

RECOVERED PAPER DATA 2003



RECOVERED PAPER DATA 2003

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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NOTE

The figures reported in this survey are those supplied by countries. As is apparent from some figures in the tables (consumption of recovered paper without any relation to paper production, unrealistic percentages, etc.) there is some misunderstanding in the definitions and readers are urged to use caution when interpreting data for some countries.

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RECOVERED PAPER DATA 2003

INTRODUCTION

This FAO survey on “*Recovered Paper Data, 2003*” follows the same format as the 2001 edition. It was produced, in cooperation with the Confederation of European Paper Industry (CEPI) which supplied the necessary data relevant to its member countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Poland, Portugal, Spain, Sweden, the United Kingdom) and its associate members (Czech Republic, Hungary, Norway, Slovak Republic, Switzerland). FAO collected data for the other countries.

The survey presents data on recovery, trade and utilization of recovered paper. Historical data for the period 2003 is presented and only a few (twelve countries) provided projections of recovery and use of recovered paper for the years 2004, 2005, 2006 and 2007. The ratios used to analyse the data are those recommended by the Sub-group on Waste Paper Terminology and are defined later in this document.

Appendix 1 contains the questionnaire which FAO sent to 46 countries.

In addition to the 20 countries covered by CEPI, the following 15 countries answered the questionnaires: Australia, Brazil, Canada, Chile, Colombia, Indonesia, Israel, Japan, Latvia, Malaysia, Morocco, New Zealand, Romania, South Africa, United States of America. All together these 35 countries represent over 75 percent of the world paper and paperboard production and the data presented can be considered representative of the recovery, use and trade of recovered paper in the world.

For inquiries on these data please contact FAO Forestry Department, Forest Products and Economics Division. Mailing address: Viale delle Terme di Caracalla, 00100 Rome, Italy, telephone: +39 06 5705 3221, fax: +39 06 5705 5137, e-mail: Felice.Padovani@fao.org. These data and data from previous surveys are also available on-line at:

www.fao.org/forestry/foris/webview/forestry2/index.jsp?siteId=3141&langId=1

DEFINITIONS OF TERMS USED

The FAO Advisory Committee on Pulp and Paper created a Sub-group on Waste Paper Terminology to define the terms to be used by FAO to describe waste paper recovery and utilization. The following are the definitions used in this report:

a) Waste paper net recovery rate: is the amount of waste paper collected for re-use as a percentage of the adjusted paper and paperboard consumption.

(Note: the adjusted paper and paperboard consumption is equal to the apparent consumption of paper and paperboard plus the net trade in converted paper and paperboard products, excluding printed materials).

b) Adjusted waste paper net recovery rate: is the amount of waste paper collected as a percentage of the adjusted paper and paperboard consumption from which the non-recoverable paper and paperboard is deducted.

c) Recovered paper utilization rate: is the amount of recovered paper used for paper and paperboard as a percentage of paper and paperboard production.

d) Recovered paper in fibre use rate: is the amount of recovered paper used for paper and paperboard as a percentage of the total fibre used for paper and paperboard.

SUMMARY

RECOVERED PAPER TRADE

Table 1– *Recovered paper trade in relation to recovered paper collection and utilization of recovered paper*, and Appendices 5 and 6 present the results of the survey.

In 2003, the United States of America was the major exporter with 12.5 million tonnes, followed by Germany with 3.2 million tonnes and by Japan, the Netherlands, Belgium and the United Kingdom with nearly 2 million tonnes.

Main importers of recovered paper were Canada, Indonesia and Germany with respectively 2.3, 2.2 and 2 million tonnes.

RECOVERED PAPER UTILIZATION FOR PURPOSES OTHER THAN PAPER AND PAPERBOARD MAKING

Table 2 – *Distribution of the total use of recovered paper between paper/paperboard making and other uses*, gives the relevant information. The information collected indicates that in nearly all countries virtually all recovered paper is used for paper and paperboard production.

RECOVERED PAPER UTILIZATION BY THE PAPER AND PAPERBOARD INDUSTRY

Table 3 – *Recovered paper utilization rate, recovered paper in fibre use rate and total fibre used for paper and paperboard production*, indicates the amounts of recovered paper being used in the paper furnish. This survey shows that about 50% of the countries use more than 50% of recovered paper in their domestic production of paper and paperboard.

Table 4 – *Composition of recovered paper (in percent)*, shows what are the major grades of paper entering in the flow of recovered paper. On average world-wide, corrugated, solid containers and kraft sack waste account for nearly half of the total recovered paper, while newspaper and magazines grades account for a much lower share of the total.

Table 5 – *Use of recovered paper by grades in percent* shows what percentage of recovered paper is used in the production of various paper and paperboard grades. The data indicates that the percentage of recovered paper entering the production of paper is much higher for packaging grades (case material, folding boxboard, wrapping and other packaging grades) than cultural grades.

LOSSES IN REPULPING OF RECOVERED PAPER

Waste paper has higher losses during pulping than virgin material due to the amount of fines and filler in the waste paper. As the content of waste paper increases in the raw material, the amount of losses will go up.

Table 6 – *Losses in repulping and processing into paper and paperboard* presents the percentage figures for pulping losses. Though data is scarce, in most of the countries reporting the information, pulping losses are between 10 and 20 percent, with some exceptions probably due to antiquated equipment or poor processing control.

PROJECTED FUTURE RECOVERY OF WASTE PAPER

Table 7 – *Projected future recovery of waste paper and use of recovered paper for paper and paperboard making* shows projections for the next four years in both waste paper collected for re-use and for recovered paper used for paper and paperboard. They are expressed as a percentage of the 2003 level taken as a base line (100 percent).

TABLES

FAO RECOVERED PAPER SURVEY (2003)

TABLE 1 - RECOVERED PAPER TRADE IN RELATION TO RECOVERED PAPER COLLECTION AND UTILIZATION OF RECOVERED PAPER

Country	2003					
	Recovered paper collected nationally for paper and paperboard production	Exports of recovered paper		Recovered paper used for paper and paperboard	Imports of recovered paper	
	1000 mt	1000 mt	%	1000 mt	1000 mt	%
Australia	1924	307	16	1654	35	2
Austria	1262	218	17	1992	948	48
Belgium	1846	1880	102	671	705	105
Brazil	2873	4	0	2900	31	1
Canada	2700	650	24	4945	2260	46
Chile	422	2	0	421	35	8
Colombia		1		505	77	15
Czech Rep	490	140	29	386	36	9
Denmark	731	429	59	400	98	25
Finland	710	105	15	688	83	12
France	5907	1337	23	5783	1213	21
Germany	13643	3231	24	12449	2037	16
Greece	407	66	16	345	4	1
Hungary	395	45	11	370	20	5
Indonesia	2215		0	4419	2204	50
Ireland	181	136	75	47	2	4
Israel	242	1	0	230	7	3
Italy	-58	519	-895		577	
Japan	20443	1971	10	18449	118	1
Latvia	45	36	79	10	2	20
Malaysia	650		0	1547	150	10
Morocco	35	0	0	70	35	50
Netherlands	2496	1924	77	2376	1804	76
New Zealand	215	184	86	215	0	0
Norway	526	153	29	456	83	18
Poland	1016	112	11	908	4	0
Portugal	495	186	38	324	15	5
Romania	211	8	4	222	20	9
Slovakia	197	53	27	251	107	43
South Africa	923	20	2	914	12	1
Spain	-799	112	-14	.	911	
Sweden	1466	177	12	1926	637	33
Switzerland	1129	318	28	1060	249	23
UK	6377	1861	29	4533	17	0
USA	44685	12524	28	30783	362	1

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 2 - DISTRIBUTION OF THE TOTAL USE OF RECOVERED PAPER BETWEEN PAPER AND PAPERBOARD MAKING

Country	2003				
	Total use of recovered paper	Recovered paper used for paper & paperboard		Recovered paper used for other purposes	
	1000 mt	1000 mt	%	1000 mt	%
Australia	1654	1654	100	0	0
Austria	1992	1992	100		0
Belgium	671	671	100		0
Brazil	2900	2900	100	0	0
Canada	4945	4945	100		0
Chile	421	421	100		0
Colombia	505	505	100		0
Czech Rep	386	386	100		0
Denmark	400	400	100		0
Finland	688	688	100		0
France	5783	5783	100		0
Germany	12449	12449	100		0
Greece	345	345	100		0
Hungary	370	370	100		0
Indonesia	4419	4419	100		0
Ireland	47	47	100		0
Israel	230	230	100	0	0
Italy					
Japan	18651	18449	99	202	1
Latvia	13	10	79	3	21
Malaysia	1547	1547	100		0
Morocco	70	70	100	0	0
Netherlands	2376	2376	100		0
New Zealand	215	215	100		0
Norway	456	456	100		0
Poland	908	908	100		0
Portugal	324	324	100		0
Romania	222	222	100		0
Slovakia	251	251	100		0
South Africa	938	914	97	24	3
Spain					
Sweden	1926	1926	100		0
Switzerland	1060	1060	100		0
UK	4533	4533	100		0
USA	32523	30783	95	1740	5

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 3 - RECOVERED PAPER UTILIZATION RATE, RECOVERED PAPER IN FIBRE USE RATE AND TOTAL FIBRE USED FOR PAPER AND PAPERBOARD PRODUCTION

Country	2003					
	Paper and paperboard production	Total fibre used for paper and paperboard	Recovered paper used for paper & paperboard	Total fibre used / paper & paperboard production	Recovered paper in fibre use rate	Recovered paper utilization rate
	1000 mt	1000 mt	1000 mt	%	%	%
Australia	3061	3061	1654	100	54	54
Austria	4564		1992	0		44
Belgium	1746		671	0		38
Brazil	7811	6830	2900	87	42	37
Canada	19970		4945	0		25
Chile	1098		421	0		38
Colombia	865	1005	505	116	50	58
Czech Rep	941		386	0		41
Denmark	370		400	0		
Finland	13057		688	0		5
France	9938		5783	0		58
Germany	19310		12449	0		64
Greece	495		345	0		70
Hungary	542		370	0		68
Indonesia	7213	3550	4419	49	124	61
Ireland	43		47	0		
Israel	380		230	0		61
Italy	9372			0		0
Japan	30458	30594	18449	100	60	61
Latvia	38	41	10	108	24	26
Malaysia	1190	1100	1547			
Morocco	135	60	70	44	117	52
Netherlands	3341		2376	0		71
New Zealand	809	1327	215	164	16	27
Norway	2186		456	0		21
Poland	2362		908	0		38
Portugal	1521		324	0		21
Romania	443	460	222	104	48	50
Slovakia	673		251	0		37
South Africa	2332	777	914	33	118	39
Spain	5438			0		0
Sweden	11062		1926	0		17
Switzerland	1819		1060	0		58
UK	6226		4533	0		73
USA	81452		30783	0		38

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 4 - COMPOSITION OF RECOVERED PAPER (IN PERCENT)

Country	2003				
	Total recovered paper	Old and over-issue newspapers and magazines, telephone directories, brochures, etc.	Corrugated, solid containers and kraft sack waste (old and new).	Wood-free printing and writing paper, punch cards and other high-grade qualities.	Mixed grades
	%	%	%	%	%
Australia	100	24	66	10	0
Austria	100	31	32	10	26
Belgium	100	42	45	3	11
Brazil	100	6	70	14	11
Canada	100	48	38	11	3
Chile	100	7	60	28	5
Colombia	100	7	64	27	2
Czech Rep	100	26	47	11	16
Denmark	100	16	48	18	19
Finland	100	45	29	16	10
France	100	31	48	8	13
Germany	100	30	31	12	26
Greece	100	9	71	9	12
Hungary	100	11	66	2	20
Indonesia					
Ireland	100	0	89	0	11
Israel	100	17	59	21	4
Italy					
Japan	100	29	46	11	15
Latvia	100	30	50	10	10
Malaysia					
Morocco					
Netherlands	100	24	26	9	40
New Zealand	100	23	57	7	13
Norway	100	43	54	2	1
Poland	100	27	55	5	13
Portugal	100	2	60	23	15
Romania	100	19	46	0	34
Slovakia	100	27	34	23	16
South Africa	100	13	55	24	8
Spain					
Sweden	100	51	32	6	11
Switzerland	100	40	25	13	23
UK	100	27	49	17	7
USA	100	19	59	11	11

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 5 - USE OF RECOVERED PAPER BY GRADES IN PERCENT

Country	2003							
	Recovered paper used for paper and paperboard	Newsprint	Other graphic paper	Case material	Folding boxboard	Wrapping, other packaging paper	Household and sanitary paper	Other paper and paperboard n.e.s.
	%	%	%	%	%	%	%	%
Australia	100	5	9	0	0	0	1	85
Austria	100	16	16	36	21	2	8	1
Belgium	100	31	12	42	11	0	0	3
Brazil	100	0	1	63	7	9	15	6
Czech Rep	100	12	2	50	9	11	11	4
Denmark	100	0	34	55	0	11	0	0
Finland	100	37	0	0	3	37	22	0
France	100	18	9	51	0	14	6	1
Germany	100	20	13	40	8	8	6	5
Greece	100	0	0	49	20	16	14	0
Hungary	100	0	1	76	0	13	10	0
Ireland	100	0	0	100	0	0	0	0
Italy	100	0	0	100	0	0	0	0
Japan	100	16	14	51	10	0	5	5
Latvia	100	0	0	30	0	40	0	30
Malaysia	100	100	0	0	0	0	0	0
Netherlands	100	16	1	36	10	32	6	0
New Zealand	100	0	0	85	2	0	13	0
Norway	100	36	0	49	0	9	7	0
Poland	100	15	1	56	4	5	13	6
Portugal	100	0	1	75	8	11	3	2
Romania	100	6	0	60	5	4	24	1
Slovakia	100	0	0	42	0	8	50	0
South Africa	100	7	3	49	15	21	4	1
Spain	100	0	1	75	8	11	3	2
Sweden	100	44	0	30	8	0	11	6
Switzerland	100	38	1	41	11	0	10	0
UK	100	25	3	43	0	8	12	8
USA	100	10	5	46	0	1	12	26

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 6 - LOSSES IN REPULPING AND PROCESSING INTO PAPER AND PAPERBOARD

Country	2003		
	Total recovered paper used	Losses in pulping	
	1000 mt	1000 mt	%
Australia	1654	180	11
Austria	1992		
Belgium	671		
Brazil	2900	435	15
Canada	4945		
Chile	421		
Colombia	505	86	17
Czech Rep	386		
Denmark	400		
Finland	688		
France	5783		
Germany	12449		
Greece	345		
Hungary	370		
Indonesia	4419		
Ireland	47		
Israel	230		
Italy			
Japan	18651		
Latvia	13	1	8
Malaysia	1547		
Morocco	70	6	9
Netherlands	2376		
New Zealand	215		
Norway	456		
Poland	908		
Portugal	324		
Romania	222	60	27
Slovakia	251		
South Africa	938	137	15
Spain			
Sweden	1926		
Switzerland	1060		
UK	4533		
USA	32523	4617	14

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

TABLE 7 - PROJECTED FUTURE RECOVERY OF WASTE PAPER AND USE OF RECOVERED PAPER FOR PAPER AND PAPERBOARD MAKING

Country	Waste paper collected for re-use					Recovered paper used for paper and paperboard				
	%					%				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Australia	100	102	103	105	106	100	101	102	103	104
Brazil	100	104	107	111	115	100	103	106	110	114
Indonesia	100					100				
Israel	100					100				
Japan	100	102	102	103	104	100	101	101	101	102
Latvia	100	120	129	140	156	100	100	150	180	200
Malaysia	100	112	124	136	146	100	105	106	106	107
Morocco	100	100	100	100	100	100	100	100	100	100
New Zealand	100	100	100	100	100	100	102	102	102	102
Romania	100	114	120	124	124	100	119	126	131	131
South Africa	100	101	102	103	104	100	102	104	107	109
USA	100	103				100	97	99	100	101

APPENDIX 1: QUESTIONNAIRE

FAO RECOVERED PAPER SURVEY (2003)
Part 1: Main Questionnaire

Country:

(All figures in 000 metric tons)	2003
1. Production of paper and paperboard	
2. Net trade in paper and paperboard	
3. Recovered paper collected nationally for paper and paperboard production	
4. Exports of recovered paper.*	
5. Imports of recovered paper.*	
6a. Recovered paper* used domestically for purposes other than paper and paperboard making.	
6b. Recovered paper* used domestically for paper and paperboard making	
(i) Old and over-issue newspapers and magazines, telephone directories, brochures, etc.	
(ii) Corrugated, solid containers and kraft sack waste (old and new)	
(iii) Wood-free printing and writing paper, punch cards and other high-grade qualities	
(iv) Mixed grades	
7. Losses in repulping and processing into paper and paperboard	
8. Total fibre used for paper and paperboard	

*including recovered paper market pulp measured in terms of recovered paper.

FAO RECOVERED PAPER SURVEY (2003)

Part 2: Use of the main types of recovered paper in the manufacture of major grades of paper and paperboard.

Country:

		Types of recovered paper (all figures in 000 metric tons)				
		Recovered paper* used domestically for paper and paperboard making. Total recovered paper	Old and over-issue newspapers, magazines, telephone directories, brochures, etc.	Corrugated, solid container and kraft sack waste (old and new).	Wood-free printing and writing papers, punch cards and other high-grade qualities.	Mixed grades
Major grades of paper and paperboard	year	[6b.] **	[6b.(i)] **	[6b.(ii)] **	[6b.(iii)] **	[6b.(iv)] **
Paper and paperboard total	2003	_____	_____	_____	_____	_____
Newsprint	2003	_____	_____	_____	_____	_____
Other graphic paper	2003	_____	_____	_____	_____	_____
Case material	2003	_____	_____	_____	_____	_____
Folding boxboard	2003	_____	_____	_____	_____	_____
Wrappings, other packaging paper	2003	_____	_____	_____	_____	_____
Household and sanitary paper	2003	_____	_____	_____	_____	_____
Other paper and paperboard, n.e.s.	2003	_____	_____	_____	_____	_____

* Including recovered paper market pulp measured in terms of recovered paper

** same headings as in Part 1: Main Questionnaire

FAO RECOVERED PAPER SURVEY (2003)

Part 3: Projected future consumption and supply of recovered paper

Country:

(All figures in 000 metric tons)	2003	2004	2005	2006	2007
Waste paper collected for re-use					
Exports of recovered paper* [4] **					
Imports of recovered paper* [5] **					
Recovered paper* used domestically for purposes other than paper and paperboard making [6a.] **					
Recovered paper* used domestically for paper and paperboard making [6b.] **					

*including recovered paper market pulp measured in terms of recovered paper.

** same headings as in Part 1: Main Questionnaire

**APPENDIX 2: DEFINITIONS OF THE TERMS USED IN
THE FAO RECOVERED PAPER SURVEY QUESTIONNAIRE**

APPENDIX 2 – DEFINITIONS OF THE TERMS USED IN THE FAO RECOVERED PAPER SURVEY QUESTIONNAIRE

1. Paper and paperboard production is the quantity of all paper and paperboard of commercial quality (fibre building boards not included) produced within a country.
2. Net trade in paper and paperboard (excluding printed material) is the difference between the imports and exports of converted paper and paperboard products (SITC [Rev. 2] 642 and part of BIN 48). In case imports exceed exports, this factor is positive, and in case exports are higher than imports the factor is negative.
3. Recovered paper collected nationally for paper and paperboard production is the net quantity of recovered paper collected which is used exclusively in paper and paperboard manufacture including also recovered paper market pulp measured in terms of recovered paper input.
4. and 5. Exports and imports of recovered paper are the quantities of all kinds of waste paper exported and imported for any kind of use including waste paper market pulp¹ measured in terms of waste paper inputs.
- 6a. Recovered paper used domestically for purposes other than paper and paperboard making is the quantity of waste paper used for fibre building boards, moulded products, in bulk as wrapping and packaging material or for any other major industrial or commercial use.
- 6b. Recovered paper used domestically for paper and paperboard making is the net quantity of the waste paper intake at the mill (and excluding all sorting losses) of any kind of waste paper - either locally collected or imported - which is used exclusively in paper and paperboard manufacture including also recovered paper market pulp measured in terms of recovered paper input. (Whenever possible, the quantities of recovered paper should be expressed at 90 percent dryness and should include the losses in repulping and processing into paper and paperboard). The details under this heading include the following:
 - i) Old and over-issue newspapers and magazines, telephone directories, brochures, etc., i.e. waste paper containing mainly mechanical pulp.
 - ii) Corrugated, solid container and kraft sack waste (old and new), i.e. recovered paper containing mainly unbleached sulphate pulp.
 - iii) Wood-free printing and writing papers, copy paper, computer printouts, and other high-grade qualities, i.e. recovered paper containing mainly bleached chemical pulp.
 - iv) Mixed grades, all other types of recovered paper.
7. Losses in repulping and processing into paper and paperboard is the quantity which is lost as broken fibres, fillers, coatings and other additives when the recovered paper is repulped, as well as the fibre losses in processing the derived recovered paper pulp into paper and paperboard.
8. Total fibre used for paper and paperboard is the total input quantity of all types of fibres at 90 percent dryness used for paper and paperboard manufacturing. The fibres can originate from wood (round, split, chips, residues, sawdust, etc.), from non-wood fibrous vegetable materials (bagasse, straw, bamboo, esparto, other reeds and grass, cotton linters, flax, hemp, etc.), from rags and other textile wastes and from recovered paper.

¹

Recovered paper market pulp is the pulp made of recovered paper for sale in the open market and does not include recovered paper pulp used in own plant or shipped to wholly owned or associated companies within the country. All recovered paper pulp moving outside the producing country is considered to be recovered paper market pulp.

PLEASE NOTE: For some of the headings or for some parts of the headings the data might not be readily available. In such cases you are kindly requested to make estimates and to indicate such estimates with e.g. a footnote.

**APPENDIX 3: WASTE PAPER RECOVERY AND UTILIZATION OF
RECOVERED PAPER IN PAPER AND PAPERBOARD IN 2003**

FAO RECOVERED PAPER SURVEY (2003)

APPENDIX 3 - WASTE PAPER RECOVERY AND UTILIZATION OF RECOVERED PAPER IN PAPER AND PAPERBOARD INDUSTRY

Country	2003						
	Production of paper and paperboard	Net trade in paper and paperboard	Apparent consumption of paper and paperboard	Recovered paper collected nationally for paper and paperboard production	Recovered paper collection rate	Exports of recovered paper	Imports of recovered paper
	1000 mt	1000 mt	1000 mt	1000 mt	%	1000 mt	1000 mt
Australia	3061	597	3658	1924	53	307	35
Austria	4564	-2529	2035	1262	62	218	948
Belgium	1746	1682	3428	1846	54	1880	705
Brazil	7811	27	7838	2873	37	4	31
Canada	19970	-12630	7340	2700	37	650	2260
Chile	1098	60	1158	422	36	2	35
Colombia	865	-47	818		0	1	77
Czech Rep	941	227	1168	490	42	140	36
Denmark	370	957	1327	731	55	429	98
Finland	13057	-11446	1611	710	44	105	83
France	9938	874	10812	5907	55	1337	1213
Germany	19310	1691	21001	13643	65	3231	2037
Greece	495	681	1176	407	35	66	4
Hungary	542	182	724	395	55	45	20
Indonesia	7213	-2068	5145	2215	43		2204
Ireland	43	387	430	181	42	136	2
Israel	380	123	503	242	48	1	7
Italy	9372	1677	11049	-58	-1	519	577
Japan	30458	504	30962	20443	66	1971	118
Latvia	38	-108	-70	45	-65	36	2
Malaysia	1190	1980	3170	650	21		150
Morocco	135	204	339	35	10	0	35
Netherlands	3341	145	3486	2496	72	1924	1804
New Zealand	809	65	874	215	25	184	0
Norway	2186	-1318	868	526	61	153	83
Poland	2362	-209	2153	1016	47	112	4
Portugal	1521	-464	1057	495	47	186	15
Romania	443	95	538	211	39	8	20
Slovakia	673	411	1084	197	18	53	107
South Africa	2332	-321	2011	923	46	20	12
Spain	5438	1770	7208	-799	-11	112	911
Sweden	11062	-8694	2368	1466	62	177	637
Switzerland	1819	-255	1564	1129	72	318	249
UK	6226	6237	12463	6377	51	1861	17
USA	81452	7443	88895	44685	50	12524	362

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

APPENDIX 3 - WASTE PAPER RECOVERY AND UTILIZATION OF RECOVERED PAPER IN PAPER AND PAPERBOARD INDUSTRY (cont.)

Country	2003						
	Recovered paper used for other purpose than paper and paperboard	Recovered paper used for paper and paperboard	Losses in repulping and processing into paper and paperboard	Total fibre used for paper and paperboard	Recovered paper in fibre use rate	Total fibre / paper and paperboard production	Recovered paper utilization rate
	1000 mt	1000 mt	1000 mt	1000 mt	%	%	%
Australia	0	1654	180	3061	54	100	54
Austria		1992					44
Belgium		671					38
Brazil	0	2900	435	6830	42	87	37
Canada		4945					25
Chile		421					38
Colombia		505	86	1005	50	116	58
Czech Rep		386					41
Denmark		400					108
Finland		688					5
France		5783					58
Germany		12449					64
Greece		345					70
Hungary		370					68
Indonesia		4419		3550	124	49	61
Ireland		47					109
Israel	0	230					61
Italy							0
Japan	202	18449		30594	60	100	61
Latvia	3	10	1	41	24	108	26
Malaysia		1547		1100	141	92	130
Morocco	0	70	6	60	117	44	52
Netherlands		2376					71
New Zealand		215		1327	16	164	27
Norway		456					21
Poland		908					38
Portugal		324					21
Romania		222	60	460	48	104	50
Slovakia		251					37
South Africa	24	914	137	777	118	33	39
Spain							0
Sweden		1926					17
Switzerland		1060					58
UK		4533					73
USA	1740	30783	4617				38

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

APPENDIX 4: EXPORTS 2003

FAO RECOVERED PAPER SURVEY (2003)

APPENDIX 4		EXPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2003 (1000 mt)														
		Australia	Austria	Belgium	Brazil	Canada	Colombia	Czech Rep	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy
to	from															
ARGENTINA					2											
AUSTRALIA																
AUSTRIA			6					24	2	2	13	446		13		88
BANGLADESH																
BELGIUM										1	120	83				
BOSNIA HERZEG																3
BRAZIL																
BULGARIA			14									2	9	1		2
CANADA																
CHINA		60		312					2	2	92	506			42	71
COLOMBIA																
CROATIA			21									4		2		36
CZECH REP			3									30				
DENMARK												37				
ESTONIA										2						
FINLAND												2				
FRANCE				317					2			231				19
GERMANY			129	110				60	211	45	212			6	1	152
GREECE												3				3
HUNGARY		1	1					1				18			1	1
INDIA		9		90						5	21	49	2		33	2
INDONESIA		175		188						1	41	197				25
IRELAND																
ISRAEL																
ITALY			10	7				1	1	1	57	178	12			
JAPAN				1												
KOREA REP		2									6	26				
LITHUANIA												3				
MALAYSIA		27		10						1	9	8				6
MEXICO																
MOLDOVA														3		
NETHERLAND				759				1	6		67	993			22	5
NORWAY									12	2		1				
PAKISTAN		1														
PHILIPPINES		17		5								7			1	
POLAND								1			1	5				
PORTUGAL																
ROMANIA											1			1		4
RUSSIA										5						
SINGAPORE		2														
SLOVAK REP.			12	1				48				10		6		
SLOVENIA			25	1				1			2	49		2		54
SOUTH AFRICA		2														
SPAIN				2						2	480	23			23	7
SWEDEN									191	25	2	129				
SWITZERLAND			1	3				1		2	69	144				16
THAILAND		10		20						1	5	28				6
TURKEY												1	42			8
UK				7					1	3	140	4			12	6
UKRAINE								2						7		
URUGUAY					2											
USA				2		650	1				1	1				
VENEZUELA											1					
VIETNAM		1		1								2				
YUGOSLAVIA			2									2		4		
ZAMBIA																
ZIMBABWE																
OTHERS				38					1	5	7	9	1		1	5
GRAND TOTAL		307	218	1880	4	650	1	140	429	105	1337	3231	66	45	136	519

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

FAO RECOVERED PAPER SURVEY (2003)

APPENDIX 4		EXPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2003 (cont.)													
		(1000 mt)													
from	Japan	Latvia	Netherlands	New Zealand	Norway	Poland	Portugal	Slovakia	South Africa	Spain	Sweden	Switzerland	UK	USA	Total
to															
ARGENTINA															2
AUSTRALIA				14											14
AUSTRIA			14			2		11			7	58	16		702
BANGLADESH														46	46
BELGIUM			111									1	70		386
BOSNIA HERZEG															3
BRAZIL													1		1
BULGARIA															28
CANADA													1	2260	2261
CHINA	1314		522	29						6	1		388	5824	9171
COLOMBIA														42	42
CROATIA													1		64
CZECH REP			5					12							50
DENMARK			4		16							29			86
ESTONIA															2
FINLAND												20			22
FRANCE			120		5					26		119	219		1058
GERMANY			477		3	85				31	40	76	118		1756
GREECE															6
HUNGARY								1							24
INDIA			84	6							1		195	588	1085
INDONESIA	33		353	77									331	384	1805
IRELAND			1							1			16		18
ISRAEL														29	29
ITALY			9							14	18	56	12	128	504
JAPAN													12	106	119
KOREA REP	64		55										38	1071	1262
LITHUANIA		21				1									25
MALAYSIA			18	30									52		161
MEXICO													2	1140	1142
MOLDOVA						3									6
NETHERLAND					12	1				3	6	7	134	56	2072
NORWAY			1								46		1		63
PAKISTAN															1
PHILIPPINES	58		47	7									2	84	228
POLAND											2				9
PORTUGAL										3					3
ROMANIA															6
RUSSIA															5
SINGAPORE				4											6
SLOVAK REP.						8									85
SLOVENIA			3									1			138
SOUTH AFRICA				1											3
SPAIN			2				186				3		11	49	788
SWEDEN			23		83	1							133		587
SWITZERLAND			4										5		235
THAILAND	465		12	4									9	398	958
TURKEY											1		1		63
UK			21												194
UKRAINE		15				11		29							64
URUGUAY															2
USA			15										4		674
VENEZUELA														74	75
VIETNAM	34		1	11									3	28	81
YUGOSLAVIA															8
ZAMBIA									1						1
ZIMBABWE									19						19
OTHERS	3		22		34					28	3		86	218	461
GRAND TOTAL	1971	36	1924	183	153	112	186	53	20	112	177	318	1861	12525	28699

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated.

APPENDIX 5: IMPORTS 2003

FAO RECOVERED PAPER SURVEY (2003)

ANNEX 5		IMPORTS OF RECOVERED PAPER BY COUNTRY OF ORIGIN IN 2003														
		(1000 mt)														
to	Australia	Austria	Belgium	Brazil	Canada	Colombia	Czech Rep	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	
from																
AUSTRALIA																
AUSTRIA							3	1		2	119		1		9	
BELGIUM		4								272	106				6	
CANADA			2			1									9	
CHINA	2		1													
COSTA RICA						3										
CYPRUS												1				
CZECH REP		28									46		1		1	
DENMARK		2								2	134				2	
DOMINICAN REP						4										
ECUADOR						2										
EL SALVADOR						1										
ESTONIA									3							
FIJI	3															
FINLAND			6								47				1	
FRANCE		10	154								238				72	
GERMANY		656	134				19	48	47	332		2	16		192	
GREECE															13	
GUATEMALA						2										
HONDURAS						5										
HUNGARY		13														
ICELAND																
IRELAND			3								1					
ISRAEL																
ITALY		105					1			22	182	1	1			
KENYA																
LITHUANIA											3					
MEXICO																
MOLDOVA																
MOZAMBIQUE																
NETHERLAND		27	349				4	10		93	815				29	
NEW ZEALAND	19															
NORWAY								20			11					
PANAMA						6										
PAPUA N GUIN	2															
PARAGUAY				6												
POLAND		3								1	93					
PORTUGAL																
PUERTO RICO						8										
RUSSIA									1							
SINGAPORE	4															
SLOVAK REP		10					9						1			
SLOVENIA		7													2	
SPAIN			1							34	26				16	
SWEDEN		6						19	26	1	37				21	
SWITZERLAND		59								118	90				48	
TURKEY																
UK	2	17	49						1	317	82			2	25	
UKRAINE		1							1							
URUGUAY				8												
USA	3		3	17	2260	43			4	14	7				128	
VENEZUELA						3										
OTHERS			3							5					3	
GRAND TOTAL	35	948	705	31	2260	78	36	98	83	1213	2037	4	20	2	577	

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated

FAO RECOVERED PAPER SURVEY (2003)

ANNEX 5		IMPORTS OF RECOVERED PAPER BY COUNTRY OF ORIGIN IN 2003 (cont.)														
		(1000 mt)														
to	Japan	Latvia	Morocco	Netherlands	Norway	Poland	Portugal	Romania	Slovak Rep	South Africa	Spain	Sweden	Switzerland	UK	USA	Total
from																
AUSTRALIA										2						2
AUSTRIA				1					11				12			159
BELGIUM				486					1	1	2	6	3	1		888
CANADA	3			1							1				348	365
CHINA																3
COSTA RICA																3
CYPRUS																1
CZECH REP				1		1			72				1			161
DENMARK				16	18				1			179				354
DOMINICAN REP																4
ECUADOR																2
EL SALVADOR																1
ESTONIA		1										2				6
FIJI																3
FINLAND					2						2	12	2			72
FRANCE			1	76				1			559		49	1		1161
GERMANY			2	931		2	1	3	12		32	130	147			2706
GREECE				2												15
GUATEMALA																2
HONDURAS																5
HUNGARY								6	4							23
ICELAND				2								9				11
IRELAND				15						1	36			13		69
ISRAEL								1								1
ITALY				8				1			3		17			341
KENYA										2						2
LITHUANIA		1														4
MEXICO	8														12	20
MOLDOVA								8								8
MOZAMBIQUE										1						1
NETHERLAND					5						3	43	5	1		1384
NEW ZEALAND										2						21
NORWAY												146				177
PANAMA																6
PAPUA N GUIN																2
PARAGUAY																6
POLAND				1					6		1	1				106
PORTUGAL											189					189
PUERTO RICO																8
RUSSIA																1
SINGAPORE																4
SLOVAK REP																20
SLOVENIA																9
SPAIN			29	1			10					3	1			121
SWEDEN				2	56	1					7					176
SWITZERLAND				1												316
TURKEY					1											1
UK			3	192	1					3	13	105	12		2	826
UKRAINE				1												3
URUGUAY																8
USA	102			67			4				54	1		1		2708
VENEZUELA																3
OTHERS	5										9					25
GRAND TOTAL	118	2	35	1804	83	4	15	20	107	12	911	637	249	17	362	12503

Notes: Denmark, Greece, Ireland, Malaysia and Morocco figures have been estimated

