

# RECOVERED PAPER DATA 2009



# **RECOVERED PAPER DATA 2009**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Rome, 2010

### **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 2009

### INTRODUCTION

This FAO survey on “*Recovered Paper Data, 2009*” follows the same format as the 2006 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, Czech Republic, Finland, France, Germany, Hungary, Italy, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, the Netherlands, the United Kingdom). FAO collected data for the other remaining countries.

The survey presents data on recovery, trade and utilization of recovered paper. Historical data for the period 2009 is presented and only a few countries provided projections of recovery and use of recovered paper for the years 2010, 2011, 2012 and 2013. 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 18 countries covered by CEPI, the following 18 countries answered the questionnaires: Australia, Brazil, Chile, Colombia, Cuba, Israel, Iraq, Japan, Malaysia, Mexico, New Zealand, Peru, Poland, Russian Federation, Thailand, The former Yugoslav Republic of Macedonia, Turkey and the United States of America. All together these 36 countries represent over 70 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 Assessment, Management and Conservation Division. Mailing address: Viale delle Terme di Caracalla, 00100 Rome, Italy, telephone: +39 06 5705 2799, fax: +39 06 5705 5137, e-mail: [Felice.Padovani@fao.org](mailto: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](http://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 2009, the United States of America was the major exporter with 19 million tonnes, followed by Japan with 4.9, The United Kingdom and Germany with 3.4 and The Netherlands 3.2 million tonnes. France and Belgium reported more than 2 million tonnes and Italy and Australia with more than 1 million tonnes.

Main importers of recovered paper were Germany and The Netherlands respectively with 3.1 and 2.8 million tonnes and by Belgium, Mexico and Austria with more than 1 million tonnes. Just below 1 million tonnes we found Thailand, Spain and Sweden.

### 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 half of the total recovered paper, while newspaper and magazines grades account for 20%.

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 70% 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 2009 level taken as a base line (100 percent).

## TABLES





## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009					
	Recovered paper collected nationally for paper and paperboard production	Exports of recovered paper		Recovered paper used for paper and paperboard	Imports of recovered paper	
	1000mt	1000mt	%	1000mt	1000mt	%
Australia	3381	1342	40	1989	4	0
Austria	1552	430	28	2291	1169	51
Belgium	1879	2426	129	1090	1636	150
Brazil	3834	2	0	3848	13	0
Chile	489	17	3	576	121	21
Colombia	633	2	0	727	96	13
Cuba	28	0	0	31	3	10
Czech Republic	709	404	57	344	40	12
Finland	785	216	28	604	35	6
France	6949	2740	39	4998	789	16
Germany	15399	3760	24	14776	3137	21
Hungary	485	182	38	425	122	29
Israel	305	50	16	255	25	10
Italy	6195	1855	30	4752	412	9
Japan	21663	4914	23	16946	44	0
Macedonia, TFY Rep.	15	10	67	.	2	.
Malaysia	1196	5	0	1566	370	24
Mexico	3039	198	7	4549	1408	31
Netherlands	2960	3845	130	2002	2887	144
New Zealand	255	244	96	.	549	.
Norway	584	285	49	402	103	26
Poland	1604	350	22	1269	15	1
Portugal	823	422	51	412	10	2
Romania	.	58	.	270	3	1
Russian Federation	1500	147	10	1275	1	0
Slovakia	237	98	41	168	29	18
South Africa	1015	15	1	1000	30	3
Spain	4624	945	20	4593	913	20
Sweden	1288	318	25	1864	894	48
Switzerland	1317	550	42	862	95	11
Turkey	1016	34	3	1096	702	64
United Kingdom	8157	4430	54	3819	92	2
United States of America	45121	19065	42	26353	300	1

## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009				
	Total use of recovered paper	Recovered paper used for paper & paperboard		Recovered paper used for other purposes	
		1000mt	1000mt	%	1000mt
Australia	2039	1989	98	50	2
Austria	2291	2291	100	.	0
Belgium	1090	1090	100	.	0
Brazil	3848	3848	100	0	0
Chile	593	576	97	17	3
Colombia	727	727	100	0	0
Cuba	31	31	100	0	0
Czech Republic	344	344	100	.	0
Finland	604	604	100	.	0
France	4998	4998	100	.	0
Germany	14776	14776	100	.	0
Hungary	425	425	100	.	0
Israel	255	255	100	0	0
Italy	4752	4752	100	.	0
Japan	16946	16946	100	0	0
Macedonia, TFY Rep.	.	.	.	.	.
Malaysia	1566	1566	100	0	0
Mexico	4549	4549	100	0	0
Netherlands	2002	2002	100	.	0
New Zealand	.	.	.	.	.
Norway	402	402	100	.	0
Poland	1269	1269	100	0	0
Portugal	412	412	100	.	0
Romania	270	270	100	.	0
Russian Federation	1495	1275	85	220	15
Slovakia	168	168	100	.	0
South Africa	1000	1000	100	0	0
Spain	4593	4593	100	.	0
Sweden	1864	1864	100	.	0
Switzerland	862	862	100	.	0
Turkey	1096	1096	100	0	0
United Kingdom	3819	3819	100	.	0
United States of America	26625	26353	99	272	1

## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009					
	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
	1000mt	1000mt	1000mt	%	%	%
Australia	3312	3215	1989	97	62	60
Austria	4606	.	2291	0	.	50
Belgium	1796	.	1090	0	.	61
Brazil	9368	9474	3848	101	41	41
Chile	1306	1381	576	106	42	44
Colombia	1039	1175	727	113	62	70
Cuba	18	31	31	172	100	172
Czech Republic	802	.	344	0	.	43
Finland	10602	.	604	0	.	6
France	8331	.	4998	0	.	60
Germany	20899	.	14776	0	.	71
Hungary	435	.	425	0	.	98
Israel	380	425	255	112	60	67
Italy	8404	.	4752	0	.	57
Japan	26268	26827	16946	102	63	65
Macedonia, TFY Rep.	23	.	.	0	.	0
Malaysia	1421	1566	1566	110	100	110
Mexico	4556	5342	4549	117	85	100
Netherlands	2609	.	2002	0	.	77
New Zealand	882	1293	.	147	0	0
Norway	1576	.	402	0	.	26
Poland	3301	.	1269	0	.	38
Portugal	1632	.	412	0	.	25
Romania	286	.	270	0	.	94
Russian Federation	7223	7564	1275	105	17	18
Slovakia	921	.	168	0	.	18
South Africa	2307	812	1000	35	123	43
Spain	5700	.	4593	0	.	81
Sweden	10933	.	1864	0	.	17
Switzerland	1542	.	862	0	.	56
Turkey	4191	.	1096	0	.	26
United Kingdom	4293	.	3819	0	.	89
United States of America	71927	72610	26353	101	36	37

## FAO RECOVERED PAPER SURVEY (2009)

TABLE 4 - COMPOSITION OF RECOVERED PAPER (IN PERCENT)

Country	2009				
	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	11	49	13	26
Austria	100	32	38	12	17
Belgium	100	53	35	0	11
Brazil	100	5	64	14	18
Chile	100	2	64	25	10
Colombia	100	6	66	28	1
Cuba	.	.	.	.	.
Czech Republic	100	6	66	3	24
Finland	100	51	39	8	2
France	100	25	53	10	12
Germany	100	29	34	12	24
Hungary	100	2	74	1	22
Israel	100	11	59	27	3
Italy	100	14	48	10	28
Japan	100	31	44	12	13
Macedonia, TFY Rep.	.	.	.	.	.
Malaysia	100	20	70	5	5
Mexico	100	10	60	28	2
Netherlands	100	17	35	8	40
New Zealand	.	.	.	.	.
Norway	100	51	39	8	2
Poland	100	18	68	7	8
Portugal	100	0	66	16	18
Romania	100	35	52	1	11
Russian Federation	100	13	50	14	23
Slovakia	100	29	31	38	3
South Africa	100	10	56	24	9
Spain	100	22	52	8	19
Sweden	100	54	29	8	10
Switzerland	100	46	27	11	16
Turkey	.	.	.	.	.
United Kingdom	100	39	36	18	7
United States of America	100	13	60	13	14

## FAO RECOVERED PAPER SURVEY (2009)

TABLE 5 - USE OF RECOVERED PAPER BY GRADES IN PERCENT

Country	2009							
	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.
	percent	percent	percent	percent	percent	percent	percent	percent
Australia	100	7	1	18	7	63	2	2
Austria	100	12	22	39	18	1	7	0
Belgium	100	41	22	30	6	0	0	0
Brazil	100	0	2	60	7	9	15	7
Chile	100	0	0	70	0	0	30	0
Colombia	.	.	.	.	.	.	.	.
Czech Republic	100	0	1	73	1	19	4	2
Finland	100	41	0	22	0	20	16	0
France	100	19	4	57	0	13	6	2
Germany	100	16	14	45	9	6	5	5
Hungary	100	0	0	96	0	0	4	0
Israel	100	0	0	0	0	64	33	3
Italy	100	5	2	53	12	20	4	3
Japan	100	19	15	49	8	0	5	3
Malaysia	100	100	0	0	0	0	0	0
Mexico	100	10	28	0	0	60	0	2
Netherlands	100	14	1	38	3	39	6	0
Norway	100	41	0	22	0	20	16	0
Poland	100	9	0	62	6	4	18	0
Portugal	100	1	3	67	7	10	6	5
Romania	100	11	0	57	1	0	31	0
Russian Federation	100	0	0	45	9	10	9	26
Slovakia	100	0	0	34	0	0	66	0
South Africa	100	10	0	43	13	2	29	2
Spain	100	16	1	59	9	2	6	7
Sweden	100	46	0	25	8	0	14	7
Switzerland	100	47	0	34	10	0	9	0
United Kingdom	100	39	0	39	0	3	12	7
United States of America	100	8	5	50	20	2	14	2

## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009		
	Total recovered paper used	Losses in pulping	
	1000mt	1000mt	%
Australia	2039	199	10
Austria	2291	.	.
Belgium	1090	.	.
Brazil	3848	0	.
Chile	593	113	19
Colombia	727	.	.
Cuba	31	.	.
Czech Republic	344	.	.
Finland	604	.	.
France	4998	.	.
Germany	14776	.	.
Hungary	425	.	.
Israel	255	75	29
Italy	4752	.	.
Japan	16946	.	.
Macedonia, TFY Rep.	.	.	.
Malaysia	1566	.	.
Mexico	4549	786	17
Netherlands	2002	.	.
New Zealand	.	.	.
Norway	402	.	.
Poland	1269	.	.
Portugal	412	.	.
Romania	270	.	.
Russian Federation	1495	75	5
Slovakia	168	.	.
South Africa	1000	203	20
Spain	4593	.	.
Sweden	1864	.	.
Switzerland	862	.	.
Turkey	1096	.	.
United Kingdom	3819	.	.
United States of America	26625	.	.

## FAO RECOVERED PAPER SURVEY (2009)

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				
	percent					percent				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Australia	100	106	111	117	124	100	103	105	105	109
Brazil	100	105	108	111	115	100	106	109	112	116
Chile	100	101	104	107	110	100	102	106	109	113
Colombia	100	0	0	0	0	100	103	113	118	122
Cuba	100	100	100	100	100	100	100	100	100	100
Israel	100	133	141	143	143	100	167	176	176	176
Japan	100	0	0	0	0	100	0	0	0	0
Malaysia	100	101	102	103	104	100	101	101	102	104
Mexico	100	100	100	100	100	100	103	106	109	112
New Zealand	100	0	0	0	0	.	.	.	.	.
Russian Federation	100	113	123	133	143	100	86	98	110	118
South Africa	100	104	111	117	123	100	108	114	120	127
Turkey	100	0	0	0	0	.	.	.	.	.
United States of America	100	0	0	0	0	100	108	109	110	0





## **APPENDIX 1: QUESTIONNAIRE**

**FAO RECOVERED PAPER SURVEY (2009)**  
**Part 1: Main Questionnaire**

**Country:**

(All figures in 000 metric tons)		2009
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 (2009)**

**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	2009					
Newsprint	2009					
Other graphic paper	2009					
Case material	2009					
Folding boxboard	2009					
Wrappings, other packaging paper	2009					
Household and sanitary paper	2009					
Other paper and paperboard, n.e.s.	2009					

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

\*\* same headings as in Part 1: Main Questionnaire

**FAO RECOVERED PAPER SURVEY (2009)**  
**Part 3: Projected future consumption and supply of recovered paper**

**Country:**

(All figures in 000 metric tons)	2009	2010	2011	2012	2013
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

**FAO RECOVERED PAPER SURVEY (2009)**  
**Part 4: Recovered paper EXPORTS by country of destination**

**Country:**

Recovered paper* EXPORTS to: (indicate countries of destination) (all figures in 000 mt)	2009
Total exports of recovered papers * [4]**	

\* 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 pulp<sup>1</sup> 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.

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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 2009**

## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009						
	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	percent	1000 mt	1000 mt
Australia	3312	711	4023	3381	84	1342	4
Austria	4606	-2704	1902	1552	82	430	1169
Belgium	1796	1590	3386	1879	56	2426	1636
Brazil	9368	-933	8435	3834	45	2	13
Chile	1306	-166	1140	489	43	17	121
Colombia	1039	292	1331	633	48	2	96
Cuba	18	27	45	28	62	0	3
Czech Republic	802	470	1272	709	56	404	40
Finland	10602	-9365	1237	785	63	216	35
France	8331	1199	9530	6949	73	2740	789
Germany	20899	130	21029	15399	73	3760	3137
Hungary	435	354	789	485	61	182	122
Israel	380	498	878	305	35	50	25
Italy	8404	1431	9835	6195	63	1855	412
Japan	26268	744	27012	21663	80	4914	44
Macedonia, TFY Rep.	23	52	75	15	20	10	2
Malaysia	1421	1674	3095	1196	39	5	370
Mexico	4556	3511	8067	3039	38	198	1408
Netherlands	2609	298	2907	2960	102	3845	2887
New Zealand	882	243	1125	255	23	244	549
Norway	1576	-798	778	584	75	285	103
Poland	3301	1020	4321	1604	37	350	15
Portugal	1632	-255	1377	823	60	422	10
Romania	286	363	649	.	0	58	3
Russian Federation	7223	-1445	5778	1500	26	147	1
Slovakia	921	-449	472	237	50	98	29
South Africa	2307	-15	2292	1015	44	15	30
Spain	5700	513	6213	4624	74	945	913
Sweden	10933	-9004	1929	1288	67	318	894
Switzerland	1542	-24	1519	1317	87	550	95
Turkey	4191	1940	6131	1016	17	34	702
United Kingdom	4293	5723	10015	8157	81	4430	92
United States of America	71927	347	72274	45121	62	19065	300

## FAO RECOVERED PAPER SURVEY (2009)

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

Country	2009						
	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	percent	percent	percent
Australia	50	1989	199	3215	62	97	60
Austria	.	2291	.	.	.	.	50
Belgium	.	1090	.	.	.	.	61
Brazil	0	3848	0	9474	41	101	41
Chile	17	576	113	1381	42	106	44
Colombia	0	727	.	1175	62	113	70
Cuba	0	31	.	31	100	172	172
Czech Republic	.	344	.	.	.	.	43
Finland	.	604	.	.	.	.	6
France	.	4998	.	.	.	.	60
Germany	.	14776	.	.	.	.	71
Hungary	.	425	.	.	.	.	98
Israel	0	255	75	425	60	112	67
Italy	.	4752	.	.	.	.	57
Japan	0	16946	.	26827	63	102	65
Macedonia, TFY Rep.	.	.	.	.	.	.	0
Malaysia	0	1566	.	1566	100	110	110
Mexico	0	4549	786	5342	85	117	100
Netherlands	.	2002	.	.	.	.	77
New Zealand	.	.	.	1293	.	147	.
Norway	.	402	.	.	.	.	26
Poland	0	1269	.	.	.	.	38
Portugal	.	412	.	.	.	.	25
Romania	.	270	.	.	.	.	94
Russian Federation	220	1275	75	7564	17	105	18
Slovakia	.	168	.	.	.	.	18
South Africa	0	1000	203	812	123	35	43
Spain	.	4593	.	.	.	.	81
Sweden	.	1864	.	.	.	.	17
Switzerland	.	862	.	.	.	.	56
Turkey	0	1096	.	.	.	.	26
United Kingdom	.	3819	.	.	.	.	89
United States of America	272	26353	.	72610	36	101	37



## **APPENDIX 4: EXPORTS 2009**



## FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 4	EXPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (1000 mt)											
<i>from</i>	Australia	Austria	Belgium	Brazil	Chile	Colombia	Cuba	Czech Rep.	Finland	France	Germany	Hungary
<i>to</i>												
ARGENTINA					12							
AUSTRALIA												
AUSTRIA		0	0					89	0	8	384	123
BELGIUM		0	0					0	0	294	76	0
BOLIVIA				1								
BULGARIA		0	0					0	0	0	0	0
CANADA		0	1					0	0	4	1	0
CHINA	1006	0	770					0	25	570	1030	1
CYPRUS		0	0					0	0	0	0	0
CROATIA												
CZECH REP.		11	1					0	0	4	6	0
DENMARK		0	0					0	0	0	12	0
ECUADOR						2						
ESTONIA		0	0					0	2	0	0	0
FINLAND		0	0					0	0	1	0	0
FRANCE		0	140					0	0	0	194	0
GERMANY		325	90					210	50	307	0	8
GREECE		0	1					0	0	0	1	0
GUATEMALA												
HUNGARY		9	0					2	0	0	9	0
INDIA	80											
INDONESIA	159											
IRELAND		0	0					0	0	0	0	0
ITALY		11	1					1	5	68	70	0
JAPAN		0	0					0	0	0	0	0
KAZAKHSTAN												
LAO PDR												
LATVIA		0	0					0	0	0	0	0
LITHUANIA		0	0					1	0	0	0	0
MALAYSIA	39											
MALTA		0	0					0	0	0	0	0
MEXICO												
MYANMAR												
NETHERLAND		10	986					3	4	539	1444	0
NORWAY		0	1					0	2	0	0	0
PAKISTAN	2											
PANAMA							122					
PARAGUAY				1								
PERU					1							
PHILIPPINES	8											
POLAND		0	4					31	0	0	22	0
PORTUGAL		0	0					0	0	1	0	0
REP. OF KOREA	11				1							
ROMANIA		0	0					0	0	0	0	0
RUSSIAN FED.		0	0					0	2	0	0	0
SAUDI ARABIA												
SERBIA												
SINGAPORE	1				3							
SLOVAK REP.		2	0					63	0	0	2	15
SLOVENIA		61	0					5	0	7	14	23
SOUTH AFRICA	17											
SPAIN		0	0					0	0	687	29	0
SYRIAN ARAB REP.												
SWEDEN		1	0					0	103	9	54	0
SWITZERLAND	1	0	0					0	0	23	54	0
THAILAND	9											
TURKEY		0	11					0	0	2	1	0
UKRAINE												
UK		0	7					0	0	10	9	0
TANZANIA												
USA		0	2					0	0	2	0	0
VIET NAM	9											
OTHERS												
<b>GRAND TOTAL</b>	<b>1342</b>	<b>429</b>	<b>2015</b>	<b>2</b>	<b>17</b>	<b>2</b>	<b>122</b>	<b>404</b>	<b>195</b>	<b>2536</b>	<b>3412</b>	<b>171</b>

## FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 4		EXPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (cont.) (1000 mt)											
from	Israel	Italy	Japan	Malaysia	Mexico	Netherland	New Zealand	Norway	Peru	Poland	Portugal	Romania	
<b>to</b>													
ARGENTINA													
AUSTRALIA							1						
AUSTRIA		92				17		0		25	0	8	
BELGIUM		0				396		0		0	0	0	
BOLIVIA									5				
BULGARIA		0				0		0		0	0	0	
CANADA		2				0		0		0	0	0	
CHINA	6	957	4317		30	2110	74	67		49	78	10	
CYPRUS		0				0		0		0	0	0	
CROATIA													
CZECH REP.		0				0		0		4	0	0	
DENMARK		0				1		26		0	0	0	
ECUADOR									5				
ESTONIA		0				0		0		0	0	0	
FINLAND		0				0		0		0	0	0	
FRANCE		41				83		17		0	0	0	
GERMANY		168				431		10		216	1	0	
GREECE		0				0		0		0	0	0	
GUATEMALA					1								
HUNGARY		20				0		0		13	0	17	
INDIA	16						29						
INDONESIA			15				57						
IRELAND		0				0		0		0	0	0	
ITALY		0				5		0		1	0	0	
JAPAN		0				0		0		0	0	0	
KAZAKHSTAN													
LAO PDR													
LATVIA		0				0		0		0	0	0	
LITHUANIA		0				0		0		0	0	0	
MALAYSIA							3						
MALTA		0				0		0		0	0	0	
MEXICO													
MYANMAR													
NETHERLAND		24				0		7		26	58	0	
NORWAY		0				12		0		0	0	0	
PAKISTAN					1								
PANAMA													
PARAGUAY													
PERU													
PHILIPPINES			23	5			25						
POLAND		0				0		0		0	0	0	
PORTUGAL		0				0		0		0	0	0	
REP. OF KOREA	10		86		3		3						
ROMANIA		0				0		0		0	0	0	
RUSSIAN FED.		0				0		0		0	0	0	
SAUDI ARABIA													
SERBIA													
SINGAPORE							1						
SLOVAK REP.		0				0		0		3	0	0	
SLOVENIA		91				0		0		0	0	0	
SOUTH AFRICA													
SPAIN		1				3		0		0	262	0	
SYRIAN ARAB REP.													
SWEDEN		0				19		85		2	0	0	
SWITZERLAND		6				31		0		0	0	0	
THAILAND	14		362				28						
TURKEY	1	8				1		0		0	0	6	
UKRAINE													
UK		0				44		0		0	1	0	
TANZANIA													
USA	1	4			163	0	1	0		0	1	0	
VIET NAM	2		108				22						
OTHERS			3										
<b>GRAND TOTAL</b>	<b>50</b>	<b>1415</b>	<b>4914</b>	<b>5</b>	<b>198</b>	<b>3154</b>	<b>244</b>	<b>213</b>	<b>10</b>	<b>339</b>	<b>400</b>	<b>41</b>	

### FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 4	EXPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (cont.) (1000 mt)											
<i>from</i>	Russian Federation	Slovak Rep.	South Africa	Spain	Sweden	Switzerl.	Thailand	The FYR of Macedonia	Turkey	UK	USA	Total
<i>to</i>												
ARGENTINA												12
AUSTRALIA							0					1
AUSTRIA		52		2	12	67				2		882
BELGIUM		0		1	0	3	0			27		797
BOLIVIA												6
BULGARIA		0		0	0	0		1		0		1
CANADA		0		0	0	0	0			0	1153	1161
CHINA	6	0		647	30	0	1		13	2792	12825	27416
CYPRUS		0		0	0	0				0		0
CROATIA								5				5
CZECH REP.		7		0	0	0				0		32
DENMARK		0		0	14	0				0		53
ECUADOR												7
ESTONIA		0		0	0	0				0		2
FINLAND	5	0		0	17	0	0			0		24
FRANCE		0		22	0	120	0			84		702
GERMANY	0	4		7	125	300		0	1	130		2384
GREECE		0		0	0	0		0		1		2
GUATEMALA												1
HUNGARY		11		0	0	0				0		81
INDIA			4				3		3		1186	1321
INDONESIA	0		3				12		3		330	579
IRELAND		0		0	0	0				1		1
ITALY	4	0		11	19	53				5		253
JAPAN		0		0	0	0	0			0		0
KAZAKHSTAN	5											5
LAO PDR							1					1
LATVIA		0		0	0	0				0		0
LITHUANIA	4	0		0	0	0				0		5
MALAYSIA			1									43
MALTA		0		0	0	0				0		0
MEXICO											1143	1143
MYANMAR							1					1
NETHERLAND	2	0		173	23	2				216		3516
NORWAY		0		0	43	0				30		88
PAKISTAN									6			9
PANAMA												122
PARAGUAY												1
PERU												1
PHILIPPINES			2				11					74
POLAND		4		0	10	0				0		72
PORTUGAL		0		5	0	0				0		6
REP. OF KOREA	1		1						1		838	955
ROMANIA		0		0	0	0				0		0
RUSSIAN FED.		0		0	0	0				0		2
SAUDI ARABIA									5			5
SERBIA								0				0
SINGAPORE							1					6
SLOVAK REP.		0		0	0	0				0		85
SLOVENIA		0		3	0	4		2		2		211
SOUTH AFRICA												17
SPAIN		0		0	2	0				15		999
SYRIAN ARAB REP.									1			1
SWEDEN		0		0	0	0				115		387
SWITZERLAND		0		1	0	0				25		141
THAILAND			4									417
TURKEY		0		0	0	0		2		2		35
UKRAINE	120											120
UK		0		1	1	0	0			0		74
TANZANIA									1			1
USA		0	0	6	0	0	0			6		186
VIET NAM							0					141
OTHERS	0		0				0		0		1590	1593
<b>GRAND TOTAL</b>	<b>147</b>	<b>79</b>	<b>15</b>	<b>879</b>	<b>296</b>	<b>549</b>	<b>30</b>	<b>10</b>	<b>34</b>	<b>3453</b>	<b>19065</b>	<b>46174</b>

## **APPENDIX 5: IMPORTS 2009**

### FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 5	IMPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (1000 mt)											
to	Australia	Austria	Belgium	Brazil	Chile	Colombia	Cuba	Czech Rep.	Finland	France	Germany	Hungary
<i>from</i>												
AUSTRALIA												
AUSTRIA		0	1					7	0	2	279	28
BELGIUM		1	0					0	0	149	140	0
BULGARIA		0	0					0	0	0	0	1
CAMBODIA												
CANADA		0	0		1	0	1	0	0	0	0	0
CHINA		0	0					0	0	0	0	0
CHILE												
COSTA RICA					1	7						
CYPRUS		0	0					0	0	0	0	0
CZECH REP.		99	0					0	0	1	142	0
DENMARK		0	0					0	0	0	211	0
DOMINICAN REPUBLIC					6	3	1					
ECUADOR					3	17						
EL SALVADOR					6	2						
ESTONIA		0	0					0	8	0	0	0
FINLAND		0	0					0	0	1	59	0
FRANCE	1	6	360					0	1	0	437	0
GERMANY	1	514	156					15	0	237	0	12
GREECE		0	1					0	0	1	0	0
GUATEMALA					1	2						
HONDURAS					2	6						
HUNGARY		123	0					1	0	0	6	0
IRELAND		0	4					0	0	0	0	0
ISRAEL												
ITALY		151	0					0	0	67	202	20
JAPAN		0	0					0	0	0	0	0
LAO PDR												
LITHUANIA		1	0					0	1	0	2	0
MALAYSIA												
MEXICO						1						
NETHERL.		19	973					0	0	75	787	0
NEW CALEDONIA												
NEW ZEALAND	1											
NORWAY		0	0					0	0	0	5	0
PANAMA					2	0						
PARAGUAY				9								
PHILIPPINES												
POLAND		32	0					3	0	2	176	18
PORTUGAL		0	0					0	0	0	0	0
PUERTO RICO						5						
REPUBLIC OF KOREA												
ROMANIA		4	0					0	0	1	0	13
RUSSIAN FEDERATION		0	0					0	8	0	1	0
SAUDI ARABIA												
SINGAPORE												
SLOVAK REP.		97	0					12	0	0	106	12
SLOVENIA		16	0					0	0	0	4	6
SPAIN		4	1				1	0	0	57	7	0
SWEDEN		12	6					0	14	0	97	0
SWITZERLAND		64	2					0	0	119	301	0
UNITED ARAB EMIRATES												
UK		2	95					0	0	75	167	0
URUGUAY				4								
USA		5	10		97	51		0	0	0	7	0
ZIMBABWE												
OTHERS	1				2	2			1			
<b>GRAND TOTAL</b>	<b>4</b>	<b>1153</b>	<b>1609</b>	<b>13</b>	<b>121</b>	<b>96</b>	<b>3</b>	<b>39</b>	<b>33</b>	<b>788</b>	<b>3136</b>	<b>110</b>

## FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 5	IMPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (cont.) (1000 mt)											
to	Israel	Italy	Japan	Malaysia	Mexico	Netherl.	New Zealand	Norway	Peru	Poland	Portugal	Romania
<i>from</i>												
AUSTRALIA				54			418					
AUSTRIA		12				1		0		0	0	0
BELGIUM	1	2		10		514		0	1	1	0	0
BULGARIA		0				0		0		0	0	0
CAMBODIA												
CANADA		3		7		0		0	1	0	0	0
CHINA		0				0		0		0	0	0
CHILE									1			
COSTA RICA												
CYPRUS		0				1		0		0	0	0
CZECH REP.		1				6		0		13	0	0
DENMARK		2				106		5		0	0	0
DOMINICAN REPUBLIC									1			
ECUADOR									3			
EL SALVADOR					2							
ESTONIA		0				1		0		0	0	0
FINLAND		3				2		2		0	0	0
FRANCE		70		18		230		0		0	0	0
GERMANY		68		14		1505	101	0		0	0	0
GREECE		41				3		0		0	0	0
GUATEMALA					8							
HONDURAS									1			
HUNGARY		2				0		0		0	0	0
IRELAND		0		7		92		14		0	0	0
ISRAEL												
ITALY		0		14		73		0		0	0	0
JAPAN		0				0		0		0	0	0
LAO PDR												
LITHUANIA		0				10		0		0	0	0
MALAYSIA												
MEXICO												
NETHERL.	2	30		20	1	0		12		0	0	0
NEW CALEDONIA							12					
NEW ZEALAND				14								
NORWAY		0				0		0		0	0	0
PANAMA												
PARAGUAY												
PHILIPPINES												
POLAND		2				41		0		0	0	0
PORTUGAL		0				0		0		0	0	0
PUERTO RICO												
REPUBLIC OF KOREA												
ROMANIA		0				0		0		0	0	0
RUSSIAN FEDERATION		0		7		4		0		0	0	0
SAUDI ARABIA												
SINGAPORE				96								
SLOVAK REP.		0				0		0		0	0	1
SLOVENIA		35				0		0		0	0	0
SPAIN	1	13		10		33		0		0	10	0
SWEDEN		18		16		2		44		0	0	0
SWITZERLAND		26		7		2		0		0	0	0
UNITED ARAB EMIRATES												
UK		3		50		203		26		0	0	0
URUGUAY												
USA	21	71	43	26	1397	48	18	0	24	0	0	0
ZIMBABWE												
OTHERS		1	1									
<b>GRAND TOTAL</b>	<b>25</b>	<b>405</b>	<b>44</b>	<b>370</b>	<b>1408</b>	<b>2877</b>	<b>549</b>	<b>103</b>	<b>32</b>	<b>15</b>	<b>10</b>	<b>1</b>

### FAO RECOVERED PAPER SURVEY (2009)

APPENDIX 5		IMPORTS OF RECOVERED PAPER BY COUNTRY OF DESTINATION IN 2009 (cont.) (1000 mt)										
to	Russian Federation	Slovak Rep.	South Africa	Spain	Sweden	Switzerl.	Thailand	The FYR of Macedonia	Turkey	UK	USA	Total
<i>from</i>												
AUSTRALIA			15				8					495
AUSTRIA		1		0	0	9				0		340
BELGIUM		0		0	0	1	3		30	0		852
BULGARIA		0		0	0	0		1	230	0		232
CAMBODIA							24					24
CANADA		0		0	0	0				1	279	294
CHINA		0	1	0	0	0	4			0		5
CHILE												1
COSTA RICA												8
CYPRUS		0		0	0	0				0		1
CZECH REP.		22		0	0	0				0		284
DENMARK		0		0	240	0				0		566
DOMINICAN REPUBLIC												11
ECUADOR												23
EL SALVADOR												10
ESTONIA		0		0	0	0				0		9
FINLAND	1	0		0	93	0				0		161
FRANCE		0	1	599	6	18			80	10		1838
GERMANY		0		18	60	53	61			1		2818
GREECE		0		0	0	0			230	0		276
GUATEMALA												11
HONDURAS												9
HUNGARY		5		0	0	0				0		136
IRELAND		0		0	0	0				55		172
ISRAEL							2					2
ITALY		0		1	0	5	22		50	0		606
JAPAN		0		0	0	0	350			0		350
LAO PDR							6					6
LITHUANIA		0		0	1	0				0		15
MALAYSIA							8					8
MEXICO											21	22
NETHERL.		0		2	90	3	39		12	17		2084
NEW CALEDONIA												12
NEW ZEALAND							29					44
NORWAY		0		0	268	0				0		273
PANAMA												2
PARAGUAY												9
PHILIPPINES							35					35
POLAND		0		0	0	0				0		275
PORTUGAL		0		251	0	0				0		252
PUERTO RICO												5
REPUBLIC OF KOREA							3					3
ROMANIA		0		0	0	0			70	0		88
RUSSIAN FEDERATION		0		0	0	0				0		20
SAUDI ARABIA							6					6
SINGAPORE			0				82					178
SLOVAK REP.		0		0	0	0				0		228
SLOVENIA		0		0	0	0				0		61
SPAIN		0	0	0	0	1				0		140
SWEDEN		0		17	0	0				0		227
SWITZERLAND		0	0	0	0	0	7			0		529
UNITED ARAB EMIRATES							4					4
UK		0	1	16	126	1	27			0		791
URUGUAY												4
USA		0	4	1	0	4	216			6		2049
ZIMBABWE			2									2
OTHERS	0		6					1				15
<b>GRAND TOTAL</b>	<b>1</b>	<b>29</b>	<b>30</b>	<b>904</b>	<b>885</b>	<b>95</b>	<b>936</b>	<b>2</b>	<b>702</b>	<b>92</b>	<b>300</b>	<b>16426</b>





