

# Recycling status of retailers

# Collection status at welfare organizations



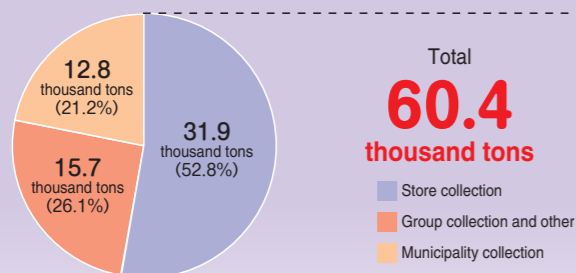
Storefront collection boxes such as those at supermarkets collect a large volume of paper cartons.

Storefront collection boxes such as those at supermarkets collect more than 50% of paper cartons collected from homes.

Store collection figures are based on information provided by the Japan Chain Stores Association (JCSA), the Japanese Consumers' Cooperative Union (JCCU), and our independent survey. The collection volume of cartons from stores in 2014 was 31.9 thousand tons. This was a dip of 0.4 thousand tons from the previous year.

In keeping with changes in the types of retail stores, the survey also covers a percentage of drug stores.

Household paper cartons collection volume by collection center (Estimated value)



## We are working on recycling!!

### Seicomart Co., Ltd.

(Head office: Sapporo City, Hokkaido)

#### Activity examples

Seicomart Co., Ltd. is the chain office of "Seicomart" stores that run business in all parts of Hokkaido and some areas of Ibaraki and Saitama Prefecture. They have a network consisted of 1,178 stores (as of October 2015).

They started paper carton collection at storefronts in 2005. They efficiently collect paper cartons using their own distribution network and produce original boxed tissue papers from this material. Customers can receive a box of tissue papers in exchange for "20 PB (private brand) paper packaging" or "30 PB egg containers".

The collection rate has been increasing year on year from 33% in 2005 thanks to this "participatory recycling". They have maintained a high collection rate of about 60% from 2007, and they continue to carry out ongoing consistent efforts to increase awareness of paper carton recycling activities.

In addition to paper packaging and egg packages, they recycle old newspapers and magazines as well as cardboard boxes collected as paper materials at storefronts.

They also utilize used vegetable oils from food cooking plants as the fuel to heat greenhouses where vegetables are grown. Because of these and other various environmental activities, they obtained "Sapporo Mayor Prize of Recycling-Oriented Society Promotion Category in 4th Sapporo Environmental Prize" in 2012.



A Seicomart store



Original tissue papers recycled from paper cartons

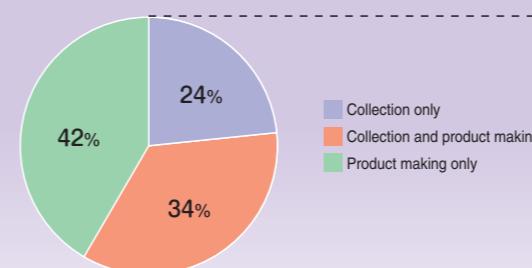
Welfare organizations produce a range of products using collected paper cartons.

Welfare organizations collect paper cartons from various sources including home, elementary schools, supermarkets, administrative bodies and daycare centers. They also produce a range of products utilizing collected cartons.

Among 274 facilities that are carrying out collections or product making, 42% are devoted to product making and 34% are doing both. This figure accounts for three quarters of the total. They produce a wide range of products including postcards, business cards and calendars.

More than half of the facilities engage in the collection. Sources are home, daycare centers and retailers in the region.

Breakdown of welfare organizations by collection and product making



## We are working on recycling!!

### Social welfare corporation Yume Kobo Welfare Society Work Space Yume Kobo

(Location: Suzaka City, Nagano Prefecture)

#### Activity examples

Social welfare corporation Work Space Yume Kobo was opened in 1999 as a work place for people with disabilities. It is currently operated as a multi-functional welfare facility for people with disabilities (30 target people of support of continued working Type B, and six target people of rehabilitation training). To support the social independence of people with disabilities, it provides them with opportunities to work along with leisurely daytime activities at the facility.

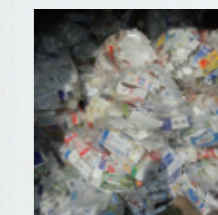
In this facility, they collect paper cartons, and production and sales of original hand-woven fabric goods and baked goods. Other than that, this facility focuses on order-based processing of souvenirs and cardboard boxes as well as out-of-facility work.

This facility has continued collecting paper cartons from when they opened because they think it contributes to improving the regional environmental and recycling issues. They currently collect about eight tons of paper cartons a year (three times a week) via well maintained collection centers mainly set up in supermarkets in Suzaka City and Nagano City. This facility recycles paper cartons through the network of Nagano Help Center Association, a specified non-profit corporation.

They plan to continue collecting paper cartons because it not only provides disabled citizens with opportunities to get outdoors and have contact with people outside the society, but it also provides a type of relaxation that is difficult to experience from indoor work alone.



Collection work



Paper cartons stored in a warehouse

# Status of municipality and group collection



Collection of paper cartons is carried out by about 90% of local governments.

21.2 thousand tons of paper cartons are collected through the municipality and group collection.

Municipality collection of paper cartons is promoted by the separate collection approach and the base collection approach.

Among the 1,741 municipalities in the country, we have sent questionnaires to 1,734 local governments in 2014 excluding seven areas that have been affected by the nuclear accident related to the Fukushima nuclear plants. We received responses from 1,247 municipalities. The total population of municipalities that responded to the survey made up 87.6% of the total population.

Used paper carton collection by municipalities and unions is classified as "municipality collection", and collection carried out by citizen's groups (registered to respective municipalities) is classified as "group collection". The implementation rates of municipality collection and group collection were about the same as those of the previous year. The municipality collection rate was 82%, and the group collection rate - excluding cases where no answers were received - was 51%. Either municipality collection or group collection was executed in 89% of the municipality. This means that almost 90% of local governments are collecting paper cartons.

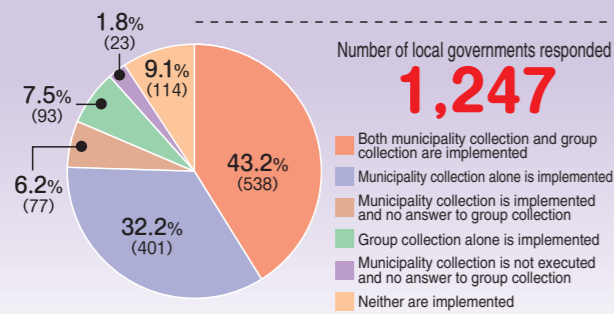
The survey estimated the municipality collection volume and group collection volume after grouping the target municipalities into four types: "General cities", "Government-ordinance-designated cities", "Tokyo special wards" and "Towns and villages". In fiscal 2014, the municipality collection volume was 12.8 thousand tons, and the group collection volume was 8.4 thousand tons. Total collection volume was 21.2 thousand tons.

Per capita collection volume (basic unit) both in the municipality and group collection is decreasing because of the decrease in the general cities that share more than 60% of the national population. In Tokyo's special wards, the volume by group collection is flustering out and that by municipality collection is decreasing. In the Government-ordinance-designated cities, the share of group collection is increasing compared to municipality collection. We must study and develop measures unique to the given region to secure a better collection rate.

Used paper cartons are collected in two ways in each municipality. One is the separate collection approach, and the other is the base collection approach. Strict separate collection refers to collection from homes and stations, and the base collection approach refers to collection from collection boxes at community halls and similar locations.

By city type, the separate collection is more widely employed by general cities, towns and villages, and the base collection approach is used more in the ordinance-designated cities and Tokyo special wards.

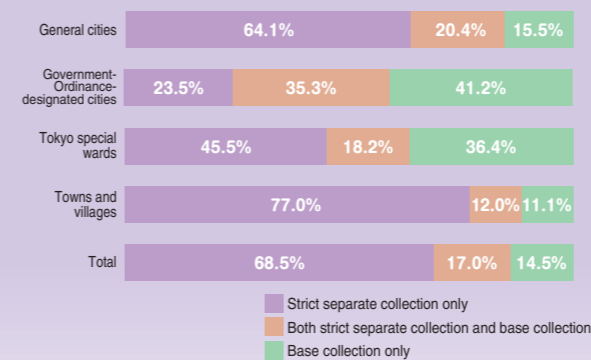
Implementation rate of municipality collection and group collection



Estimated municipality and group collection volumes by city type

	Total	General cities	Government-ordinance-designated cities	Tokyo special wards	Towns and villages
<b>Municipality collection</b>					
Estimated volume (1,000 tons)	12.8	9.1	1.3	0.7	1.6
Estimated collection ratio by city type	100%	71%	11%	5%	13%
Collection volume per person (grams per person)	100	113	50	78	139
<b>Group collection</b>					
Estimated volume (1,000 tons)	8.4	5.5	2.1	0.2	0.6
Estimated collection ratio by city type	100%	65%	25%	2%	7%
Collection volume per person (grams per person)	65	68	78	23	54
Population by city type (millions)	128	81	27	9	11

Ratio of paper carton collection types by city type



## We are working on recycling!

### Kitakyushu City, Fukuoka Prefecture

**Activity examples**

Under the slogan of Kitakyushu City it aims at "Nurturing of human resources and culture, preservation of environment and development of technology to deepen its global relationships", this city works hard to provide support for parents, to upgrade the educational environment and to improve welfare and medical care in addition to its dream for the future of achieving growth as a future-focused, environment-conscious city. Taking a cue from the full-scale enforcement of the Containers and Packaging Recycling Law in April 2000, Kitakyushu City started collection and recycling of paper cartons in July of that year. The city collected 152 tons in 2014 via 264 collection bases installed at the Citizen Center, supermarkets and other locations. The base collection approach helps maintain paper cartons in good condition as materials suitable for recycling.

The city is promoting wide use of toilet rolls "Eco-per" made from used papers and milk cartons that are collected in the city and recycled into new products for consumers. From April 2015, they start building a regional circulatory zone of milk cartons and used papers aiming to help create a low carbon society with the cooperation of citizens. To achieve this goal, they promote wide use of "Eco-per" featuring the friendly environmental mascot characters "Teitan & black Teitan" in the city and at facilities of neighboring cities. They say it will help people to visualize and gain a better idea of their recycling activities. At the same time, the city started comprehensive collection and recycling of milk cartons for school meals at elementary schools.



Toilet roll "Eco-per" and promotional seal



# Recycling status at schools

# Recycling status of recycled paper manufacturers



Recycling of paper milk cartons used in school lunches is also increasing.

Approximately 11.7 thousand tons of paper milk cartons were supplied for school lunches in 2014, which was roughly the same amount as in the previous year. Out of the total supply, 8.8 thousand tons (75.1%) are collected for recycling. The figure remains high. In addition to recycling of paper milk cartons for schools, reuse of paper cartons used in science and mathematics classes as well as collection of paper cartons from children's homes are being implemented at elementary schools.

## We are working on recycling!

### Shimizu Cho Nishi Elementary School and Minami Elementary School

(Suntogun, Shizuoka Prefecture)

#### Activity examples

Shimizu Cho, where Nishi Elementary School and Minami Elementary School are located, is an area with a wonderful natural environment commanding a panoramic view of Mt. Fuji with the clear water of the Kakita River and Kano River flowing through the town. In addition to the above two elementary schools, Shimizu Elementary school is also situated in the town, and children attending these three schools are working on recycling of milk cartons used in school lunches.

At Nishi Elementary School, sixth graders teach new pupils how to disassemble milk cartons by hand. After lunches, all children open milk cartons used for meals by hand, stack cartons in plastic cases, and then children on duty rinse cartons and dry them in the sun. Collected milk cartons are recycled into home-use papers at Corelex Shin-ei Mfg. Co., Ltd. with the help of Kannami Tobu Agricultural Cooperative. Recycled tissue papers are distributed to each class once a year to help students visualize their achievement and to educate them regarding the importance of valuing resources.

In addition to recycling of milk cartons used for school lunches, as part of the activity of the Welfare Committee, children of both schools collect paper cartons, aluminum cans, caps of pet bottles and products featuring the Bellmark at home and take them to school every Wednesday morning. Participating children get a seal for their reward card. The funds raised through this activity are donated to welfare organizations and used for PTA expenses.



Enjoying opening milk cartons by hand (Nishi Elementary School)



Welfare Committee activity (Collection of paper cartons) (Minami Elementary School)

Collected paper cartons are recycled as high-quality pulp fiber.

Among the 14 recycled paper manufacturers who answered the questionnaire, 12 manufacturers accept paper waste (industrial paper waste) of paper cartons, used papers, and used paper cartons generated in Japan.

The total volume accepted by the manufacturers was 123.0 tons in 2014 after the collection volume of domestic paper cartons and import volumes of used paper cartons are combined. About 80% (95.4 thousand tons) of them are recycled into toilet rolls and tissue papers. Paper cartons are used for these products as precious high-quality pulp fiber material.

## We are working on recycling!

### Kitakyushu Plant, KYUSHU PAPER PRODUCTS Co., LTD.

(Kitakyushu City, Fukuoka Prefecture)

#### Activity examples

Kitakyushu Plant of KYUSHU PAPER PRODUCTS Co., LTD. began business in 2006 at Yawata Plant of the former Nippon Steel Corporation Co., Ltd. as a cutting-edge plant that utilizes the comprehensive technology of Oita Paper Products Co., Ltd., which was founded in 1918. Under the company credo "Growing with regional development", staff at this company work hard, in addition to carrying out their business activities, to build a regional recycling society, preserve the environmental, and contribute to society through paper making.

For the purpose of environmental preservation, they utilize surplus electricity, gas, steam and water to recycle various types of used papers into high-quality toilet rolls. They accept about 3,000 tons of paper cartons a year mainly from the western part of Japan as precious resources to enhance the quality of their toilet rolls. They also recycle wastes by, for instance, processing polluted sludge from drainage treatment processes into foaming inhibitor, which is required in the iron-making process to eliminate impurities.

They also work hard to provide environmental education, including educating people to enhance their awareness of recycling. The plant accepts about 2,500 visitors a year, and positively participates in recycling of school lunch milk cartons and providing onsite lessons, both of which are to be started this year at every elementary school in Kitakyushu. They participate in an environmental event "Eco-Life Stage" hosted by the city to increase consumers' awareness of paper carton recycling.

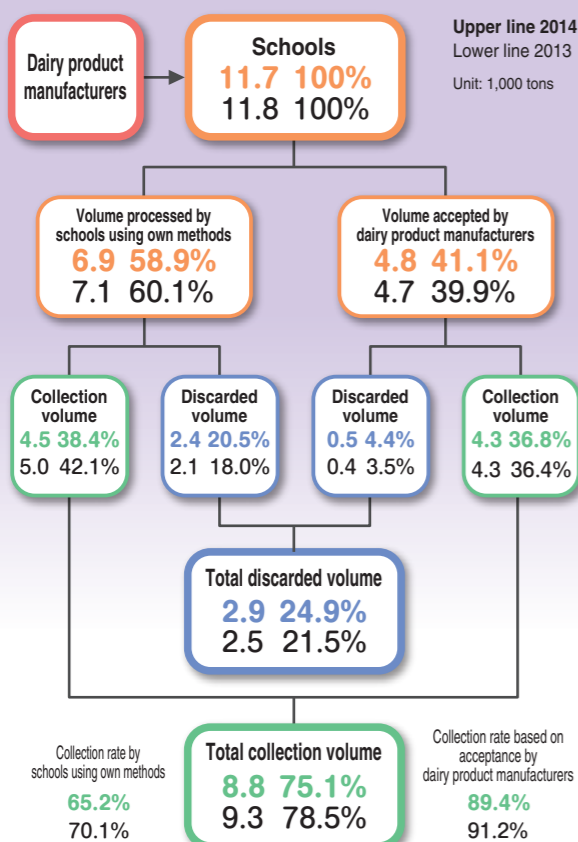


Onsite lessons



Eco-Life Stage

#### Material flow of milk cartons for schools (Estimated value)



※Some figures may not add up to the total due to rounding.

#### Use for recycled products

