

# Paper carton collection rate in fiscal 2015



The paper carton collection rate in fiscal 2015 was 43.1%.

The "Basic survey on the present status and trends of beverage paper carton recycling" has been carried out since 1995 to enable collection and provision of information about paper carton recycling to communities. This survey was also carried out in the period from June to October 2016, and the status of paper carton recycling in fiscal 2015 was revealed. The overall paper carton collection rate in fiscal 2015 was 43.1% (a reduction of 1.6 points over the previous fiscal year). The collection rate of used (consumed) paper cartons was 34.2% (a reduction of 1.5 pt. over the previous fiscal year). Taking into consideration the diversification in used paper carton collection routes in recent years, we have added direct collection by wholesalers of used paper materials and recycled paper manufacturers in the fiscal 2015 survey. The volume of the above direct collection was included in "group collection and others" in the material flow.

※In the fiscal 2015 survey, we conducted questionnaire-based surveys at nine paper carton manufacturers, 305 beverage manufacturers, 1,734 local authorities, 2,034 elementary schools, 1,029 supermarkets, 22 citizen's groups and welfare work places, and 31 recycled paper manufacturers. The interview survey took place at four facilities. Areas affected by the nuclear accident in Fukushima were excluded from the survey.  
 ※"Industrial waste papers and used papers" refers to waste paper and used paper generated in paper carton manufacturing plants or beverage manufacturing plants.  
 ※"Industrial waste papers" refers to edge trims generated in paper carton manufacturing processes or at beverage manufacturing plants before paper cartons were filled with beverages. "Used papers" refers to waste paper cartons after filling beverage product. "Used (consumed) paper cartons" refers to paper cartons used at home, school, stores, and offices.

## Paper Carton Collection Rate in Fiscal 2015

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

**43.1%**  
(44.7% in fiscal 2014)

= Collection volume of domestic paper cartons  
 ÷ Amount of base paper (raw paper) used  
 = 98,300 tons/228,300 tons

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

**34.2%**  
(35.7% in fiscal 2014)

= Used paper carton collection volume  
 ÷ Shipping volume of paper cartons from beverage manufacturers  
 = 67,000 tons/196,000 tons

Trade prices of paper cartons collected in municipality collection and group collection are growing.

As paper fibers are long and strong, used paper cartons are considered to be high-quality recycled paper materials and are traded at a relatively high price accordingly. However, since the trade 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 taking any additional conditions into account, we have calculated the average price of municipality collection (including collection at Tokyo special wards) and group collection after dividing the trade price into two types: the "pick-up 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 paper materials are the main counterparts of the collection. The average trade prices of all paper cartons collected in the municipality collection and group collection are slightly higher than they were in the previous fiscal year.

## Average trade price of used paper cartons

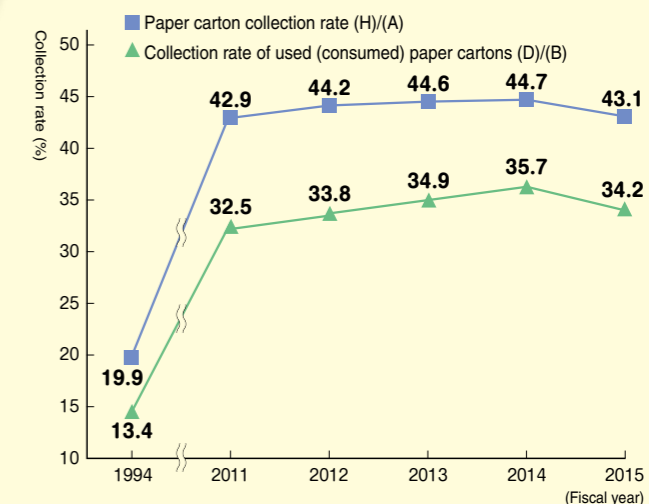
Fiscal year		2012	2013	2014	2015	
Municipality collection	Used paper recyclers	Pick-up price	6.8	7.0	6.9	8.0
		Carry-in price	6.7	6.5	7.0	7.7
	Wholesalers of used paper materials	Pick-up price	9.2	8.3	9.0	8.4
		Carry-in price	8.2	8.4	9.3	9.4
	Recycled paper manufacturers	Pick-up price	9.4	6.4	8.6	6.8
		Carry-in price	10.9	9.0	12.0	7.8
Average price		7.6	7.4	7.9	8.3	
Group collection	(Unknown traders)	Pick-up price	4.9	5.1	5.2	5.5
		Carry-in price	5.3	5.7	6.0	5.7
	Average price		5.0	5.2	5.4	5.6

(Yen/kg)

The paper carton collection volume in fiscal 2015 was 98,300 tons.

The collection rate of domestic paper cartons fluctuates as shown in the graph on the right. The following table presents details of the collection volume and rate. The collection volume of domestic paper cartons in fiscal 2015 was 98,300 tons. This was a reduction of 6,100 tons (5.8%) over the previous fiscal year. Of this reduction, 2,000 tons were due to a reduction in industrial waste papers and used papers at paper carton manufacturers and beverage manufacturers. The collection volume of used paper cartons was 67,000 tons. This is a reduction of 4,100 tons (5.8%) over the previous year. It is a result of a reduction in collection volume from residential homes, which had been increasing over the last few years.

## Trends in paper carton collection rate



## Trend in major figures (thousand tons)

Category	Fiscal 1994	Fiscal 2011	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Over previous year	
Usage volume of base paper (raw paper) for paper cartons for beverages (A)	216.0	246.6	242.9	238.2	233.7	228.3	-2.3%	
Industrial paper waste at paper carton manufacturers	16.5	35.1	36.2	33.5	31.4	29.7	-5.4%	
Industrial paper waste at beverage manufacturers	-	3.3	2.4	2.4	2.2	1.9	-11.7%	
Shipping volume of paper cartons for beverages from beverage manufacturers (B)	197.9	208.3	204.3	202.1	199.3	196.0	-1.7%	
Household (C)	168.7	184.8	180.3	178.5	176.2	176.2	0.0%	
Shipping volume of business waste	29.2	23.5	24.0	23.6	23.1	19.8	-14.1%	
School meals	10.7	11.8	11.9	11.8	11.7	11.6	-1.5%	
Restaurants and others	18.5	11.7	12.1	11.7	11.3	8.3	-27.2%	
Collection volume of used (consumed) paper cartons (D) = (E) + (F)	26.5	67.7	69.1	70.6	71.1	67.0	-5.8%	
Household (E)	25.9	56.2	57.2	59.4	60.4	56.3	-6.8%	
Collection volume from stores	13.8	33.0	32.6	32.3	31.9	30.4	-4.6%	
Municipality collection volume	4.3	13.9	13.7	13.6	12.8	12.2	-4.8%	
Group collection volume	7.8	9.3	10.9	13.5	15.7	13.7	-12.8%	
Municipalities' grasp	7.8	8.6	8.7	9.1	8.4	8.8	4.8%	
Independent collection excluding the above	-	0.7	2.2	4.4	7.3	4.9	-33.0%	
Business (F)	0.6	11.5	11.9	11.2	10.7	10.7	0.1%	
School meals	0.6	9.2	9.6	9.3	8.8	8.8	-0.6%	
Restaurants and others	-	2.3	2.3	1.9	1.9	2.0	3.3%	
Collection volume of industrial paper waste and used paper cartons (G)	16.5	38.1	38.4	35.7	33.3	31.3	-5.9%	
Paper carton manufacturers	16.5	35.1	36.2	33.5	31.4	29.7	-5.4%	
Beverage manufacturers	-	3.0	2.2	2.2	1.9	1.7	-14.2%	
Collection volume of domestic paper cartons (H) = (D) + (G)	43.0	105.7	107.5	106.3	104.4	98.3	-5.8%	
Import volume of used paper cartons	-	14.0	11.4	12.8	18.6	19.8	6.2%	
Total volume of accepted paper cartons	43.0	119.7	118.8	119.1	123.0	118.1	-4.0%	
Recycling volume of paper cartons	30.1	95.7	95.2	93.7	95.4	95.1	-0.3%	
Collection rate	Paper carton collection rate (H)/(A)	19.9%	42.9%	44.2%	44.6%	44.7%	43.1%	-1.6points
	Collection rate of used (consumed) paper cartons (D)/(B)	13.4%	32.5%	33.8%	34.9%	35.7%	34.2%	-1.5points
	Collection rate of used (consumed) paper cartons in residential homes (E)/(C)	15.4%	30.4%	31.7%	33.3%	34.3%	31.9%	-2.4points

※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 results of the questionnaire survey.  
 ※Industrial paper waste for fiscal 1994 includes paper cartons with aluminum.  
 ※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 those of the previous fiscal year using the values in the table.

# Paper carton material flow in fiscal 2015

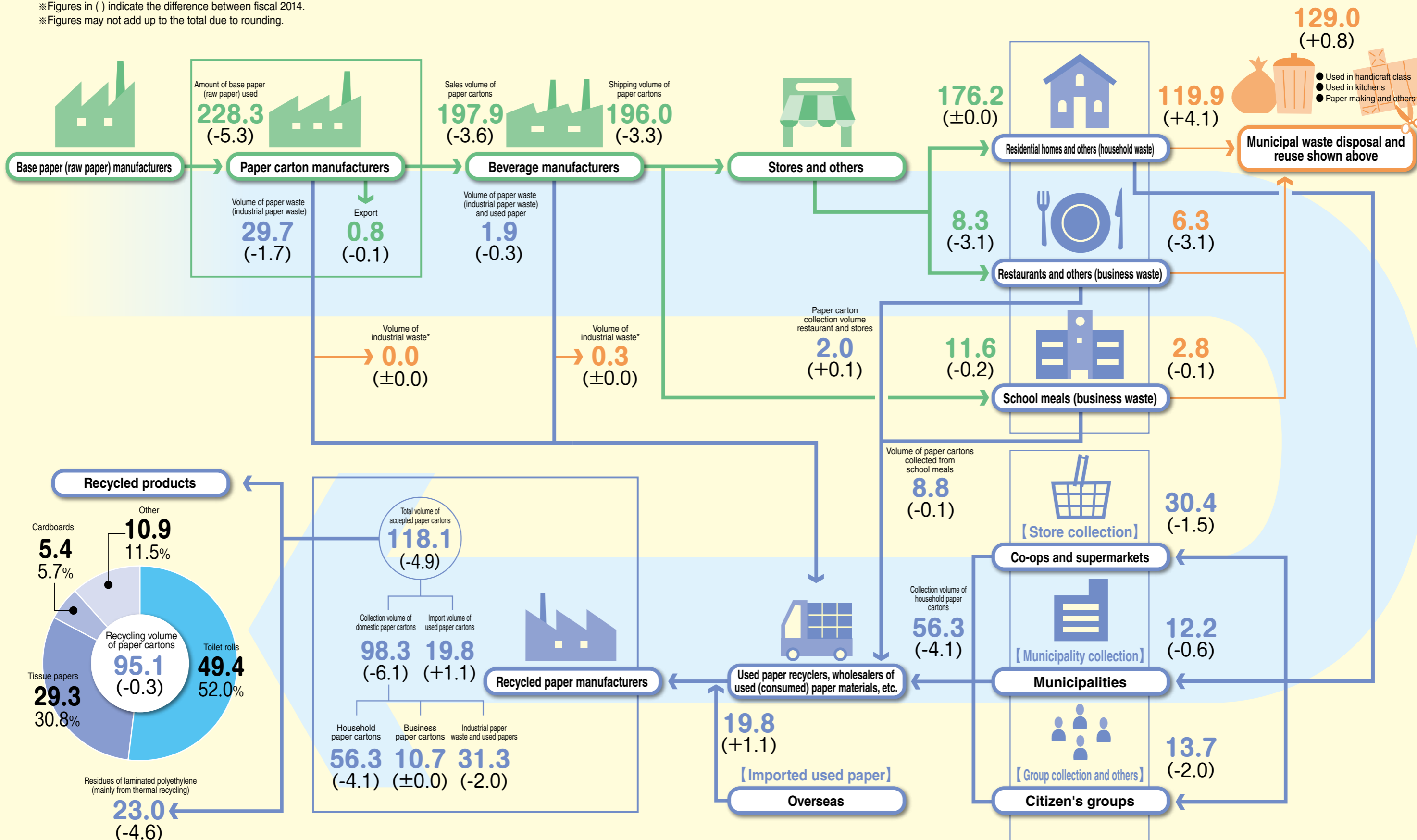


The following shows the overall state of paper carton recycling in fiscal 2015 in the form of material flow.

※Unit: 1,000 tons

※Figures in ( ) indicate the difference between fiscal 2014.

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



\* The volume of industrial waste includes that generated by thermal recycle.