

# Paper carton collection rate in fiscal 2012



Paper carton collection rate in fiscal 2012 was 44.2%.

The "Basic survey on the present status and trends of beverage paper carton recycling" was continued from 1995 to enable collection and provision of information about paper carton recycling in society. This survey was also held in the period from June to October 2013, and the paper carton recycling situation in fiscal 2012 was revealed. The overall paper carton collection rate in fiscal 2012 was 44.2% (an increase of 1.3 points over the previous fiscal year). The collection rate of used (consumed) paper cartons was 33.8% (an increase of 1.3% over the previous year). Taking into consideration the diversification in used paper carton collection routes these days, we have added direct collection by wholesalers of used (consumed) paper materials and recycled paper manufacturers in the 2012 survey. The volume of the above direct collection is included in "group collection and others" in the material flow.

※In the fiscal 2012 survey, we selected nine paper carton manufacturers, 315 beverage manufacturers, 1,735 local authorities, 2,110 elementary schools, 1,000 supermarkets, six citizen's groups and welfare work places, and 33 recycled paper manufacturers to be questionnaire survey respondents. In addition, we interviewed staff members at four locations. Areas affected by the nuclear accident in Fukushima are excluded from the survey.  
 ※Faulty paper cartons and base paper (raw paper) that have been generated by the paper carton manufacturing and beverage filling processes at beverage plants, and edge trims created during paper carton manufacturing are called "paper wastes" or "industrial paper wastes".  
 ※Empty paper cartons that generated at stores, business facilities, schools and households are called "used paper".

## Paper Carton Collection Rate in Fiscal 2012

**Paper carton collection rate**  
(Including industrial paper wastes and used papers)

**44.2%**

(42.9% in fiscal 2011)

= Collection volume of domestic paper cartons  
 ÷ Amount of base paper (raw paper) used  
 = 107.5 thousand tons/242.9 thousand tons

**Used paper carton collection rate**  
(Used paper cartons)

**33.8%**

(32.5% in fiscal 2011)

= Used paper carton collection volume  
 ÷ Shipping volume of paper cartons from beverage manufacturers  
 = 69.1 thousand tons/204.3 thousand tons

Paper carton transaction price of municipalities remains high.

As paper fibers are long and strong, used paper cartons are considered high-quality raw materials of recycled paper and traded at a relatively high price. However, since the transaction price of paper cartons differs by local government, it is difficult to calculate a standard price. Based only on the price of paper cartons (without any additional conditions), we have calculated the average price of the municipality collection and group collection after dividing the transaction price into two types of "delivery price" and the "carry-in price". The former is when the counterpart visits you to purchase the products and the latter is when you bring the products to the counterpart. Used paper recyclers and wholesalers of used (consumed) paper materials the main counterpart of the collection. Transaction price in the municipality collection and group collection remains high.

## Average transaction price of used paper cartons

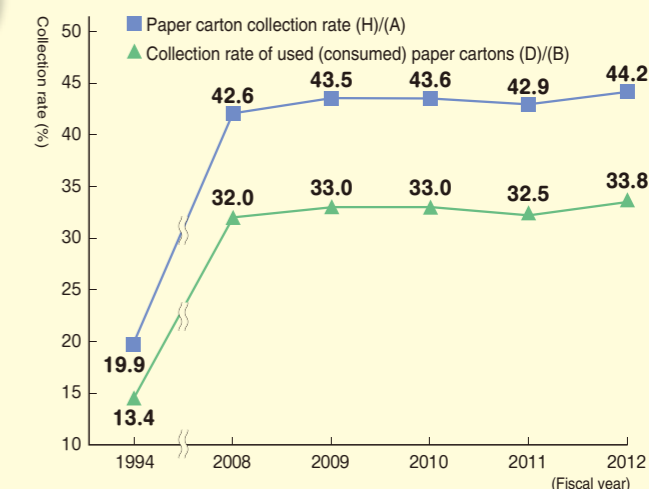
Fiscal year		2009	2010	2011	2012	
Municipality collection	Used paper recyclers	Delivery price	6.2	7.5	7.1	6.8
		Carry-in price	5.4	6.9	7.5	6.7
	Wholesalers of used (consumed) paper materials	Delivery price	7.0	8.9	9.4	9.2
		Carry-in price	7.0	8.0	8.7	8.2
	Paper manufacturers	Delivery price	8.8	12.3	10.8	9.4
		Carry-in price	8.0	10.2	10.3	10.9
Group collection	(Regardless of counterpart)	Delivery price	4.3	5.2	5.2	4.9
		Carry-in price	6.9	5.1	5.9	5.3

(Yen / kg)

Paper carton collection volume in fiscal 2012 was 107.5 thousand tons.

The paper carton collection rate in 2011 dipped for the first time since the start of the survey as shown in the figure at the right. However, the rate shifted to increase in 2012. The collection volume of domestic paper cartons in fiscal 2012 was 107.5 thousand tons. This was an increase of 1.7 thousand tons (1.6%) over the previous year. The collection volume of used paper cartons in fiscal 2012 was 69.1 thousand tons. This was an increase of 1.5 thousand tons (2.1%) over the previous year. Trends in used volume of paper cartons and their collection volume are summarized in "Trends shown by major data".

## Trends in paper carton collection rate



## Trend shown by main data (thousand tons)

Category	Fiscal 1994	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012	Percent increase over previous year
<b>Used amount of paper cartons for beverages (A)</b>	216.0	251.0	244.3	246.8	246.6	<b>242.9</b>	-1.5%
Industrial paper wastes of paper carton manufacturers	16.5	37.1	35.9	37.3	35.1	<b>36.2</b>	3.2%
Industrial paper wastes of beverage manufacturers	—	3.0	2.6	2.1	3.3	<b>2.4</b>	-27.7%
<b>Shipping volume of paper cartons for beverages from beverage manufacturers (B)</b>	197.9	210.9	205.8	207.3	208.3	<b>204.3</b>	-1.9%
<b>Residential homes (C)</b>	168.7	189.3	184.3	184.6	184.8	<b>180.3</b>	-2.4%
Restaurants, vending machines and others (business)	18.5	9.8	9.7	10.8	11.7	<b>12.1</b>	3.8%
Milk for school lunches (business)	10.7	11.8	11.8	11.8	11.8	<b>11.9</b>	0.6%
<b>Collection volume of used (consumed) paper cartons (D) = (E) + (F)</b>	26.5	67.4	68.0	68.4	67.7	<b>69.1</b>	2.1%
<b>Collection volume from homes (E)</b>	25.9	56.7	57.3	56.6	56.2	<b>57.2</b>	1.9%
Collection volume from stores	13.8	33.4	34.5	33.6	33.0	<b>32.6</b>	-1.1%
<b>Municipality collection volume</b>	4.3	14.4	13.9	14.1	13.9	<b>13.7</b>	-1.1%
<b>Group collection volume</b>	7.8	8.9	8.9	8.9	9.3	<b>10.9</b>	16.9%
<b>Collection volume from business organizations (F)</b>	0.6	10.7	10.7	11.8	11.5	<b>11.9</b>	3.4%
Collection volume of milk cartons from schools	0.6	9.3	9.3	9.4	9.2	<b>9.6</b>	4.2%
Restaurants, vending machines and others	—	1.4	1.4	2.3	2.3	<b>2.3</b>	0.0%
<b>Collection volume of industrial paper wastes and used paper cartons (G)</b>	16.5	39.7	38.2	39.3	38.1	<b>38.4</b>	0.8%
Collection volume by paper carton manufacturers	16.5	37.1	35.9	37.3	35.1	<b>36.2</b>	3.2%
Collection volume by beverage manufacturers	—	2.6	2.3	1.9	3.0	<b>2.2</b>	-27.5%
<b>Collection volume of domestic paper cartons (H) = (D) + (G)</b>	43.0	107.1	106.2	107.6	105.7	<b>107.5</b>	1.6%
Import volume of used paper cartons	—	13.9	10.9	12.7	14.0	<b>11.4</b>	-18.9%
<b>Total volume of accepted paper cartons</b>	43.0	120.9	117.1	120.3	119.7	<b>118.8</b>	-0.8%
<b>Recycling volume of paper cartons</b>	30.1	93.8	93.2	96.3	95.7	<b>95.2</b>	-0.6%
<b>Paper carton collection rate (H)/(A)</b>	19.9%	42.6%	43.5%	43.6%	42.9%	<b>44.2%</b>	1.3points
<b>Collection rate of used (consumed) paper cartons (D)/(B)</b>	13.4%	32.0%	33.0%	33.0%	32.5%	<b>33.8%</b>	1.3points
<b>Collection rate of used paper cartons in residential homes (E)/(C)</b>	15.4%	30.0%	31.1%	30.6%	30.4%	<b>31.7%</b>	1.3points

※Recycling volume of paper cartons = Total volume of accepted paper cartons X Yield rate The yield rate after fiscal 2001 is computed based on the questionnaire survey.  
 ※Industrial paper wastes for fiscal 1994 include aluminum laminated paper cartons.  
 ※Collection volume of paper cartons from business organizations is calculated from fiscal 2004 based on the questionnaire survey.  
 ※A review of the weight of milk cartons for schools conducted in fiscal 2005 has affected the value of some items.  
 ※Some of the total values may include errors due to rounding to the nearest 100 tons. Also, due to the same reason, some figures may not add up if you calculate the collection rate and percentage over the previous year's figures using the values in the table.



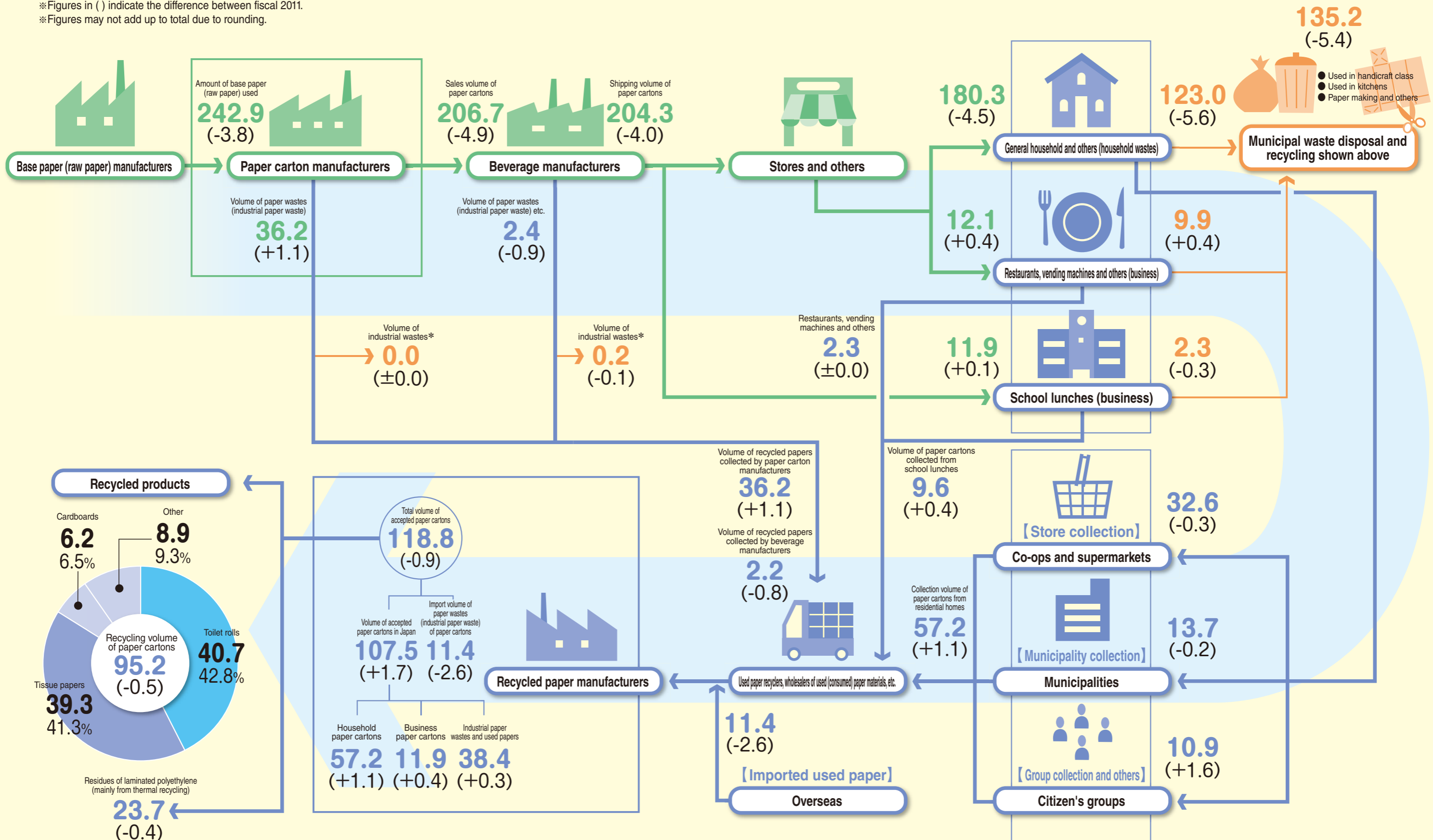
# Paper carton material flow in fiscal 2012

The following shows the overall state of paper carton recycling in fiscal 2012 in the form of material flow.

※Unit: 1,000 tons

※Figures in ( ) indicate the difference between fiscal 2011.

※Figures may not add up to total due to rounding.



\* Industrial paper wastes include those generated by thermal recycle.