8.0	4.7	4.0	8.7	6.5	3.0	9.5
Hardwoods	1.4	0.1	1.5	4.6	-	4.6	2.2	3.1	5.3	2.1	3.5	5.6	2.6	3.9	6.5
Nordic Countries															
Softwoods	33.6	1.7	31.9	53.6	1.9	53.5	53.3	-	53.3	57.4	0.2	57.2	64.3	-	64.3
Hardwoods	7.7	-	7.7	12.4	-	12.4	15.3	0.9	14.4	18.0	0.9	17.1	21.1	0.9	20.2
Other Western Europe															
Softwoods	6.3	-	6.3	8.5	1.0	9.5	13.8	-	13.8	18.9	-	18.9	26.6	-	26.6
Hardwoods	4.3	-	4.3	8.3	-	8.3	12.2	-	12.2	16.2	-	16.2	20.9	-	20.9
Japan															
Softwoods	9.0	0.3	9.3	3.8	0.2	4.0	1.5	0.9	2.4	3.9	7.0	10.9	12.4	24.8	37.2
Hardwoods	6.5	-	6.5	14.6	0.4	15.0	11.5	5.8	17.3	8.6	15.2	23.8	6.6	22.8	29.4
Latin America															
Softwoods	0.8	-	0.8	3.9	-	3.9	8.0	-	8.0	21.4	2.0	19.4	37.0	0.2	36.8
Hardwoods	3.0	-	3.0	9.2	-	9.2	13.9	-	13.9	20.4	-	20.4	25.2	-	25.2

Source: PPI

Table II-31 CONSUMPTION OF FIBER LOGS (2)

	1 9 6 0		1 9 7 0		1 9 8 0		1 9 9 0		(Unit: Million m <sup>3</sup> )	
	Domestic Net Supply	Fiber Logs Consumed	Domestic Net Supply	Fiber Logs Consumed	Domestic Net Supply	Fiber Logs Consumed	Domestic Net Supply	Fiber Logs Consumed	Domestic Net Supply	Fiber Logs Consumed
Other Eastern Hemisphere										
Softwoods	2.0	2.0	5.4	5.4	8.2	8.0	16.4	14.2	31.6	26.1
Hardwoods	27.9	27.8	35.2	34.8	46.0	40.2	63.1	47.9	92.5	69.9
Oceania										
Softwoods	0.5	0.5	2.1	2.1	3.8	3.8	8.2	6.5	12.3	12.0
Hardwoods	1.1	1.1	1.1	1.1	3.7	0.9	7.1	2.0	11.3	6.9
Middle East and North Africa										
Softwoods	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9	0.9
Hardwoods	5.7	5.7	6.3	6.3	7.2	7.2	8.7	8.7	11.7	11.7
Africa South of the Sahara										
Softwoods	0.5	0.5	2.2	2.2	3.0	3.0	5.1	5.1	7.2	7.2
Hardwoods	11.6	11.6	17.1	17.1	20.4	20.4	24.3	24.3	32.0	32.0
Far East										
Softwoods	0.8	0.8	0.9	0.9	1.2	1.0	2.9	2.4	11.2	6.0
Hardwoods	9.5	9.4	10.7	10.3	14.7	11.7	23.0	12.9	37.5	21.8
Eastern Europe										
Softwoods	51.9	50.1	77.1	70.4	93.1	88.3	99.5	92.7	136.0	113.7
Hardwoods	14.5	14.5	20.6	20.6	26.2	25.3	30.6	29.3	34.6	32.8
Eastern Europe USSR										
Softwoods	8.7	8.7	15.0	14.7	21.0	20.7	22.5	22.5	23.4	23.4
Hardwoods	6.7	6.7	9.1	9.1	11.9	11.6	14.2	13.9	16.2	15.9
Centrally Planned Asia										
Softwoods	63.2	61.4	62.1	55.7	72.1	67.6	77.0	70.2	112.6	90.3
Hardwoods	7.8	7.8	11.5	11.5	14.3	13.7	16.4	15.3	18.4	16.9
Centrally Planned Asia										
Softwoods	8.3	8.3	11.3	11.3	16.9	16.9	19.9	19.9	25.7	25.7
Hardwoods	6.8	6.8	8.9	8.9	10.3	10.3	10.5	10.5	11.1	11.1

Source: PPI

Table II-32 RATE OF IMPORT TO APPARENT CONSUMPTION OF PULPHOOD IN THE MAJOR IMPORTING COUNTRIES (1972-1982)

(Unit: 1,000 CUM)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Canada	Import	445	339	652	556	495	834	1,074	666	687	557
	Consump.	35,074	40,120	46,363	35,796	35,689	39,231	39,730	39,670	50,516	39,617
	Rate (%)	1	1	1	2	1	2	2	3	2	1
U.S.A.	Import	1,637	1,523	1,535	1,303	1,544	1,688	1,430	1,583	1,661	1,443
	Consump.	101,606	103,196	112,422	92,127	98,392	102,026	110,593	119,015	119,365	119,339
	Rate (%)	2	1	1	1	2	2	1	1	1	1
Austria	Import	734	1,110	1,459	1,257	1,047	1,033	1,072	1,575	1,769	1,242
	Consump.	3,066	3,345	3,427	3,359	3,591	3,552	3,690	4,562	4,718	4,241
	Rate (%)	24	33	43	37	29	29	29	35	37	31
Belux	Import	1,479	1,912	2,166	1,548	2,530	2,797	2,682	2,768	3,061	2,918
	Consump.	2,047	2,508	2,948	2,249	3,374	3,410	3,246	3,180	3,449	3,242
	Rate (%)	72	76	73	69	78	82	83	87	89	90
Switzerland	Import	262	359	565	426	461	363	429	587	858	591
	Consump.	843	884	1,222	1,049	1,064	1,128	1,236	1,310	1,542	1,372
	Rate (%)	31	41	46	41	43	32	36	45	52	43
R.Germany	Import	1,153	1,275	1,169	1,068	1,358	1,343	1,397	1,408	1,462	1,311
	Consump.	6,753	7,064	9,437	7,558	7,228	8,594	8,483	8,785	9,276	9,192
	Rate (%)	17	18	12	13	17	16	16	16	16	15
Finland	Import	2,279	4,358	4,381	4,313	4,443	3,508	3,056	3,071	3,338	4,584
	Consump.	20,532	21,798	21,553	18,248	17,233	15,906	18,905	20,854	21,715	22,742
	Rate (%)	11	20	20	24	26	22	16	15	15	21
France	Import	735	572	792	621	749	683	652	873	1,010	699
	Consump.	6,328	6,876	7,978	7,488	7,237	7,412	7,128	7,411	7,901	6,831
	Rate (%)	12	8	10	8	10	9	9	12	13	10
Italy	Import	1,823	1,444	1,937	1,413	1,756	1,325	1,244	1,474	1,579	1,212
	Consump.	2,629	2,367	2,501	1,873	2,228	2,138	1,982	2,407	2,588	2,174
	Rate (%)	69	61	77	75	79	62	63	61	61	57
Norway	Import	1,926	1,864	2,163	2,285	1,397	1,042	1,056	1,100	1,151	1,128
	Consump.	5,462	5,411	6,350	7,035	5,392	3,668	3,980	4,138	4,295	4,562
	Rate (%)	35	34	34	32	26	28	27	27	27	25
Sweden	Import	467	489	1,153	3,355	2,490	3,055	1,549	2,715	3,968	9,114
	Consump.	25,141	25,656	31,126	34,099	29,905	23,651	23,162	28,148	24,551	32,183
	Rate (%)	2	2	4	10	8	13	7	10	16	28
Japan	Import	7,507	10,740	11,945	9,788	10,839	15,515	14,524	16,693	17,481	12,539
	Consump.	21,374	23,541	25,897	20,809	22,518	26,605	24,155	26,486	28,764	23,786
	Rate (%)	35	46	46	47	48	58	60	63	61	55

Source: Yearbook of Forest Products, 1982 (FAO)

Table 11-33 RATE OF EXPORT TO PRODUCTION OF PULPHOOD IN MAJOR EXPORTING COUNTRIES  
(1972-1982) (1)

(Unit: 1,000 CUM)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Canada											
Export	2,803	2,602	2,328	1,827	2,242	2,420	2,501	2,373	2,995	2,861	2,215
Produc.	38,432	42,383	48,039	37,067	36,836	38,517	40,898	41,029	41,999	52,690	41,335
Rate (%)	7	6	5	5	6	6	6	6	7	5	5
U.S.A.											
Export	3,965	5,235	6,074	5,040	6,095	6,290	5,715	7,090	6,892	5,521	4,389
Produc.	103,934	106,908	116,961	95,864	102,943	98,271	106,058	116,253	124,324	123,225	122,285
Rate (%)	4	5	5	5	6	6	5	6	6	4	4
Denmark											
Export	203	158	95	507	614	601	594	512	406	486	488
Produc.	77	77	85	280	431	389	336	287	287	287	287
Rate (%)	264	205	112	181	142	154	177	178	141	169	170
Finland											
Export	367	320	298	285	230	282	171	617	1,083	1,592	549
Produc.	18,620	17,760	17,470	14,220	13,020	12,680	16,020	18,400	19,460	20,830	18,680
Rate (%)	2	2	2	2	2	2	1	3	6	8	3
France											
Export	1,662	1,910	2,215	1,947	1,859	1,957	2,000	2,057	2,296	2,377	2,468
Produc.	7,255	8,214	9,401	8,814	8,397	8,686	8,466	8,605	9,187	8,509	8,509
Rate (%)	23	23	24	22	22	23	24	24	25	28	29
H. Germany											
Export	414	572	1,798	2,758	2,347	1,921	1,175	1,455	2,277	2,095	2,043
Produc.	6,014	6,361	10,066	9,648	8,317	9,172	8,261	8,832	10,091	9,630	9,630
Rate (%)	7	9	18	29	28	21	14	16	23	22	21
Ireland											
Export	0	0	0	0	3	26	63	62	99	289	471
Produc.	80	80	123	115	229	218	117	87	87	87	480
Rate (%)	0	0	0	0	1	12	54	71	114	332	98
Netherlands											
Export	89	245	333	149	434	425	348	355	467	457	407
Produc.	680	440	550	601	516	421	380	370	332	332	332
Rate (%)	13	56	61	25	84	101	92	96	141	138	123
Norway											
Export	131	118	130	265	380	586	409	774	886	753	596
Produc.	3,667	3,665	4,317	5,015	4,385	3,212	3,333	3,812	4,030	4,030	4,030
Rate (%)	4	3	3	5	9	18	12	20	22	19	15
Sweden											
Export	2,580	3,063	2,239	2,056	1,535	904	887	887	1,442	1,336	1,131
Produc.	27,254	28,230	32,212	32,800	28,950	21,500	22,500	26,300	22,025	24,405	23,725
Rate (%)	9	11	7	6	5	4	4	3	7	5	5
U.K.											
Export	0	0	0	1	1	2	15	13	109	634	590
Produc.	895	895	1,015	1,070	1,050	1,060	860	1,000	791	1,168	1,168
Rate (%)	0	0	0	0	0	0	2	1	14	54	51



Table II-33 RATE OF EXPORT TO PRODUCTION OF PULPWOOD IN THE MAJOR EXPORTING COUNTRIES  
(1972-1982) (2)

(Unit: 1,000 CUM)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Indonesia											
Export	26	23	24	24	112	318	360	451	468	468	468
Produc.	40	40	30	20	20	20	20	20	20	20	20
Rate (%)	65	58	80	120	560	1,590	1,800	2,255	2,340	2,340	2,340
Malaysia											
Export	737	731	962	906	585	715	498	282	532	532	532
Produc.	737	731	962	906	592	666	613	613	613	613	613
Rate (%)	100	100	100	100	99	107	81	46	87	87	87
Australia											
Export	830	1,930	2,496	2,658	3,511	4,786	4,635	4,957	6,629	6,161	5,684
Produc.	2,034	1,959	2,268	4,976	4,341	5,353	5,319	5,314	6,390	6,411	5,760
Rate (%)	41	99	110	53	81	89	87	93	104	96	99
New Zealand											
Export	217	269	435	403	355	540	439	400	435	515	585
Produc.	1,686	3,415	2,738	2,637	2,850	3,243	3,016	3,016	3,500	3,766	3,739
Rate (%)	14	8	16	15	12	17	15	13	12	14	16

Source: Yearbook of Forest Products, 1982 (FAO)

Table II-34 BKP PRODUCTION, SHARE AND GROWTH RATE BY REGION

(Unit: 1,000 ton, %, %/y)

Region	Share										Average Annual Growth Rate		
	1972	1977	1980	1981	1982	1972	1977	1982	1977/72	1982/77	1982/72		
World Total	28,114	32,336	40,351	40,860	40,084	100.0	100.0	100.0	2.8	4.4	3.6		
EC	708	808	671	701	785	2.5	2.5	2.0	2.7	-0.6	1.0		
Scandinavian 3*	3,989	4,384	5,801	6,229	5,719	14.2	13.6	14.3	1.9	5.5	3.7		
Other W. Europe	549	772	1,064	1,147	1,156	2.0	2.4	2.9	7.1	8.4	7.7		
Total W. Europe	5,246	5,964	7,536	8,077	7,660	18.7	18.4	19.1	2.6	5.1	3.9		
Eastern Europe	225	382	513	557	635	0.8	1.2	1.6	11.2	10.7	10.9		
North America	18,417	20,636	25,086	25,520	24,727	65.5	63.8	61.7	2.3	3.7	3.0		
Latin America	603	1,114	2,177	1,798	1,856	2.1	3.4	4.6	13.1	10.7	11.9		
Asia	3,280	3,755	4,477	4,268	4,603	11.7	11.6	11.5	2.7	4.2	3.4		
Oceania	190	323	327	377	335	0.7	1.0	0.8	11.2	0.7	6.9		
Africa	153	162	236	263	268	0.5	0.5	0.7	1.2	10.6	5.8		

Note: Excludes production of USSR and Taiwan.

\*; Norway, Sweden and Finland

Source: FAO, Yearbook of Forest Products (1972 - 1982)

Table II-35 MAJOR BKP PRODUCING COUNTRIES (1983)

(Unit: 1,000 MT)

Region	Country	BKP Total			LBKP			NBKP		
		Capacity	Production	Capacity	Production	Capacity	Production	Capacity	Production	
N. America	USA	19,147	19,147	8,053	8,053	11,094	11,094	11,094		
N. America	Canada	8,782	7,762	1,121	1,121	7,641	7,641	7,192		
Asia	Japan	4,581	4,488	3,802	3,725	779	779	763		
W. Europe	Sweden	3,585	3,385	890	840	2,695	2,695	2,545		
W. Europe	Finland	3,225	2,908	1,375	1,240	1,850	1,850	1,668		
L. America	Brazil	2,168	2,099	2,006	1,942	162	162	157		
E. Europe	USSR	1,500	1,275	0	0	1,500	1,500	1,275		
W. Europe	Spain	767	738	627	603	140	140	135		
W. Europe	France	730	684	480	450	250	250	234		
W. Europe	Portugal	615	610	595	590	20	20	20		

Table II-36 BKP PRODUCTION, SHARE AND GROWTH RATE BY GRADE AND REGION

(Unit: 1,000 ton, %, %/y)

Region	Share										Average Annual Growth Rate	
	1 9 7 3*		1 9 8 3**		1 9 7 3		1 9 8 3		1 9 8 3			
	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP		
World Total	11,976	17,860	19,161	27,143	100.0	100.0	100.0	100.0	100.0	100.0	4.81	4.27
Scandinavian 3***	1,375	2,956	2,088	4,421	11.5	16.6	10.9	16.3	10.9	16.3	4.27	4.10
Other W. Europe	359	325	1,833	388	2.9	1.8	9.6	1.4	9.6	1.4	18.00	1.78
W. Europe Total	1,725	3,281	3,921	4,809	14.4	18.4	20.5	17.7	20.5	17.7	8.56	3.90
Eastern Europe	200	567	240	1,918	1.7	3.2	1.3	7.0	1.3	7.0	1.84	12.96
North America	6,205	13,006	8,837	18,072	51.8	72.8	46.1	66.5	46.1	66.5	3.60	3.34
Latin America	475	219	1,936	787	4.0	1.2	10.1	2.9	10.1	2.9	15.09	13.65
Asia	3,170	572	3,875	1,251	26.5	3.2	20.2	4.6	20.2	4.6	2.02	8.14
Oceania	116	100	120	212	1.0	0.5	0.6	0.8	0.6	0.8	0.34	7.80
Africa	85	115	232	94	0.7	0.6	1.2	0.3	1.2	0.3	10.56	-2.00
Share in Total BKP	40.1	59.9	41.4	58.6	-	-	-	-	-	-	-	-

Note: Includes production of USSR and Taiwan.

Source: \*; FAO, World Pulp and Paper Demand, Supply and Trade-2 (1977)

\*\*; FAO, Pulp and Paper Capacities 1983 - 1988 (1984)

PPI, July 1984

\*\*\*; Norway, Sweden and Finland

Table II-37 1983 BKP MARKET PULP OUTPUT BY GRADE AND CONTINENT

(Unit: 1,000 ton)

	North America	Europe	Latin America	Asia	Africa	Austral- asia	Total
<b>NBKP</b>							
Output	8,355	4,004	597	136	-	82	13,174
Share (%)	63.4	30.4	4.6	1.0	-	0.6	100.0
<b>LBKP</b>							
Output	2,851	3,446	1,533	808	300	-	8,938
Share (%)	31.9	38.6	17.2	9.0	3.3	-	100.0
<b>Total</b>							
Output	11,206	7,450	2,130	944	300	82	22,112
Share (%)	50.7	33.7	9.6	4.3	1.3	0.4	100.0

Source: PPI, July 1984

Table II-38 PROJECTED PRODUCING CAPACITY OF BKP BY GRADE AND REGION (1983 - 1988)

(Unit: 1,000 t/y)

Region	BKP Total			LBKP			NBKP		
	1983	1988	1983-88 increase	1983	1988	1983-88 increase	1983	1988	1983-88 increase
World Total	49,056	55,478	6,422	20,273	23,468	3,231	28,819	32,016	3,191
Scandinavian 3*	7,060	8,345	1,285	2,265	2,650	385	4,795	5,695	900
Other W. Europe	2,360	3,010	650	1,942	2,450	508	418	560	142
W. Europe Total	9,420	11,355	1,935	4,207	5,100	893	5,213	6,255	1,042
Eastern Europe	2,536	2,636	100	283	283	0	2,253	2,353	100
North America	27,929	30,433	2,504	9,174	10,363	1,189	18,755	20,070	1,315
Latin America	3,031	3,632	601	2,158	2,439	281	873	1,193	320
Asia	5,345	5,880	535	4,014	4,432	418	1,331	1,448	117
Oceania	402	435	33	121	154	33	281	281	0
Africa	393	1,107	714	280	697	417	113	410	297

Note: Includes production of USSR and Taiwan.

\*: Norway, Sweden and Finland

Source: FAO, Pulp and Paper Capacities 1983 - 1988 (1984)

Table II-39 BKP DEMAND, SHARE AND GROWTH RATE BY REGION

(Unit: 1,000 ton, %, %/y)

Region	BKP Demand										Share			Average Annual Growth Rate		
	1972	1977	1980	1981	1982	1972	1977	1982	1977	1982	1977/72	1982/77	1982/72			
World Total	27,901	32,245	39,264	40,241	39,149	100.0	100.0	100.0	100.0	100.0	2.9	4.0	3.4			
Scandinavian 3*	2,230	1,944	2,743	3,138	3,010	8.0	6.0	7.7	6.0	7.7	-2.7	9.1	3.0			
Other W. Europe	4,621	6,211	7,754	7,703	7,209	16.6	19.2	18.4	19.2	18.4	6.0	3.0	4.5			
Total W. Europe	6,851	8,115	10,497	10,841	10,219	24.6	25.2	26.1	25.2	26.1	3.4	4.7	4.1			
Eastern Europe	341	623	816	855	883	1.2	1.9	2.3	1.9	2.3	12.8	7.2	10.0			
North America	15,562	17,429	19,684	21,040	20,148	55.8	54.1	51.5	54.1	51.5	2.3	2.9	2.6			
Latin America	754	1,051	1,396	1,022	1,071	2.7	3.3	2.7	3.3	2.7	6.9	0.4	3.6			
Asia	3,913	4,388	6,110	5,652	6,042	14.0	13.6	15.4	13.6	15.4	2.3	6.6	4.4			
Oceania	289	386	408	454	402	1.0	1.2	1.0	1.2	1.0	6.0	0.8	3.4			
Africa	189	255	353	378	386	0.7	0.8	1.0	0.8	1.0	6.2	8.5	7.4			

Note: \*; Norway, Sweden and Finland

Source: FAO, Yearbook of Forest Products (1972 - 1982)

Table II-40 MAJOR BKP CONSUMING COUNTRIES (1982)

(Unit: 1,000 MT)

No.	Region	Country	Consumption	Share (%)
1	N. America	USA	18,271	46.6
2	Asia	Japan	5,250	13.4
3	W. Europe	Germany FR	1,944	5.0
4	N. America	Canada	1,876	4.8
5	W. Europe	France	1,648	4.2
6	W. Europe	Finland	1,642	4.2
7	W. Europe	Sweden	1,336	3.4
8	W. Europe	Italy	907	2.3
9	L. America	Brazil	867	2.2
10	W. Europe	UK	864	2.2
11	W. Europe	Spain	813	2.1
12	W. Europe	Netherlands	405	1.0
Sub-Total			35,823	91.5
World Total			39,149	100.0



Table II-41 EKP SUPPLY AND DEMAND BALANCE IN MAJOR COUNTRIES (1)

(Unit: 1,000 MT)

Country	Items	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Canada	PRD	5,518	6,146	6,506	5,082	6,322	6,520	7,037	7,481	7,859	7,312	6,836
	IMP	69	39	33	41	42	24	31	100	84	74	86
	EXP	4,148	4,503	4,871	3,542	4,414	4,373	5,302	5,284	5,985	5,065	5,046
	CON	1,439	1,682	1,668	1,581	1,950	2,171	1,766	2,297	1,958	2,321	1,876
USA	PRD	12,899	13,500	13,950	12,559	13,603	14,116	15,467	16,215	17,227	18,208	17,891
	IMP	2,269	2,482	2,494	2,029	2,423	2,474	2,670	2,869	2,762	2,765	2,576
	EXP	1,045	1,117	1,389	1,377	1,288	1,332	1,355	1,578	2,263	2,254	2,196
	CON	14,123	14,865	15,055	13,211	14,738	15,258	16,782	17,506	17,726	18,719	18,271
Finland	PRD	1,488	1,563	1,527	1,306	1,461	1,576	2,094	2,574	2,709	2,819	2,638
	IMP	1	1	0	0	1	1	1	1	1	2	7
	EXP	654	708	554	384	451	598	943	1,170	1,260	1,113	1,063
	CON	835	856	973	922	1,011	979	1,152	1,405	1,450	1,708	1,642
Norway	PRD	80	85	150	175	190	120	61	18	3	158	167
	IMP	86	99	96	70	78	66	101	117	144	74	44
	EXP	33	128	65	71	96	100	162	133	117	168	179
	CON	133	56	181	174	172	86	0	2	30	64	32
Sweden	PRD	2,421	2,875	2,947	2,822	2,883	2,688	2,945	3,168	3,089	3,252	2,914
	IMP	22	27	10	19	14	12	15	35	32	33	37
	EXP	1,181	2,172	2,177	1,893	1,985	1,821	2,183	2,002	1,858	1,919	1,615
	CON	1,262	730	780	948	912	879	777	1,201	1,263	1,366	1,336
W. Germany	PRD	0	0	0	0	0	0	0	0	0	0	0
	IMP	1,164	1,294	1,353	1,098	1,385	1,435	1,647	1,780	1,938	1,957	1,950
	EXP	0	0	0	0	0	0	0	7	6	0	6
	CON	1,164	1,294	1,353	1,098	1,385	1,435	1,647	1,773	1,932	1,957	1,944

Table II-41 BKP SUPPLY AND DEMAND BALANCE IN MAJOR COUNTRIES (2)

(Unit: 1,000 MT)

Country	Items	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
France	PRD	470	497	511	464	482	586	576	537	480	510	594
	IMP	762	836	931	716	878	878	1,114	1,195	1,264	1,319	1,135
	EXP	104	180	101	39	91	91	100	105	91	66	81
	CON	1,128	1,153	1,341	1,141	1,269	1,373	1,590	1,627	1,653	1,763	1,648
Italy	PRD	79	83	90	65	59	40	68	17	0	0	0
	IMP	629	650	677	530	724	716	1,001	1,119	1,177	1,040	907
	EXP	0	0	1	1	0	0	1	0	0	0	0
	CON	708	733	766	594	783	756	1,068	1,136	1,177	1,040	907
U.K.	PRD	0	0	0	0	0	0	0	0	0	0	0
	IMP	1,123	1,076	1,139	1,004	1,166	1,128	1,179	1,220	1,099	1,105	866
	EXP	0	0	0	0	0	3	4	1	8	2	2
	CON	1,123	1,076	1,139	1,004	1,166	1,125	1,175	1,219	1,091	1,103	864
Netherlands	PRD	0	0	0	0	0	0	0	0	0	0	0
	IMP	348	398	406	344	383	381	453	476	474	451	406
	EXP	2	2	3	3	6	4	1	6	2	3	1
	CON	346	396	403	341	377	377	452	470	472	448	405
Brazil	PRD	318	376	417	370	507	654	903	1,078	1,585	1,542	1,595
	IMP	92	50	78	58	36	33	42	45	39	17	7
	EXP	6	14	4	7	12	19	133	446	766	762	735
	CON	404	412	491	421	531	663	812	677	858	797	867

Notes: PRD=Production, IMP=Import, EXP=Export, and CON=Consumption

Table II-42 BKP DEMAND BY GRADE AND REGION

(Unit: 1,000 MT)

Region	LBKP	NBKP	BKP Total
North America	5,533	10,944	16,477
Western Europe	2,945	4,681	7,626
Japan	2,896	996	3,892
Latin America	475	517	992
Oceania	146	159	305
Middle East and North Africa	10	46	56
Africa South of Sahara	35	120	155
Far East	170	77	247
Centrally Planned	225	642	867
World Total	12,435	18,182	30,617

Source: FAO, World Pulp and Paper Demand,  
Supply and Trade-2

Table II-43 BKP PRODUCTION/IMPORT/EXPORT/APPARENT CONSUMPTION IN LATIN AMERICA (1)

(Unit: 1,000 MT)

Country	Item	1972	1977	1980	1981	1982	Average Growth Rate (%/Y)	
							1977/72	1982/77
Argentina	Produc.	52	50	53	34	52	-0.8	0.8
	Import	47	57	75	95	104	3.9	12.8
	Export	0	0	0	0	0	-	-
	Net Imp.	47	57	75	95	104	-	-
	Consump.	99	107	128	129	156	1.6	7.8
	SS-Rate	53	47	41	26	33	-	-
Brazil	Produc.	318	654	1,585	1,542	1,595	15.5	19.5
	Import	92	33	39	17	7	-18.5	-26.7
	Export	6	19	766	762	735	25.9	107.7
	Net Imp.	86	14	-727	-745	-728	-	-
	Consump.	404	668	858	797	867	10.6	5.4
	SS-Rate	79	98	185	193	184	-	-
Chile	Produc.	139	269	315	321	298	14.1	2.1
	Import	0	0	0	0	0	-	-
	Export	n.a	175	217	201	227	-	5.3
	Net Imp.	0	-175	-217	-201	-227	-	-
	Consump.	139	94	98	120	71	-7.5	-5.5
	SS-Rate	100	286	321	268	420	-	-
Colombia	Produc.	0	0	2	1	1	-	-
	Import	0	11	34	41	37	-	27.5
	Export	0	0	0	0	0	-	-
	Net Imp.	0	11	34	41	37	-	-
	Consump.	0	11	36	42	38	-	28.1
	SS-Rate	0	0	0	0	0	-	-
Ecuador	Produc.	0	0	0	0	0	-	-
	Import	0	0	2	4	11	-	-
	Export	0	0	0	0	0	-	-
	Net Imp.	0	0	2	4	11	-	-
	Consump.	0	0	2	4	11	-	-
	SS-Rate	0	0	0	0	0	-	-
Peru	Produc.	0	0	0	0	0	-	-
	Import	16	15	15	12	12	-1.3	-4.4
	Export	0	0	0	0	0	-	-
	Net Imp.	16	15	15	12	12	-	-
	Consump.	16	15	15	12	12	-1.3	-4.4
	SS-Rate	0	0	0	0	0	-	-

Table 11-43 BKP PRODUCTION/IMPORT/EXPORT/APPARENT CONSUMPTION IN LATIN AMERICA (2)

(Unit: 1,000 MT)

Country	Item	1972	1977	1980	1981	1982	Average Growth Rate (%/y)	
							1977/72	1982/77
Uruguay	Produc.	n.a	13	19	17	16	-	4.2
	Import	2	5	6	4	2	20.0	16.8
	Export	0	0	0	0	0	-	-
	Net Imp.	2	5	6	4	2		
	Consump.	2	18	25	21	18	55.0	0.0
	SS-Rate	0	72	76	81	89		
Mexico	Produc.	94	141	224	222	209	8.4	8.2
	Import	0	0	0	0	0	-	-
	Export	0	0	0	0	0	-	-
	Net Imp.	0	0	0	0	0		
	Consump.	94	141	224	222	209	8.4	8.2
	SS-Rate	100	100	100	100	100		

Note: SS-Rate = Production/Apparent Consumption x 100

Source: URUGUAY; Paper Association Uruguay  
 CHILE; PPI Annual Review (Production in 1981 and 1982)  
 OTHER COUNTRIES; FAO Yearbook of Forest Products

Table II-44 PROJECTION OF PAPER & PAPERBOARD PRODUCTION AND WOODPULP CONSUMPTION IN THE WORLD

Year	GDP in 1975 US\$ (billion)	Paper & Paperboard Consumption (1,000 MT)	Paper & Paperboard Production (1,000 MT)	Woodpulp Consumption (1,000 MT)
<b>Actual</b>				
=====				
1972	5,418	137,510	137,582	107,923
1973	5,902	146,605	147,118	113,836
1974	6,039	148,331	149,356	117,586
1975	6,152	128,232	130,709	102,537
1976	6,471	146,724	147,265	114,861
1977	6,760	151,335	151,895	116,281
1978	7,201	158,198	158,178	121,107
1979	7,445	169,287	170,447	123,302
1980	7,586	170,787	172,301	125,388
1981	7,723	170,716	172,471	125,935
1982	7,754	165,091	165,360	120,133
<b>Forecast</b>				
=====				
1988	9,272	188,146	188,146	136,406
1990	9,969	195,628	195,628	140,852
1995	11,948	212,304	212,304	150,736
2000	14,321	224,886	224,886	157,420
<b>Annual Average Growth Rate (%)</b>				
=====				
1988/1982	3.03	2.20	2.18	2.14
1990/1988	3.69	1.97	1.97	1.62
1990/1982	3.19	2.14	2.12	2.01
1995/1990	3.69	1.65	1.65	1.37
2000/1995	3.69	1.16	1.16	0.87
2000/1982	3.47	1.73	1.72	1.51

Notes (Projection Method):

1. Paper & Paperboard Consumption:

Regression Formula:

$$y = K / (1 + 3.67931 e^{-0.279498x})$$

Where: y = Paper & Paperboard Consumption (1,000 MT)  
(See Table )

x = GDP in 1975 US\$ (1,000 billion)  
(See Table )

K = Ceiling Value (240,000,000 MT)

2. "Paper & Paperboard Production" = "Paper & Paperboard Consumption"

3. Woodpulp Consumption:

Ratio of Woodpulp Consumption to Paper & Paperboard Production:

	1988	1990	1995	2000
	-----	-----	-----	-----
	0.725	0.72	0.71	0.70

Table II-45 FORECAST OF WOODPULP CONSUMPTION AND BKP CONSUMPTION IN THE WORLD

Year	Woodpulp Consumption (A) (1,000 MT)	BKP Consumption (B) (1,000 MT)	Ratio (B/A) (%)	Average Annual Growth Rate (%/y)			Remarks
				Woodpulp Consumption	BKP Consumption	Ratio	
1972	107,923	27,901	25.9				
1973	113,836	29,859	26.2				
1974	117,586	30,858	26.2				
1975	102,537	27,747	27.1				
1976	114,861	31,043	27.0				
1977	116,281	32,245	27.7	77/72	1.50	2.94	Historical Data
1978	121,107	35,311	29.2				
1979	123,302	38,187	31.0				
1980	125,388	39,264	31.3				
1981	125,935	40,241	32.0				
1982	120,133	39,149	32.6	82/72	1.08	3.45	
1988	136,406	45,378	33.3	88/82	2.14	2.49	
1990	140,852	47,120	33.5	90/88	1.62	1.90	Forecast
1995	150,736	51,516	34.2	95/90	1.37	1.80	
2000	157,420	55,306	35.1	2000/95	0.87	1.43	

Table II-46 FORECAST OF WOODPULP CONSUMPTION AND BKP CONSUMPTION IN N. AMERICA, L. AMERICA AND EC

Region	Year	Paper and Paperboard			Woodpulp		BKP		Average Annual Growth Rate (%)				
		Consumption (1,000 MT)	Production (A) (1,000 MT)	Consumption (B) (1,000 MT)	Consumption (C) (1,000 MT)	Consumption (1,000 MT)	Consumption (1,000 MT)	Ratio (%)		Period	(A)	(B)	(C)
								(B/A)	(C/B)				
North America	1972	59,021	62,859	53,195	15,562	84.6	29.2						
	1977	60,731	64,946	57,291	17,429	88.2	30.4			77/72	0.70	1.50	2.30
	1980	67,290	72,847	59,282	19,684	81.8	33.2			80/72	1.90	1.40	3.00
	1981	68,527	74,066	60,630	21,040	81.9	34.9			81/72	1.80	1.50	3.40
	1982	62,843	67,471	56,410	20,148	83.6	35.7			82/72	0.70	0.60	2.60
	1988	73,456	75,094	61,201	22,032	81.5	36.0			88/82	1.80	1.40	1.50
Latin America	1977	7,380	5,536	3,133	1,051	56.6	33.5			77/72	5.40	9.60	6.90
	1980	9,660	7,727	4,652	1,396	60.2	30.0			80/72	7.80	11.30	8.00
	1981	9,294	7,434	4,516	1,022	60.7	22.6			81/72	6.40	9.60	3.40
	1982	9,607	7,697	4,574	1,071	59.4	23.4			82/72	6.10	8.70	3.60
	1988	10,284	8,432	4,974	1,244	59.0	25.0			88/82	1.50	1.40	2.50
	1990	11,137	9,155	5,401	1,365	59.0	25.2			90/82	2.20	2.10	3.10
EC	1972	28,897	21,415	13,323	4,741	62.2	35.6						
	1977	29,969	22,634	12,719	5,340	56.2	41.9			77/72	1.10	-0.90	2.40
	1980	32,907	24,606	13,974	6,692	56.3	47.9			80/72	1.80	0.60	4.40
	1981	32,675	24,205	13,449	6,658	55.6	49.5			81/72	1.40	0.10	3.80
	1982	31,714	23,431	12,621	6,101	53.8	48.3			82/72	0.90	-0.60	2.60
	1988	34,788	25,567	13,678	6,839	53.5	50.0			88/82	1.50	1.40	1.90
1990	35,721	26,275	14,031	7,072	53.4	50.4			90/82	1.44	1.33	1.86	
1995	37,926	28,166	14,928	7,613	53.0	51.0			95/90	1.36	1.25	1.49	
2000	39,838	29,675	15,579	8,024	52.5	51.5			2000/95	1.05	0.86	1.06	



Table II-47 FORECAST OF BKP SUPPLY AND DEMAND BALANCE IN THE WORLD

Region	Item	Unit	1988	1990	1995	2000
World Total	Capacity (A)	1,000 MT	54,086	54,086	54,086	54,086
	Production (B)	1,000 MT	45,378	47,120	48,677	48,677
	Operating Rate (B/A)	%	83.9	87.1	90.0	90.0
	Consumption (C)	1,000 MT	45,378	47,120	51,516	55,306
	S/D Balance (B-C)	1,000 MT	0	0	-2,839	-6,639
	Additional Capacity Required (C-B)/0.9	1,000 MT	0	0	3,154	7,376
North America	Capacity (A1)	1,000 MT	30,433	30,433	30,433	30,433
	Production (B1)	1,000 MT	27,390	27,390	27,390	27,390
	Operating Rate (B1/A1)	%	90.0	90.0	90.0	90.0
	Consumption (C1)	1,000 MT	22,032	22,915	24,683	26,115
	S/D Balance (B1-C1)	1,000 MT	5,358	4,475	2,707	1,275
Latin America	Capacity (A2)	1,000 MT	3,632	3,632	3,632	3,632
	Production (B2)	1,000 MT	3,269	3,269	3,269	3,269
	Operating Rate (B2/A2)	%	90.0	90.0	90.0	90.0
	Consumption (C2)	1,000 MT	1,244	1,365	1,575	1,814
	S/D Balance (B2-C2)	1,000 MT	2,025	1,904	1,694	1,455
EC	Capacity (A3)	1,000 MT	1,120	1,120	1,120	1,120
	Production (B3)	1,000 MT	1,008	1,008	1,008	1,008
	Operating Rate (B3/A3)	%	90.0	90.0	90.0	90.0
	Consumption (C3)	1,000 MT	6,839	7,072	7,613	8,024
	S/D Balance (C3-B3)	1,000 MT	-5,831	-6,064	-6,605	-7,016

Table II-48 BXP TRADE IN THE WORLD (1)

(Unit: 1,000 MT)

Region	Item	Share (%)						Average Growth Rate (%/y)			
		1972	1977	1980	1981	1982	1972	1977	1982	1977/72	1982/77
World Total	Produc.	28,114	32,336	40,351	40,860	40,084	100.0	100.0	100.0	2.8	4.4
	Import	8,189	9,112	12,328	11,910	11,127	100.0	100.0	100.0	2.4	4.1
	Export	8,322	9,203	13,415	12,529	12,062	100.0	100.0	100.0	2.0	5.6
EC	Produc.	708	808	671	701	785	2.5	2.5	2.0	2.7	-0.6
	Import	4,253	4,763	6,269	6,169	5,547	52.4	52.3	49.9	2.3	3.1
	Export	220	231	248	212	231	2.6	2.5	1.9	1.0	0.0
	Net Imp.	4,033	4,532	6,021	5,957	5,316					
	Consump.	4,741	5,340	6,692	6,658	6,101	17.0	16.6	15.6	2.4	2.7
	SS-Rate	15	15	10	11	13					
Scandinavian 3*	Produc.	3,989	4,384	5,801	6,229	5,719	14.2	13.6	14.3	1.9	5.5
	Import	109	79	177	109	88	1.3	0.9	0.8	-6.2	2.2
	Export	1,868	2,519	3,235	3,200	2,797	22.4	27.4	23.2	6.2	2.1
	Net Imp.	-1,759	-2,440	-3,058	-3,091	-2,709					
Other W. Europe	Produc.	549	772	1,064	1,147	1,156	2.0	2.4	2.9	7.1	8.4
	Import	277	315	385	365	420	3.4	3.5	3.8	2.6	5.9
	Export	946	256	387	467	468	11.4	2.8	3.9	-23.0	12.8
	Net Imp.	-669	59	-2	-102	-48					
Total W. Europe	Produc.	5,246	5,964	7,536	8,077	7,660	18.7	18.4	19.1	2.6	5.1
	Import	4,639	5,157	6,831	6,643	6,055	57.2	56.6	54.4	2.1	3.3
	Export	3,034	3,006	3,870	3,879	3,496	36.5	32.7	29.0	-0.2	3.1
	Net Imp.	1,605	2,151	2,961	2,764	2,559					
Eastern Europe	Produc.	225	382	513	557	635	0.8	1.2	1.6	11.2	10.7
	Import	142	256	339	350	338	1.8	2.8	3.0	12.5	5.7
	Export	26	15	36	52	90	0.3	0.2	0.7	-10.4	43.1
	Net Imp.	116	241	303	298	248					

Table II-48 BKP TRADE IN THE WORLD (2)

(Unit: 1,000 MT)

Region	Item	Share (%)						Average Growth Rate (%/y)		
		1972	1977	1980	1981	1982	1977	1977/72	1982/77	
North America	Produc.	18,417	20,636	25,086	25,520	24,727	63.8	61.7	2.3	3.7
	Import	2,338	2,498	2,846	2,839	2,663	27.4	23.9	1.3	1.3
	Export	5,193	5,705	8,248	7,319	7,242	62.0	60.0	1.9	4.9
	Net Imp.	-2,855	-3,207	-5,402	-4,480	-4,579				
Latin America	Produc.	603	1,114	2,177	1,798	1,856	3.4	4.6	13.1	10.7
	Import	157	131	202	188	177	1.4	1.6	-3.6	6.2
	Export	6	194	983	964	962	2.1	8.0	100.4	37.7
	Net Imp.	151	-63	-781	-776	-785				
Asia	Produc.	3,280	3,755	4,477	4,268	4,603	11.7	11.5	2.7	4.2
	Import	664	805	1,756	1,551	1,568	8.8	14.1	3.9	14.3
	Export	31	172	123	167	129	1.9	1.1	40.9	-5.6
	Net Imp.	633	633	1,633	1,384	1,439				
Oceania	Produc.	190	323	327	377	335	0.7	0.8	11.2	0.7
	Import	102	122	145	149	136	1.3	1.2	3.6	2.2
	Export	3	59	64	72	69	0.6	0.6	81.4	3.2
	Net Imp.	99	63	81	77	67				
Africa	Produc.	153	162	236	263	268	0.5	0.7	1.2	10.6
	Import	67	144	209	192	191	0.8	1.7	16.5	5.8
	Export	31	51	92	77	73	0.4	0.6	10.5	7.4
	Net Imp.	36	93	117	115	118				

Note: SS-Rate: Self-sufficiency Rate (%)

\*; Norway, Sweden and Finland

Sources: Yearbook of Forest Products, 1972-1982 (FAO)

Table II-49 MAJOR BKP EXPORTING COUNTRIES (1982)

(Unit: 1,000 MT, %)

Country	Exports		Net Exports
	Quantity	Share	
Canada	5,046	41.8	4,960
USA	2,196	18.2	-380
Sweden	1,615	13.3	1,578
Finland	1,003	8.3	996
Brazil	735	6.1	728
Chile	227	1.9	227
Norway	179	1.5	135
Sub-Total	11,001	91.2	8,224
World Total	12,062	100.0	-

Table II-50 MAJOR BKP IMPORTING COUNTRIES (1982)

(Unit: 1,000 MT, %)

Country	Imports		Net Imports	Consumption
	Quantity	Share		
USA	2,576	23.2	380	18,271
West Germany	1,950	17.5	1,944	1,944
France	1,135	10.2	1,054	1,648
Japan	1,102	9.9	1,041	5,272
Italy	907	8.2	907	907
U.K.	866	7.8	864	864
Netherlands	406	3.6	405	405
Sub-Total	8,942	80.4	6,595	29,311
World Total	11,127	100.0	-	39,149

Table 11-51 RATES OF EXPORT/PRODUCTION OF BLEACHED SULPHATE PULP IN MAJOR EXPORTING COUNTRIES (1972-1982)

(Unit: 1,000 MT)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
<b>Canada</b>											
Export	4,148	4,503	4,871	3,542	4,414	4,373	5,302	5,284	5,985	5,955	5,046
Produc.	5,518	6,146	6,586	5,082	6,322	6,520	7,037	7,481	7,859	7,312	6,836
Rate (%)	75	73	75	70	70	67	75	71	76	69	74
<b>U.S.A.</b>											
Export	1,045	1,117	1,389	1,377	1,288	1,332	1,355	1,570	2,263	2,254	2,196
Produc.	12,899	13,500	13,959	12,559	13,603	14,116	15,467	16,215	17,227	18,208	17,891
Rate (%)	8	8	10	11	9	9	9	10	13	12	12
<b>Brazil</b>											
Export	6	14	4	7	12	19	133	446	766	762	735
Produc.	318	376	417	370	507	654	903	1,078	1,585	1,542	1,595
Rate (%)	2	4	1	2	2	3	15	41	48	49	46
<b>Chile</b>											
Export	0	0	0	122	165	175	235	226	217	201	227
Produc.	139	138	180	199	244	269	283	308	315	0	0
Rate (%)	0	0	0	61	68	65	83	73	69	0	0
<b>Belux</b>											
Export	114	162	137	67	132	133	151	150	141	141	141
Produc.	159	169	182	128	152	182	166	188	191	191	191
Rate (%)	72	96	75	52	87	73	91	80	74	74	74
<b>Finland</b>											
Export	654	708	554	384	451	598	943	1,170	1,260	1,113	1,003
Produc.	1,488	1,563	1,527	1,306	1,461	1,576	2,094	2,574	2,709	2,819	2,638
Rate (%)	44	45	36	29	31	38	45	45	47	39	38
<b>France</b>											
Export	104	180	101	39	91	91	100	105	91	66	81
Produc.	470	497	511	464	482	586	576	537	480	510	594
Rate (%)	22	36	20	8	19	16	17	20	19	13	14
<b>Norway</b>											
Export	33	128	65	71	96	100	162	133	117	138	179
Produc.	80	85	150	175	150	120	61	18	3	158	167
Rate (%)	41	151	43	41	51	83	266	739	3,900	106	107
<b>Sweden</b>											
Export	1,181	2,172	2,177	1,893	1,985	1,821	2,183	2,002	1,858	1,919	1,615
Produc.	2,421	2,875	2,947	2,822	2,883	2,688	2,945	3,168	3,089	3,252	2,914
Rate (%)	49	76	74	67	69	68	74	63	60	59	55
<b>Morocco</b>											
Export	0	0	47	31	42	33	49	63	69	59	56
Produc.	37	49	50	53	42	55	66	82	83	75	80
Rate (%)	0	0	94	58	100	60	74	77	83	79	70
<b>Japan</b>											
Export	31	39	171	119	128	152	90	93	90	91	61
Produc.	3,222	3,384	3,365	3,059	3,508	3,550	3,670	4,132	4,195	3,913	4,289
Rate (%)	1	1	5	4	4	4	2	2	2	2	1
<b>N.Zealand</b>											
Export	3	8	14	40	57	59	63	73	64	72	69
Produc.	104	122	148	203	193	220	215	193	218	260	229
Rate (%)	3	7	9	20	30	27	29	38	29	28	30

Sources: Yearbook of Forest Products, 1972-1982 (FAO)

Table II-52 BKP EXPORTS BY DESTINATION USA, CANADA AND BRAZIL IN 1983

(Unit: 1,000 MT)

Destination	U. S. A.				C A N A D A				BRAZIL	
	LBKP	NBKP	BKP TOTAL	BKP SHARE (%)	LBKP	NBKP	BKP TOTAL	BKP SHARE (%)	BKP	SHARE (%)
Western Europe	377.7	769.1	1,146.8	50.4	143.8	1,231.8	1,375.6	25.2	433.5	46.5
Sweden	0.3	1.2	1.5	0.0	0.0	0.5	0.5	0.0	0.3	0.0
U.K.	108.1	80.2	188.3	8.3	32.3	170.7	203.0	3.7	21.7	2.3
Belgium	24.4	97.7	122.1	5.4	2.3	119.3	121.6	2.2	325.7	34.9
Netherlands	63.1	39.8	102.9	4.5	29.2	115.2	144.4	2.6	8.3	0.9
W. Germany	100.9	276.5	377.4	16.6	59.0	362.8	421.8	7.7	64.7	6.9
France	20.7	125.7	146.4	6.4	16.1	231.6	247.7	4.5	1.6	0.2
Italy	58.6	140.3	198.9	8.7	4.9	227.4	232.3	4.3	1.3	0.1
Other Europe	1.6	7.7	9.3	0.4	0.0	4.3	4.3	0.1	9.9	1.1
North America	24.5	70.5	95.0	4.2	235.4	2,455.1	2,690.5	49.3	145.0	15.5
Canada	24.5	70.5	95.0	4.2	-	-	-	-	0	-
USA	-	-	-	-	235.4	2,455.1	2,690.5	49.3	145.0	15.5
Latin America	63.7	144.7	208.4	9.2	0	62.9	62.9	1.1	48.4	5.2
Mexico	11.7	110.2	121.9	5.4	0	19.3	19.3	0.3	3.3	0.3
Venezuela	33.6	24.7	58.3	2.6	0	31.1	31.1	0.6	18.3	2.0
Other L. America	18.4	9.8	28.2	1.2	0	12.5	12.5	0.2	26.8	2.9
Asia	302.2	275.6	577.8	25.3	90.1	884.2	974.3	17.8	228.4	24.5
Japan	151.7	227.4	379.1	16.6	90.1	544.4	634.5	11.6	181.0	19.4
Other Asia	150.5	48.2	198.7	8.7	0	339.8	339.8	6.2	47.4	5.1
Oceania	0	0	0	0	0	0	0	0	0	0
Africa	12.1	49.9	62.0	2.7	5.2	48.9	54.1	1.0	38.8	4.2
Other countries	51.9	135.2	187.1	8.2	2.6	297.8	300.4	5.5	38.4	4.1
World Total	832.2	1,445.0	2,277.2	100.0	477.1	4,980.7	5,457.8	100.0	932.5	100.0
Share of LBKP and NBKP (%)	36.5	63.5	100.0	-	8.7	91.3	100.0	-	-	-

Source: Trade Statistics of USA, Canada and Brazil

Table II-53 RATES OF IMPORT/APARENT CONSUMPTION OF BLEACHED SULPHATE PULP IN MAJOR IMPORTING COUNTRIES (1972-1982) (1)

(Unit: 1,000 MT)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Canada											
Import	69	39	33	41	42	24	31	100	84	74	86
Consump.	1,439	1,682	1,668	1,531	1,950	2,171	1,766	2,297	1,958	2,321	1,876
Rate (%)	5	2	2	3	2	1	2	4	4	3	5
U.S.A.											
Import	2,269	2,482	2,494	2,029	2,423	2,474	2,670	2,969	2,762	2,765	2,576
Consump.	14,123	14,865	15,955	13,211	14,738	15,258	16,782	17,506	17,726	18,719	18,271
Rate (%)	16	17	17	15	16	16	16	16	16	15	14
Argentina											
Import	47	70	69	54	50	57	79	85	75	95	104
Consump.	99	125	137	121	130	107	148	181	128	129	156
Rate (%)	47	56	59	45	38	53	53	47	59	74	67
Belux											
Import	182	229	249	187	174	161	175	207	199	199	199
Consump.	227	236	294	248	194	210	190	245	249	249	249
Rate (%)	80	97	85	75	90	77	92	84	80	80	80
Denmark											
Import	40	43	47	31	36	36	61	76	68	68	78
Consump.	40	43	47	31	36	36	61	76	68	68	78
Rate (%)	100	100	100	100	100	100	100	100	100	100	100
France											
Import	762	836	931	716	878	878	1,114	1,195	1,264	1,319	1,135
Consump.	1,128	1,153	1,341	1,141	1,269	1,373	1,599	1,627	1,653	1,763	1,648
Rate (%)	68	73	69	63	69	64	70	73	76	75	69
W.Germany											
Import	1,164	1,294	1,353	1,098	1,385	1,435	1,647	1,780	1,938	1,957	1,959
Consump.	1,164	1,294	1,353	1,098	1,385	1,435	1,647	1,773	1,932	1,957	1,944
Rate (%)	100	100	100	100	100	100	100	100	100	100	100
Italy											
Import	629	650	677	530	724	716	1,001	1,119	1,177	1,040	907
Consump.	708	733	766	594	783	756	1,068	1,136	1,177	1,040	907
Rate (%)	89	89	88	89	92	95	94	99	100	100	100
Nether.											
Import	348	398	406	344	383	381	453	476	474	451	406
Consump.	346	396	403	341	377	377	452	470	472	448	405
Rate (%)	101	101	101	101	102	101	100	101	100	101	100
U.K.											
Import	1,123	1,076	1,139	1,004	1,166	1,128	1,179	1,220	1,099	1,105	866
Consump.	1,123	1,076	1,139	1,004	1,166	1,125	1,175	1,219	1,091	1,103	864
Rate (%)	100	100	100	100	100	100	100	100	101	100	100
Austria											
Import	63	94	109	93	97	94	97	91	119	136	144
Consump.	71	100	114	97	103	100	102	97	123	140	150
Rate (%)	89	94	96	96	94	94	95	94	97	97	96

Table II-53 RATES OF IMPORT/APARENT CONSUMPTION OF BLEACHED SULPHATE PULP IN MAJOR IMPORTING COUNTRIES (1972-1982) (2)

(Unit: 1,000 MT)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
S. Africa	Import	66	76	64	54	100	108	113	186	168	168
	Consump.	147	155	157	130	185	181	205	276	263	263
	Rate (%)	45	49	41	42	54	60	62	55	67	64
Japan	Import	390	601	777	547	554	507	925	1,326	1,046	1,102
	Consump.	3,581	3,946	3,971	3,487	3,934	3,905	4,505	5,431	4,868	5,258
	Rate (%)	11	15	20	16	14	13	21	21	24	21
S. Korea	Import	213	152	111	94	123	163	237	241	271	226
	Consump.	213	152	111	94	123	163	237	271	340	334
	Rate (%)	100	100	100	100	100	100	100	89	80	68
Thailand	Import	16	21	0	10	28	54	57	44	75	59
	Consump.	16	21	0	10	28	54	57	44	75	59
	Rate (%)	100	100	0	100	100	100	100	100	100	100
Australia	Import	92	132	144	122	90	122	116	140	144	125
	Consump.	178	218	190	168	135	235	219	249	261	231
	Rate (%)	52	61	76	73	67	54	53	60	56	55

Sources: Yearbook of Forest Products, 1972-1982 (FAO)



Table II-54 LBRP IMPORTS IN THE EC COUNTRIES

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
EC												
MT	124,641	149,586	147,424	916,886	1,627,718	1,668,436	2,079,473	2,278,336	2,256,438	2,230,116	2,179,081	2,611,927
1000US\$	22,647	31,560	50,877	346,942	627,929	641,141	676,666	917,607	1,012,157	1,048,394	909,820	884,983
US\$/MT	181.7	211.0	345.1	378.4	385.8	384.3	325.4	402.8	448.6	407.1	417.5	331.2
West Germany												
MT	14,176	9,052	15,541	366,837	456,912	513,367	584,560	678,571	713,509	710,590	692,958	853,632
1000US\$	2,537	1,915	5,892	138,848	189,532	204,881	195,069	281,693	314,204	348,844	304,235	293,173
US\$/MT	179.0	211.6	379.1	378.5	414.8	399.1	333.7	414.2	440.4	490.9	439.0	343.4
France												
MT	27,158	28,010	35,236	224,392	280,214	258,705	351,396	407,188	435,727	432,101	405,929	437,580
1000US\$	4,953	5,619	12,488	84,868	97,867	90,814	113,341	166,506	189,256	189,892	159,108	138,232
US\$/MT	182.4	200.6	354.4	378.2	349.3	351.0	322.5	408.9	434.3	439.5	392.0	315.9
Italy												
MT	59,799	73,859	54,554	140,388	200,495	191,267	291,149	292,876	242,731	203,066	226,554	304,205
1000US\$	10,735	14,923	18,401	57,467	73,354	70,015	88,931	119,368	111,202	96,324	97,444	99,887
US\$/MT	179.5	202.0	337.3	409.3	365.9	366.1	305.4	407.6	458.1	474.3	430.1	328.4
Netherlands												
MT	12,276	20,888	24,541	115,470	156,304	154,264	178,260	191,233	188,918	196,384	183,332	219,291
1000US\$	2,910	4,014	7,474	42,994	63,805	59,188	58,410	76,887	82,136	94,223	79,429	71,805
US\$/MT	163.7	192.2	304.6	372.3	408.2	383.7	327.7	402.1	434.8	479.8	433.3	327.4
Belux												
MT	11,232	17,777	15,167	53,990	45,989	39,436	52,199	73,229	72,615	73,458	90,211	95,933
1000US\$	2,345	3,643	5,806	19,600	19,739	15,948	19,316	30,933	32,924	34,287	37,133	33,064
US\$/MT	208.8	204.9	382.8	363.0	429.2	404.4	370.0	422.4	453.4	466.8	411.6	344.7
U.K.												
MT				469,886	485,018	577,418	584,719	584,719	563,662	566,500	539,973	650,128
1000US\$				173,433	195,680	186,328	232,007	232,007	219,001	282,629	218,014	222,613
US\$/MT				369.1	403.4	322.7	396.8	396.8	485.0	463.6	403.7	342.4
Ireland												
MT			400	7,265	5,316	8,901	9,124	11,024	12,840	14,842	193	
1000US\$			194	2,928	2,002	3,784	3,011	4,638	5,642	7,279	129	
US\$/MT			485.0	406.4	376.6	425.1	330.0	420.7	439.4	490.4	621.8	
Denmark												
MT			1,985	8,604	12,602	17,478	35,367	39,496	26,436	31,343	35,379	46,591
1000US\$			704	3,269	5,290	6,493	11,857	15,786	12,242	15,868	15,801	16,298
US\$/MT			354.7	379.9	419.8	371.5	335.3	399.7	463.1	506.3	446.6	349.8
Greece												
MT										1,832	4,552	4,567
1000US\$										883	1,637	1,497
US\$/MT										482.0	359.6	327.8

Sources: NIMEX 1972-1983



Table II-56 BKP IMPORTS IN EC COUNTRIES BY ORIGIN (1983)

(Unit: 1,000 MT)

Origin	W. Germany		France		Italy		U.K.		Belgium		Netherlands	
	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP	LBKP	NBKP
USA	107.2	342.9	26.4	199.2	19.7	181.4	134.8	67.7	14.7	46.5	43.1	63.7
Canada	68.4	572.6	12.9	282.1	24.6	213.0	44.8	174.0	2.1	83.7	26.2	68.6
Sweden	116.7	373.1	40.2	242.9	35.2	105.6	85.7	97.4	3.0	58.7	14.7	43.7
Brazil	125.8	64.7	58.6	9.9	11.7	19.1	55.1	9.8	30.9	1.7	24.5	2.8
Finland	21.4	91.2	45.8	63.4	41.8	45.4	93.0	58.6	1.5	8.0	33.3	40.9
Norway	10.2	21.1	1.8	19.7	0.4	13.5	9.3	6.6	0.5	3.2	0.3	3.7
Other countries	5.2	51.3	67.3	61.8	15.7	31.6	7.2	28.0	12.4	8.8	29.2	1.2
Total	465.9	1,516.9	260.0	879.0	1,149.1	609.6	429.9	285.5	65.1	210.6	171.3	224.6

Table II-57 BKP IMPORT PRICE IN EC BY GRADE

Year	NBKP Import (CIF) US\$/ton	LBKP Import (CIF) US\$/ton
1972	182	182
1973	204	211
1974	336	345
1975	376	376
1976	397	386
1977	406	384
1978	333	325
1979	430	403
1980	469	449
1981	530	470
1982	471	418
1983	368	331

Source: EC Trade Statistics

Table II-58 TREND OF U.S. SOUTHERN BKP PRICE IN U.S. MARKET AND NORTHERN EUROPE

		(Unit: US\$/MT)	
		U.S. Southern Softwood kraft (NBKP)	U.S. Southern Hardwood kraft (LBKP)
		in U.S. Market in Northern Europe*	in U.S. Market in Northern Europe*
1980	1Q	468.5	440.9
	2Q	512.0	487.8
	3Q	512.6	487.8
	4Q	512.6	487.8
1981	1Q	512.6	487.8
	2Q	512.6	487.8
	3Q	512.6	487.8
	4Q	512.6	487.8
1982	1Q	512.6	487.8
	2Q	468.5	385.8
	3Q	468.5	385.8
	4Q	388.6	363.8
1983	1Q	369.3	347.2
	2Q	400.1	374.8
	3Q	440.9	413.4
	4Q	463.0	435.4
1984	1Q	501.6	474.0
	2Q	567.7	540.1
	3Q	567.7	540.1
	4Q	512.6	490.5
1985	1Q	485.0	446.4

Note: \* CIF price

Source: Pulp & Paper Weekly

Table II-59 U.S. SOUTHERN SOFTWOOD PULP PRODUCTION COST

(Unit: \$/short ton)

	1976	1982	Average Annual Growth Rate 1976-1982, %
<b>Variable Costs</b>			
Wood	85(27.4)	115(22.9)	5.2
Labor	30(9.7)	43(8.5)	6.2
Energy	20(6.5)	45(9.0)	14.5
Chemicals	35(11.3)	45(9.0)	4.3
Others	72(23.2)	111(22.1)	7.5
<b>Total</b>	<b>242(78.1)</b>	<b>359(71.5)</b>	<b>6.8</b>
<b>Overhead</b>	<b>13(4.2)</b>	<b>23(4.6)</b>	<b>10.0</b>
<b>Fixed Costs</b>			
Interest	40(12.9)	65(12.9)	8.4
Depreciation	15(4.8)	55(11.0)	24.0
<b>Total</b>	<b>55(17.7)</b>	<b>120(23.9)</b>	<b>13.8</b>
<b>Grand Total</b>	<b>310(100.0)</b>	<b>502(100.0)</b>	<b>8.4</b>
<b>Consumer Price Index</b>	<b>170.5</b>	<b>289.1</b>	<b>9.2</b>

Note: ( )=Share

Source: PPI, September 1983, p.57

Table II-60 ESTIMATED AVERAGE COSTS OF PRODUCING NBKP PAPER GRADE MARKET PULP

(Unit: US\$/air dry ton)

	First half 1981			First half 1982			1984		
	US		Sweden	US		Sweden	US		Sweden
	South	Western Canada		South	Western Canada		South	Western Canada	
Fiber	108	138	189	116	138	212	120	109	184
Chemicals	43	32	-	45	37	-	50	41	31
Wage and Salaries	54	49	78	58	55	85	60	49	35
Energy	46		87*	41	38	85*	45	36	12
Others	43	70		47	37		60	42	27
Direct Cost Total	294	289	354	307	305	382	335	277	289

Note: \*; Includes chemicals and others.

Source: PPI, Sep., 1982 and July, 1984

Table II-61 ESTIMATED AVERAGE COSTS OF PRODUCING BLEACHED  
KRAFT PAPER-GRADE MARKET PULP (1)

(Unit: US\$/air dry ton)

Softwood	First half 1982	First half 1981
<u>Western Canada</u>	(0.8008 C\$/US\$)	(0.8375 C\$/US\$)
Fiber	\$138	\$138
Chemicals	37	32
Wages and Salaries	55	49
Energy	38	-
Other Direct	37	70*
Total Direct	305	289
Interest	24	25
Depreciation	16	16
Other Indirect	12	12
Total	357	357
<u>Sweden</u>	(5.90 SKr/US\$)	(5.54 SKr/US\$)
Fiber	212	189
Wages and Salaries	85	78
Energy and Chemicals	85	87
Total Direct	382	354
Capital and Misc.	101	99
Total	483	453
<u>US South</u>		
Fiber	116	108
Chemicals	45	43
Wages and Salaries	58	54
Energy	41	46
Other Direct	47	43
Total Direct	307	294
Interest	20	20
Depreciation	18	18
Other Indirect	17	17
Total	362	349



Table II-61 ESTIMATED AVERAGE COSTS OF PRODUCING BLEACHED  
KRAFT PAPER-GRADE MARKET PULP (2)

(Unit: US\$/air dry ton)

Hardwood	First half 1982	First half 1981
Brazil	(160.686 cruz/US\$)	(93.96 cruz/US\$)
Fiber	60	43
Labor	29	32
Energy	25	22
Chemicals	36	25
Total Direct	150	122
Supplies, Capital, Misc.	177	191
Total	327	313
US South		
Fiber	101	96
Chemicals	32	30
Wages and Salaries	58	55
Energy	51	64
Other Direct	46	42
Total Direct	288	287
Interest	20	20
Depreciation	18	18
Other Indirect	17	17
Total	343	342

Note: \* Includes energy.

Source: Mead Corp. estimates

Table II-62 CAPACITY OF SOFTWOOD PULP PLANT IN NORTH AMERICA

Company	Completion	Capacity (t/d)
Great Lakes Forest	1966	520
Domtar	1967	650
Intercontinental	1968	570
British Columbia Forest	1972	520
Weyerhaeurer	1972	1,000
Procter & Gamble	1973	650
Alabama River Pulp	1978	1,000
Northwood Pulp & Timber	1982	830
Streat Northern Nekosa	1984	1,100

Source: PPI, September 1983, p.58

Table II-63 ESTIMATED PER-TON PRICES AND FREIGHTS FOR PRODUCERS  
OF MARKET PULP IN VARIOUS REGIONS OF WORLD

	(Unit: US\$)			
	Eastern		Brazil	
	Southern US (NBKP)	Canada (NBKP)	Sweden (NBKP)	(LBKP)
Price (list)	530(100.0)	545(100.0)	545(100.0)	510(100.0)
Freight CIF	65(12.3)	60(11.0)	45(8.3)	70(13.7)
Northern Europe Mill net	465(87.7)	485(89.0)	500(91.7)	440(81.3)

Note: ( )=Share

Source: PPI, June, 1982 p.67

Table II-64 PRODUCING CAPACITY OF PULP BY REGION

(Unit: 1,000 ton/Y, %)

	1978		1981		1983		Average Annual Growth Rate	
	Capacity	Share	Capacity	Share	Capacity	Share	1981/1978	1983/1981
<b>North America</b>								
Canada	22,844	15.5	23,100	15.0	23,418	15.4	0.4	0.7
U.S.A.	50,348	34.0	52,980	34.3	50,986	33.6	1.7	-1.9
Sub-total	73,192	49.5	76,080	49.3	74,404	49.0	1.3	-1.1
<b>Latin America</b>								
Brazil	2,500	1.7	3,900	2.5	3,990	2.6	16.0	1.1
Chile	733	0.5	813	0.5	851	0.6	3.5	2.3
Mexico	1,000	0.7	732	0.5	1,078	0.7	-9.0	21.4
Others	1,462	0.1	1,319	0.9	1,536	1.0	-3.4	7.9
Sub-total	5,695	3.9	6,764	4.4	7,455	4.9	5.9	5.0
<b>Asia</b>								
Japan	12,502	8.5	12,788	8.3	12,459	8.2	0.8	-1.0
China	4,000	2.7	5,600	3.6	6,192	4.1	11.9	5.2
Others	2,363	1.6	3,970	2.6	2,555	1.7	18.9	-10.0
Sub-total	18,865	12.8	22,358	14.5	21,206	14.0	5.8	-2.6
<b>Oceania</b>	2,121	1.4	2,260	1.5	2,467	1.6	2.1	4.5
<b>Africa</b>	1,230	0.8	1,898	1.2	1,864	1.2	5.6	-0.9
<b>East Europe</b>	13,330	9.0	14,005	9.0	13,646	9.0	1.7	-1.3
<b>North Europe</b>								
Finland	8,125	5.5	8,510	5.5	8,872	5.8	1.6	2.1
Norway	1,985	1.3	1,945	1.3	2,170	1.4	-0.7	5.6
Sweden	11,545	7.8	9,625	6.2	9,443	6.2	-5.9	-1.0
Sub-total	21,655	14.6	20,080	13.0	20,485	13.5	-2.5	1.0
<b>West Europe (excl. N. Europe)</b>	11,728	7.9	10,990	7.1	10,404	6.8	-2.4	-2.7
<b>World Total</b>	147,816	100.0	154,435	100.0	151,931	100.0	1.5	-0.5

Table II-65 TREND OF BKP IMPORT IN EC BY GRADE

	L B K P		N B K P		BKP TOTAL	
	Imports (1,000T)	Share (%)	Imports (1,000T)	Share (%)	Imports (1,000T)	Share (%)
1972	124.6	16.3	637.7	83.7	762.3	100.0
1975	916.9	25.4	2,697.9	74.6	3,614.8	100.0
1976	1,627.7	33.4	3,242.9	66.6	4,870.6	100.0
1977	1,668.4	34.5	3,162.1	65.5	4,830.5	100.0
1978	2,079.5	35.2	3,835.9	64.8	5,912.4	100.0
1979	2,278.3	34.8	4,260.3	65.2	6,538.6	100.0
1980	2,256.4	34.9	4,207.4	65.1	6,463.8	100.0
1981	2,230.1	38.5	3,563.6	61.5	5,793.7	100.0
1982	2,179.0	35.9	3,891.0	64.2	6,070.0	100.0
1983	2,611.9	39.2	4,043.1	60.8	6,655.0	100.0
1983/1972						
Average Annual Growth Rate(%)	31.9		18.3		21.8	

Source: EC Trade Statistics

Table II-66 IMPORT PRICE OF BKP MARKET PULP IN EC BY GRADE

	N B K P Market Pulp (A)	L B K P Market Pulp (B)	Ratio (B)/(A)x100 (%)
1976	397	386	97.2
1977	406	384	94.6
1978	333	325	97.6
1979	430	403	93.7
1980	469	449	95.7
1981	530	470	88.7
1982	471	418	88.7
1976-1982 Average	-	-	93.7

Table II-67 PROJECTED PRICE OF URUGUAY BKP MARKET PULP (FOB)

(Unit: US\$/ton)

Year	NBKP Market Pulp Project Price	LBKP Market Pulp Project Price
1984	418	388
1985	439	407
1990	560	520
1991	588	546
1992	618	573
1993	648	602
1994	681	632
1995	715	664
1996	751	697
1997	788	732
1998	828	768
1999	869	807
2000	912	847

Table II-68 GROSS DOMESTIC PRODUCT  
AT FACTOR COST PER  
ORIGINAL ECONOMIC SECTOR

(Unit: Millions of New Pesos  
at 1978 Prices )

	1981	1982 <sup>*</sup>	1983 <sup>*</sup>
Agriculture	3,439	3,051	3,114
Fishery and Sea Game	157	1,334	155
Manufacturing Industries	6,662	5,536	5,148
Electricity, Citi Gas, Water	430	435	446
Building	1,593	1,377	1,012
Trade	5,327	4,182	3,689
Transportation and Storage	1,819	1,593	1,493
Communications	206	218	231
House Ownership	1,848	1,861	1,874
Other	8,692	8,838	8,792
GDP at Factors Cost	30,173	27,225	25,954

Note: \* Provisional Data

Source: Central Bank of Uruguay, Statistical Bulletin Nr. 49



Table II-69 FOREIGN TRADE PER GROUPS OF GOODS

Exports	(Unit: 1,000 US\$)		
	1982	1983	Jan./Apr. * 1984
Animals on the Hoof, Products of the Animal Kingdom	291,598	364,342	76,658
Products of the Vegetable Kingdom	152,484	139,326	23,850
Fats and Oils	5,465	8,675	3,477
Foodstuff Industry	18,152	30,189	11,370
Mineral Products	4,141	1,699	3,217
Chemical Industry	43,128	24,070	7,186
Plastic Matters	18,951	12,235	2,114
Skins, Hides	139,537	139,178	37,838
Timber, Charcoal	51	111	-
Paper	7,567	11,569	-
Textiles	292,547	266,614	112,582
Footwear	10,027	9,222	1,875
Stones Manufactures	12,001	8,130	1,740
Pearls, Stones	676	360	-
Common Metals and By-Products	7,965	6,310	2,229
Machinery, Appliances, Electric Materials	6,578	4,991	939
Transportation Material	6,251	7,889	1,945
Optics, Photography, Clockmaking	593	659	-
Weapons and Munitions	3	31	-
Other	1,953	3,455	3,933
Artistic Objects	4,498	5,439	-
Total	1,024,166	1,044,494	290,923

Note: \* Provisional Figures

Source: BCU, Op. Cit.

Banco de la Republica del Uruguay

Table II-70 FOREIGN TRADE PER GROUPS OF GOODS

Imports	(Unit: 1,000 US\$)		
	1982	1983	Jan./Apr. * 1984
Animals on the Hoof, Products of the Animal Kingdom	2,344	1,057	-
Products of the Vegetable Kingdom	39,448	43,539	11,449
Fats and Oils	3,487	6,279	2,718
Foodstuff Industry	26,297	10,934	4,194
Mineral Products	479,088	286,188	95,768
Chemical Industry	114,520	96,900	27,607
Plastic Matters	45,768	40,540	12,890
Skins, Hides	4,554	6,353	2,040
Timber, Charcoal	10,618	3,791	-
Paper	22,473	14,001	3,858
Textiles	27,753	31,732	8,337
Footwear	974	377	-
Stones Manufactures	6,994	3,376	-
Pearls, Stones	262	70	-
Common Metals and By-Products	45,977	32,730	9,827
Machinery, Appliances, Electric Materials	157,022	86,972	25,669
Transportation Material	91,135	26,263	7,557
Optics, Photography, Clockmaking	19,314	9,968	2,709
Weapons and Munitions	976	249	-
Other	8,187	4,301	3,802
Artistic Objects	<u>1</u>	<u>-</u>	<u>-</u>
Total	<u>1,107,192</u>	<u>705,620</u>	<u>218,425</u>

Note: \* Provisional Figures

Source: BCU, Op. Cit.

Banco de la Republica del Uruguay

Table II-71 GDP (P.B.I. AL COSTO DE FACTORES)

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83
Current Term in Million Peso	2,217	4,036	7,108	10,874	17,145	26,292	49,758	79,539	105,903	113,182	164,226
Real Term in Million Peso in 1978	21,752	22,415	23,746	24,700	24,974	26,292	27,914	29,600	30,173	27,225	25,954

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay

Table II-72 GROSS DOMESTIC PRODUCT  
GROWTH RATES

Sector	1983/82 Percentage Variation	I-84/IV-83 Percentage Variation
Agriculture	2.1	-10.4
Fishery and Sea Game	15.5	-51.9
Manufacturing Industries	-7.0	-2.4
Electricity, City Gas, Water	2.5	3.4
Building	-26.5	-14.8
Trade	-11.8	6.4
Transportation and Storage	-6.2	12.3
Other Sectors	-0.2	4.5
GDP	-4.7	0.7

Note: The Origin of the GDP Arises from the Following Charter.

Source: Central Bank of Uruguay (BCU)  
Statistical Monthly Bulletin

Table II-73 INCREASE RATIO ON THE 12 MONTHS  
BEFORE MONTH CONSUMER'S PRICE INDEX  
(DECEMBER IN EACH YEAR)

1975	66.8
1976	39.9
1977	57.3
1978 Jul.	42.3
1979	83.1
1980	42.8
1981	29.4
1982 Nov.	11.0
Dec.	20.5
1983 Dec.	51.5
1984 Jan.	40.7
Feb.	42.5
Mar.	43.9
Apr.	44.7
May	50.1
Jun.	56.2
Jul.	62.0
Aug.	63.4

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay

Table II-74 EXCHANGE RATE

(Unit: New Peso/US\$)

	<u>Selling</u>	<u>Buying</u>
1975 Average	2.26	2.23
1976 "	3.34	3.31
1977 "	4.68	4.65
1978 "	6.06	6.05
1979 "	7.86	7.84
1980 "	9.10	9.08
1981 "	10.82	10.79
1982 Sep.	13.12	13.09
Dec.	28.51	28.21
1983 Average	34.54	34.38
Dec.	42.73	42.50
1984 Jan.	45.88	45.66
Apr.	51.73	51.48
Jul.	55.61	55.36
Sep.	57.95	57.70

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay

Table II-75 INDEX OF REAL SALARIES (1968=100)  
(AVERAGE OF EACH YAER)

	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	
	111.47	110.02	115.67	95.89	92.29	93.48	85.22	80.24	70.68	68.15	62.62	62.39	67.05	66.83	52.97

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay

Table II-76 GDP/CAP.  
(Assumed: Population 3 Million)

	1975	1977	1979	1981	1983
Peso Current (Million Peso)	7,108	17,145	49,758	105,903	164,226
Exchange Rate, Average, (Peso/ US\$)	2.26	4.68	7.86	10.82	34.54
US\$ Current (Million US\$)	3,145	3,663	6,330	9,788	4,755
Per Cap. (US\$)	1,048	1,221	2,110	3,262	1,585

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay

Table II-77 FOREIGN TRADE STATISTICS

	'70	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83
	(Unit: Million US\$)													
1. Export	232.7	205.7	214.0	321.5	382.2	381.2	546.5	607.5	686.0	788.1	1,058.5	1,215.4	1,022.9	1,045.1
2. Import	230.9	222.1	200.3	284.8	486.7	516.2	587.2	721.0	757.3	1,206.3	1,680.3	1,599.0	1,057.9	705.6
Balance (1.-2.)	1.8	-16.4	13.7	36.7	-104.5	-135.0	-40.7	-113.5	-71.3	-418.2	-621.8	-383.6	-35.0	339.5

Source: BOLETIN ESTADISTICO/Banco Central del Uruguay



Table II-78 EXTERNAL DEBT OF URUGUAY

(Unit: Million US\$)

	<u>1982</u>	<u>1983</u>	<u>31/3/84</u>
Public Sector	2,705.1	3,197.5	3,245.0
Central Bank	673.0	1,176.9	1,212.4
Republic Bank	246.2	244.0	242.9
Mortgage Bank	168.6	144.4	143.4
Non-financial Public Sector	1,617.3	1,632.2	1,646.3
Private Sector	1,550.2	1,391.9	1,441.2
Suppliers	362.3	331.3	329.0
Commercial Banks	1,187.9	1,060.6	1,112.2
Total Gross External Debt	<u>4,255.3</u>	<u>4,589.4</u>	<u>4,686.2</u>

Source: BCU, OP. Cit.

Table II-79 PRODUCTION, EXPORT, IMPORT, AND APPARENT DOMESTIC DEMAND IN URUGUAY (1)

	(Unit: Ton)															
	1 9 7 6			1 9 7 7			1 9 7 8			1 9 7 9						
	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM
1. News paper	-	10,634	-	10,634	-	12,100	-	12,100	-	12,547	-	12,547	-	13,594	-	13,594
Printing & Writing	12,200	475	920	11,755	13,100	417	6,148	7,369	21,000	546	5,595	15,951	22,000	1,171	6,423	16,748
2. Packing paper & board	10,900	-	60	10,840	15,100	-	240	14,860	10,000	-	493	9,507	13,000	-	602	12,398
3. Other paper & board	15,500	1,516	417	16,599	16,500	1,570	670	17,400	20,000	3,137	1,043	22,094	29,000	3,800	1,613	38,187
4. Sanitary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	38,600	12,625	1,397	49,828	44,700	14,087	7,058	51,729	51,000	16,230	7,131	60,099	64,000	18,565	8,638	73,927
5. Pulp	14,800	6,515	49	21,266	17,300	9,256	159	26,397	19,000	10,863	-	29,863	24,000	11,186	-	35,186
6. Waste paper	-	1,182	-	-	-	2,246	-	-	-	1,687	-	-	-	1,533	-	-

Table II-79 PRODUCTION, EXPORT, IMPORT, AND APPARENT DOMESTIC DEMAND IN URUGUAY (2)

	(Unit: Ton)															
	1 9 8 0			1 9 8 1			1 9 8 2			1 9 8 3						
	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM				
1. News paper	264	9,145	-	9,409	311	9,669	-	9,980	204	7,451	-	7,655	386	8,562	-	8,948
Printing & Writing	25,463	2,733	8,591	19,605	20,079	2,788	5,768	17,099	15,193	1,799	4,973	12,019	20,153	1,149	7,893	13,409
2. Packing paper & board	19,577	832	784	19,625	18,388	2,145	644	19,889	15,533	2,214	270	17,477	17,835	1,958	725	19,068
Other paper & board/Sanitary	5,730	5,629	1,277	10,082	5,998	6,836	1,269	11,565	6,242	6,305	763	11,784	5,045	2,285	1,836	5,503
	51,034	18,339	10,652	58,721	44,776	21,438	7,681	58,533	37,172	17,769	6,006	48,935	43,428	13,954	10,454	46,928
3. Pulps	23,853	8,865	-	32,718	23,959	7,116	-	31,075	21,000	5,145	-	26,154	21,000	6,747	1,037	26,710
4. Waste paper	-	3,806	-	-	-	1,015	-	-	-	786	1,138	-	-	1,500	340	-

Notes: PRD=PRODUCTION, IMP=IMPORT, EXP=EXPORT and DEM=DEMAND

Source: Production: Paper Association of Uruguay

\*1 = ppi

\*2 = Assumption Figure same as 1982

Import and Export: CENCI

Waste Paper: CENCI

Table II-80 PRODUCTION, IMPORT, EXPORT AND DOMESTIC DEMAND OF PAPER AND PAPERBOARD

(Unit: ton)

Year	Production	Import	Export	Apparent Domestic Demand
1965	42,990	28,660	0	71,650
1966	40,500	19,900	0	60,400
1967	37,600	17,000	0	54,600
1968	35,500	9,800	0	45,300
1969	38,300	19,700	230	55,970
1970	40,140	20,700	0	60,390
1971	41,750	22,300	0	64,050
1972	36,700	19,000	0	55,700
1973	41,250	16,540	800	56,990
1974	43,400	17,720	2,700	58,420
1975	36,600	9,200	1,300	44,500
1976	38,600	11,000	1,400	48,200
1977	44,700	13,000	6,100	51,600
1978	51,000	18,000	6,000	63,000
1979	54,000	18,000	8,700	63,300

(Remarks) [Apparent Domestic Demand] = [Production] + [Import] - [Export]

(Source) Banco Central del Uruguay: Indicadores de la Actividad

Table II-81 OUTLINE OF MAJOR PAPER COMPANIES IN URUGUAY

Item	Companies	FNP	IPUSA	PAMER	CICSSA
Factories		Paper mill 1 Board mill 1 Paper converting mill 1	Paper mill 1 Board mill 1 Paper converting mill 1	Paper mill 1 Board mill 1 Paper converting mill 1	Paper mill 1 Board mill 1
Major products		o Wood free printing & writing paper o Art paper o Tissue paper o Copying paper o Light weight kraft paper o Newspaper o Wrapping paper	o Wood contained printing & writing paper o Low grade wrapping paper o White board o Ledger o Napkin o Toilet roll o Envelope	o Corrugated fiber board box o Heavy duty kraft paper sack o Wood contained printing & writing paper o Toilet roll o Coated paper	o corrugated fiber board box o Heavy duty kraft paper sack o Hard board o Roofing paper sheet
Production capacity		Paper 45,000 t/y LBKP 75 t/d Paper 110 - 155 t/d	Paper 18,000 t/y GP 3 - 4 t/d Paper 43 t/d Paper board 15 t/d	Paper 21,000 t/y MP (GP) 6 - 7 t/d Paper, paper board 85 t/d	Paper 15,000 t/y GP 20 t/d Paper, paper board 50 t/d
Integrated paper mill system		Pulp --paper and final products	Pulp --paper and final products	Pulp --paper and final products	Paper --final products
Major equipment and facilities		o KAMYR Continuous digester o Paper machines 3	o G.P. grinders 2 o Paper machines 4 o Not book converting machine 1	o Rotary digesters 3 o G.P. grinder 1 o Paper machines 3 o Corrugated fiber board converting machine 1	o G.P. grinder 1 o Paper machine 1 o Wet system hard board machine 1 o Asphalt impregnating machine 1

Table II-82 UTILIZATION RATE OF PAPER PRODUCTION AND CAPACITY  
OF MAJOR PAPER COMPANIES

	1 9 8 2		1 9 8 3		
	Capacity (t/d)	Production (t)	Utilization Rate (%)	Production (t)	Utilization Rate (%)
FNP	155	16,438.0	35.0	19,038	40.9
PAMER	85	8,550.0	33.5	11,136	43.7
IPUSA	58	5,128.0	29.0	6,105	34.9
CICSSA	50	4,563.0	30.0	4,452	29.7
Sub-Total	348	34,679.0		40,731	
Annual Working Days		300		300	

Note: Annual production assuming 300 working days per year  
Source: Paper Association of Uruguay

Table II-83 TREND OF MAJOR PRODUCTS

(Unit: t/y)

Products	1980	1981	1982	1983
News paper	264	331	204	386
Printing and Writing paper	25,463	20,079	15,193	20,153
Household and Sanitaries paper	5,730	5,998	5,442	5,054
Packing and Warpping paper & board	19,577	18,388	15,533	17,835
Others	0	0	800	0
Total	51,034*1	44,776*1	37,172*1	43,428*2

Source: \*1 LATU

\*2 Paper Association of Uruguay

Table II-84 CONSUMPTION AND ESTIMATION OF CORRUGATED BOXES

Commodities	1 9 8 2		1 9 8 3	
	Export Materials (kg)	Corrugated Boxes Number of Unit	Export Materials (kg)	Corrugated Boxes Number of Unit
Cheese	2,133,600	142,200	2,557,600	170,500
Butter	3,755,500	150,220	12,408,500	496,340
Meat	-	2,000,000	-	-
Fish	-	2,500,000	-	-
Citrus	-	500,000	-	-
Garments	-	30,000	-	-
Wool Yarns	-	30,000	-	-
Wool Fabrics	-	80,000	-	-
Synthetic man made yarns	-	36,000	-	-
Leather Garments	-	30,000	-	-
Leather Products	-	33,000	-	-
Shoes	-	380,000	-	-
Estimation of 1984 for Citrus			2,000,000 Pices	
1990 for Citrus			8,000,000 Pices	

Source: LATU



Table II-85 PRODUCTION OF PAPER COMPANIES (1)

Product	(Unit: Ton/year)											
	Total		FNP		PAMER		IPUSA		CICSSA		Cartonera pando	
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983		
I. Printing & writing papers												
Affiche	897.4	464.6	816.4	324.6	-	-	-	-	81.0	140.0	-	-
Base paper for coating	564.2	239.5	564.2	239.5	-	-	-	-	-	-	-	-
Cardboard	386.0	984.0	-	-	-	-	386.0	984.0	-	-	-	-
Cardboard mark	66.0	85.0	-	-	-	-	66.0	85.0	-	-	-	-
Coated paper	370.0	164.0	-	-	370.0	164.0	-	-	-	-	-	-
Coated paper	492.2	517.4	492.2	517.4	-	-	-	-	-	-	-	-
Colour filing card	158.1	126.4	158.1	126.4	-	-	-	-	-	-	-	-
Colour writing paper	988.4	1,130.9	988.4	1,130.9	-	-	-	-	-	-	-	-
Coloured cardboard	162.1	118.1	162.1	118.1	-	-	-	-	-	-	-	-
Copy paper	-	644.0	-	644.0	-	-	-	-	-	-	-	-
File	0.9	-	0.9	-	-	-	-	-	-	-	-	-
Gray cardboard	176.2	233.0	-	-	-	-	-	-	-	-	176.2	233.0
Illustration	30.0	6.0	-	-	30.0	6.0	-	-	-	-	-	-
Illustration	47.3	28.7	47.3	28.7	-	-	-	-	-	-	-	-
Manifold	96.1	5.0	76.1	5.0	-	-	20.0	5.0	-	-	-	-
Medium fibre graphic	326.7	247.3	326.7	247.3	-	-	-	-	-	-	-	-
Newsprint	204.2	385.5	204.2	385.5	-	-	-	-	-	-	-	-
Offset paper	741.8	675.1	741.8	675.1	-	-	-	-	-	-	-	-
One side coated paper	231.8	325.0	231.8	325.0	-	-	-	-	-	-	-	-
Paper for photocopy	265.1	517.4	265.1	517.4	-	-	-	-	-	-	-	-
Three plies cardboard	221.0	266.0	-	-	-	-	221.0	266.0	-	-	66.0	152.0
Two piles cardboard	582.0	901.0	-	-	-	-	466.0	901.0	50.0	150.0	32.5	43.0
Two piles cardboard	-	302.0	-	-	-	-	-	-	-	-	-	-
White cardboard	145.9	131.8	111.4	88.8	-	-	-	-	2.0	-	-	-
White filing card	57.5	56.8	57.5	56.8	-	-	-	-	-	-	-	-
White writing paper	7,058.4	8,618.2	7,058.4	8,618.2	-	-	-	-	-	-	-	-
White writing paper K	2,375.1	3,417.9	2,375.1	3,417.9	-	-	-	-	-	-	-	-
Woodlike cardboard	-	1.0	-	-	-	-	-	-	-	-	-	1.0
1st class mimeograph paper (white + colour)	359.0	410.0	-	-	-	-	359.0	410.0	-	-	-	-
2nd class mimeograph paper	113.0	52.0	-	-	71.0	52.0	-	-	42.0	-	-	-
2nd class writing paper	21.0	11.0	-	-	6.0	1.0	-	-	15.0	10.0	-	-
Total printing and writing papers	17,137.4	21,064.6	14,677.7	17,461.6	477.0	223.0	1,518.0	2,651.0	190.0	300.0	274.7	429.0

Table II-85 PRODUCTION OF PAPER COMPANIES (2)

Product	(Unit: Ton/year)						Cartonera pando			
	Total		FNP		PAMER			IPUSA		CICSSA
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
II. Packaging papers	335.2	293.4	335.2	293.4	-	-	-	-	-	-
Brown UB kraft paper	41.9	60.9	41.9	60.9	-	-	-	-	-	-
Calendered kraft	4,156.0	7,055.0	-	-	4,156.0	7,055.0	-	-	-	-
Carton boxes	156.0	207.0	-	-	-	-	156.0	207.0	-	-
Cheap blue paper	594.9	780.0	-	-	-	-	-	-	120.0	160.0
Chipboard	3,117.0	3,300.0	-	-	-	-	-	-	3,117.0	3,300.0
Corrugated boxes	220.0	-	-	-	-	-	-	-	220.0	-
Felt board	0.7	-	-	-	-	-	-	-	-	0.7
Fiber board	382.3	122.3	125.6	122.3	-	-	-	-	-	-
Fibre	10.9	9.5	10.9	9.5	-	-	-	-	-	-
Kraft bags	1,386.0	1,211.0	-	-	549.0	671.0	-	-	837.0	540.0
Multilayer kraft	118.0	226.0	-	-	-	-	118.0	226.0	-	-
Napkins etc.	256.0	252.0	-	-	256.0	252.0	-	-	-	-
Other corrugated boxes	221.0	296.0	-	-	155.0	154.0	-	-	32.0	-
Other kraft papers	963.3	1,021.0	-	-	-	-	-	-	79.0	120.0
Packaging paper for oiled and fruit	750.1	714.0	-	-	-	-	212.0	244.0	-	-
Packaging paper for stores	264.4	302.5	264.4	302.5	-	-	-	-	-	-
Packaging paper for shops	332.5	193.1	96.5	108.1	-	-	236.0	85.0	-	-
Paper for envelopes	22.4	12.5	22.4	12.5	-	-	-	-	-	-
Paper for meat packaging	90.0	109.0	-	-	90.0	109.0	-	-	-	-
Paperfruit packaging	89.0	107.0	-	-	-	-	89.0	107.0	-	-
Sulphite paper, N 3	540.5	437.8	540.5	437.8	-	-	-	-	-	-
Sulphate paper	-	16.0	-	16.0	-	-	-	-	-	-
Sulphite paper, industrial	56.0	62.0	-	-	-	-	56.0	62.0	-	-
Toilet paper	5,025.0	4,528.0	-	-	2,867.0	2,672.0	2,158.0	1,856.0	-	-
Towel paper	299.0	318.0	-	-	-	-	299.0	318.0	-	-
Trade mark	44.0	50.0	-	-	-	-	44.0	50.0	-	-
Trade mark (pine)	44.0	69.0	-	-	-	-	44.0	69.0	-	-
White kraft paper	323.3	213.4	323.3	213.4	-	-	-	-	-	-
White paper	142.0	120.0	-	-	-	-	142.0	120.0	-	-
White three ply board	321.5	277.0	-	-	-	-	-	-	321.5	277.0
Total packaging papers	20,036.2	22,363.4	1,760.7	1,576.4	8,073.0	10,913.0	3,610.0	3,454.0	4,373.0	4,152.0
GRAND TOTAL	37,173.6	43,428.0	16,438.4	19,038.0	8,550.0	11,136.0	5,128.0	6,105.0	4,563.0	4,452.0

Table II-86 PULPS AND PAPERS EXPORT COUNTRIES FOR URUGUAY

Countries	1975	1976	1977	1978	1979	1980	1981	1982	1983
Sweden	3,186.3	1,102.5	2,070.6	1,536.9	1,321.1	1,099.4	1,010.1	762.2	579.0
Chile	2,993.4	3,412.5	2,875.6	3,399.9	5,181.9	5,263.4	3,050.3	2,741.0	2,402.4
Canada	2,209.8	1,398.4	2,298.3	2,846.8	2,333.1	3,463.7	5,155.9	2,627.0	2,496.7
EC	1,182.9	1,393.9	1,529.1	979.1	1,556.3	2,279.9	2,650.3	1,917.5	949.5
Brazil	637.6	318.7	576.2	1,182.2	3,178.9	4,935.2	6,721.7	5,042.4	3,990.3
Finland	431.8	404.6	344.8	614.1	1,415.1	1,080.2	1,497.8	901.1	394.0
France	256.2	153.7	272.9	186.1	319.8	584.5	449.2	345.6	357.5
Germany FR	210.2	333.6	344.4	410.8	479.2	856.4	892.4	462.5	314.9
Spain	112.5	-	155.8	139.5	-	340.2	306.9	192.2	-
S. Africa	-	298.7	171.4	-	-	-	448.5	332.0	-
India	-	212.5	143.1	-	-	-	-	-	-
U.K.	180.0	266.8	271.6	253.6	370.2	377.1	370.4	296.9	306.8
Argentina	-	184.4	353.2	345.4	622.1	1,451.9	1,296.5	1,724.4	1,117.3
Austria	-	153.7	290.8	255.6	211.8	383.2	-	261.5	208.7
Italy	-	-	142.7	149.3	251.7	-	-	-	-
Japan	-	-	-	-	-	-	-	286.9	-
Others	422.8	251.0	215.8	351.1	629.7	1,225.1	1,467.0	680.8	884.1
Total	11,823.5	10,092.2	12,056.3	12,650.4	17,880.9	23,340.0	25,317.0	18,574.0	14,001.2

Source: CENCI

Table II-87 PRODUCTION OF PULPS IN URUGUAY (1)

	(Unit: Ton)															
	1 9 7 6			1 9 7 7			1 9 7 8			1 9 7 9						
	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM	PRD	IMP	EXP	DEM				
Pulp																
Mechanical	2,900	0	0	2,900	2,200	50	0	2,250	2,000	0	0	2,000	3,000	218	0	3,218
Semi-chemical	2,200	877	0	3,077	2,200	1,505	0	3,705	2,000	624	0	2,624	3,000	1,413	0	4,413
Chemi-mechanical																
Sulphate un bleach	0	2,836	0	2,836	0	2,944	0	2,944	1,000	4,238	0	5,238	1,000	2,096	0	3,096
Sulphate bleach	9,700	2,293	49	11,944	12,900	4,597	0	17,497	14,000	6,001	0	20,001	17,000	7,459	0	24,459
Sulphite un bleach	0	508	0	508	0	160	0	160	0	0	0	0	0	0	0	0
Sulphite bleach	0	0	0	0	0	0	0	159	0	0	0	0	0	0	0	0
Dissolving pulp	0	0.6	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	14,800	6,515	49	21,266	17,300	9,256	159	26,397	19,000	10,863	0	29,863	24,000	11,186	0	35,186

Table II-87 PRODUCTION OF PULPS IN URUGUAY (2)

	(Unit: Ton)																			
	1 9 8 0			1 9 8 1			1 9 8 2			1 9 8 3										
	PRD	IMP	EXP	PRD	IMP	EXP	PRD	IMP	EXP	PRD	IMP	EXP	PRD	IMP	EXP	PRD	IMP	EXP	DEM	
Pulp																				
Mechanical	1,821	0	0	1,821	3,369	0	0	3,369	2,000	200	0	2,200	2,000	220	0	2,220	0	0	2,220	
Semi-chemical	2,633	0	0	2,633	2,710	0	0	2,710	2,000	810	0	2,810	2,000	1,267	0	3,267	0	0	3,267	
Chemi-mechanical																				
Sulphate un bleach	0	1,699	0	1,669	565	1,477	0	2,042	1,000	1,884	0	2,884	1,000	2,350	0	3,350	0	0	3,350	
Sulphate bleach	18,700	5,815	0	24,515	17,315	3,991	0	23,348	16,000	2,260	0	18,260	16,000	2,908	1,037	17,871	0	0	17,871	
Sulphite un bleach	699	710	0	1,439	0	680	0	680	0	0	0	0	0	0	0	0	0	0	0	
Sulphite bleach	0	641	0	641	0	968	0	968	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	23,853	8,865	0	32,718	23,959	7,116	0	31,075	21,000	5,154	0	26,154	21,000	6,745	1,037	26,708	0	0	26,708	

Notes: PRD=PRODUCTION, IMP=IMPORT, EXP=EXPORT and DEM=DEMAND  
Source: Paper Association of Uruguay

Table II-88 TREND OF EXPORT PULPS FROM BRAZIL

Export Countries	1980	1981	1982	1983
Austria	-	-	-	18
Belgium	191	245	119	61
Denmark	-	-	8	11
France	-	-	25	67
F.R. Germany	-	-	2	4
G.D. Germany	33	39	82	121
Italy	29	25	24	29
Netherlands	30	24	17	25
Norway	109	182	10	-
Finland	-	-	10	-
Switzerland	-	-	3	4
U.K.	37	46	44	76
Sweden	-	-	19	21
U.S.A.	68	105	128	157
Australia	2	2	1	-
China	14	3	-	18
Indonesia	4	15	10	19
Iraq	7	-	-	-
Japan	189	165	165	176
R. Korea	12	13	5	13
Other Asia	-	-	14	10
Argentina	30	44	46	23
Colombia	4	-	-	-
Mexico	2	1	-	4
Peru	2	-	-	-
Venezuela	9	17	19	11
Other Latin America	-	14	13	14
S. Africa	10	14	-	36
Other Africa	2	1	9	7
TOTAL	784	955	773	925

Table II-89 TREND OF PRODUCTION BY CENIBRA

(Unit: 1,000 t/y)

Year	Production
1977	42(Actual Working 90 days)
1978	117
1979	215
1980	279
1981	213
1982	306
1983	299
1984	317
1985	320(Assumption)

Table II-90 RESULTS OF SALES VOLUME BY CENIBRA

(Unit: 1,000 t)

Distination	1981	1982	1983	1984	*1985
Japan	112	159	151	155	145
Europe	29	24	29	26	36
North America	18	11	34	40	44
South America	16	38	22	20	18
Others	9	7	5	0	5
Sub-Total	184	239	241	241	248
Domestic	39	61	61	65	83
Grand Total	223	300	302	306	331

Note: \*; Assumption

Figure II-1 CHART OF BASIC CONCEPT OF ANALYSIS

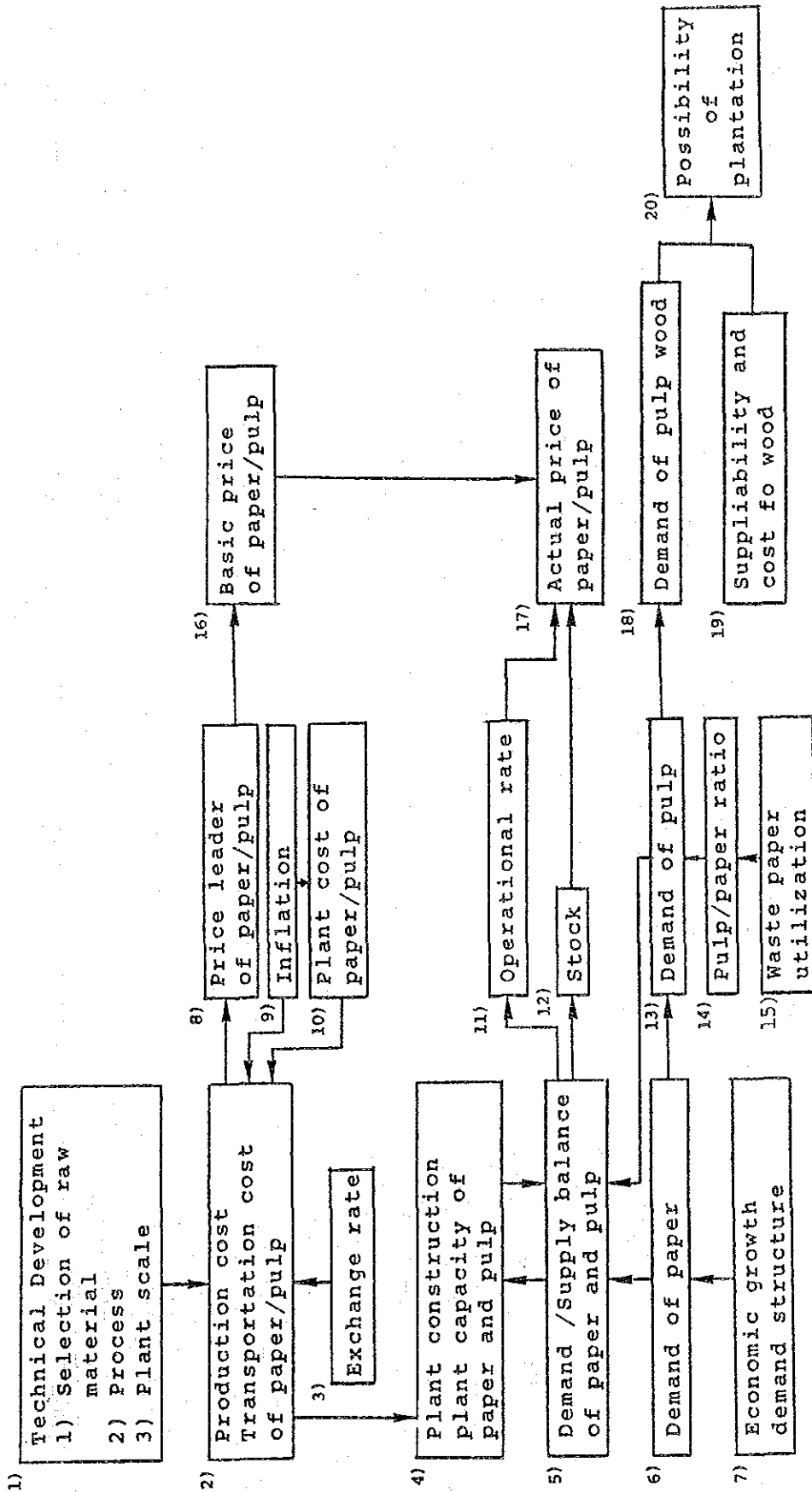
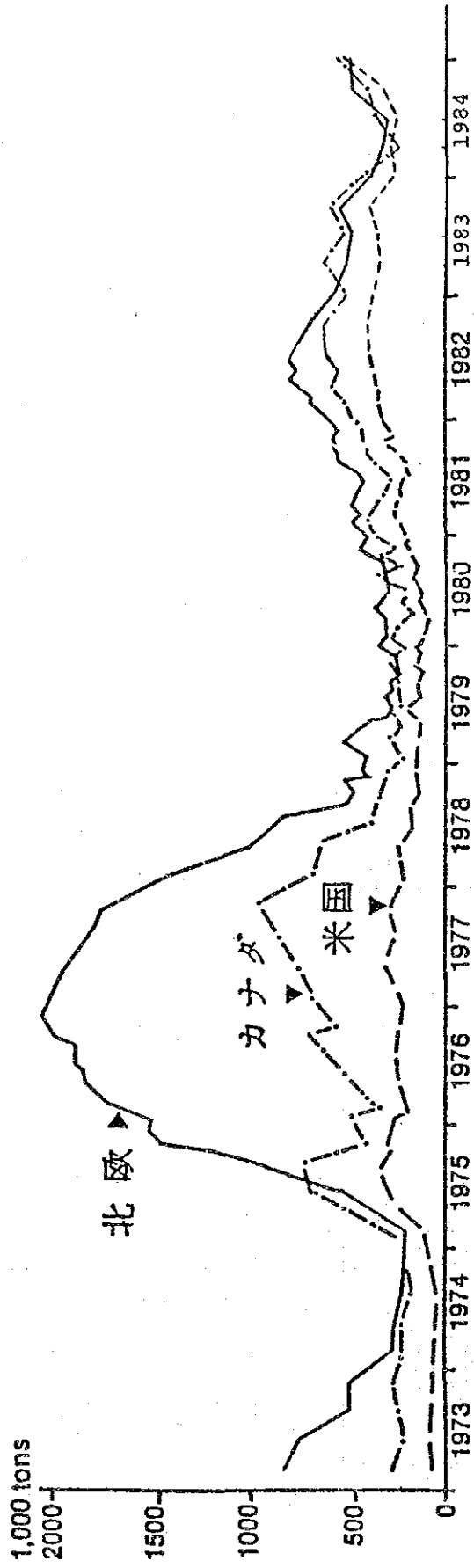


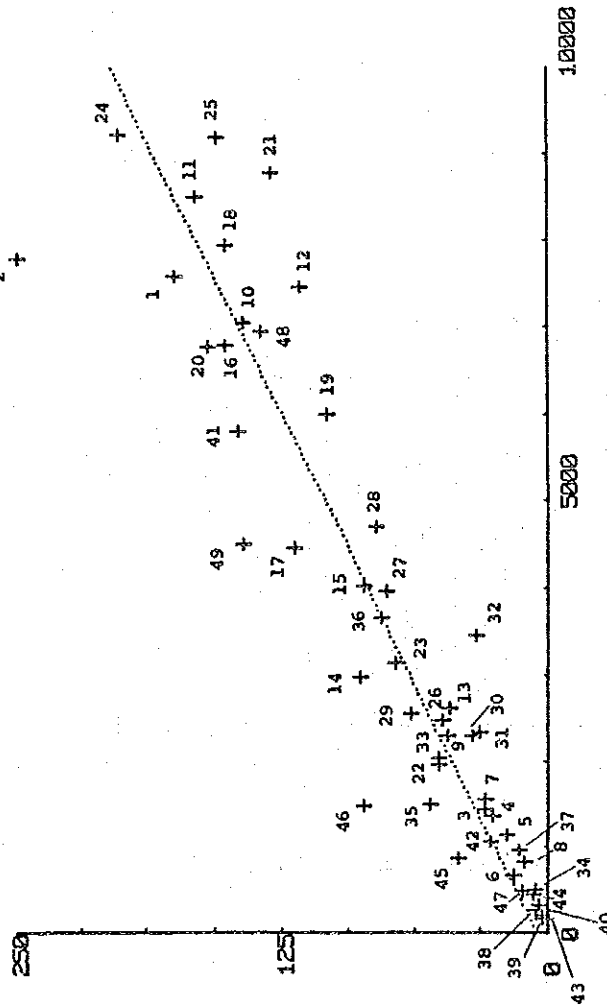


Figure II-2 NORSCAN'S INVENTORY LEVEL OF MARKET PULP



Source: PPI/'82

Figure II-3 P.C. CONSUMPTION OF PAPER AND PAPERBOARD AND P.C. GDP (1982)



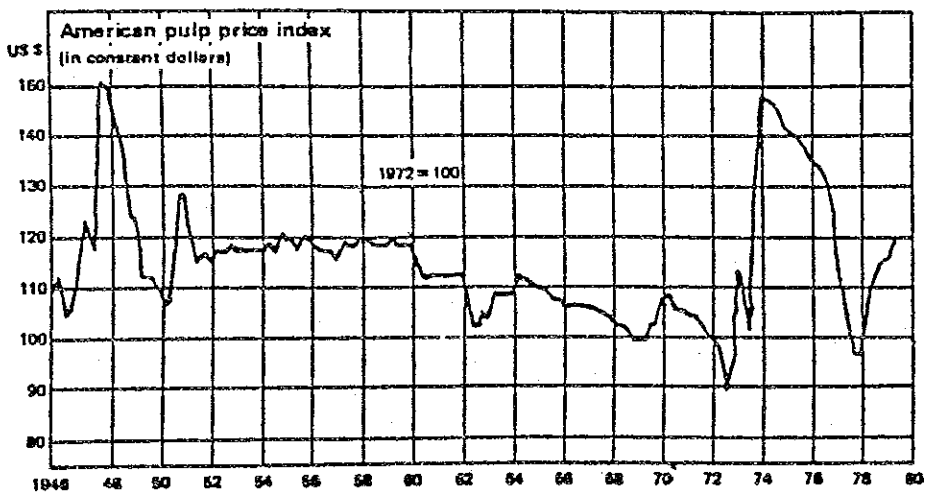
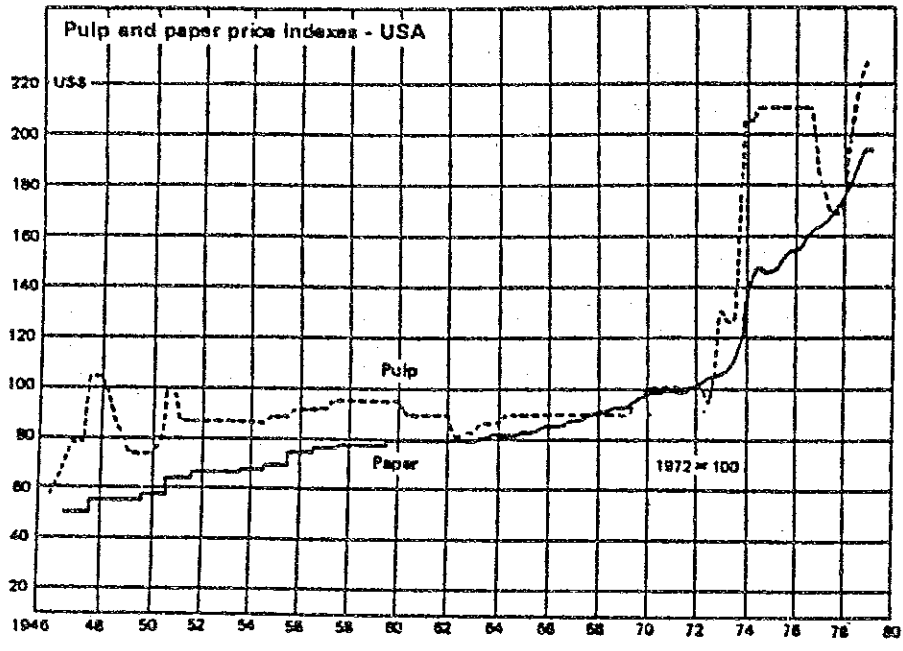
Notes:  $Y = 4.87984 + 0.020021x$   
 $r = 0.926112$

Where,  $Y =$  Per Capita Consumption of Paper & Paperboard (kg/year)  
 $x =$  Per Capita GDP (1975 US\$)  
 $r =$  Correlation Coefficient

No.	Country Name	Per Capita GDP US\$	Per Capita Consumption (kg/year)
1	CANADA	7,603	175.0
2	U.S.A.	7,808	258.0
3	ARGENTINA	1,430	29.0
4	BRAZIL	1,363	25.0
5	CHILE	1,146	19.0
6	COLOMBIA	660	16.8
7	MEXICO	1,563	29.0
8	PERU	812	11.0
9	VENEZUELA	2,290	47.0
10	BELGIUM	7,055	143.0
11	GERMANY	8,516	166.8
12	FRANCE	7,477	117.0
13	GREECE	2,617	46.0
14	IRELAND	2,974	88.0
15	ITALY	4,913	87.0
16	NETHERLANDS	6,798	152.0
17	UNITED KINGDOM	4,433	119.0
18	WEST GERMANY	7,950	152.0
19	AUSTRIA	5,992	104.0
20	FINLAND	6,784	160.0
21	NORWAY	8,806	130.0
22	PORTUGAL	1,959	51.0
23	SPAIN	3,135	72.8
24	SWEDEN	9,227	202.0
25	SWITZERLAND	9,202	156.8
26	BULGARIA	2,488	49.0
27	CZECHOSLOVAKIA	3,950	76.0
28	EAST GERMANY	4,677	81.0
29	HUNGARY	2,558	64.0
30	POLAND	2,299	35.0
31	ROMANIA	2,348	32.0
32	USSR	3,457	33.0
33	YUGOSLAVIA	2,036	51.0
34	EGYPT	498	6.0
35	SOUTH AFRICA	1,503	55.0
36	ISRAEL	3,653	78.5
37	TURKEY	967	13.0
38	CHINA	250	6.0
39	INDIA	151	2.2
40	INDONESIA	310	3.9
41	JAPAN	5,803	146.0
42	MALAYSIA	1,063	27.0
43	PAKISTAN	196	2.2
44	PHILIPPINES	446	7.0
45	SOUTH KOREA	855	42.0
46	TAIWAN	1,476	81.0
47	THAILAND	483	11.5
48	AUSTRALIA	6,955	135.0
49	NEW ZEALAND	4,487	143.0

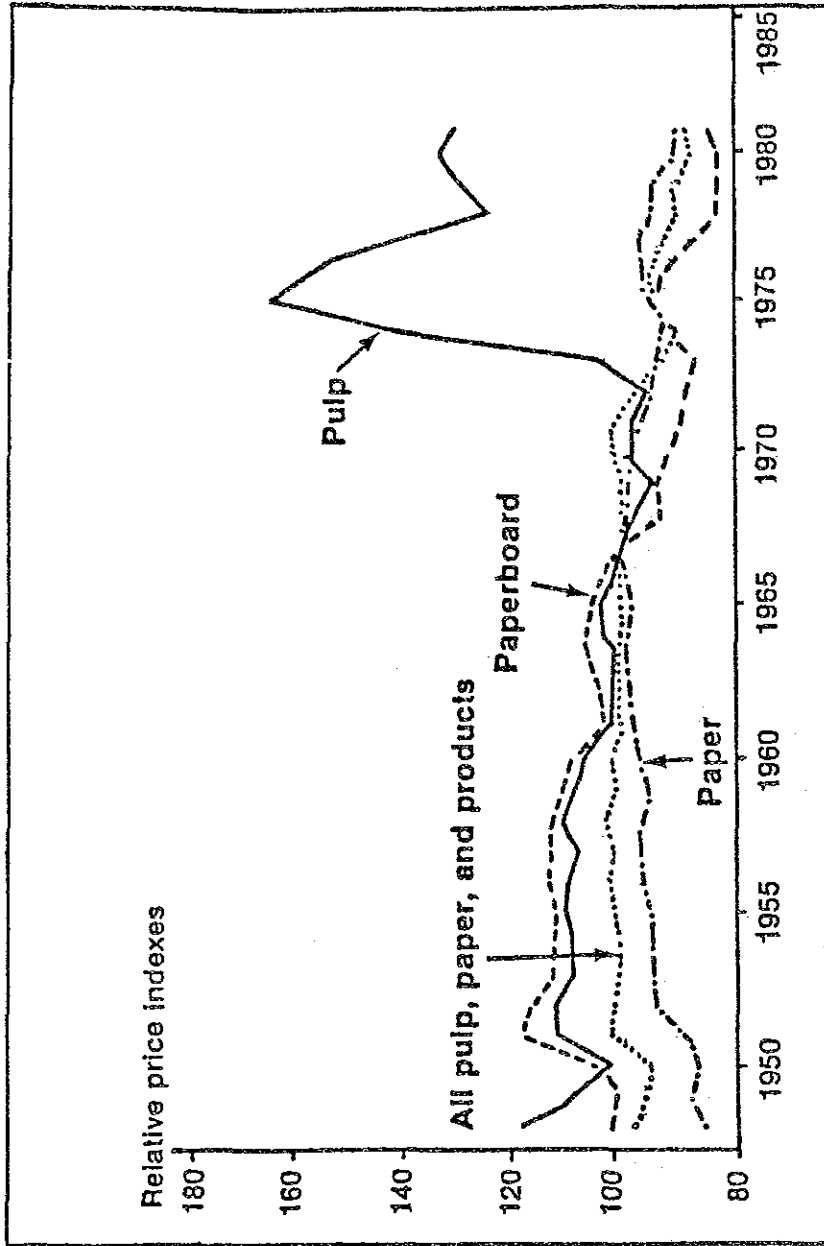
Sources: World-Product-CASIS, MAY 20, 1983  
 ppi

Figure II-4 PULP AND PAPER PRICE INDEXES-USA



Source: PULP & PAPER WEEK/Jan. '80

Figure II-5 REAL PRODUCER PRICE INDEXES FOR PULP AND PAPERBOARD



Note: \* Producer Price Indexes Deflated by Producer Price Index for All Industrial Commodities.

Source: Department of Commerce; Kidder, Peabody & Co. Incorporated Calculation.

(E) Kidder, Peabody & Co. Incorporated Estimates.

Figure II-6 PRICE AND PRICE INDEXES FOR PAPER

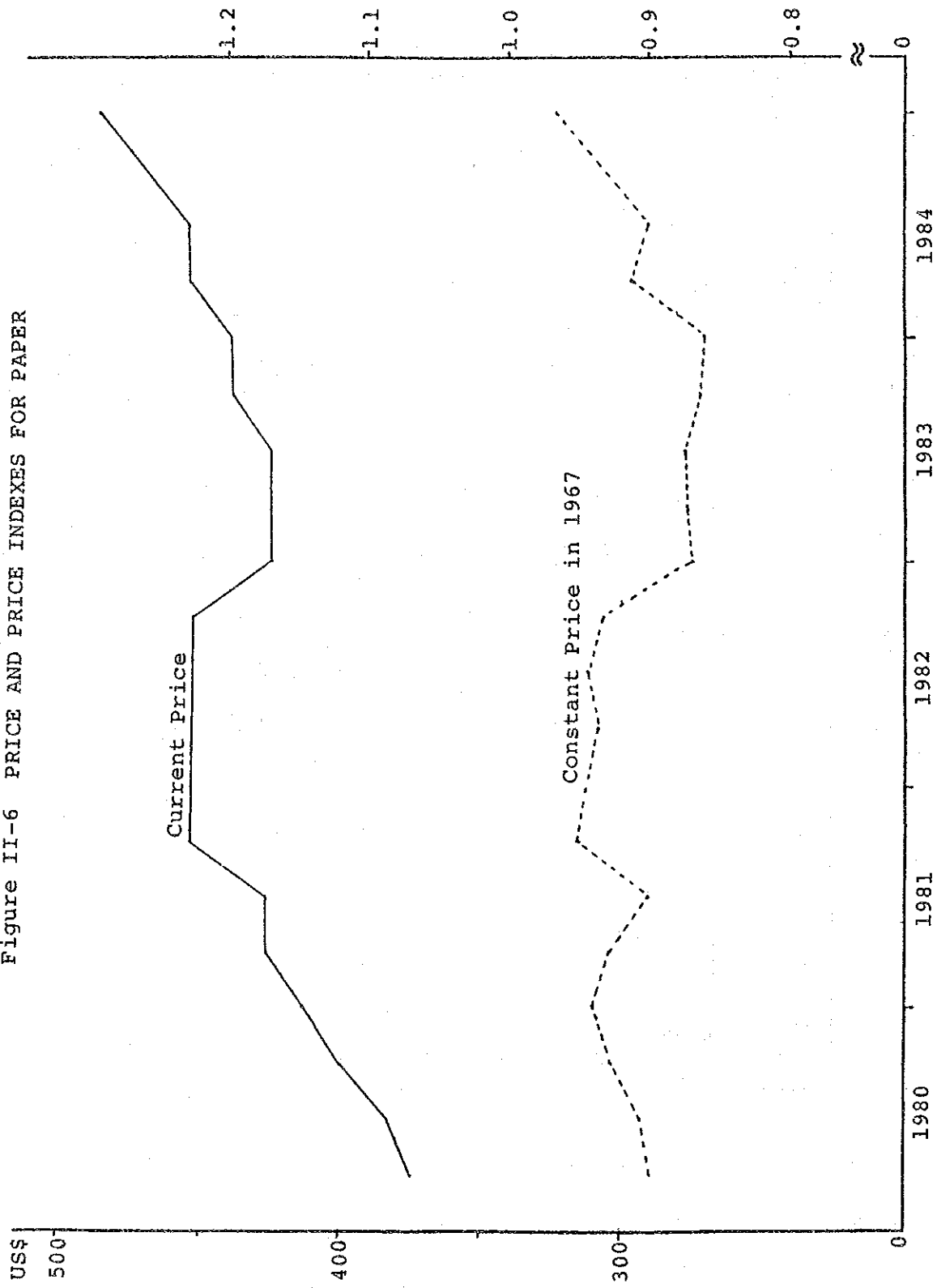
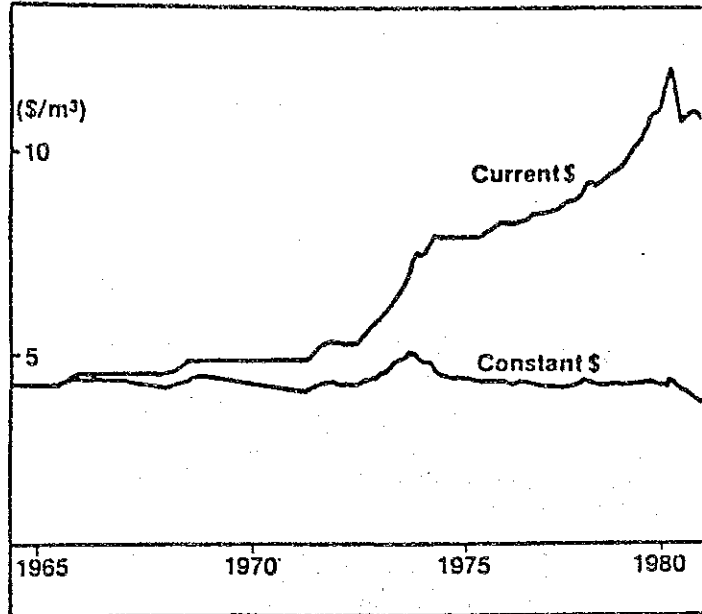
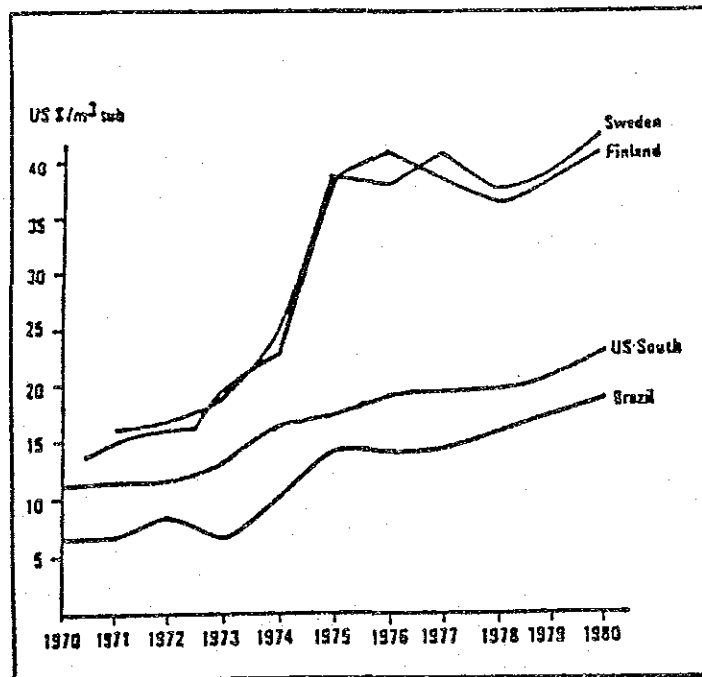


Figure II-7 LOUISIANA PULPWOOD PRICE  
(PINE, FOB RAIL CAR)



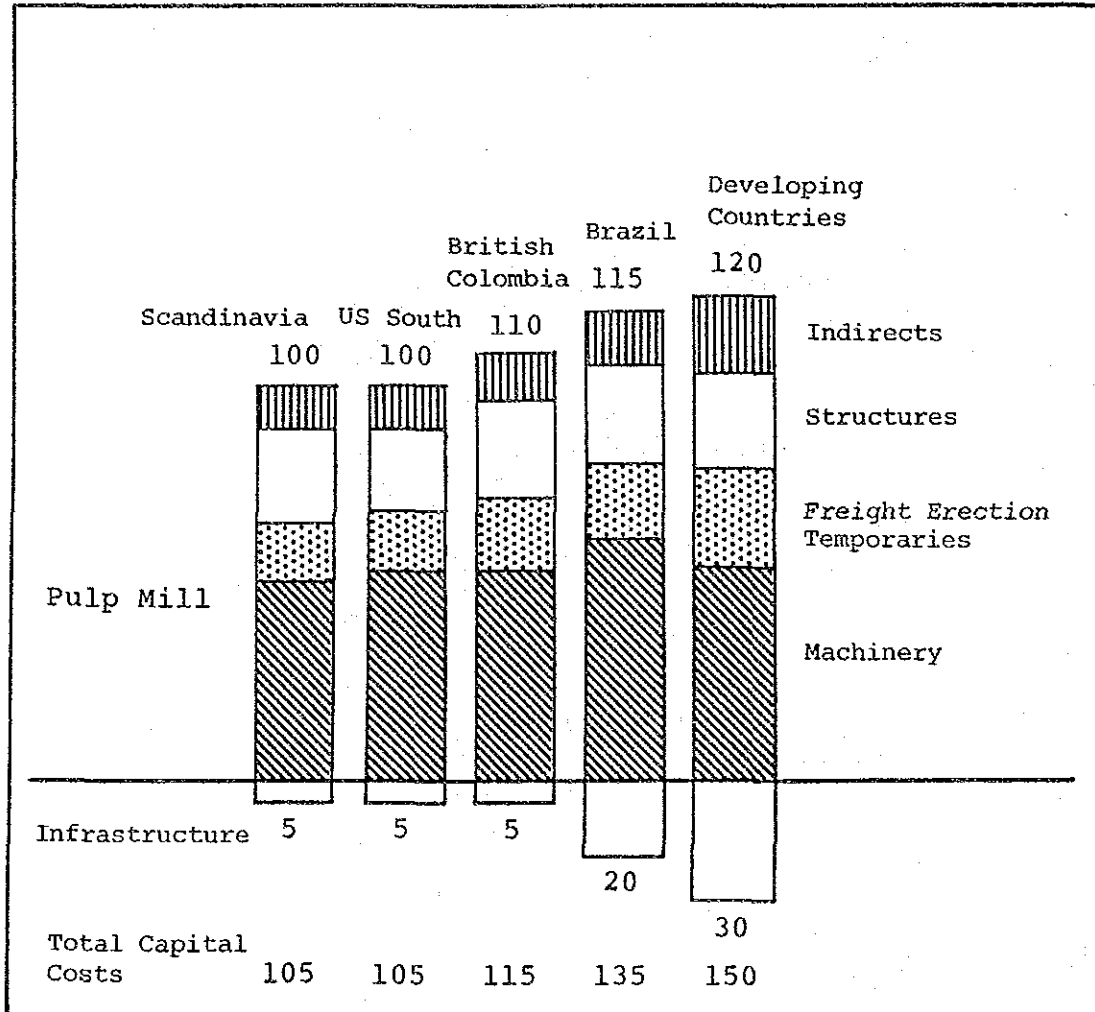
Source: PULP & PAPER WEEK/Jun. '81

Figure II-8 COST OF SOFTWOOD PULPWOOD  
AT MILL IN THE 1970'S



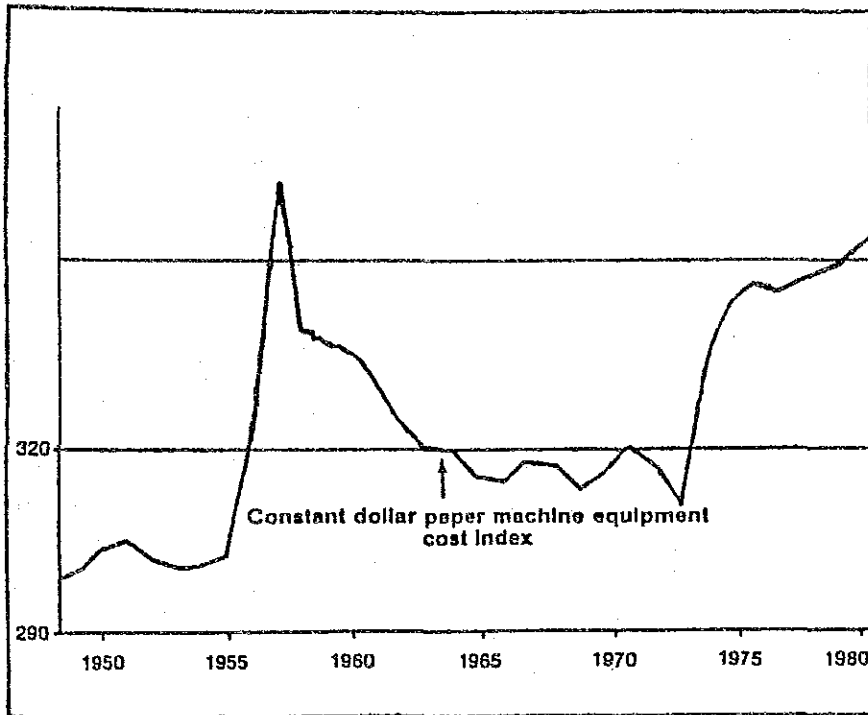
Source: PULP & PAPER WEEK/Sep. '81

Figure II-9 COMPARISON OF CAPITAL COST STRUCTURE OF A NEW PULP MILL BUILT IN VARIOUS LOCATIONS



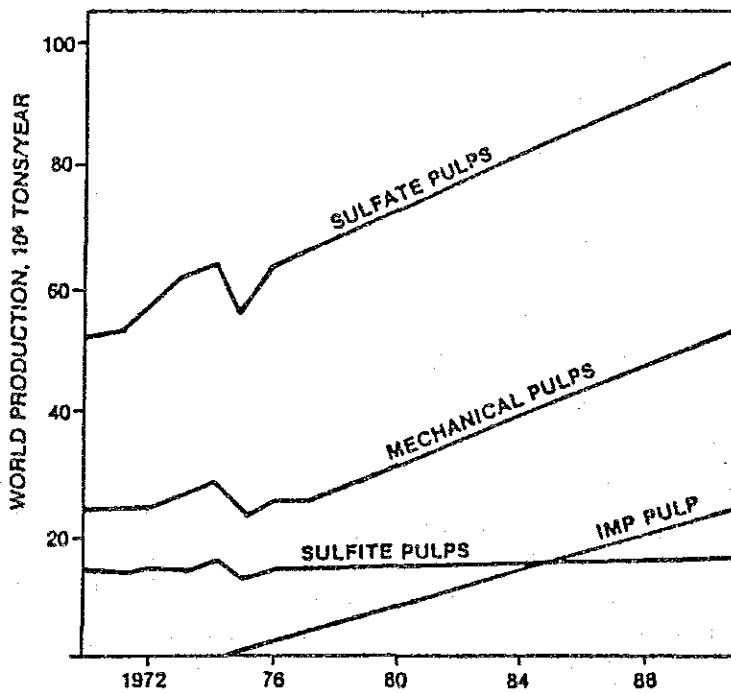
Source: PULP & PAPER WEEK/Sep. '81

Figure II-10 CONSTANT DOLLAR PAPER MACHINE EQUIPMENT COST INDEX



Source: PULP & PAPER WEEK/Sep. '83

Figure II-11 WORLD PRODUCTION OF CHEMICAL AND MECHANICAL PULPS



Source: PULP & PAPER WEEK/Sep. '83



Figure II-12 IMPORT PRICE OF LBKP AND NBKP IN EC

(US\$/Ton)

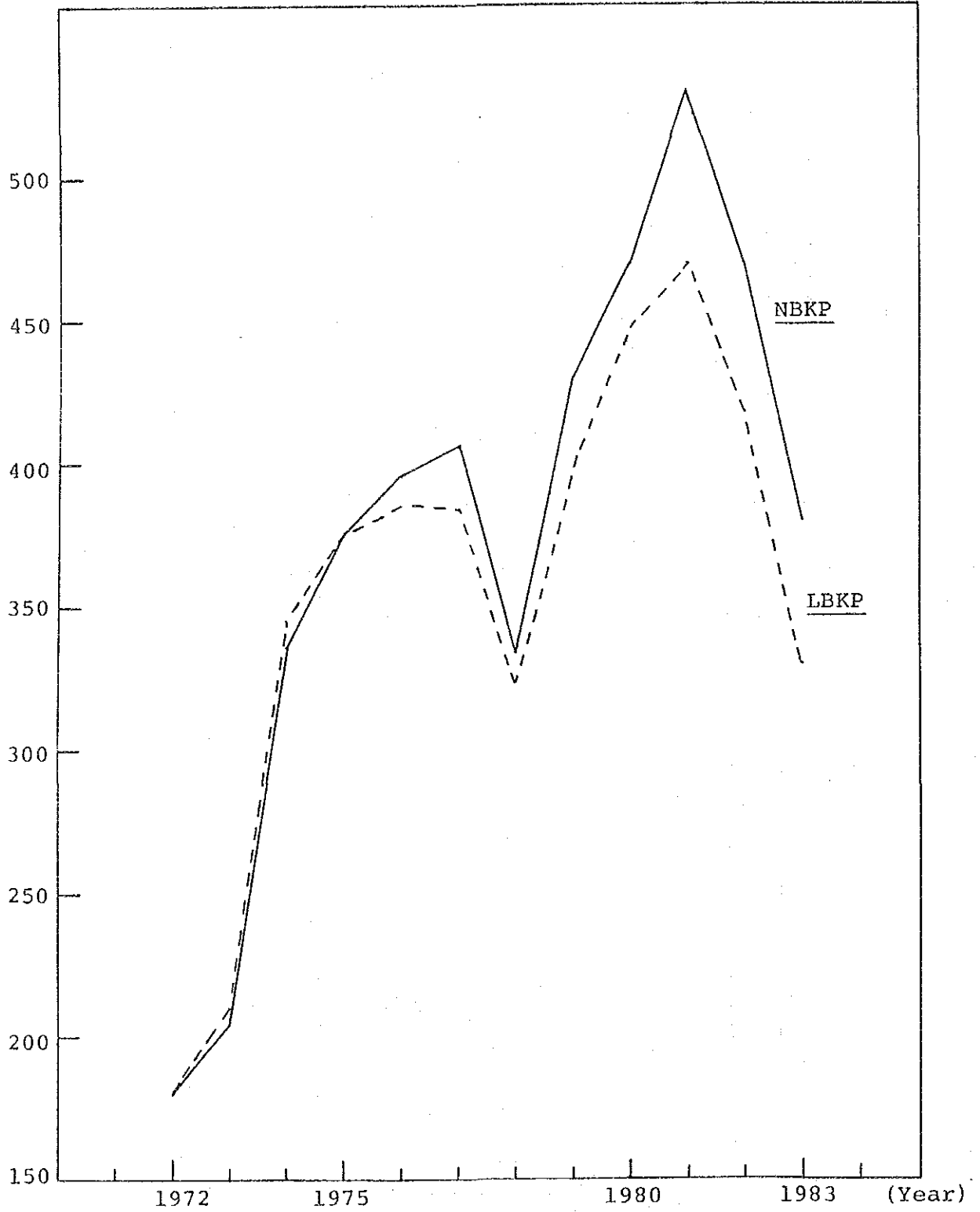


Figure II-13 US SOUTHERN NBKP PRICE

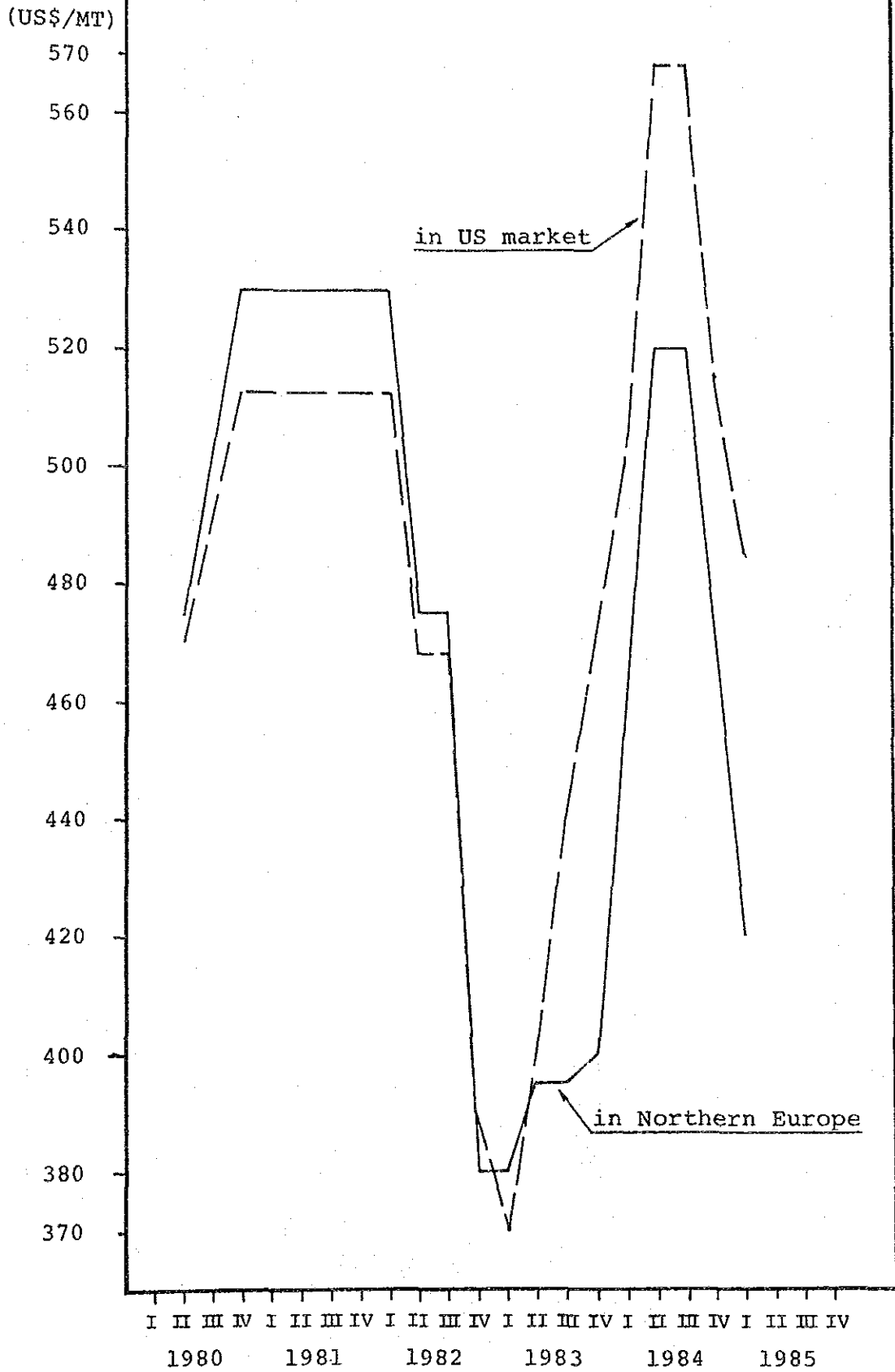


Figure II-14 US QUARTERLY PULP PRICE INDEX IN CONSTANT DOLLARS

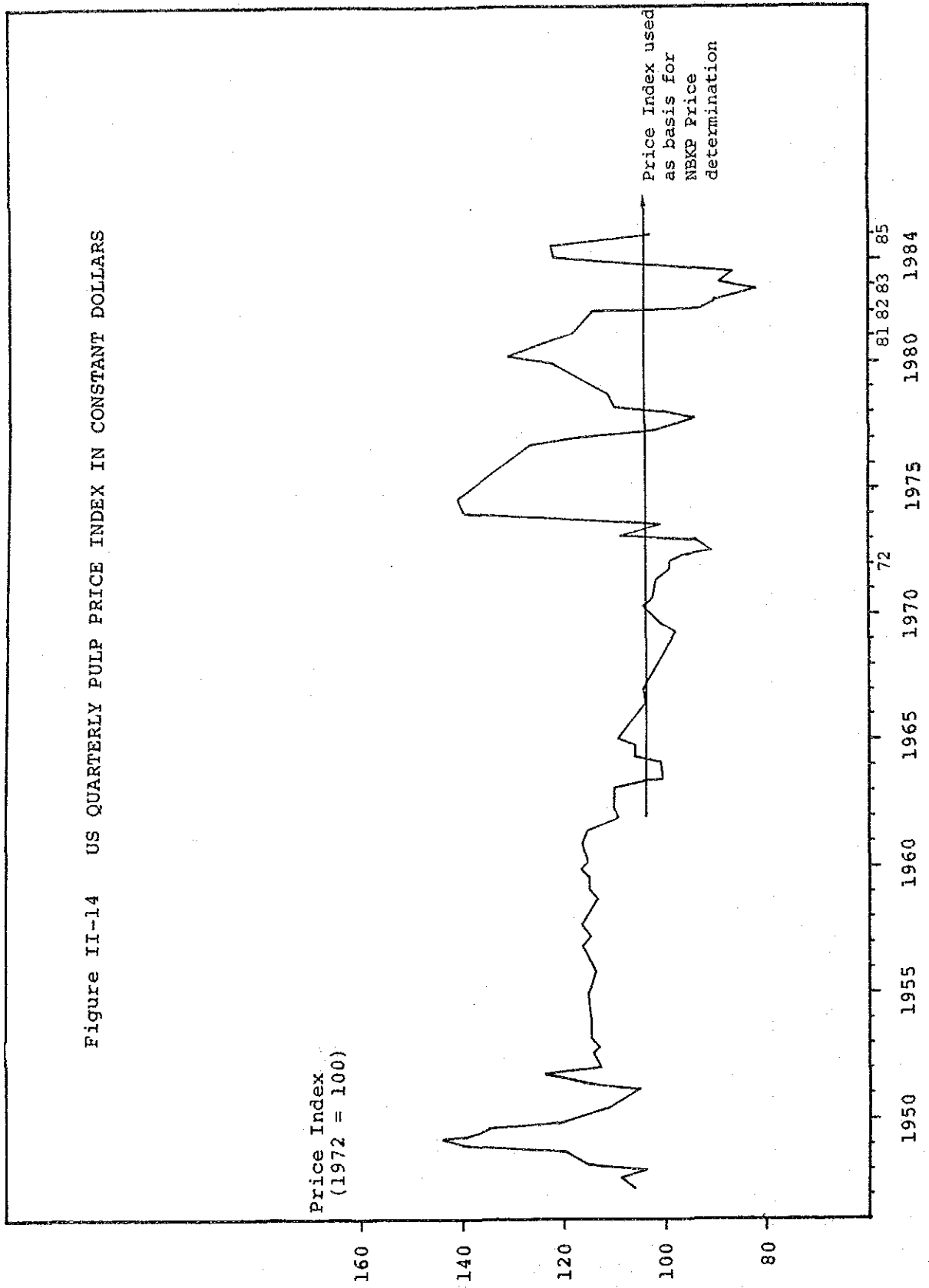


Figure II-15 PULP AND PAPER PRICE INDEXES - USA

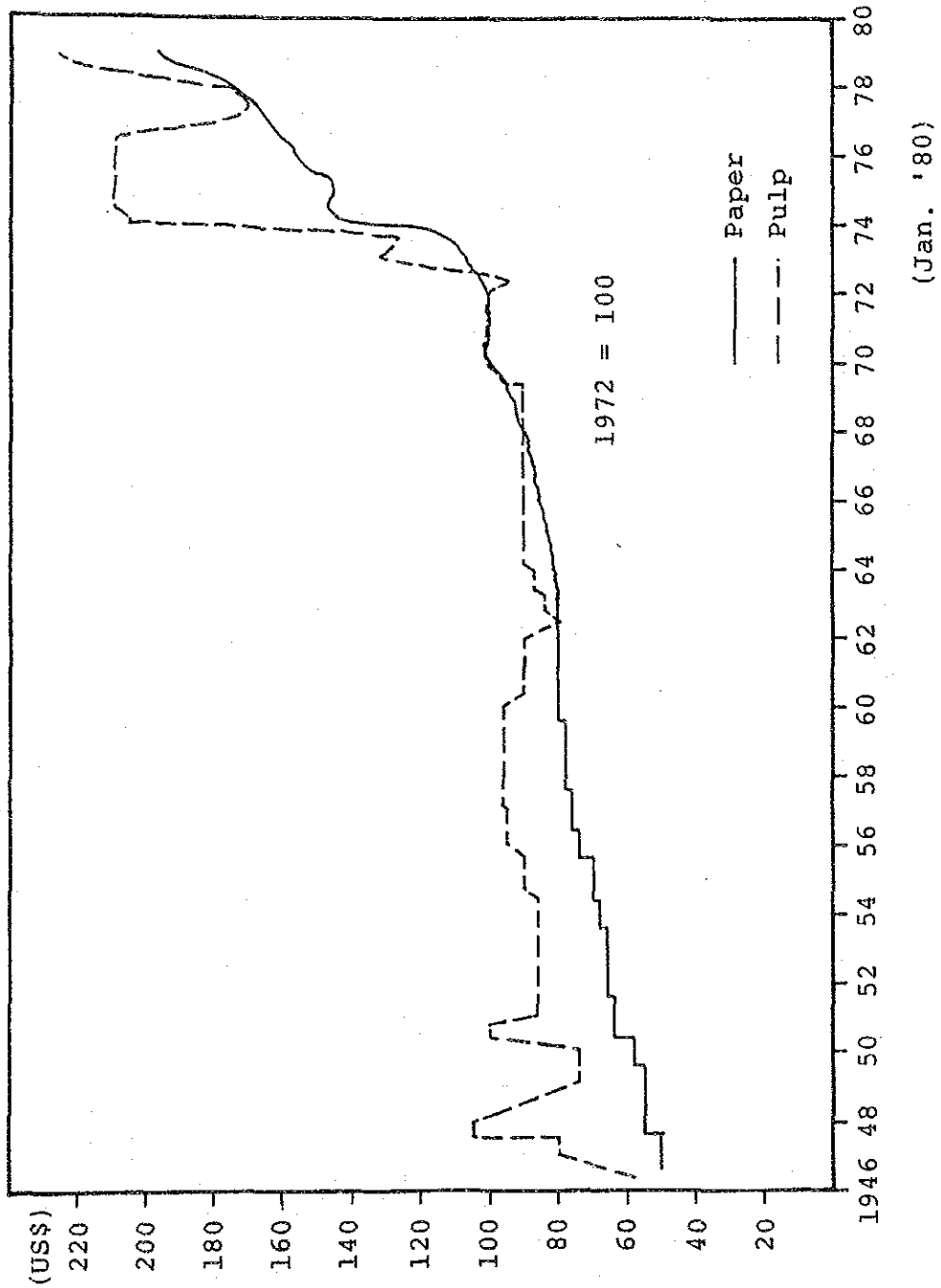


Figure II-16 AMERICAN PULP PRICE INDEX  
(in Constant Dollars)

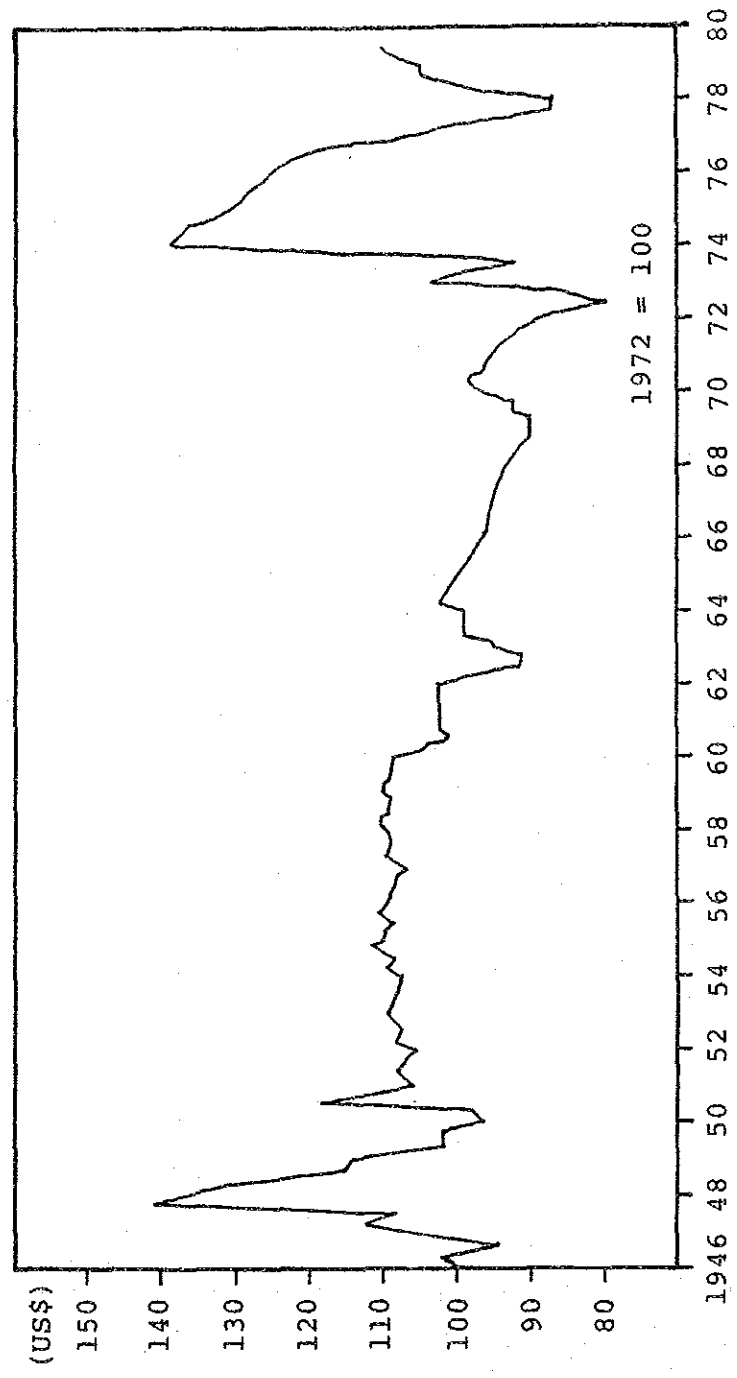
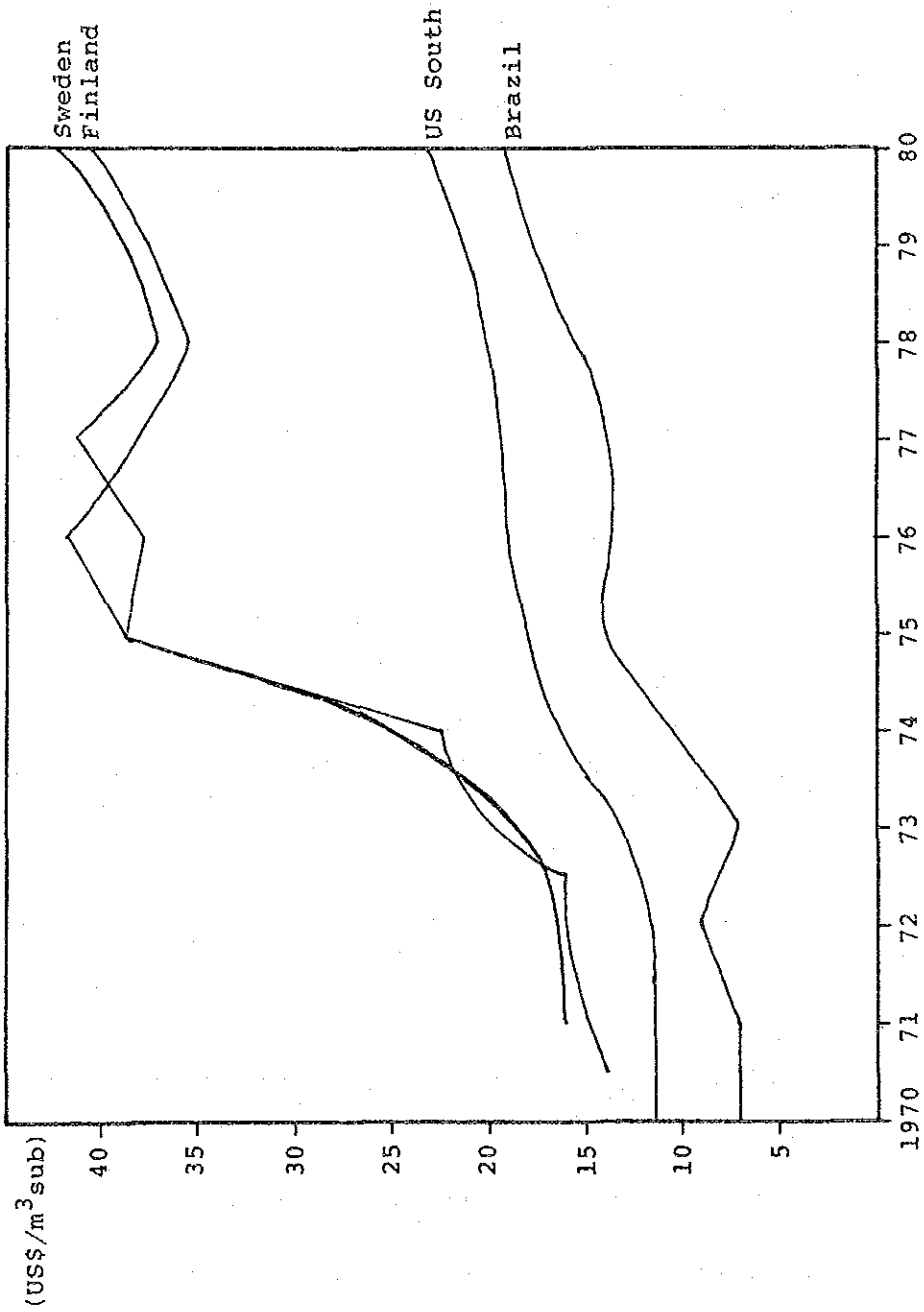
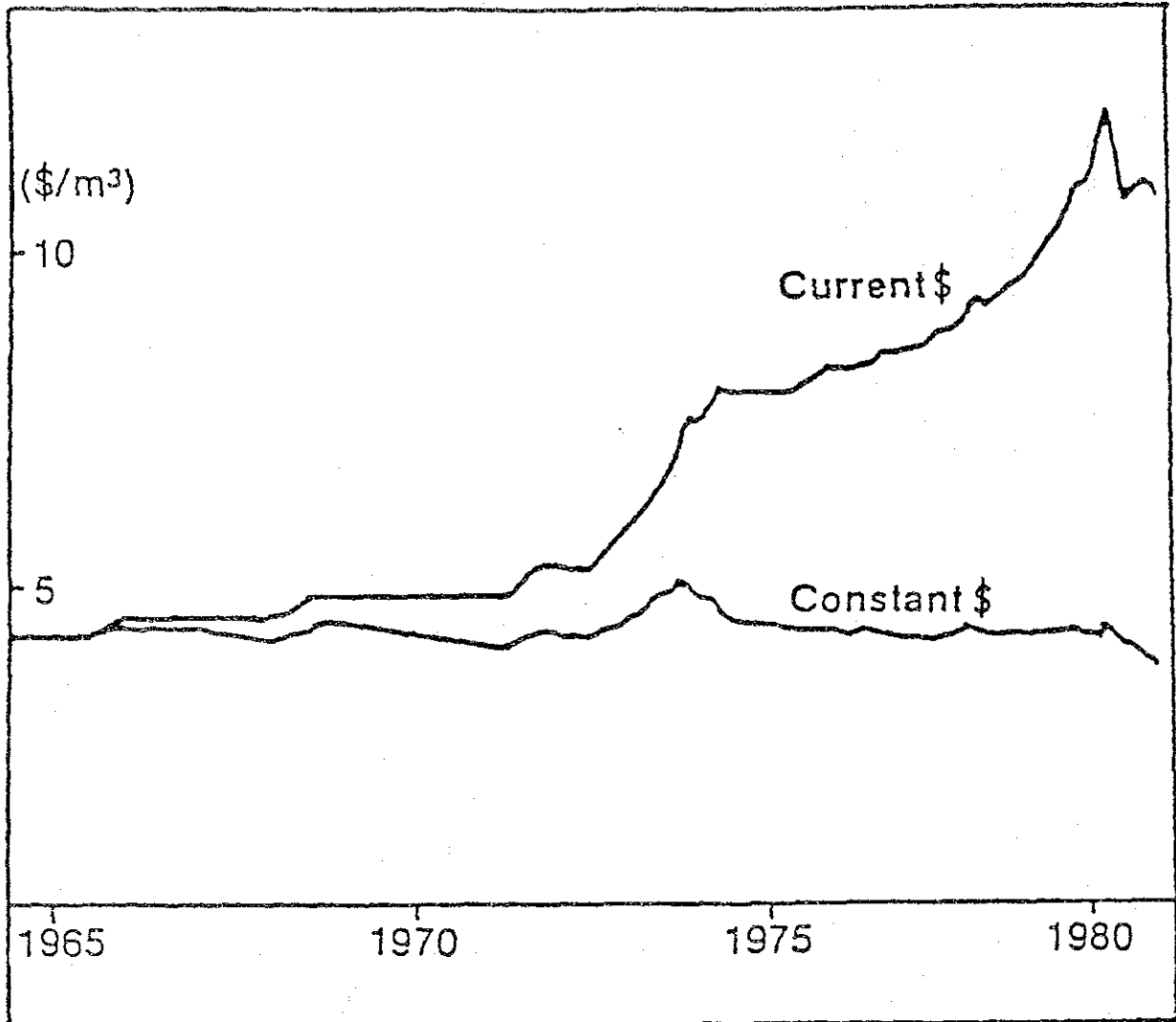


Figure II-17 COST OF SOFTWOOD AT MILL IN THE 1970'S



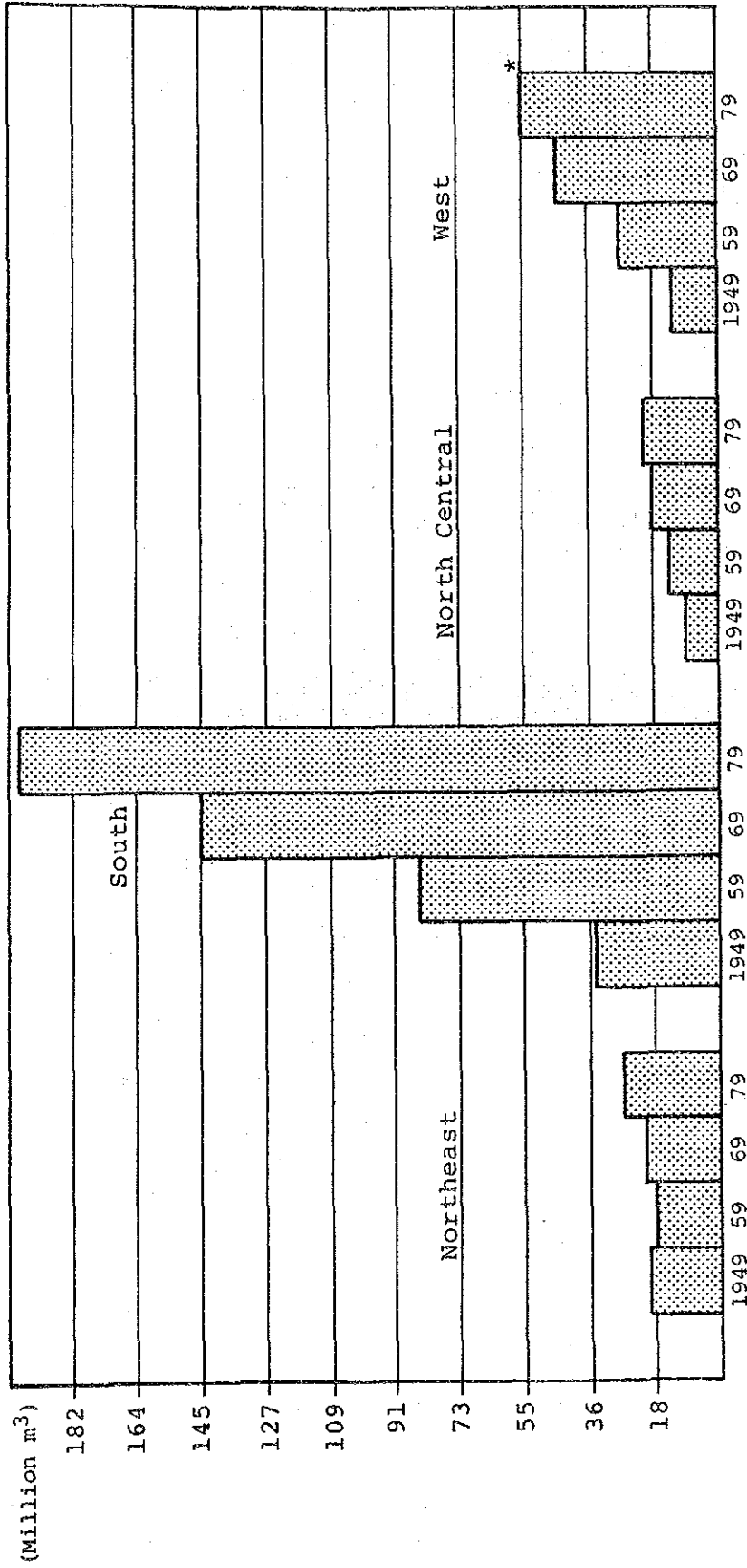
Source: Pulp & Paper Weekly/Sep., '81

Figure II-18 LOUISIANA PULPWOOD PRICE  
(Pine, FOB rail car)



Source: Pulp & Paper Weekly/June, '81

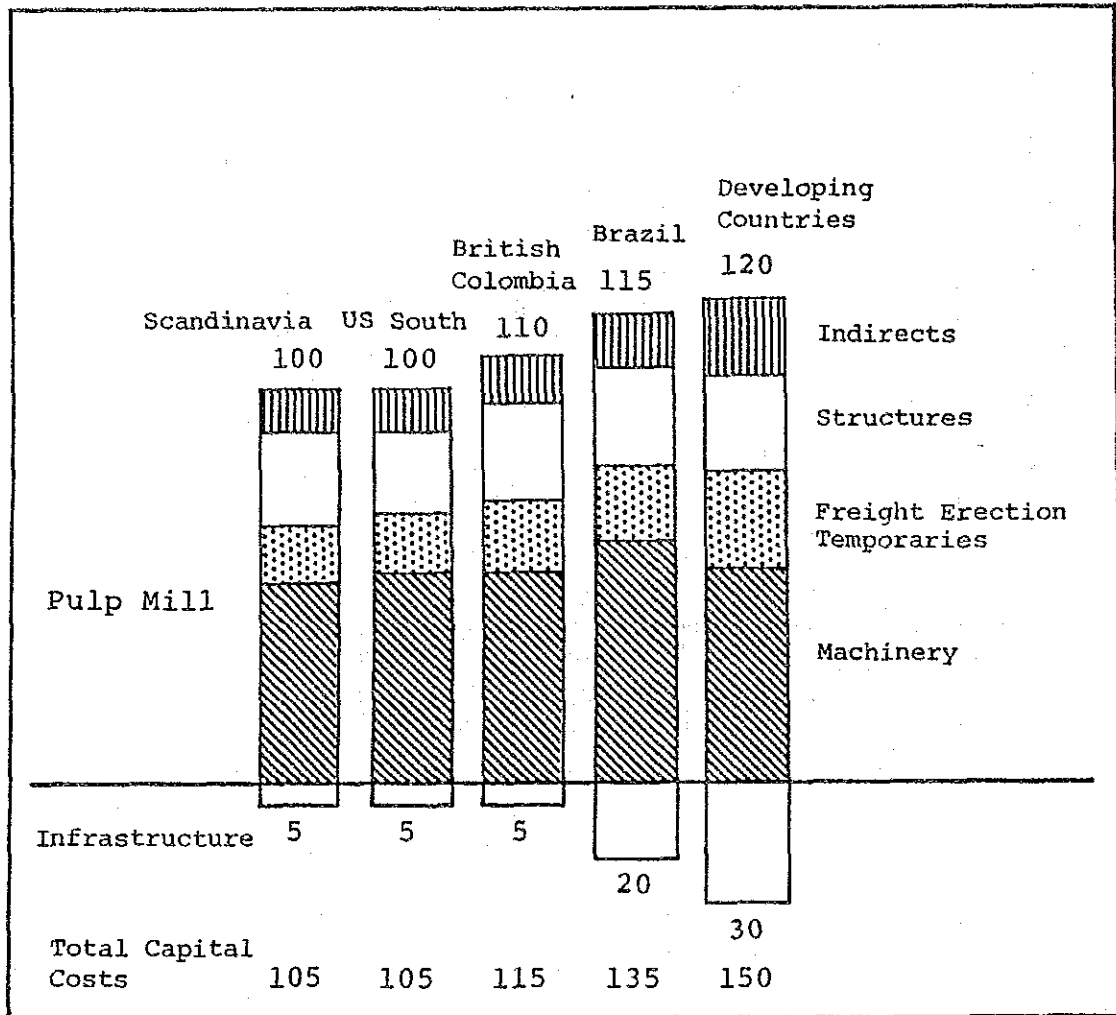
Figure II-19 USA PULPWOOD CONSUMPTION BY REGIONS



Note: \*; Corrected for strikes

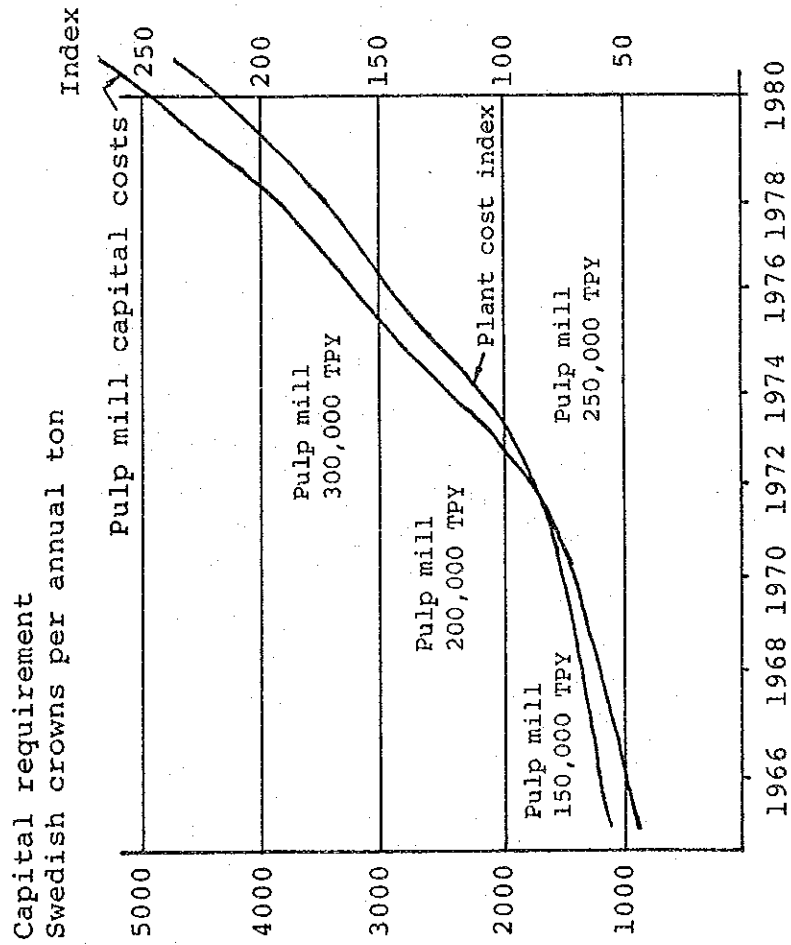


Figure II-20 COMPARISON OF CAPITAL COST STRUCTURE OF A NEW PULP MILL BUILT IN VARIOUS LOCATIONS



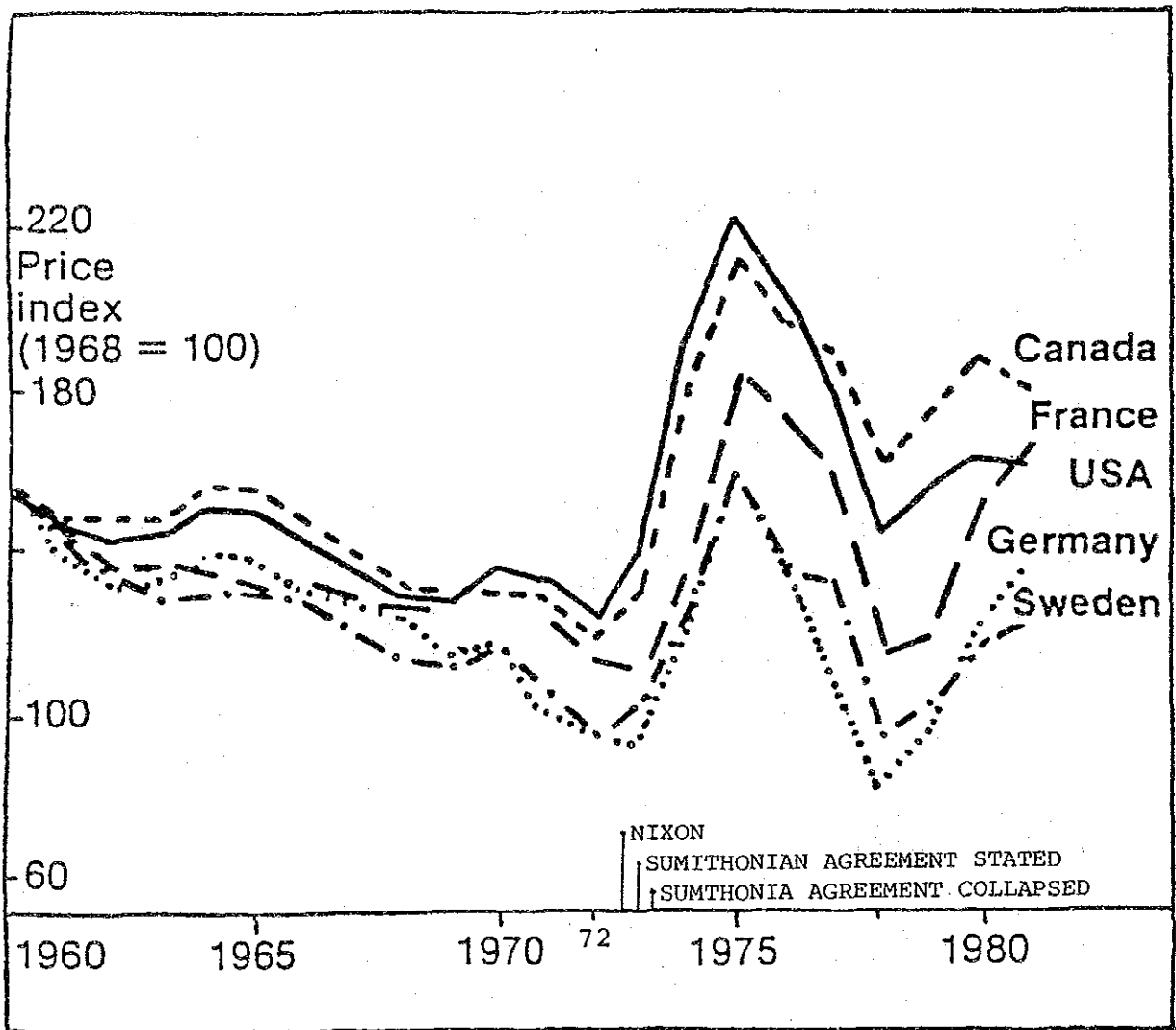
Source: PULP & PAPER WEEK/Sep. '81

Figure II-21 PULP MILL CAPITAL REQUIREMENTS YEARS 1965 TO 1980  
(Sweden, Softwood Kraft Pulp Mill)



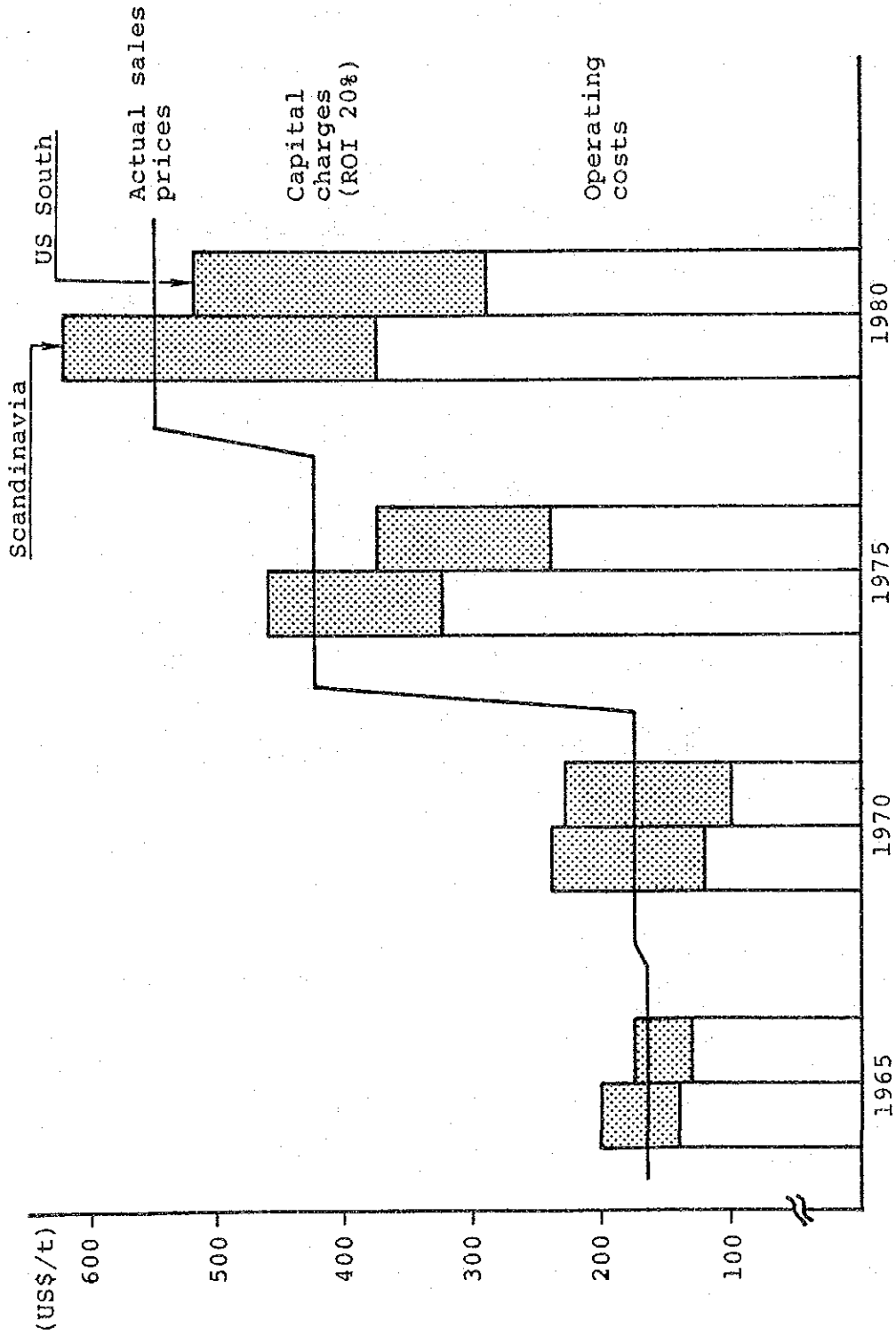
Notes: 1) Capital requirements exclude interest during construction, working capital and infrastructure.  
2) The years indicate the start-up year of the mill.

Figure II-22 ANNUAL AVERAGE CANADIAN PULP PRICE  
 IN THE USA DEFLATED AND CORRECTED  
 FOR EXCHANGE RATE



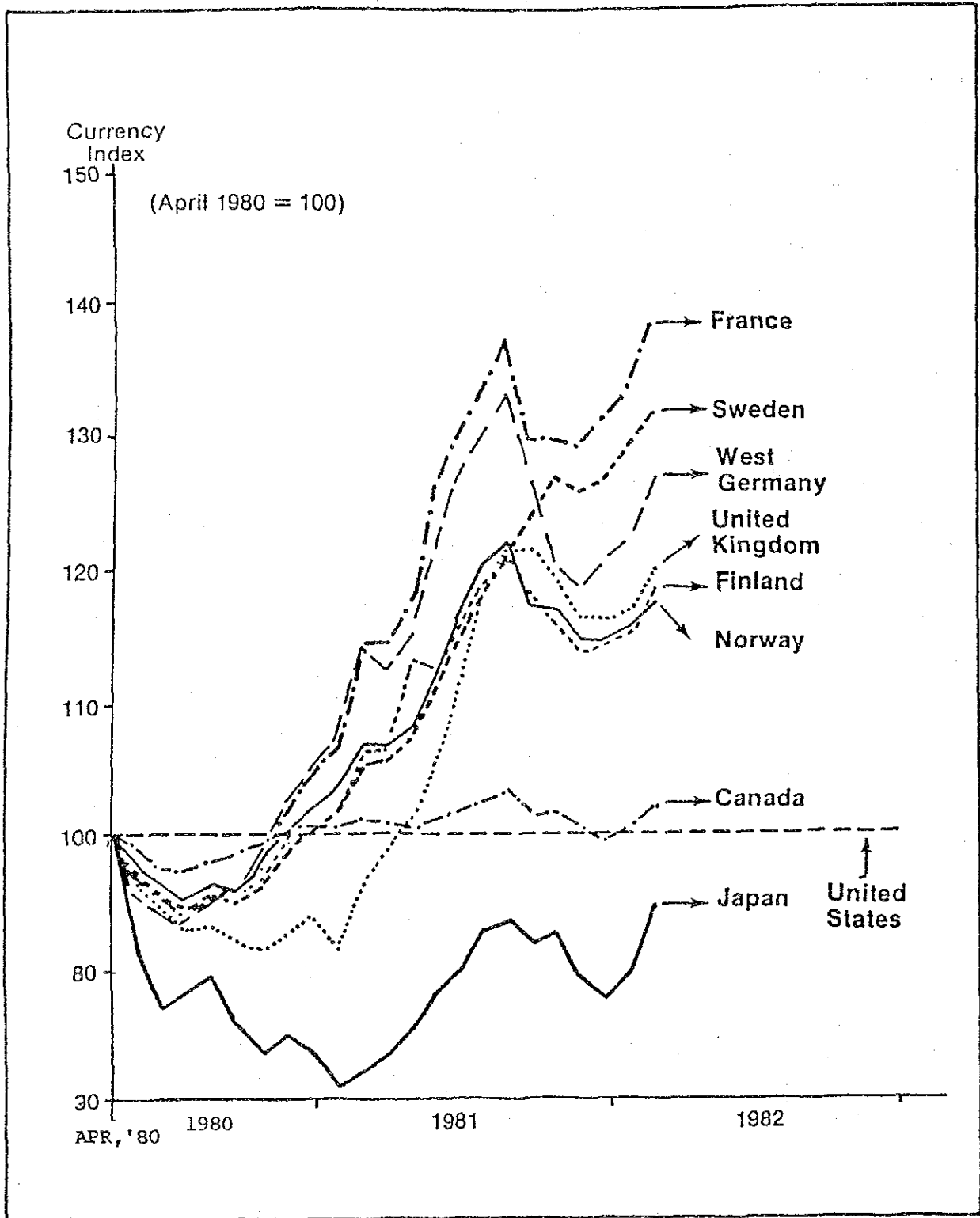
Source: PPI, June 1981

Figure II-23 DEVELOPMENT OF SALES PRICES (CIF ROTTERDAM) AND SALES PRICES REQUIRED AT 20% ROI FOR BL. SOFTWOOD PULP



Note: Required sales prices at full production.

Figure II-24 INTERNATIONAL PULP AND PAPER STATUS INDEX OF MARKET PULP PRICES IN CURRENCIES OF VARIOUS COUNTRIES\*



Note: \* Based on April 1, 1980, and market pulp prices of US\$535/MT.

Figure II-25 FREIGHT OF BKP MARKET PULP PRICE  
(New Orleans - Rotterdam)

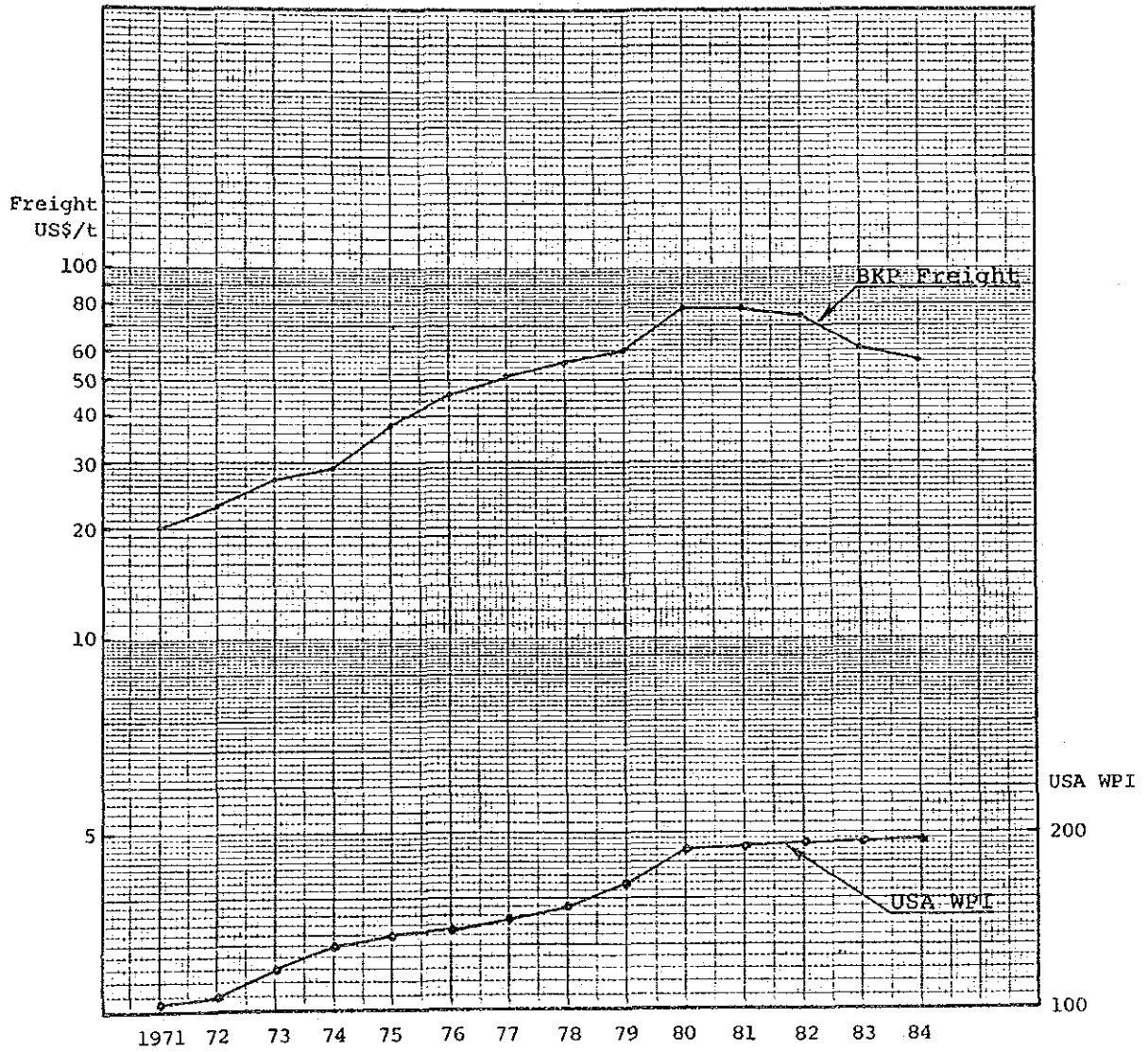
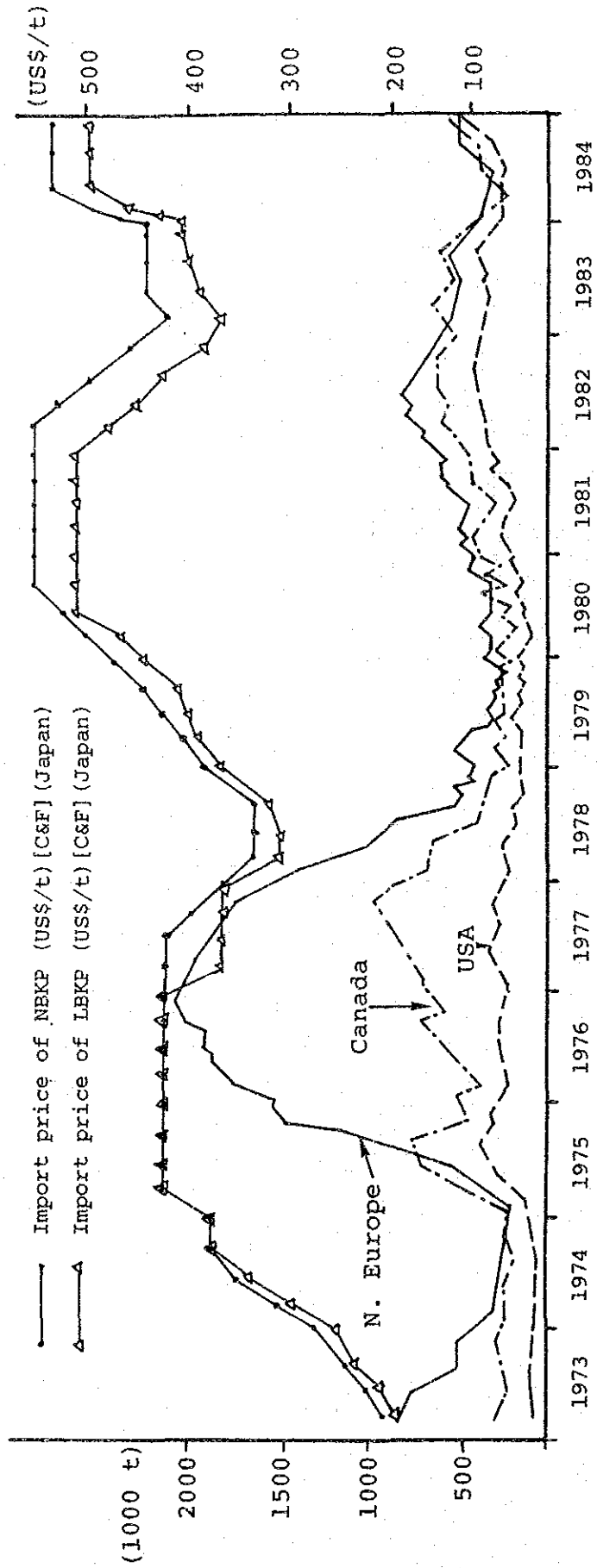


Figure II-26 MARKET PULP INVENTORY IN NOSCAN AND IMPORT PRICE OF NBKP AND LBKP IN JAPAN



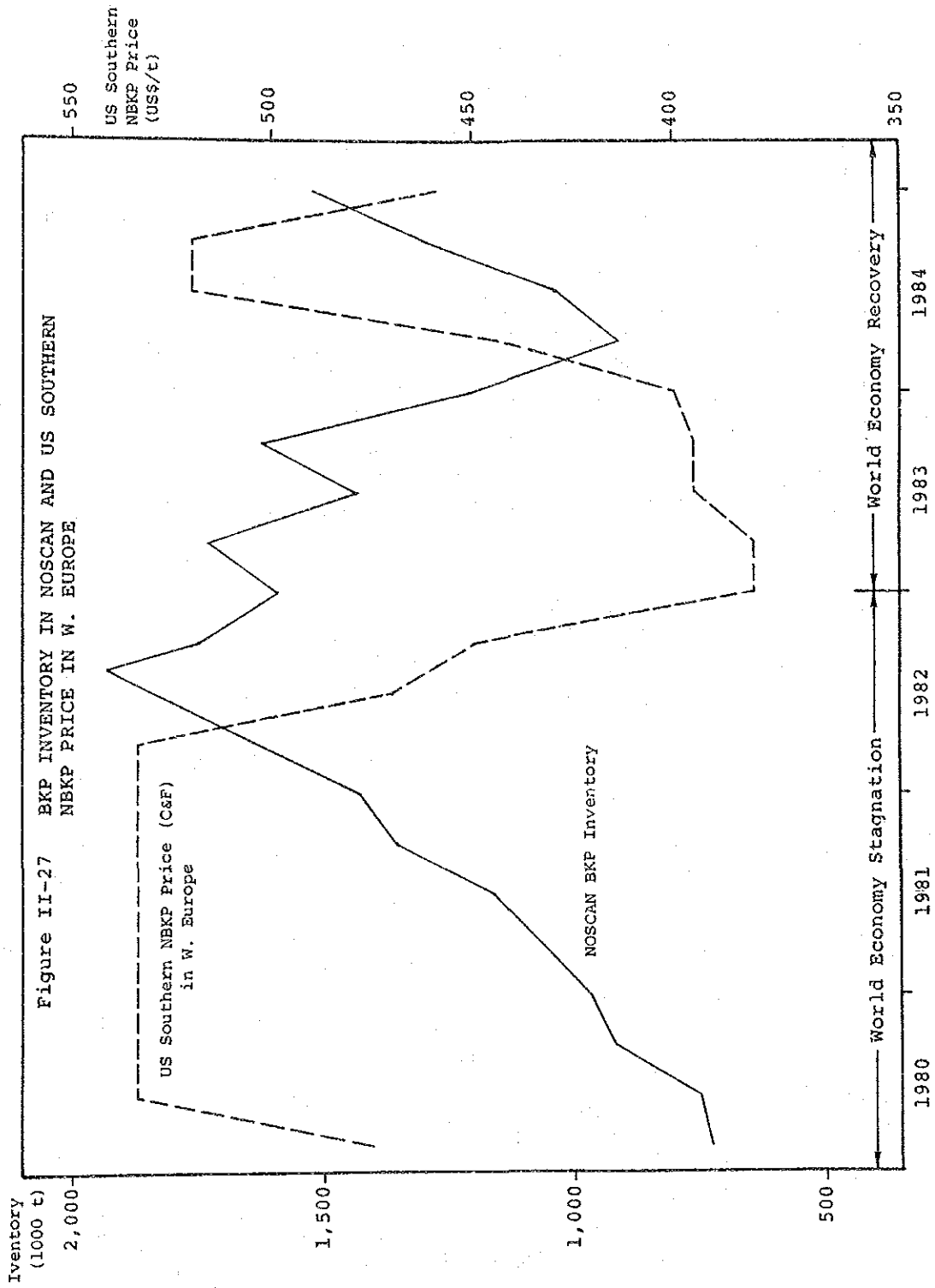
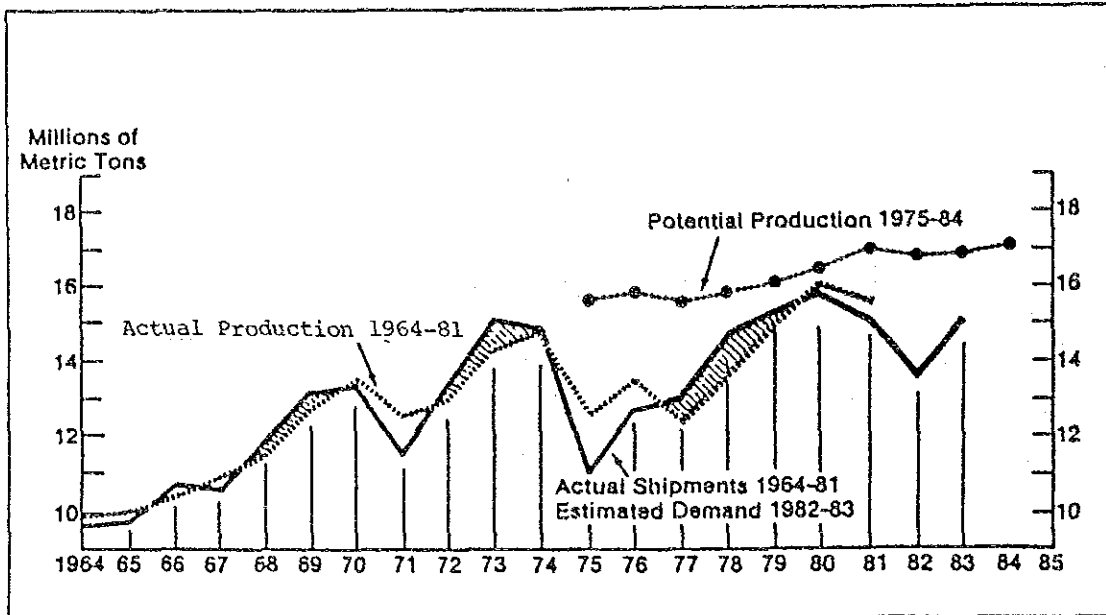




Figure II-28 NORTH AMERICAN/NORDIC CHEMICAL PAPER GRADE MARKET PULP CAPACITY (Sulfite and Kraft)



Source: PPI, September 1983  
 Note: Potential production is based on a 95% operating rate.

Figure II-29 WORLD WIDE CHEMICAL PAPER GRADE MARKET PULP CAPACITY

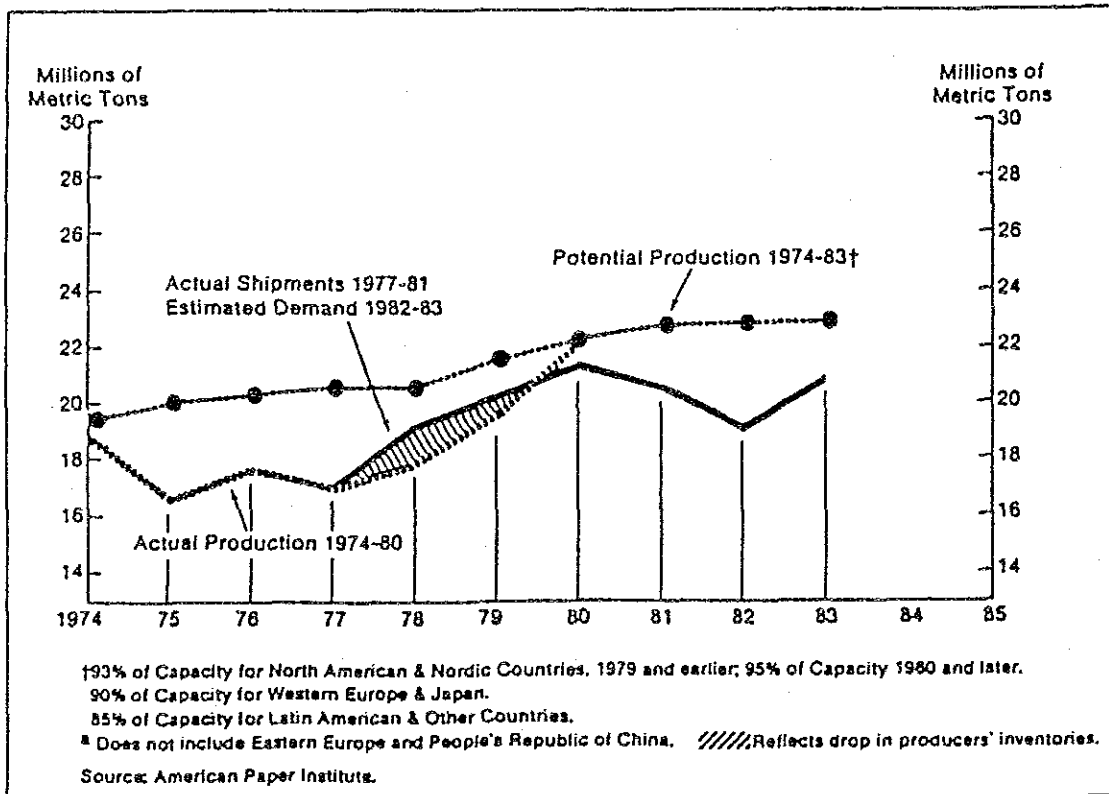


Figure II-30 ECONOMIC INDICATORS IN URUGUAY

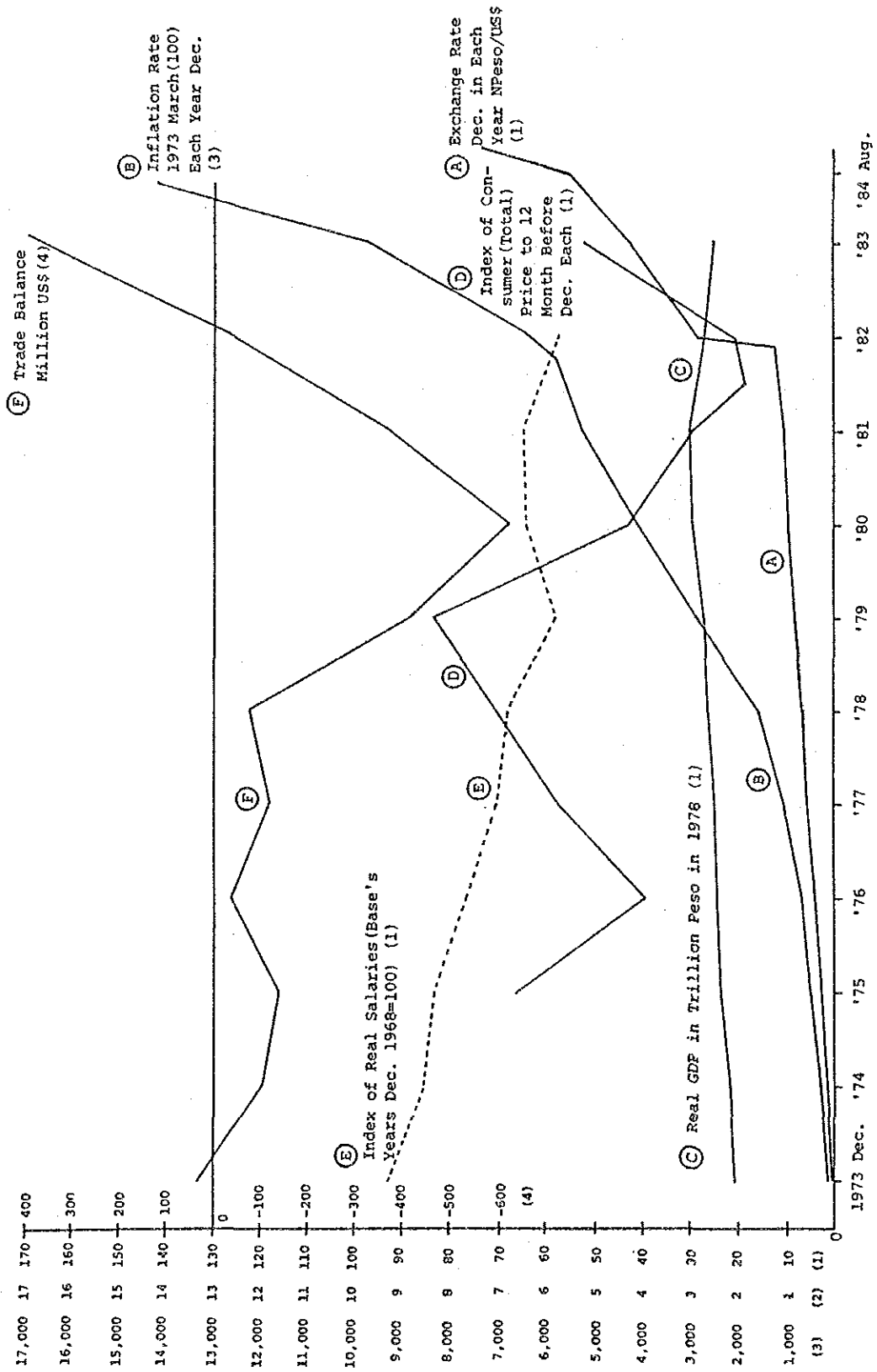
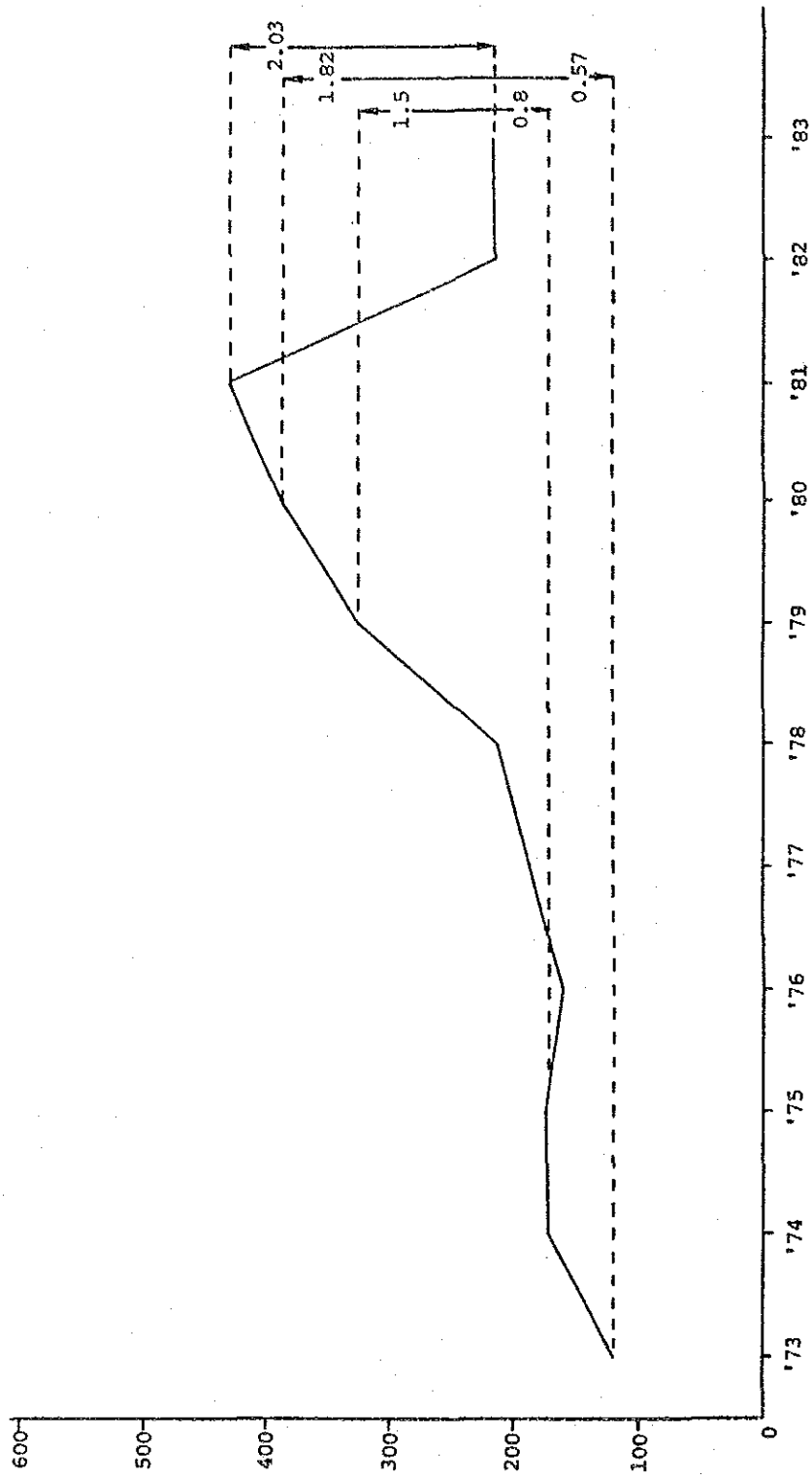


Figure II-31 INFLATION INDEX (1973 MARCH=100)/EXCHANGE RATE (1973=1) DEC. IN EACH YEAR



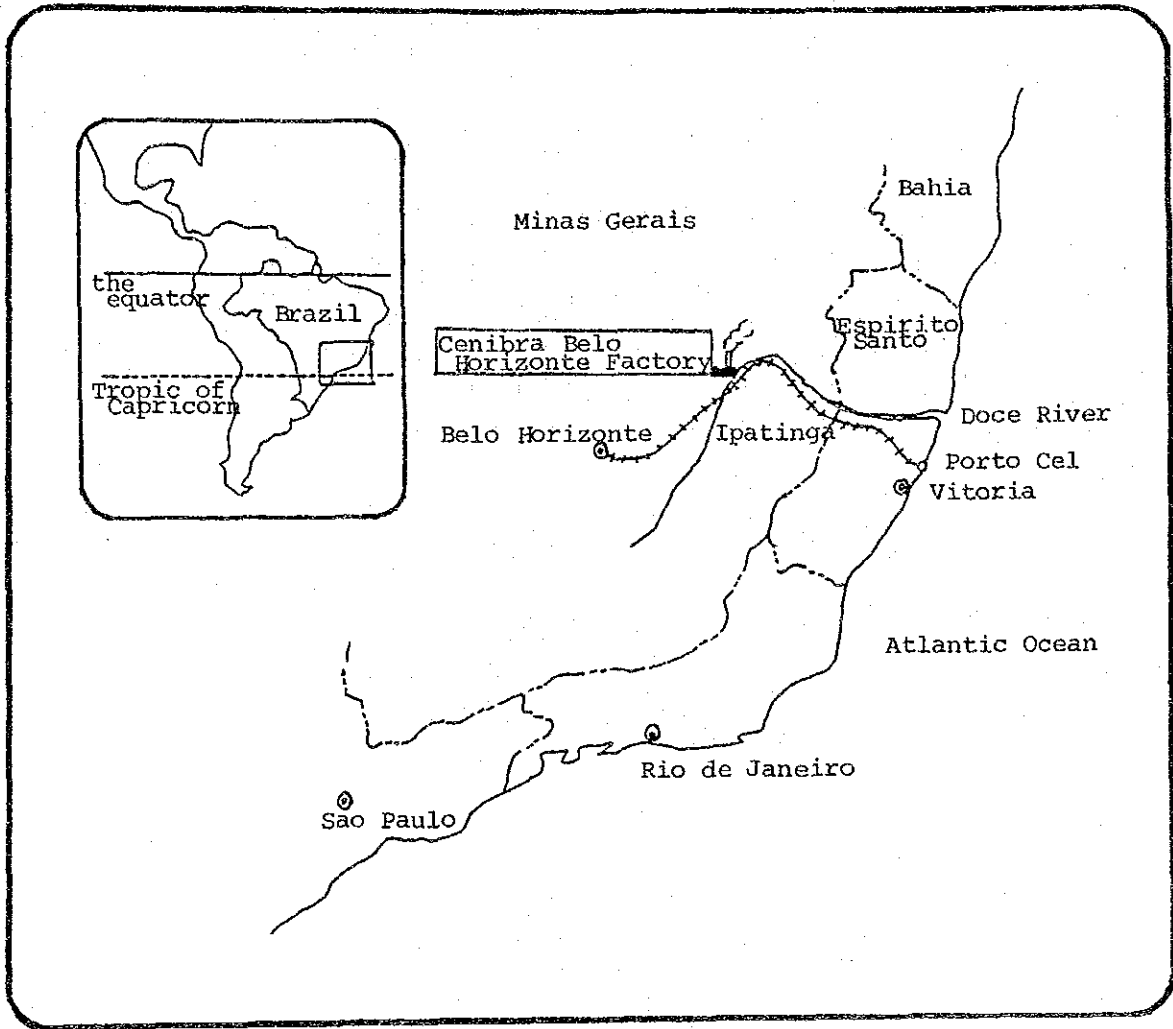


Figure II-32 LOCATION OF BELO HORIZONTE FACTORY

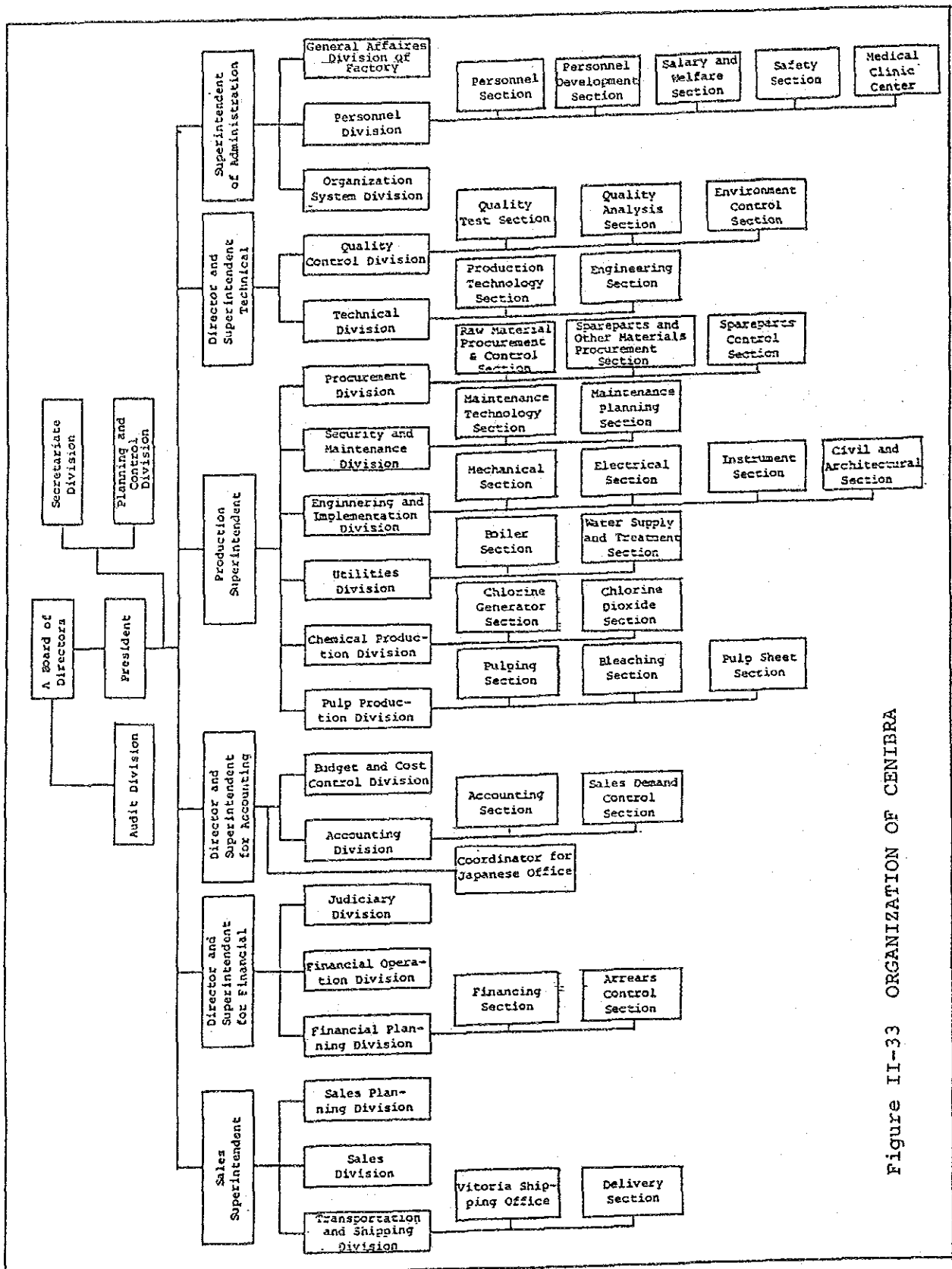


Figure II-33 ORGANIZATION OF CENIBRA

## 第 III 編

### 森林資源と原木供給

- 第 1 章 ウルグアイ林業の現況
- 第 2 章 植林経費及び伐出経費の現況
- 第 3 章 植林計画
- 第 4 章 伐出計画
- 第 5 章 原木工場着価格
- 第 6 章 本計画に必要な植林面積
- 第 7 章 パルプ化テスト



## 第Ⅲ編 森林資源と原木供給

### 第1章 ウルグァイ林業の現状

ウルグァイ林業の現況について以下概要を述べます。

#### 1-1 森林面積

全国の森林面積は下表に示すように国土面積のわずか5%を占めるにすぎず、この森林面積のうち木材の生産性の高い人工林もわずか約20%です。

天然林はほとんどが河川敷に自生している河畔林であり、この原木は薪炭材として利用されていますが、産業用の木材供給源とはなりません。

また、人工林も牧場における家畜保護用として植林されたものが多く、木材生産を目的として植林されたものは非常に少ないのが現況です。

(単位：ha)

国土面積		森林面積				計
		人工林	天然林			
			森林	ヤシ林	小計	
17,621,500		170,140	596,831	70,484	667,315	837,455
指	100.0	1.0	3.4	0.4	3.8	4.8
数		20.3	71.3	8.4	79.7	100.0

明細は、表Ⅲ-1 FOREST IN URUGUAY 参照。

#### 1-2 森林蓄積

森林局では10ha以上の面積を有する全国の人工林蓄積を次表のように指定しています。



(単位：面積千 ha，蓄積千 m<sup>3</sup>)

針葉樹			広葉樹			計		
面積	m <sup>3</sup> /ha	蓄積	面積	m <sup>3</sup> /ha	蓄積	面積	m <sup>3</sup> /ha	蓄積
28	120	3,307	115	186	21,431	143	173	24,738
(20)	—	(13)	(80)	—	(87)	(100)	—	(100)

(注) ( )内は比率を示す。

本表は 10 ha 以上を対象としているため前表の人工林面積と一致しない。

明細は、表 III-2 WOOD VOLUME ESTIMATION PER PLANTATION AGE IN URUGUAY を参照。

また、森林局では全国の年平均成長量を針葉樹 12m<sup>3</sup>/ha/年，広葉樹 15m<sup>3</sup>/ha/年と推定しています。したがって人工林の年間成長量は次のとおりです。

(単位：面積千 ha，成長量千 m<sup>3</sup>)

針葉樹			広葉樹			計		
面積	m <sup>3</sup> /ha	成長量	面積	m <sup>3</sup> /ha	成長量	面積	m <sup>3</sup> /ha	成長量
28	12	336	115	15	1,725	143	14.4	2,061

(注) 10 ha 以上の人工林の成長量を示す。

### 1-3 年間伐採量

最近の木材生産量推移は、表 III-3 REMOVALS OF ROUNDWOODS IN URUGUAY に示していますが、製材用，ベニア用，枕木用及びパルプ用のいわゆる産業用丸太の年間生産量は約 250 千 m<sup>3</sup>（1978 年～1983 年の平均）であり，製炭用を含む薪炭材の年間生産量は約 1,556 千 m<sup>3</sup>（1978 年～1982 年の平均）で両者合計でも 1,806 千 m<sup>3</sup>にしかすぎません。

### 1-4 最近の人工林植栽面積

今回入手した資料（Situacion Actual de la Forestacion en el Uruguay）によれば，森林局では 1978 年現在の人工林の樹種別植栽面積をつぎのように推定しています。また，

1979年～1983年間の植林面積（表Ⅲ-4 REGISTERED PLANTATION AREA FROM 1975 TO 1983参照）をこれに加算し1983年現在の樹種別人工林面積を推定すれば次表のとおりとなります。

樹種	人工林面積 (1978年現在)		植栽面積 (1979～1983年)		合計	
	(ha)	(%)	(ha)	(%)	(ha)	(%)
ユーカリ類	113,200	70.9	3,742	61.5	116,942	70.5
マツ類	26,660	16.7	1,833	30.1	28,493	17.2
ヤナギ類	13,330	8.3	509	8.4	13,839	8.3
その他	6,550	4.1	—	—	6,550	4.0
計	159,740	100.0	6,084	100.0	165,824	100.0

(注) “1-1 森林面積”の項に示した表の人工林面積と一致していない。

マツ類にはマツ以外の針葉樹を含む。

ヤナギ類にはポプラを含む。

次表は、表Ⅲ-4 REGISTERED PLANTATION AREA FROM 1975 TO 1983を要約しマツ類の植栽比率の推移を示したものです。依然としてユーカリの植栽が過半数を占めていますが、マツ類の植栽比率が増加傾向にあることがうかがえます。また1980年度より植栽面積が激減しているのは、1979年税制が改正され、それまでの植林に対する税制上の優遇策が大幅に圧縮されたことによる影響が大きいといわれています。（1979年の税制改正は1978年に遡及して実施されたので植栽面積は1978年より減少に転じています。）

年 度	植 栽 面 積	う ち マ ツ 類 の 比 率
	ha	%
1975	1,835.6	32.5
1976	2,901.0	25.8
1977	4,280.0	33.4
1978	2,664.0	37.8
1979	2,020.3	42.1
1980	734.0	23.8
1981	951.1	12.4
1982	1,362.2	21.8
1983	1,016.1	38.7
計	17,764.3	31.6

1-5 林産業の現況

1-5-1 紙パルプ産業

主な紙パルプ会社の日産能力及び生産推移は次のとおりです。

日 産 能 力

企 業 名	日 産 能 力	1979年生産量
	t/日	t/年
IPUSA	58	10,000
PAMER	85	13,000
CICSSA	50	8,000
F N P	155	21,000
CARTONERA PANDO	22	
Total	340	52,000

(出所) Direccion Forestal

生産量推移

年 度	生 産 量 t/年
1980	51,043
1981	47,700
1982	38,800
1983	42,200

(出所) Direccion Forestal

1-5-2 林産工業

紙パルプ工場以外の主要林産工業の能力及び生産量推移は次のとおりです。

生産能力

(m<sup>3</sup>/年)

企 業 名	合 板	パーティクル・ボード	ファイバー・ボード	計
Madera del Norte	2,800	—	—	2,800
Ricardo Vazques	3,000	—	—	3,000
Samic	3,000	—	—	3,000
Bavosi	700	—	—	700
Clen	700	—	—	700
Osborne	600	—	—	600
Nogara	600	—	—	600
Adolfo Caig	600	—	—	600
Tablacurvi	—	1,500	—	1,500
Neoplac	—	12,000	—	12,000
Fibromadera	—	—	1,800	1,800
Ciccsa	—	—	3,000	3,000
Total	12,000	13,500	4,800	30,300

(出所) Ministerio de Industria y Energia, 1976

## 生産量推移

(m<sup>3</sup>/年)

年 度	合 板 及 び ブロック・ボード	パーティクル・ボード	ファイバー・ボード	合 計
1977	4,800	6,400	3,000	14,200
1978	4,500	6,000	2,950	13,450
1979	2,300	7,000	3,290	12,590
1980	6,500	6,000	4,000	16,500
1981	6,500	6,000	4,000	16,500
1982	3,000	4,000	3,000	10,000
1983	3,000	4,500	3,300	11,000

(出所) Ministerio de Industria y Energia, 1976

以上にみるとおりウルグァイの紙パルプ産業を含む林産業の規模は小さく、それにもなって産業用の丸太生産量も少ないのが現状といえます。

### 1-6 植林施業の概要

森林局ではつぎの樹種を植栽奨励樹種とし、その植林施業基準(後述)を示して植林の奨励と技術指導を行なってきました。

#### 1-6-1 植栽奨励樹種

ウルグァイではマツとユーカリの植林について100年近い経験を有しており、その結果をふまえて現在次の樹種を植栽奨励樹種としています。

奨励樹種	植栽適地
テーダマツ ( <i>Pinus taeda</i> )	全 国
エリオッティマツ ( <i>Pinus elliottii</i> )	全 国
ピナスターマツ ( <i>Pinus pinaster</i> )	太西洋海岸及びラプラタ河岸の防砂林用として。
グローブラス(ユーカリ) ( <i>E. globulus</i> )	全 国
グランディス(ユーカリ) ( <i>E. grandis</i> )	霜害に弱く南部での成育はグローブラスに劣る。
ポプラ 63/51 ( <i>Alamo hibrido</i> )	ウルグアイ国西部のウルグアイ河岸及び湿地帯において成育優良。

(注) E. = Eucalyptus

#### 1-6-2 植林施業基準

森林局では技術指導の重点を現在次の4点においています。

(1) 優良種子の選択, 特に種子の産地選択の指導

(2) 植栽密度の指導

従来の密植(2m×2m: 2,500本/ha, 2.5m×2.5m: 1,600本/ha)に対し疎植(3m×3m: 1,110本/ha, 3.5m×3.5m: 800本/ha)の採用を指導。

(3) 枝打, 間伐の実行奨励

これにより植栽後4~5年で林内放牧が可能。

(4) 短伐期施業の奨励

以上を取入れた樹種別の施業基準例を示せば次の通りです。

項目	樹種	グローブラス グランディス サリグナ	ポプラ 63/51 # 74/D # 214
	テ-ダマツ エリオッティマツ		
植付本数	1,110本/ha (3m×3m)	1,110本/ha (3m×3m)	280本/ha (6m×6m)
輪伐期	20年	12年	18年
年平均成長量	18 m <sup>3</sup> /ha/年	25 m <sup>3</sup> /ha/年	16 m <sup>3</sup> /ha/年
(保育基準)			
蟻駆除	植栽後1~3年	植栽後1~3年	
下刈	" "	" "	
除伐	" "	" "	
枝打・間伐			
第1回	植栽後5~8年		植栽後7~9年
間伐率	33%	-	-
枝打	間伐後の全材	-	軽度
間伐材積	35 m <sup>3</sup> /ha	-	-
第2回	植栽後11~13年		植栽後11~13年
間伐率	33%	-	-
枝打	間伐後の全材	-	強度
間伐材積	70 m <sup>3</sup> /ha	-	-
主伐材積	255 m <sup>3</sup> /ha	300 m <sup>3</sup> /ha	300 m <sup>3</sup> /ha
合計収穫材積	360 m <sup>3</sup> /ha	300 m <sup>3</sup> /ha	300 m <sup>3</sup> /ha
主伐材の 主な用途	製材・ベニア材：80% パルプ材：20%	製材・ベニア材：60% パルプ材・薪炭材：40%	製材・ベニア材：80% パルプ材：20%

この施業基準例と後述の植林計画において採用している施業法を比較すれば次のとおりです。

項目	テ-ダマツ エリオッティマツ		グローブラス グランディス		ポプラ	
	施業基準例	後述植林計画	施業基準例	後述植林計画	施業基準例	後述植林計画
植付本数	1,110本/ha	1,110本/ha	1,110本/ha	1,600本/ha	280本/ha	1,600本/ha
輪伐期	20年	11年	12年	平均7.2年	18年	平均7.2年
年平均成長量	18 m <sup>3</sup> /ha/年	15 m <sup>3</sup> /ha/年	25 m <sup>3</sup> /ha/年	平均 26.7 m <sup>3</sup> /ha/年	16 m <sup>3</sup> /ha/年	平均 26.7 m <sup>3</sup> /ha/年

両者の相違点の主な理由は次のとおりです。

(1) テ-ダマツ及びエリオッティマツ

施業基準例は大径木の用材生産（製材用及びベニア材用）を目的としているため 20

年の輪伐期を採用していますが、植林計画ではパルプ材の生産が目的であり、比較的小径木の方がパルプ材として工場での処理が容易なため11年の短伐期を採用しています。

年平均成長量は植林計画で採用した15m<sup>3</sup>/ha/年が妥当と判断します。

(2) グロブラス及びグランディス

マツの場合と同じく施業基準例は用材生産を目的としていますので植林計画に較べ疎植・長伐期施業を採用しています。パルプ材の生産を目的として植林を実施している製紙会社のFNPやPAMERは、今まで2,500本/haの密植を実施していましたが最近植付本数を1,600~1,670本/haに変更していますので、植林計画での植付本数1,600本/haの採用は妥当と判断します。

植林計画の年平均成長量はユーカリの萌芽更新力が旺盛なことを考慮に入れたもので、これも妥当と判断します。

(3) ポプラ

施業基準例では湿地での植栽を想定し植付後の保育作業が困難なことから極端な疎植を採用しているものと考えますが、植林計画では一時的に洪水による浸水はあっても砂質土壌の所に植林されるので、ユーカリなみの施業法を採用しています。

1-7 林業政策の概要

農水省に森林局が設置されたのは1964年12月であり、森林法(Ley Forestal No 13,723)は1968年12月に公布され、これをもとに森林局では林業政策の具体策として1971年11月“林業開発のガイドライン”を作成し、これに基づいて森林局では次のような施策を実施してきました。

(1) 植林地造成計画の作成

10年間で200,000haの植林地造成を計画したもの。

(2) 植林奨励地域の指定

同地域での植林者に対する税制優遇策と融資助成策の立案。



( 3 ) 税制優遇策の作成

土地生産税より植林経費を控除する優遇策の作成

( 4 ) 林業政策推進上必要な森林の分類作業

( 5 ) 植林、森林保護及び林産物利用上必要な輸入に関する規程の作成

( 6 ) 植林奨励地域内における国有地の植林義務化

( 7 ) Rinco de Baygorriaダム及びRinco del Boneteダム周辺地の植林義務化

( 8 ) Rocha県太西洋岸丘陵地における植林の義務化, 等々

1-7-1 植林地造成計画

前項の( 1 )植林地造成計画に対する実績は、1-4 “最近の人工林植栽面積”の項及び、表 III-4 REGISTERED PLANTATION AREA FROM 1975 TO 1983 に示すように計画達成にはほど遠い状況にあります。

1-7-2 植林奨励地域の指定

農水省土壤局では土地の生産性を基準としてウルグアイ全土を17の土壤型( Zona 1から Zona 13と Zona 03, 07, 09, S 09の計17 )に大別し、更にそれをSubzona, Grupoに分類しています。

森林局ではこの分類のうちZona 7, 8, 9の土壤は土地利用上植林に最適であることから、これらを1971年12月植林奨励地域に指定しました。その県別分布は次表のとおりです。

この面積は国土面積の約10%, 1,800,000 haを占め、図 III-1 “植林奨励地域”に示すように大部分が西部と中北部の2地方に集中しています。