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Criterion 6, Indicator 32: Exports as a Share of Wood and Wood Products Production and Imports as a Share of Wood and Wood Products Production

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Abstract

The United States has become progressively more reliant on imports to meet consumption needs. In roundwood equivalents, imports of wood and paper products as a share of consumption increased from 13% to 30% between 1965 and 2005. This increase is due largely to increased softwood lumber import share, which increased from 15% in 1965 to 38% in 2006. The import share for other products was stable from 1965 to 1990, but has since increased. Export share of production, over this same period, initially increased from 5% in 1965 to 16% in 1991 then decreased to 10% in 2006. This pattern is due to initial increases and subsequent declines in export share for softwood lumber, softwood plywood, and paper and paperboard. For hardwood lumber, the export share has continued to increase, and for pulp the share increased then levelled off after the mid 1990s. If these trends continue, we will become increasingly dependent on forests outside the United States—making us less self-sufficient—in providing benefits from use of wood and paper. The effects of forest management, harvesting, and processing wood in the United States would be shifted to forests and industries in other countries.

Keywords: Wood product, paper products, import share, export share, consumption, production

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Criterion 6, Indicator 32: Exports as a Share of Wood and Wood Products Production and Imports as a Share of Wood and Wood Products Production

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Indicator Background

The purpose of this report is to provide information on the rationale and data provided for Indicator 32 for the *U.S. National Report on Sustainable Forests—2010*. Information on the rationale for the Indicator and recommended data to be developed are taken from the report of the Technical Advisory Committee (TAC) of the Montreal Process (MP).

Verbatim Montreal Process Technical Advisory Committee Notes

Rationale

This indicator provides information on the relative importance of international trade in wood and wood products to domestic production and consumption. This indicator is used to evaluate the trade balances for the forest sector and their contributions to the national economy.

Measurement

The measurements desired are

- The total market value of a nation's exports of wood products, reported by product categories that best fit national circumstances, expressed as a percentage of total national production.
- The total market value of a nation's imports of wood products, reported by product categories that best fit national circumstances, expressed as a percentage of total national production.

The residual domestic production not exported and the level of imports are both input to indicator 6.1.d (Indicator 28), total consumption of wood and wood products. The ratios desired for this indicator can be computed either on the basis of common volume units (e.g., roundwood equivalents) or value. Although both may be important dimensions for policy makers, the volumetric ratio may be more important for evaluating the long-term sustainability of forests and forest enterprises.

Comments and Clarifications

Additions and clarifications to Rationale

The Rationale asks for information on the relative importance of international trade in wood and wood products to production and consumption. It has been conventional to compare imports to consumption and exports to production so those are the comparisons we provide. We compare imports to consumption even though the Rationale suggests comparing imports to production. We provide raw data in the report so the reader can compare imports to production.

Additions and Clarifications to Measurement

We make comparisons using measurements in cubic volume or weight since these values are closer to indicating the physical impact of harvest or trade on forest land as opposed to financial impact.

Comparison of value of imports and exports to value of timber production is difficult because value of timber harvest is not readily available. We make a rough estimate of value of timber stumpage harvest for Indicator 40, but this value would not be comparable to the value of imported and exported logs, which includes the cost of harvest and transport to ports. But value of primary product imports and exports in Indicator 30 could be compared to value of primary product shipments shown in Indicator 25.

Indicator Development

Data Used To Address Indicator

General Description

Comparison by volume was done in two ways. First by comparing the roundwood equivalent of total imports and total exports to total consumption and total production, respectively, and second, by comparing volume or weight of individual primary products imports and exports to consumption and production.

Specific Data Sources

Roundwood equivalent data were prepared by Howard (2007) based on USDA Forest Service data on harvest and data on product production and trade from cited Federal and industry association sources. Volume and weight data were obtained from Federal sources and industry associations as reported in Howard (2007). James Howard provided data to 2006 based on data he submits annually for the UN FAO Forest Products Database (UNFAO 2009)

Analysis Techniques

General Description

Trends in import and export share are evaluated using shares that are the ration of roundwood equivalents of imports and exports and consumption and production.

Specific steps taken

Roundwood equivalents are the estimated volume of wood that needs to be harvested to produce primary products. To compute the roundwood equivalent of imports, we assume that the harvest required in other countries per unit of primary product is the same as in the United States.

Data issues

None.

Indicator Interpretation and Discussion

Indicator Results

What Does the Indicator Show?

The United States has become progressively more reliant on imports to meet consumption needs. In terms of roundwood equivalents, imports of wood and paper products as a share of consumption increased from 13% to 30% between 1965 and 2005. Over this same period was initially a concurrent trend toward increasing exports as a share of production, which reached a high in 1991, but these exports have since declined. Exports as a share of production increased from 5% in 1965 to a high of 16% in 1991 then decreased to 10% in 2006 (Fig. 1).

The sustained increase of the overall import share to the historically high level of 30% is due largely to growth in the softwood lumber import share, which reached a level of 38% in 2006. This is up from 15% in 1965. The import share for other products was relatively stable between 1965 and the 1990s, but has since also increased (Figs. 2 and 3).

The trend in overall export share of production, an increase then a decline, is due to initial increases and subsequent declines for softwood lumber, softwood plywood, and paper and paperboard. For hardwood lumber, the share has continued to increase, and for pulp the share increased then levelled off after the mid 1990s. (Figs. 4 and 5).

How Has It Changed Since 2003?

The overall trends in import share (increasing) and export share (decreasing) that appeared before 2003 have continued through 2006.

Regional Variation and Associated Issues

Data are not available for interstate imports and exports for U.S. regions, so import and export shares cannot be provided by U.S. region. However, it is possible to roughly estimate which regions are net importers of wood and paper products, in roundwood equivalent, if we assume that consumption per capita is uniform across regions. In terms of roundwood equivalent, of the four RPA Regions, only the U.S. South is a net exporter of wood and paper products (Fig. 6).

Assessment of Ability To Measure Underlying Concern

General Assessment

Consistent detailed national data are available over time on value as well as roundwood equivalent of imports and exports, which allows long-term tracking of trends.

Congruence of U.S. Results with TAC Recommendations

We have data on allowing shares to be computed in using volumes in roundwood equivalent. We have chosen to compute imports as a share of consumption rather than as a share of production. We have not estimated shares using value of products, although data on imports and production are available in other indicators to make such calculations for selected primary products as noted above.

Suggested Steps for Improvement

To determine the role of the value of exports or imports of sawlogs, pulpwood, and veneer logs as a share of U.S. production, it will be necessary to obtain data on value of sawlogs, pulpwood, and veneer logs produced in the United States. Such information is available in some regions but a national study would be needed to prepare comparable price estimates for all parts of the United States.

Cross-Cutting Issues and Relation to Other Indicators

The level and trend in wood and paper export share of consumption are a key factor in sustaining certain benefits from forests: benefits of employment and wages (Indicators 36 and 37), benefits in revenue to various groups (Distribution of Revenues—Indicator 40), and contribution to community resiliency (Indicator 38). Level and trend in import share of production also has an influence on the same indicators but in a direction opposite from export share. For example, for a given level on wood products consumption in the United States, increased export share would increase employment and wages, whereas increased import share would decrease

employment and wages. The level of export and import shares are determined by the competitiveness of U.S. industries in relation to foreign industries, which in turn is influenced in the long run by the level of capital investment in new technology (Indicator 34), by levels of research and education in the United States (Indicator 35), and by the productivity of U.S. forests (Indicator 11).

Concluding Remarks

What does the information on import share of consumption and export share of production of wood products indicate about sustainable forestry and sustaining benefits of forests?

There has been a trend since 1990 in increasing import share of consumption and decreasing export share of production in roundwood equivalents. If these trends continue, we will become increasingly dependent on forests outside the United States—making us less self sufficient—in providing the benefits from use of wood and paper in the United States. The favorable or unfavorable effects of forest management and harvesting wood in the U.S. would be shifted to forest management and harvest in other countries.

Sources

Howard, J. L. 2007. U.S. Timber production, trade, consumption, and price statistics, 1965–2005. FPL–RP–637. U.S. Department of Agriculture, Forest Service, Forest Products Laboratory, Madison, WI. 91 p. (http://www.fpl.fs.fed.us/documnts/fplrp/fpl_rp637.pdf)

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Appendix—Tables and Figures

Table 1—Production, imports, exports, and consumption of softwood timber products, by major product, 1965–2006 (million cubic feet, roundwood equivalent)^a

Year	Industrial roundwood use												Fuelwood production and consumption												
	All products			Total			Lumber			Plywood and veneer				Pulpwood-based products			Other industrial products			Pulpwood chip					
	Pro-duction	Con-sump-tion	Pro-duc-tion	Im-ports	Ex-ports	Con-sump-tion	Pro-duc-tion	Im-ports	Ex-ports	Con-sump-tion	Pro-duc-tion	Im-ports		Ex-ports	Pro-duc-tion	Im-ports	Ex-ports	Con-sump-tion	Pro-duc-tion	Im-ports	Ex-ports	Con-sump-tion	Pro-duc-tion	Im-ports	Ex-ports
1965	8,499	9,331	8,319	1,297	465	9,151	4,583	771	130	5,223	945	14	2	957	2,313	510	155	2,668	300	2	178	—	—	—	180
1966	8,646	9,442	8,476	1,325	529	9,272	4,514	756	147	5,123	990	17	4	1,003	2,451	546	168	2,829	310	7	210	—	—	—	170
1967	8,592	9,235	8,432	1,296	653	9,075	4,408	756	163	5,002	981	16	6	991	2,458	518	184	2,791	285	5	300	—	—	—	160
1968	9,096	9,788	8,956	1,462	770	9,648	4,583	913	163	5,333	1,111	25	5	1,131	2,602	518	206	2,914	265	5	396	—	—	—	140
1969	9,029	9,788	8,904	1,542	783	9,663	4,437	930	164	5,202	1,035	29	15	1,049	2,812	577	233	3,155	250	7	371	—	—	—	125
1970	9,206	9,821	9,101	1,545	929	9,716	4,309	914	180	5,044	1,082	27	9	1,099	3,052	587	313	3,326	230	17	427	—	—	—	105
1971	9,402	10,348	9,302	1,706	759	10,248	4,702	1,133	149	5,686	1,253	33	7	1,278	2,760	530	245	3,045	230	9	357	—	—	—	100
1972	9,659	10,681	9,569	1,948	926	10,591	4,849	1,416	197	6,068	1,379	42	17	1,404	2,623	489	225	2,887	230	2	487	—	—	—	90
1973	9,779	10,679	9,679	1,954	1,053	10,579	4,947	1,418	293	6,072	1,374	34	31	1,377	2,603	501	210	2,894	235	1	520	—	—	—	100
1974	9,103	9,795	8,993	1,669	977	9,685	4,341	1,075	263	5,154	1,190	22	41	1,171	2,823	565	270	3,118	235	7	404	—	—	—	110
1975	8,511	8,969	8,431	1,346	928	8,849	4,189	900	229	4,861	1,198	25	59	1,164	2,393	409	225	2,577	235	11	416	—	—	—	120
1976	9,551	10,226	9,381	1,760	1,045	10,096	4,624	1,255	261	5,618	1,382	32	54	1,360	2,630	463	225	2,868	240	11	505	—	—	—	130
1977	9,899	11,099	9,709	2,146	946	10,909	4,966	1,637	233	6,370	1,460	31	22	1,469	2,566	456	214	2,808	240	22	477	—	—	—	190
1978	10,185	11,613	9,900	2,425	997	11,328	5,009	1,870	235	6,644	1,495	37	22	1,509	2,629	505	212	2,922	240	13	528	—	—	—	285
1979	10,506	11,679	10,096	2,355	1,182	11,269	4,877	1,749	296	6,330	1,452	29	30	1,451	2,920	558	253	3,225	245	19	603	—	—	—	410
1980	9,563	10,414	8,988	2,061	1,210	9,839	4,011	1,477	320	5,168	1,194	18	27	1,185	3,041	547	365	3,223	245	18	497	—	—	—	575
1981	9,200	10,135	8,610	1,991	1,056	9,545	3,839	1,441	310	4,971	1,209	21	49	1,181	2,937	514	317	3,134	245	14	380	—	—	—	590
1982	10,022	9,930	8,389	2,018	1,097	9,310	3,726	1,387	268	4,845	1,134	25	32	1,127	2,782	476	298	2,960	248	16	498	114	—	—	620
1983	10,122	11,419	9,527	2,469	1,172	10,824	4,577	1,780	298	6,060	1,391	39	41	1,389	2,767	488	291	2,964	249	23	542	139	—	—	595
1984	10,351	11,947	9,716	2,690	1,094	11,312	4,715	1,931	258	6,389	1,390	36	26	1,401	2,821	555	271	3,105	250	23	539	148	—	—	635
1985	10,334	12,005	9,729	2,803	1,132	11,400	4,713	2,132	246	6,599	1,392	46	22	1,415	2,772	561	267	3,066	256	11	597	53	—	—	605
1986	11,109	12,646	10,591	2,766	1,228	12,128	5,259	2,070	303	7,027	1,501	47	42	1,507	3,011	591	321	3,281	257	8	562	49	—	—	518
1987	11,748	13,184	11,235	2,843	1,408	12,671	5,629	2,103	381	7,352	1,537	62	53	1,546	3,158	632	341	3,449	277	11	633	35	—	—	513
1988	11,796	12,884	11,288	2,743	1,654	12,376	5,603	1,992	495	7,100	1,497	51	66	1,482	3,182	631	358	3,456	270	9	735	59	—	—	508
1989	11,672	12,693	11,169	2,873	1,853	12,190	5,423	2,164	504	7,083	1,357	30	90	1,296	3,223	628	386	3,465	294	3	719	48	154	—	503
1990	11,466	12,277	10,968	2,580	1,769	11,779	5,154	1,865	439	6,580	1,328	26	101	1,253	3,376	644	417	3,603	298	2	639	43	174	—	498
1991	10,900	11,509	10,402	2,344	1,734	11,011	4,785	1,672	455	6,002	1,178	23	83	1,118	3,433	608	483	3,558	292	1	556	40	157	—	498
1992	11,062	12,035	10,563	2,575	1,602	11,536	4,981	1,911	389	6,503	1,209	29	91	1,147	3,436	598	509	3,526	323	6	489	31	125	—	499
1993	10,592	12,041	10,090	2,878	1,429	11,539	4,745	2,180	350	6,575	1,205	29	88	1,146	3,261	611	443	3,430	329	14	422	45	127	—	502
1994	10,781	12,419	10,268	3,016	1,378	11,906	4,883	2,329	319	6,893	1,219	27	75	1,172	3,336	622	460	3,498	305	15	387	22	138	—	513
1995	10,639	12,441	10,158	3,230	1,427	11,961	4,603	2,461	276	6,788	1,195	31	77	1,149	3,348	682	534	3,696	272	9	408	47	132	—	481
1996	10,528	12,413	10,080	3,243	1,359	11,964	4,703	2,550	259	6,994	1,176	30	75	1,130	3,434	599	522	3,512	265	13	381	50	122	—	448
1997	10,596	12,531	10,180	3,267	1,333	12,114	4,886	2,541	239	7,188	1,105	35	92	1,048	3,456	634	526	3,564	257	13	332	44	144	—	416
1998	10,577	12,827	10,097	3,336	1,085	12,348	4,866	2,594	166	7,295	1,089	43	46	1,085	3,476	631	465	3,642	257	24	263	45	146	—	480
1999	10,872	13,310	10,389	3,551	1,113	12,827	5,128	2,688	198	7,618	1,092	62	37	1,118	3,486	714	452	3,748	257	41	266	46	160	—	483
2000	10,738	13,241	10,430	3,673	1,170	12,933	5,180	2,805	209	7,776	1,063	58	43	1,078	3,568	746	459	3,856	159	62	330	1	129	—	308
2001	10,359	13,080	10,051	3,763	1,042	12,772	4,981	2,895	147	7,729	939	73	31	982	3,430	731	437	3,724	272	64	307	1	121	—	308
2002 ^b	10,404	13,288	10,115	3,895	1,011	12,999	5,161	3,026	146	8,040	947	95	27	1,016	3,347	699	447	3,599	269	75	279	0	112	—	289
2003	10,622	13,731	10,334	4,042	934	13,443	5,273	3,055	145	8,183	933	117	26	1,024	3,587	801	390	3,998	169	69	262	1	111	—	288
2004	11,105	14,750	10,812	4,590	944	14,457	5,628	3,531	125	9,033	957	176	31	1,102	3,683	819	412	4,090	169	62	256	2	120	—	293
2005	11,297	14,947	11,002	4,624	974	14,652	5,861	3,550	136	9,275	943	197	26	1,113	3,644	778	426	3,996	169	98	257	1	128	—	295
2006	10,809	14,280	10,514	4,309	838	13,985	5,554	3,282	141	8,694	887	173	26	1,034	3,644	768	410	4,002	169	85	261	2	0	—	295

^aSource: (Howard 2007, table 6a).

^bIncludes pulpwood and the pulpwood equivalent of wood pulp and paper and board.

^cIncludes cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and miscellaneous items.

Table 2—Production, imports, exports, and consumption of hardwood timber products, by major product, 1965–2006 (million cubic feet, roundwood equivalent)

Year	Industrial roundwood use													Fuelwood production and consumption										
	All products			Total			Lumber			Plywood and veneer			Pulpwood-based products			Other industrial production			Pulpwood chip					
	Pro-duction	Con-sump-tion	Im-ports	Pro-duction	Ex-ports	Im-ports	Pro-duction	Con-sump-tion	Ex-ports	Im-ports	Pro-duction	Con-sump-tion	Ex-ports		Im-ports	Pro-duction	Con-sump-tion	Ex-ports	Im-ports	Pro-duction	Con-sump-tion	Ex-ports	Im-ports	
1965	3,647	3,865	2,912	3,066	89	3,130	1,650	52	17	1,685	125	55	0	180	864	191	58	997	260	9	13	—	—	735
1966	3,719	3,961	3,044	353	112	3,286	1,709	70	35	1,743	128	65	0	193	941	210	65	1,086	255	8	12	—	—	675
1967	3,520	3,717	2,900	315	119	3,097	1,628	52	35	1,646	119	65	1	184	907	191	68	1,030	230	7	16	—	—	620
1968	3,388	3,625	2,828	345	108	3,065	1,529	52	17	1,564	127	98	1	224	937	187	74	1,050	220	7	15	—	—	560
1969	3,409	3,692	2,914	402	119	3,197	1,529	70	17	1,581	118	110	1	227	1,049	216	87	1,178	205	6	13	—	—	495
1970	3,180	3,401	2,750	352	131	2,971	1,459	52	17	1,494	115	107	3	219	970	187	100	1,057	195	6	11	—	—	430
1971	3,212	3,478	2,812	401	135	3,078	1,480	70	35	1,515	125	132	1	257	1,012	195	90	1,117	185	5	9	—	—	400
1972	3,272	3,568	2,887	440	144	3,183	1,489	70	35	1,524	133	164	2	296	1,074	201	92	1,183	175	4	15	—	—	385
1973	3,431	3,730	3,026	450	151	3,325	1,543	87	35	1,595	122	132	3	251	1,173	227	95	1,305	170	4	18	—	—	405
1974	3,463	3,698	3,038	417	181	3,273	1,484	70	35	1,519	97	86	4	178	1,277	257	123	1,411	160	5	19	—	—	425
1975	2,923	3,101	2,473	318	140	2,651	1,282	52	35	1,300	79	100	5	174	952	163	90	1,025	150	3	11	—	—	450
1976	3,192	3,413	2,722	369	149	2,943	1,402	52	35	1,419	84	123	5	202	1,086	192	94	1,184	135	2	15	—	—	470
1977	3,631	3,852	2,821	364	143	3,042	1,495	52	35	1,513	91	117	4	205	1,075	192	90	1,177	145	2	14	—	—	810
1978	4,270	4,516	3,030	432	186	3,276	1,578	70	70	1,578	92	130	2	220	1,188	230	97	1,321	155	3	18	—	—	1,240
1979	4,920	5,135	3,125	414	198	3,340	1,640	70	70	1,640	89	108	2	195	1,216	234	106	1,343	160	2	21	—	—	1,795
1980	5,623	5,698	3,093	334	259	3,168	1,611	52	87	1,576	78	62	3	138	1,209	218	145	1,282	170	2	24	—	—	2,530
1981	5,447	5,547	2,857	351	251	2,957	1,319	52	87	1,284	75	77	3	149	1,258	219	135	1,342	180	2	25	—	—	2,590
1982	5,675	5,816	2,940	354	212	3,081	1,407	31	64	1,374	95	97	3	189	1,236	222	130	1,328	187	3	15	—	—	2,735
1983	6,004	6,201	3,364	457	260	3,561	1,543	35	86	1,492	104	140	3	241	1,503	278	153	1,628	196	4	18	—	—	2,640
1984	6,638	6,880	3,653	498	256	3,895	1,775	44	92	1,728	103	125	2	226	1,549	325	142	1,732	205	5	20	—	—	2,985
1985	6,516	6,835	3,671	562	244	3,990	1,691	52	71	1,673	93	149	3	239	1,660	357	153	1,864	209	5	18	—	—	2,845
1986	6,631	6,906	4,053	585	310	4,328	1,846	49	91	1,804	96	152	4	244	1,869	381	193	2,057	219	4	22	—	—	2,578
1987	6,712	6,995	4,150	630	347	4,432	1,982	70	130	1,922	102	179	4	277	1,824	380	190	2,013	218	2	24	—	—	2,563
1988	6,888	7,036	4,330	600	452	4,479	2,064	58	208	1,914	101	150	6	245	1,892	390	205	2,077	240	2	33	—	—	2,558
1989	7,091	7,108	4,553	547	530	4,570	2,118	64	150	2,032	97	85	7	174	1,926	395	221	2,099	261	3	34	—	—	2,538
1990	7,130	7,103	4,608	511	538	4,582	2,163	45	151	2,057	95	71	9	157	1,937	394	229	2,102	264	2	35	—	—	2,521
1991	7,023	6,829	4,493	465	659	4,299	1,961	42	164	1,839	89	60	11	138	1,964	361	264	2,062	259	1	45	—	—	2,530
1992	7,262	7,035	4,717	515	742	4,490	2,003	50	172	1,880	85	71	15	142	2,080	393	293	2,181	287	1	36	—	—	2,545
1993	7,503	7,377	4,922	587	714	4,795	2,142	60	182	2,019	89	71	13	148	2,162	454	281	2,335	292	1	38	—	—	2,582
1994	7,659	7,515	5,038	616	760	4,894	2,168	67	193	2,042	101	67	11	156	2,240	480	298	2,422	271	3	42	—	—	2,621
1995	7,728	7,578	5,272	688	838	5,122	2,212	62	184	2,089	107	76	12	172	2,423	545	354	2,614	241	4	43	—	—	2,456
1996	7,469	7,245	5,178	656	880	4,954	2,183	66	190	2,059	105	67	11	161	2,319	515	343	2,490	235	5	41	—	—	2,291
1997	6,735	6,530	4,609	597	803	4,404	2,217	79	213	2,082	109	79	12	176	1,727	429	249	1,908	228	7	51	—	—	2,126
1998	6,845	6,761	4,802	643	727	4,718	2,432	96	185	2,343	112	88	9	191	1,711	451	214	1,947	228	6	53	—	—	2,043
1999	6,702	6,669	4,643	680	712	4,611	2,501	122	206	2,417	116	98	10	204	1,477	453	175	1,755	228	6	60	—	—	2,059
2000	6,514	6,595	5,201	949	869	5,281	2,203	138	226	2,115	124	96	8	212	2,415	704	317	2,802	141	9	92	—	—	1,314
2001	6,169	6,341	4,857	937	765	5,028	2,070	112	213	1,970	149	103	8	244	2,350	712	305	2,757	48	10	96	—	—	1,313
2002	5,993	6,248	4,762	981	727	5,016	2,056	129	212	1,972	120	127	8	240	2,353	712	321	2,744	48	11	109	—	—	1,231
2003	5,507	5,928	4,280	1,022	601	4,701	1,904	138	202	1,840	119	123	9	233	1,970	746	253	2,464	149	11	94	—	—	4,327
2004	5,731	6,228	4,484	1,154	658	4,980	2,043	173	222	1,994	125	178	12	291	2,009	789	266	2,532	149	10	110	—	—	4,477
2005	5,712	6,219	4,457	1,179	672	4,964	2,022	187	253	1,956	125	176	11	290	2,035	792	283	2,545	149	15	88	—	—	1,255
2006	5,632	6,123	4,377	1,098	608	4,868	1,999	158	249	1,907	116	196	9	303	2,035	733	272	2,496	149	9	78	—	—	1,255

Source: (Howard 2007, table 7a).

^bIncludes pulpwood and the pulpwood equivalent of wood pulp and paper and board.

^cIncludes cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and miscellaneous items.

Table 3—Production, imports, exports, and consumption of timber products, by major product, 1965–2006 (million cubic feet, roundwood equivalent)

Year	All products												Total						Lumber				Plywood and veneer				Pulpwood-based products				Other industrial products,		Logs		Pulpwood Chips		Fuelwood production and consumption																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Production		Imports		Exports		Consumption		Production		Imports		Exports		Consumption		Production		Imports		Exports		Consumption		Production		Imports		Exports		Consumption		Production		Imports			Exports		Consumption																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		2001	2002	2003	2004	2005	2006	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1965	12,153	13,196	11,238	1,604	561	12,281	6,233	823	148	6,908	1,071	69	3	1,137	3,176	701	213	3,665	560	11	191	—	7	915	12,382	13,403	11,537	1,679	658	12,558	6,222	826	182	6,867	1,118	82	4	1,196	3,392	755	232	3,915	565	15	223	—	17	845	12,160	12,952	11,380	1,612	819	12,172	6,037	809	197	6,648	1,100	81	7	1,175	3,365	709	253	3,822	515	12	315	—	47	780	12,584	13,414	11,884	1,807	978	12,714	6,112	966	181	6,897	1,237	124	6	1,355	3,539	705	280	3,964	485	13	411	—	101	700	12,583	13,480	11,963	1,944	1,047	12,860	5,965	1,000	182	6,783	1,153	138	16	1,275	3,861	792	320	4,333	455	13	383	—	146	620	12,536	13,222	12,001	1,896	1,211	12,687	5,768	966	197	6,537	1,197	133	12	1,318	4,023	773	413	4,383	425	23	438	—	150	535	12,737	13,827	12,237	2,107	1,017	13,327	6,182	1,203	184	7,201	1,378	166	8	1,535	3,773	725	336	4,162	415	13	366	—	123	500	13,088	14,248	12,613	2,388	1,227	13,773	6,339	1,485	232	7,592	1,512	206	18	1,700	3,698	690	317	4,070	405	6	502	—	157	575	13,426	14,409	12,921	2,404	1,421	13,904	6,490	1,505	327	7,667	1,496	165	34	1,628	3,775	729	305	4,199	405	5	538	—	216	505	12,806	13,493	12,271	2,086	1,399	12,958	5,826	1,145	297	6,673	1,287	107	45	1,349	4,100	822	393	4,529	395	12	423	—	240	535	11,672	12,070	11,102	1,664	1,266	11,500	5,471	953	263	6,160	1,277	125	64	1,338	3,345	572	314	3,602	385	14	427	—	198	570	13,790	14,951	12,790	2,510	1,350	13,951	6,461	1,689	268	7,882	1,552	148	26	1,673	3,641	648	304	3,985	385	25	491	—	261	1,000	14,680	16,129	13,155	2,857	1,408	14,604	6,586	1,939	304	8,221	1,586	167	25	1,729	3,817	735	309	4,243	395	15	545	—	225	1,525	15,706	16,815	13,501	2,769	1,660	14,610	6,516	1,819	366	7,969	1,541	137	32	1,646	4,136	792	359	4,568	405	21	623	—	280	2,205	15,464	16,113	12,359	2,395	1,747	13,008	5,623	1,530	407	6,745	1,272	81	30	1,323	4,250	765	510	4,505	415	20	522	—	278	3,105	14,867	15,682	11,687	2,342	1,527	12,502	5,158	1,493	397	6,254	1,284	99	53	1,330	4,195	734	452	4,476	425	16	405	—	220	3,180	14,861	15,746	11,506	2,371	1,487	12,391	5,133	1,418	332	6,219	1,229	122	35	1,317	4,019	698	429	4,288	435	19	513	—	114	178	16,282	17,619	13,047	2,926	1,589	14,384	6,121	1,815	384	7,551	1,495	179	44	1,630	4,270	766	444	4,592	445	26	560	—	139	1,556	16,994	18,840	13,544	3,366	1,520	15,390	6,404	2,184	317	8,271	1,485	194	25	1,654	4,432	918	419	4,931	465	16	615	—	53	1,444	17,891	19,552	14,795	3,351	1,689	16,456	7,105	2,119	394	8,830	1,598	199	45	1,751	4,881	972	514	5,338	475	13	585	—	49	151	3,096	18,619	20,179	15,543	3,473	1,913	17,103	7,611	2,173	510	9,274	1,639	240	57	1,471	4,982	1,012	531	5,463	495	13	657	—	35	158	3,076	18,902	19,921	15,836	3,343	2,324	16,855	7,667	2,050	704	9,014	1,598	201	72	1,728	5,075	1,021	563	5,533	510	11	767	—	59	218	3,066	18,763	19,800	15,722	3,420	2,383	16,759	7,541	2,228	655	9,115	1,454	114	97	1,471	5,149	1,022	608	5,564	555	6	753	—	49	271	3,041	18,596	19,380	15,577	3,091	2,307	16,361	7,317	1,909	589	8,637	1,423	97	109	1,410	5,313	1,038	646	5,704	562	4	674	—	43	288	3,019	17,922	18,338	14,894	2,808	2,393	15,310	6,746	1,714	619	7,841	1,267	83	95	1,255	5,397	969	746	5,620	551	2	602	—	41	332	3,028	18,324	19,070	15,280	3,090	2,344	16,026	6,983	1,960	561	8,383	1,294	100	106	1,288	5,516	992	801	5,706	610	7	524	—	31	351	3,044	18,440	19,934	15,306	3,632	2,139	16,800	7,052	2,395	512	8,935	1,320	94	86	1,328	5,576	1,102	758	5,920	576	18	429	—	23	354	3,134	18,367	20,019	15,430	3,917	2,265	17,082	6,815	2,522	460	8,877	1,303	107	87	1,291	5,753	1,114	865	6,002	500	18	422	—	53	416	2,739	17,997	19,658	15,258	3,899	2,239	16,918	6,886	2,616	449	9,053	1,281	97	87	1,321	5,972	1,226	888	6,310	513	13	451	—	49	377	2,937	17,332	19,061	14,790	3,864	2,136	16,519	7,103	2,619	452	9,270	1,213	114	103	1,224	5,183	1,063	775	5,472	485	20	384	—	47	422	2,542	17,422	19,588	14,899	3,979	1,812	17,065	7,298	2,690	350	9,638	1,201	131	55	1,276	5,187	1,082	679	5,590	485	30	316	—	47	412	2,523	17,253	19,836	15,631	4,622	2,039	18,214	7,384	2,943	435	9,892	1,187	154	51	1,290	5,983	1,451	776	6,658	300	72	422	—	2	355	1,622	16,528	19,421	14,907	4,700	1,807	17,800	7,052	3,007	359	9,699	1,088	176	39	1,225	5,780	1,443	742	6,481	320	73	403	—	1	265	1,621	16,398	19,536	14,878	4,877	1,738	18,016	7,217	3,154	359	10,012	1,067	223	34	1,256	5,699	1,412	768	6,343	317	86	388	—	2	188	1,520	16,129	19,658	14,614	5,064	1,535	18,143	7,177	3,193	347	11,023	1,052	240	35	1,257	5,557	1,547	643	6,462	318	80	336	—	4	155	1,515	16,836	20,978	15,296	5,744	1,602	19,438	7,671	3,704	348	11,028	1,082	354	43	1,393	5,692	1,608	678	6,622	318	80	336	—	5	168	1,540	17,009	21,166	15,459	5,802	1,646	19,616	7,883	3,737	389	11,231	1,068	373	37	1,403	5,679	1,570	708	6,541	318	114	345	—	9	166	1,550	16,441	20,403	14,891	5,408	1,446	18,853	7,552	3,439	390	10,602	1,003	369	35	1,337	5,679	1,502	683	6,498	318	94	339	—	4	0	1,550

Source: (Howard 2007, table 5a).

^aIncludes pulpwood and the pulpwood equivalent of wood pulp and paper and board.

^bIncludes cooperage logs, poles and piling, fence posts, heewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and miscellaneous items.

Table 4—Wood and paper products consumption and production by region in roundwood equivalents, 2006 (billion cubic feet)

	North	South	Rocky Mountains	Pacific Coast
Consumption	7.8	5.8	1.7	3.5
Production	2.8	9.7	0.5	2.5

Note: We assume wood and paper products consumption is 63.5 ft³ per capita in roundwood equivalent.

Sources: See Indicator 28, table 4 for consumption values.

Table 5 — Production, imports, exports, and consumption of structural panel products, by type, 1980–2006 (million square feet, 3/8-in. basis)

Year	Production			Imports			Exports			Consumption		
	Total	Softwood plywood	Other structural panels ^a	Total	Softwood plywood	Other structural panels ^{a,b}	Total	Softwood plywood	Other structural panels ^a	Total	Softwood plywood	Other structural panels ^a
1980	16,468	16,333	135	360	37	323	373	373	0	16,455	15,997	458
1981	17,023	16,752	271	349	30	319	686	686	0	16,686	16,096	590
1982	16,403	15,846	557	268	9	259	452	452	0	16,219	15,403	816
1983	20,821	19,480	1,341	423	18	405	574	574	0	20,670	18,924	1,746
1984	21,968	19,926	2,042	727	48	679	371	371	0	22,324	19,603	2,721
1985	22,838	20,169	2,669	848	54	794	321	321	0	23,366	19,903	3,463
1986	25,631	22,118	3,513	723	63	660	614	614	0	25,740	21,567	4,173
1987	26,975	22,899	4,076	889	129	760	796	796	0	27,068	22,232	4,836
1988	27,203	22,599	4,604	911	96	815	1,004	1,004	0	27,110	21,691	5,419
1989	26,490	21,385	5,105	1,160	49	1,111	1,442	1,442	0	26,207	19,991	6,216
1990	26,337	20,919	5,418	1,351	38	1,313	1,613	1,613	0	26,075	19,344	6,731
1991	24,265	18,652	5,613	1,016	28	988	1,379	1,322	57	23,901	17,358	6,544
1992	25,985	19,332	6,653	1,619	47	1,572	1,491	1,442	49	26,113	17,937	8,176
1993	26,317	19,315	7,002	2,203	41	2,163	1,470	1,409	60	27,051	17,946	9,105
1994	27,124	19,638	7,486	2,635	47	2,588	1,289	1,211	78	28,469	18,474	9,995
1995	27,270	19,367	7,903	3,274	60	3,214	1,348	1,267	82	29,196	18,160	11,036
1996	28,495	19,181	9,314	4,500	85	4,414	1,405	1,248	157	31,590	18,018	13,572
1997	28,497	17,963	10,534	5,376	104	5,272	1,715	1,548	167	32,158	16,519	15,639
1998	29,003	17,776	11,227	6,671	179	6,492	864	764	100	34,810	17,191	17,619
1999	29,428	17,816	11,612	7,659	309	7,350	960	781	179	36,127	17,344	18,783
2000	29,381	17,475	11,906	8,030	408	7,622	914	735	179	36,498	17,148	19,350
2001	27,653	15,121	12,532	8,755	665	8,090	681	514	167	35,727	15,272	20,455
2002	28,626	15,200	13,426	9,368	907	8,461	634	439	195	37,360	15,668	21,692
2003	28,321	14,706	13,615	10,386	1,306	9,080	567	410	157	38,140	15,602	22,538
2004	28,936	14,665	14,271	11,870	2,023	9,847	685	492	193	40,120	16,196	23,924
2005	29,315	14,330	14,985	12,965	2,421	10,544	580	411	169	41,700	16,340	25,360
2006	28,388	13,428	14,960	11,976	1,848	10,128	603	424	179	39,761	14,852	24,909

^aOriented strandboard and waferboard.

Industry sources estimate that about 95% of Canadian exports are to U.S. markets.

Source: Howard 2007 Table 38

Table 6—Plywood production, imports, exports, and consumption, by softwoods and hardwoods, 1965–2006 (3/8-in. basis)^a

Year	Production			Imports			Exports			Consumption			Per capita consumption		
	Total ($\times 10^6$ ft ²)	Soft- woods ($\times 10^6$ ft ²)	Hard- woods ($\times 10^6$ ft ²)	Total ($\times 10^6$ ft ²)	Soft- woods ($\times 10^6$ ft ²)	Hard- woods ($\times 10^6$ ft ²)	Total ($\times 10^6$ ft ²)	Soft- woods ($\times 10^6$ ft ²)	Hard- woods ($\times 10^6$ ft ²)	Total ($\times 10^6$ ft ²)	Soft- woods ($\times 10^6$ ft ²)	Hard- woods ($\times 10^6$ ft ²)	Total (ft ²)	Soft- woods (ft ²)	Hard- woods (ft ²)
1965	14,496	12,447	2,049	1,052	5	1,047	36	30	6	15,51	12,422	3,090	80	64	16
1966	15,132	13,056	2,076	1,257	3	1,254	56	48	8	16,33	13,011	3,322	83	66	17
1967	14,874	12,958	1,916	1,247	3	1,244	93	85	8	16,02	12,876	3,152	81	65	16
1968	16,704	14,695	2,009	1,896	10	1,886	78	64	14	18,52	14,641	3,881	92	73	19
1969	15,563	13,694	1,869	2,122	15	2,107	215	199	16	17,47	13,510	3,960	86	67	20
1970	16,136	14,340	1,796	2,049	2	2,047	172	114	58	18,01	14,228	3,785	88	69	18
1971	18,559	16,635	1,924	2,545	3	2,542	114	99	15	20,99	16,539	4,451	101	80	21
1972	20,354	18,324	2,030	3,162	6	3,156	247	221	26	23,26	18,109	5,160	111	86	25
1973	20,112	18,305	1,807	2,536	9	2,527	451	411	40	22,19	17,903	4,294	105	84	20
1974	17,279	15,878	1,401	1,648	4	1,644	610	542	68	18,31	15,340	2,977	86	72	14
1975	17,102	16,050	1,052	1,925	7	1,918	859	791	68	18,16	15,266	2,902	84	71	13
1976	19,523	18,440	1,083	2,368	12	2,356	795	716	79	21,09	17,736	3,360	97	81	15
1977	20,563	19,376	1,187	2,272	18	2,254	357	287	70	22,47	19,107	3,371	102	87	15
1978	21,149	19,964	1,185	2,555	63	2,492	329	298	31	23,37	19,729	3,646	105	89	16
1979	20,803	19,653	1,150	2,097	27	2,070	431	402	29	22,46	19,278	3,191	100	86	14
1980	17,371	16,333	1,038	1,235	37	1,198	413	373	40	18,19	15,997	2,196	80	70	10
1981	17,728	16,752	976	1,512	30	1,482	733	686	47	18,50	16,096	2,411	80	70	10
1982	17,231	15,846	1,385	1,878	9	1,869	493	452	41	18,61	15,403	3,213	80	66	14
1983	20,960	19,480	1,480	2,747	18	2,729	615	574	41	23,09	18,924	4,168	99	81	18
1984	21,431	19,926	1,505	2,527	48	2,480	408	371	37	23,55	19,603	3,948	100	83	17
1985	21,511	20,169	1,342	3,112	54	3,058	365	321	44	24,25	19,903	4,356	102	83	18
1986	23,508	22,118	1,390	3,234	63	3,171	676	614	61	26,06	21,567	4,500	108	90	19
1987	24,423	22,899	1,524	3,932	129	3,803	855	796	60	27,50	22,232	5,268	113	92	22
1988	24,151	22,599	1,552	3,358	96	3,262	1,108	1,004	104	26,40	21,691	4,711	108	89	19
1989	22,926	21,385	1,541	1,983	49	1,935	1,562	1,442	119	23,34	19,991	3,356	94	81	14
1990	22,456	20,919	1,537	1,687	38	1,649	1,766	1,613	153	22,37	19,344	3,033	90	77	12
1991	20,148	18,652	1,496	1,457	28	1,429	1,553	1,322	231	20,05	17,358	2,695	79	69	11
1992	20,755	19,332	1,423	1,776	47	1,729	1,760	1,442	318	20,77	17,937	2,834	81	70	11
1993	20,826	19,315	1,511	1,786	41	1,745	1,677	1,409	268	20,93	17,946	2,989	81	70	12
1994	21,439	19,638	1,801	1,693	47	1,646	1,455	1,211	248	21,67	18,474	3,203	83	71	12
1995	21,209	19,367	1,842	1,951	60	1,892	1,517	1,267	250	21,64	18,160	3,483	82	69	13
1996	20,965	19,181	1,784	1,780	85	1,695	1,499	1,248	251	21,24	18,018	3,228	80	68	12
1997	19,835	17,963	1,872	2,111	104	2,007	1,802	1,548	254	20,14	16,519	3,625	75	62	14
1998	19,738	17,776	1,962	2,429	179	2,250	969	764	205	21,19	17,191	4,007	78	64	15
1999 ^f	19,832	17,816	2,016	2,827	309	2,518	984	781	203	21,67	17,344	4,331	79	63	16
2000	19,741	17,475	2,266	2,902	408	2,494	916	735	181	21,72	17,148	4,579	77	61	16
2001	17,225	15,121	2,104	3,220	665	2,555	676	514	162	19,76	15,272	4,496	69	54	16
2002 ^f	17,296	15,200	2,096	4,115	907	3,208	619	439	180	20,79	15,668	5,124	72	55	18
2003 ^f	16,753	14,706	2,047	4,489	1,306	3,183	640	410	230	20,60	15,602	5,001	71	54	17
2004	16,687	14,665	2,022	6,629	2,023	4,606	783	492	291	22,53	16,196	6,336	77	55	22
2005	16,327	14,330	1,997	6,964	2,421	4,543	686	411	275	22,60	16,340	6,264	76	55	21
2006	15,238	13,428	1,810	6,926	1,848	5,078	635	424	211	21,52	14,852	6,677	72	50	22

^aSource: Howard 2007, table 37

Table 7—Veneer imports and exports, by species, 1965–2006 (million square feet, surface measured)^a

Year	Imports					Exports					
	Total	Hardwoods			Soft-woods	Total	Hardwoods				Soft-woods
		Total	Birch and maple	Other			Total	Walnut	Red and white oak	Other	
1965	1,958.2	1,871.2	817.4	1,053.8	87.0	169.8	143.7	80.6	—	63.1	26.1
1966	2,043.0	1,843.7	766.4	1,077.3	199.3	153.9	110.5	54.2	—	56.3	43.4
1967	1,990.9	1,796.7	754.9	1,041.8	194.2	192.8	105.8	44.8	—	61.0	87.0
1968	2,340.1	2,178.7	820.8	1,357.9	161.4	306.3	173.6	71.9	—	101.7	132.7
1969	2,054.6	1,855.7	698.2	1,157.5	198.9	360.6	194.2	92.4	—	101.8	166.4
1970	1,876.6	1,605.8	650.0	955.8	270.8	327.1	183.8	111.3	—	72.5	143.3
1971	2,302.1	2,035.2	812.0	1,223.2	266.9	571.5	172.7	97.7	—	75.0	398.8
1972	3,151.4	2,786.0	997.9	1,788.1	365.4	491.7	204.3	84.9	—	119.4	287.4
1973	2,967.7	2,582.9	890.5	1,692.4	384.8	660.5	346.0	90.9	—	255.1	314.5
1974	2,281.6	1,965.9	679.6	1,286.3	315.7	599.4	380.8	77.4	—	303.4	218.6
1975	1,497.7	1,145.6	552.2	593.4	352.1	736.8	390.3	63.6	—	326.7	346.5
1976	1,993.5	1,595.6	760.3	835.3	397.9	768.2	505.8	91.8	—	414.0	262.4
1977	2,261.0	1,718.5	721.3	997.2	542.5	687.0	516.5	93.1	—	423.4	170.5
1978	2,143.3	1,632.5	722.8	909.7	510.8	1,541.6	1,353.3	128.9	476.1	748.3	188.3
1979	2,076.6	1,560.1	713.4	846.7	516.5	1,072.5	886.0	80.6	522.0	283.4	186.5
1980	1,666.8	1,213.2	584.2	629.0	453.6	1,333.1	1,077.3	117.8	631.2	328.3	255.8
1981	1,729.3	1,406.3	605.1	801.2	323.0	1,378.1	919.6	107.9	509.2	302.5	458.5
1982	1,665.9	1,231.9	506.8	725.1	434.0	1,140.3	803.6	78.6	512.9	212.1	336.7
1983	2,072.5	1,607.2	637.8	969.4	465.3	1,438.8	1,023.8	106.0	624.4	293.4	415.0
1984	1,886.8	1,502.9	537.2	965.7	383.9	1,370.5	1,002.7	84.4	636.0	282.3	367.8
1985	1,753.4	1,398.0	501.5	896.5	355.4	1,100.2	792.6	85.6	481.5	225.5	307.6
1986	1,997.4	1,603.9	557.3	1,046.6	393.5	1,466.1	995.8	72.6	639.3	283.9	470.3
1987	2,106.6	1,682.2	563.4	1,118.8	424.4	1,775.9	1,384.7	90.7	857.4	436.6	391.2
1988	2,226.7	1,713.8	588.0	1,125.8	512.9	1,830.1	1,574.2	69.9	1,058.7	445.6	255.9
1989	1,163.9	719.7	239.9	479.8	444.1	1,712.2	1,599.6	35.8	431.0	1,132.7	112.6
1990	2,109.3	1,600.7	559.2	1,041.5	508.6	1,820.2	1,681.4	103.4	1,135.5	442.5	138.9
1991	1,917.4	1,383.7	523.5	860.2	533.7	1,896.1	1,725.5	85.9	1,084.3	555.4	170.6
1992	2,422.3	1,674.4	599.1	1,075.3	747.9	2,072.2	1,884.8	69.7	1,094.0	721.2	187.4
1993	2,870.0	1,904.1	619.2	1,284.9	965.9	2,209.9	1,977.4	60.7	958.1	958.6	232.5
1994	3,036.6	1,946.6	713.0	1,233.7	1,090.0	2,459.3	2,310.0	68.4	1,086.1	1,155.5	149.3
1995	3,223.2	2,283.2	739.4	1,543.8	940.0	2,800.0	2,613.3	73.6	1,109.9	1,429.8	186.7
1996	3,011.4	2,093.4	718.2	1,375.1	918.0	2,792.7	2,613.3	49.1	1,080.1	1,484.1	179.4
1997	2,926.9	1,994.9	767.9	1,227.0	932.0	3,068.6	2,875.4	60.2	1,070.3	1,744.8	193.2
1998	3,435.1	2,210.7	789.2	1,421.6	1,224.3	2,946.1	2,722.2	58.6	1,041.5	1,622.0	223.9
1999	3,933.3	2,350.6	947.9	1,402.7	1,582.7	3,293.3	2,986.8	78.6	1,008.7	1,899.4	306.5
2000	4,339.0	2,479.8	1,085.4	1,394.4	1,859.1	3,527.8	3,200.2	83.7	1,022.0	2,094.5	327.6
2001	4,263.7	2,166.5	897.0	1,269.5	2,097.2	3,372.2	3,148.8	102.6	936.9	2,109.3	223.4
2002 ^f	4,714.0	2,328.7	954.4	1,374.3	2,385.3	3,720.7	3,460.4	92.8	836.8	2,530.9	260.3
2003	4,487.5	2,073.1	712.9	1,360.2	2,414.4	3,681.4	3,283.3	74.9	763.7	2,444.7	398.1
2004	5,491.5	2,310.4	706.6	1,603.8	3,181.1	4,280.4	3,707.5	104.2	880.7	2,722.6	572.9
2005	5,751.8	2,239.4	827.1	1,412.3	3,512.4	4,130.2	3,540.0	115.5	764.0	2,660.5	590.3
2006	5,062.7	1,916.5	345.4	1,571.1	3,146.2	3,996.9	3,323.4	171.7	763.9	2,387.8	673.5

^aSource: Howard 2007, table 40.

Table 8—Lumber production, imports, exports, and consumption, by softwoods and hardwoods, 1965–2006^a

Year	Production				Imports				Exports				Consumption				Per capita consumption			
	Total (Billion board feet)	Soft-woods (Billion board feet)	Hard-woods (Billion board feet)	Total (Billion board feet)	Soft-woods (Billion board feet)	Hard-woods (Billion board feet)	Total (Billion board feet)	Soft-woods ^b (Billion board feet)	Hard-woods (Billion board feet)	Total (Billion board feet)	Soft-woods (Billion board feet)	Hard-woods (Billion board feet)	Total (Billion board feet)	Soft-woods (Billion board feet)	Hard-woods (Billion board feet)	Total (Billion board feet)	Soft-woods (Board feet)	Hard-woods (Board feet)	Total (Board feet)	
1965	38.7	29.3	9.4	5.2	4.9	0.3	0.9	0.8	0.1	43.1	33.4	9.7	222	172	50					
1966	38.6	28.8	9.8	5.2	4.8	0.4	1.1	0.9	0.2	42.7	32.7	10.0	217	166	51					
1967	37.5	28.2	9.3	5.1	4.8	0.3	1.2	1.0	0.2	41.4	32.0	9.5	208	161	48					
1968	38.0	29.3	8.7	6.2	5.8	0.3	1.1	1.0	0.1	43.1	34.1	9.0	215	170	45					
1969	37.1	28.3	8.7	6.3	5.9	0.4	1.1	1.0	0.1	42.3	33.2	9.1	209	164	45					
1970	35.9	27.5	8.3	6.1	5.8	0.3	1.2	1.1	0.1	40.8	32.2	8.6	199	157	42					
1971	38.5	30.0	8.4	7.6	7.2	0.4	1.1	0.9	0.2	45.0	36.4	8.6	217	175	41					
1972	39.5	31.0	8.5	9.4	9.0	0.4	1.4	1.2	0.2	47.5	38.8	8.7	226	185	42					
1973	40.4	31.6	8.8	9.6	9.0	0.5	2.0	1.8	0.2	47.9	38.8	9.1	226	183	43					
1974	36.2	27.7	8.4	7.3	6.8	0.4	1.8	1.6	0.2	41.6	32.9	8.7	195	154	41					
1975	34.1	26.7	7.3	6.0	5.7	0.3	1.6	1.4	0.2	38.4	31.1	7.4	178	144	34					
1976	37.7	29.7	8.0	8.2	8.0	0.3	1.8	1.6	0.2	44.1	36.1	8.1	202	165	37					
1977	40.2	31.7	8.5	10.7	10.4	0.3	1.6	1.4	0.2	49.4	40.7	8.6	224	185	39					
1978	41.0	32.1	9.0	12.2	11.9	0.4	1.8	1.4	0.4	51.4	42.5	8.9	231	191	40					
1979	40.7	31.4	9.3	11.5	11.2	0.4	2.2	1.8	0.4	50.1	40.8	9.3	222	181	41					
1980	35.4	26.2	9.2	9.9	9.6	0.3	2.5	2.0	0.5	42.8	33.8	9.0	188	149	39					
1981	32.2	24.7	7.5	9.5	9.2	0.3	2.4	1.9	0.5	39.3	32.0	7.3	171	139	32					
1982	31.8	23.8	8.0	9.4	9.1	0.2	2.0	1.6	0.4	39.1	31.3	7.8	169	135	34					
1983	38.5	29.7	8.8	12.3	12.0	0.3	2.3	1.8	0.5	48.4	39.9	8.5	207	170	36					
1984	41.3	31.2	10.1	13.6	13.3	0.3	2.1	1.6	0.5	52.8	42.9	9.9	223	181	42					
1985	40.9	31.3	9.6	15.0	14.6	0.4	1.9	1.5	0.4	54.0	44.4	9.6	226	186	40					
1986	45.8	35.3	10.5	14.6	14.2	0.3	2.4	1.9	0.5	57.9	47.6	10.3	241	198	43					
1987	49.5	38.2	11.3	15.2	14.7	0.5	3.2	2.5	0.7	61.5	50.5	11.0	253	208	45					
1988	49.9	38.1	11.7	13.8	13.5	0.3	4.5	3.3	1.2	59.2	48.3	10.9	242	197	44					
1989	49.6	37.5	12.1	15.3	14.9	0.3	4.2	3.4	0.9	60.6	49.1	11.5	245	198	47					
1990	48.1	35.8	12.3	13.1	12.9	0.2	3.8	2.9	0.9	57.4	45.7	11.7	230	183	47					
1991	44.3	33.2	11.2	11.7	11.5	0.2	4.0	3.1	0.9	52.1	41.6	10.4	206	165	41					
1992	45.9	34.5	11.4	13.4	13.2	0.3	3.6	2.6	1.0	55.8	45.1	10.7	218	177	42					
1993	45.2	32.9	12.2	15.4	15.1	0.3	3.4	2.3	1.0	57.2	45.7	11.5	222	177	45					
1994	46.5	34.1	12.4	16.6	16.2	0.4	3.3	2.2	1.1	59.8	48.2	11.6	229	185	45					
1995	44.9	32.2	12.6	17.6	17.2	0.4	2.9	1.9	1.1	59.5	47.6	11.9	226	181	45					
1996	45.8	33.3	12.5	18.4	18.0	0.4	2.9	1.8	1.1	61.3	49.5	11.8	231	186	44					
1997	47.3	34.7	12.7	18.5	18.0	0.5	2.9	1.6	1.2	62.9	51.0	11.9	235	190	44					
1998	47.4	34.7	12.7	19.2	18.7	0.5	2.2	1.1	1.1	64.5	52.2	12.2	238	193	45					
1999	49.5	36.6	12.9	19.9	19.2	0.7	2.5	1.4	1.2	66.8	54.4	12.4	245	199	45					
2000	48.6	36.0	12.6	20.2	19.4	0.8	2.7	1.4	1.3	66.1	54.0	12.1	234	191	43					
2001	46.4	34.6	11.8	20.7	20.1	0.6	2.2	1.0	1.2	64.9	53.7	11.3	228	188	40					
2002	47.6	35.8	11.8	21.7	21.0	0.7	2.2	1.0	1.2	67.1	55.8	11.3	233	194	39					
2003	47.5	36.6	10.9	22.0	21.2	0.8	2.1	1.0	1.2	67.4	56.8	10.5	231	195	36					
2004	50.8	39.1	11.7	25.5	24.5	1.0	2.1	0.8	1.3	74.1	62.8	11.4	252	213	39					
2005	52.3	40.7	11.6	25.7	24.6	1.1	2.3	0.9	1.5	75.6	64.4	11.2	255	217	38					
2006	50.0	38.6	11.4	23.7	22.8	0.9	2.4	0.9	1.4	71.3	60.4	10.9	238	202	36					

^aSource: Howard 2007, table 28.

Table 9—Particleboard and medium-density fiberboard production, imports, exports, and consumption, 1965–2006 (3/4-in. basis)^a

Year	Production			Imports (×10 ⁶ ft ²)	Exports (×10 ⁶ ft ²)	Consumption	
	Total (×10 ⁶ ft ²)	Particle- board (×10 ⁶ ft ²)	Medium- density fiberboard (×10 ⁶ ft ²)			Total (×10 ⁶ ft ²)	Per capita (ft ²)
1965	828	753	75	4	–	832	4
1966	1,031	948	83	1	–	1,032	5
1967	1,167	1,074	93	1	2	1,166	6
1968	1,494	1,391	103	1	6	1,489	7
1969	1,796	1,682	114	12	14	1,794	9
1970	1,858	1,731	127	3	10	1,851	9
1971	2,500	2,359	141	8	20	2,488	12
1972	3,236	3,079	157	14	45	3,205	15
1973	3,634	3,460	174	17	77	3,574	17
1974	3,269	3,075	194	7	113	3,163	15
1975	2,718	2,503	215	16	84	2,650	12
1976	3,469	3,189	280	60	80	3,449	16
1977	4,010	3,569	441	158	63	4,105	19
1978	4,228	3,720	508	193	61	4,360	20
1979	3,883	3,376	507	221	84	4,020	18
1980	3,443	2,950	493	264	106	3,601	16
1981	3,385	2,869	516	254	117	3,522	15
1982	2,839	2,393	446	766	41	3,564	15
1983	3,613	3,009	604	994	47	4,560	19
1984	3,830	3,196	634	1,331	54	5,107	22
1985	4,016	3,331	685	1,335	59	5,292	22
1986	4,384	3,603	781	1,395	86	5,693	24
1987	4,605	3,706	899	1,550	113	6,042	25
1988	4,768	3,829	939	1,634	163	6,239	25
1989	4,828	3,858	970	425	333	4,920	20
1990	4,756	3,806	950	363	373	4,746	19
1991	4,730	3,772	958	293	369	4,654	18
1992	5,046	3,980	1,066	405	394	5,057	20
1993	5,402	4,241	1,161	572	318	5,656	22
1994	5,793	4,542	1,251	775	297	6,271	24
1995	5,307	4,200	1,107	840	319	5,828	22
1996	5,705	4,459	1,246	814	154	6,365	24
1997	5,916	4,531	1,385	963	188	6,691	25
1998	5,994	4,593	1,401	1,038	135	6,897	26
1999	6,229	4,816	1,413	1,221	135	7,315	27
2000	6,292	4,804	1,488	1,856	162	7,986	28
2001	5,480	4,096	1,384	1,936	192	7,224	25
2002	6,035	4,414	1,621	1,377	212	7,200	25
2003	5,592	3,984	1,608	1,574	194	6,972	24
2004	6,052	4,305	1,747	1,751	195	7,608	26
2005	5,951	4,111	1,840	1,571	199	7,323	25
2006	6,110	4,189	1,921	1,379	205	7,284	24

^aSource: Howard, 2007 table 53.

Table 10—Hardboard production, imports, exports, and consumption, 1965–2006 (1/8 in. basis)

Year	Production ^a (×10 ⁶ ft ²)	Imports (×10 ⁶ ft ²)	Exports (×10 ⁶ ft ²)	Consumption	
				Total (×10 ⁶ ft ²)	Per capita (ft ²)
1965	2,921	574	22	3,473	18
1966	3,083	459	32	3,510	18
1967	3,038	455	30	3,463	17
1968	3,710	623	40	4,293	21
1969	4,247	694	48	4,893	24
1970	4,384	452	77	4,759	23
1971	5,225	631	83	5,773	28
1972	5,798	1,060	103	6,755	32
1973	6,050	1,047	131	6,966	33
1974	5,654	739	175	6,218	29
1975	5,681	264	158	5,787	27
1976	6,785	486	187	7,084	32
1977	7,714	625	174	8,165	37
1978	7,825	903	78	8,650	39
1979	7,688	831	101	8,418	37
1980	6,140	515	87	6,568	29
1981	6,105	568	171	6,502	28
1982	5,587	458	47	5,998	26
1983	7,303	717	60	7,960	34
1984	6,837	807	64	7,580	32
1985	6,300	782	192	6,890	29
1986	5,822	855	182	6,495	27
1987	5,458	832	269	6,021	25
1988	5,118	633	322	5,429	22
1989	5,196	718	427	5,487	22
1990	5,025	689	552	5,162	21
1991	4,895	571	606	4,860	19
1992	5,273	571	836	5,008	20
1993	5,248	639	917	4,970	19
1994	5,206	1,119	1,190	5,135	20
1995	4,930	1,152	1,377	4,705	18
1996	5,280	1,183	1,426	5,037	19
1997	4,501	1,306	1,259	4,548	17
1998	4,300	1,273	871	4,703	17
1999	4,386	1,782	916	5,253	19
2000	3,781	1,764	942	4,602	16
2001	3,322	2,299	788	4,833	17
2002	2,919	2,676	669	4,926	17
2003	4,304	3,080	648	6,736	23
2004	3,880	4,188	1,005	7,063	24
2005	4,347	4,786	1,076	8,056	27
2006	3,834	4,885	1,318	7,401	25

^aSource: Howard 2007, table 56.

Table 11—Paper and board production, imports, exports, and consumption, 1965–2006^b

Year	Production (Thousand tons)	Imports ^c		Exports ^c		Consumption	
		Thousand tons	Percentage of consumption	Thousand tons	Percentage of production	Total	Per capita
						Thousand tons	Pounds
1965	40,489	6,536	14.4	1,530	3.8	45,495	468
1966	43,904	7,178	14.5	1,696	3.9	49,386	502
1967	43,745	6,818	14.0	1,835	4.2	48,728	490
1968	47,085	6,643	12.9	2,125	4.5	51,602	514
1969	49,824	7,051	12.9	2,377	4.8	54,498	538
1970	48,719	6,845	12.9	2,433	5.0	53,131	518
1971	49,741	6,932	12.8	2,665	5.4	54,008	520
1972	53,842	7,245	12.4	2,790	5.2	58,297	555
1973	56,346	7,865	12.8	2,616	4.6	61,595	581
1974	55,756	8,128	13.4	3,058	5.5	60,827	569
1975	47,997	5,961	11.6	2,400	5.0	51,557	477
1976	54,993	6,879	11.6	2,637	4.8	59,235	543
1977	56,656	7,190	11.7	2,546	4.5	61,301	557
1978	58,571	8,311	12.9	2,583	4.4	64,299	578
1979	61,070	8,462	12.7	2,864	4.7	66,668	592
1980	61,042	8,013	12.4	4,241	6.9	64,814	569
1981	62,109	7,779	11.7	3,630	5.8	66,258	576
1982	59,290	7,321	11.6	3,494	5.9	63,117	544
1983	64,947	8,357	12.0	3,786	5.8	69,519	593
1984	68,449	10,148	13.5	3,542	5.2	75,055	635
1985	66,983	10,444	14.1	3,290	4.9	74,137	622
1986	70,905	10,922	14.0	3,972	5.6	77,855	647
1987	74,361	11,855	14.4	4,111	5.5	82,105	676
1988	76,587	12,184	14.4	4,239	5.5	84,532	690
1989	76,786	12,027	14.3	4,713	6.1	84,100	680
1990	78,679	12,195	14.2	5,163	6.6	85,711	686
1991	79,427	11,086	13.2	6,435	8.1	84,078	665
1992	82,868	11,731	13.4	7,021	8.5	87,578	686
1993	84,857	12,990	14.3	6,835	8.1	91,013	705
1994	89,080	13,651	14.3	7,536	8.5	95,195	730
1995	89,509	14,238	14.8	7,621	8.5	96,126	731
1996	90,381	13,023	13.8	9,118	10.1	94,287	710
1997	95,029	14,513	14.6	10,367	10.9	99,175	740
1998	94,510	15,571	15.4	9,103	9.6	100,978	747
1999	97,020	16,678	15.9	8,824	9.1	104,873	768
2000	94,491	17,356	16.8	8,701	9.2	103,147	731
2001	88,913	16,449	16.9	8,059	9.1	97,303	683
2002	89,636	16,567	17.0	8,976	10.0	97,227	676
2003	88,385	18,109	18.1	6,238	7.1	100,256	689
2004	91,899	19,036	18.3	6,742	7.3	104,193	709
2005	91,031	17,958	17.6	7,125	7.8	101,864	687
2006	91,800	17,724	17.3	7,085	7.7	102,439	685

^aExcludes hardboard, wet machine board, and construction grades.^bNumbers are the sum of Table 44 and Table 45.^cExcludes converted products.

Table 12—Wood pulp production, imports, exports, and consumption, 1965–2006^a

Year	Production (× 10 ³ tons)	Imports		Exports		Consumption	
		× 10 ³ tons	Consumption (%)	× 10 ³ tons	Production (%)	Total (× 10 ³ tons)	Per capita (Pounds)
1965	33,993	3,137	8.8	1,402	4.1	35,728	368
1966	36,603	3,358	8.7	1,547	4.2	38,414	391
1967	36,677	3,166	8.3	1,721	4.7	38,122	384
1968	40,892	3,532	8.3	1,916	4.7	42,508	424
1969	42,813	4,040	9.0	2,103	4.9	44,750	442
1970	43,546	3,513	8.0	3,095	7.1	43,964	429
1971	43,903	3,515	7.8	2,175	5.0	45,243	436
1972	46,767	3,728	7.7	2,253	4.8	48,242	460
1973	48,327	3,993	8.0	2,344	4.9	49,976	472
1974	48,349	4,123	8.3	2,802	5.8	49,670	464
1975	43,084	3,078	7.1	2,565	6.0	43,597	404
1976	47,721	3,727	7.6	2,518	5.3	48,930	449
1977	49,132	3,864	7.7	2,640	5.4	50,356	457
1978	50,020	4,024	7.8	2,599	5.2	51,445	462
1979	51,177	4,318	8.2	2,935	5.7	52,560	467
1980	52,958	4,051	7.6	3,806	7.2	53,203	467
1981	52,790	4,087	7.7	3,678	7.0	53,199	463
1982	51,468	3,656	7.1	3,395	6.6	51,729	446
1983	54,055	4,093	7.5	3,644	6.7	54,504	465
1984	57,747	4,490	7.7	3,594	6.2	58,643	496
1985	54,145	4,466	8.1	3,795	7.0	54,816	460
1986	56,997	4,582	8.0	4,458	7.8	57,121	475
1987	59,547	4,850	8.2	4,889	8.2	59,508	490
1988	61,158	5,038	8.3	5,528	9.0	60,668	495
1989	61,996	5,004	8.2	5,766	9.3	61,234	495
1990	63,048	4,893	7.9	5,905	9.4	62,036	496
1991	63,635	4,997	8.0	6,338	10.0	62,294	493
1992	65,338	5,029	8.0	7,222	11.1	63,145	494
1993	64,313	5,413	8.6	6,499	10.1	63,227	490
1994	65,920	5,650	8.7	6,728	10.2	64,842	497
1995	67,103	5,969	9.2	8,261	12.3	64,811	493
1996	65,503	5,692	8.9	7,170	10.9	64,025	482
1997	66,650	6,398	9.7	6,990	10.5	66,057	493
1998	65,163	5,984	9.2	6,025	9.2	65,122	482
1999 ^f	62,914	6,660	10.5	5,936	9.4	63,638	466
2000	62,758	7,227	11.4	6,409	10.2	63,576	451
2001	58,198	7,348	12.4	6,167	10.6	59,380	417
2002	58,069	7,247	12.3	6,254	10.8	59,063	411
2003	57,659	6,691	11.4	5,847	10.1	58,503	402
2004	59,065	6,726	11.3	6,225	10.5	59,566	405
2005	60,267	6,762	11.2	6,413	10.6	60,616	409
2006	60,568	6,939	11.4	6,606	10.9	60,901	407

^aSource: Howard 2007, table 49.

Table 13—Insulating board production, imports, exports, and consumption, 1965–2006^a

Year	Production (× 10 ³ tons)	Imports (× 10 ³ tons)	Exports (× 10 ³ tons)	Consumption	
				Total (× 10 ³ tons)	Per capita (pounds)
1965	1,234	28	15	1,246	6
1966	1,130	25	18	1,137	6
1967	1,178	25	17	1,187	6
1968	1,276	34	17	1,294	6
1969	1,330	36	24	1,342	7
1970	1,172	38	19	1,191	6
1971	1,409	42	24	1,427	7
1972	1,438	44	24	1,458	7
1973	1,436	51	29	1,459	7
1974	1,204	26	37	1,193	6
1975	1,086	13	28	1,071	5
1976	1,250	17	28	1,239	6
1977	1,271	39	31	1,279	6
1978	1,261	51	39	1,273	6
1979	1,215	51	18	1,247	6
1980	1,020	37	23	1,034	5
1981	780	38	40	777	3
1982	657	43	25	676	3
1983	836	75	30	880	4
1984	934	105	33	1,006	4
1985	903	126	29	1,000	4
1986	805	124	43	886	4
1987	823	100	47	876	4
1988	859	117	75	902	4
1989	901	127	66	962	4
1990	868	106	64	910	4
1991	853	73	70	856	3
1992	867	114	79	902	4
1993	865	105	76	894	3
1994	857	112	62	906	3
1995	857	112	62	906	3
1996	857	112	62	906	3
1997	857	112	62	906	3
1998	857	112	62	906	3
1999	857	112	62	906	3
2000	857	112	62	906	3
2001	857	112	62	906	3
2002	857	112	62	906	3
2003	857	112	62	906	3
2004	857	112	62	906	3
2005	857	112	62	906	3
2006	857	112	62	906	3

^aSource: Howard 2007, table 55.

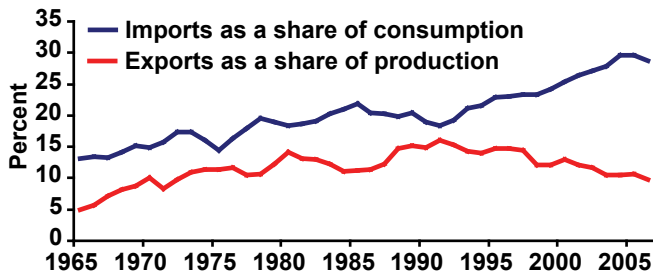


Figure 1. Wood and paper products imports as a share of consumption, and exports as a share of production, in roundwood equivalents, 1965–2006 (on volume basis in roundwood equivalent). Source: Table 3.

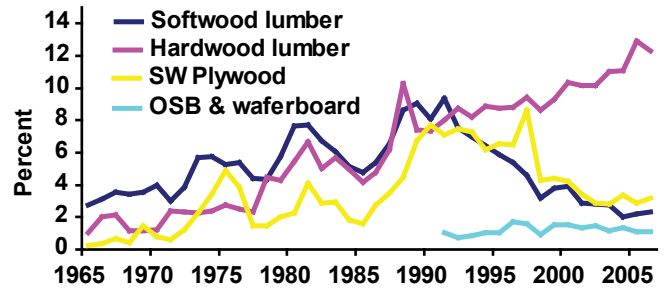


Figure 4. Wood products exports as a share of production, 1965–2006 (cubic units exported per cubic units produced) Source: Tables 5, 6, and 8.

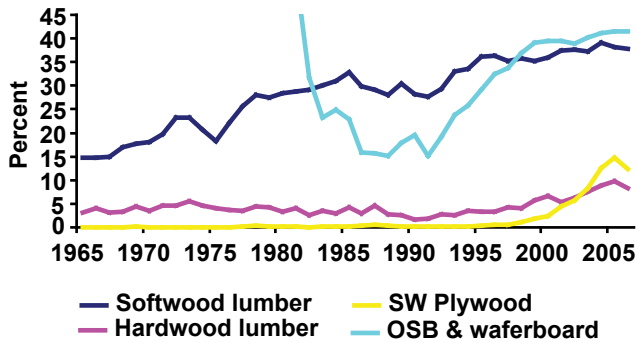


Figure 2. Wood products imports as a share of consumption, 1965–2006 (cubic units imported per cubic unit consumed). Sources: Tables 1, 2, and 5.

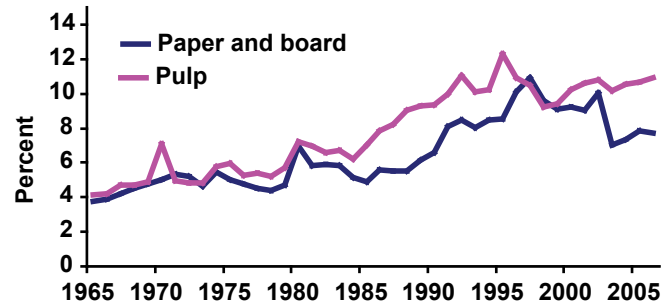


Figure 5. Pulp, paper, and paperboard exports as a share of production, 1965–2006 (tons exported per tons produced). Source: Tables 11 and 12.

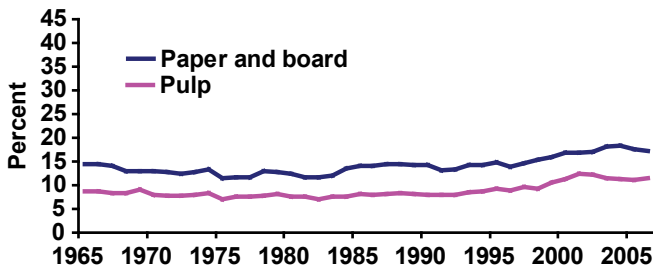


Figure 3. Pulp, paper, and board imports as a share of consumption, 1965–2006 (tons imported per tons consumed) Source: Tables 11 and 12.

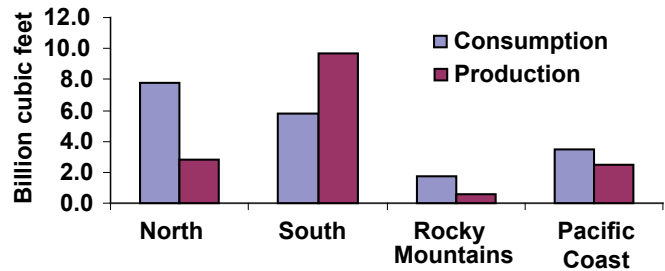


Figure 6. Wood and paper products consumption and production by region in roundwood equivalents, 2006 (billion cubic feet) (Region consumption is estimated by assuming per capita consumption of 63.5 cubic feet in roundwood equivalent). Source: Table 4.

