# 2014 Paper carton recycling Annual report





Recycling rather than trashing makes you feel better.

Committee for Milk Container Environmental Issues

# Chairperson's message

The landscape continued to change in 2013, as the nation struggled with the ongoing challenges of reconstruction from the Great East Japan Earthquake of 2011 and cleanup of the stricken Fukushima nuclear power plant. At the same time, however, there is a growing sense of expectation for what lies ahead for the Japanese economy.

The International Dairy Federation (IDF) World Dairy Summit 2013 was held in Yokohama in late October, bringing together the international dairy farming and dairy industries. The event was a resounding success and facilitated discussions on environmental issues surrounding the dairy farming and dairy industries.

The Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging, which came into full effect in 2008, is currently being reviewed with an eye toward introducing future revisions. Regardless of what these revisions will entail, we must continue to encourage the adoption and expansion of paper carton recycling as we push toward an environmentally-conscious society reflected in the thoughts and actions of each individual.

The collection rate for paper carton recycling has plateaued over the last few years, despite having risen steadily in the years following the start of data collection. In fiscal 2011, the collection rate for paper cartons declined year-on-year for the first time. Although this was partly due to the Great East Japan Earthquake, it sounded a strong warning that lower collection rates for paper cartons will impede paper carton recycling efforts.

In response, we established two new subcommittees to strengthen our efforts, creating a Local Organization Board and General Affairs Committee in fiscal 2012. The new committees supplemented the activities of our existing Events Subcommittee and Publicity Subcommittee, bringing the total number of committees to four. By supporting regional efforts, the new committees are working to further promote the adoption and expansion of paper carton recycling. They have also launched a variety of new initiatives.

With the help of these initiatives, the collection rate in fiscal 2012 improved to 44.2%, up 1.3 percentage points year-on-year.

In fiscal 2013, the Local Organization Board newly developed "quiz-type information panels" and produced "toilet paper rolls to promote the virtues of paper carton recycling". These new measures are intended for the use of regional stakeholders as means of promoting paper carton recycling.



Masao Yamato Chairperson Committee for Milk Container Environmental Issues

The General Affairs Subcommittee arranged meetings with municipal environmental departments in order to gain their feedback on improving public relations efforts, and collaborated with municipalities on education and awareness-raising efforts. We also restarted our program to distribute paper carton recycling boxes, distribution of which had been halted after reaching the target of 20,000 locations. We are now distributing a new and improved recycling box under the program.

Alongside this, we have conducted several surveys to find ways to more effectively promote paper carton recycling and track collection rates more accurately.

"The Paper Carton Recycling Annual Report 2014" summarizes these and other efforts over the last year. Please take the time to read the report and give us your feedback.

We will continue to work with diverse stakeholders including the Japan Milk Carton Recycling Association, a citizen's group that is dedicated to promoting dairy carton recycling in Japan, to achieve the goal of a paper carton recycling rate in excess of 50% in fiscal 2015.

We hope you will lend us even greater support as we pursue these various efforts.

January 2014

# Action Plan to Improve the Paper Carton Collection Rate

By setting the goal of "Achieving the collection rate of more than 50% in 2015", the Committee for Milk Container Environmental Issues (hereinafter referred to as COMCEI) aims to enhance the paper carton collection rate and recycling rate.

Specific initiatives are as follows.



• To value the blessings of nature and help preserve the global environment so that the next generation of children can enjoy peace of mind, we will strengthen our cooperation with all parties related to paper carton recycling and promote voluntary activities to improve the collection rate.

•We will save resources and reduce the environmental impact by utilizing renewable paper cartons as high quality resources. We will continue to promote the importance of resource conservation through paper carton recycling.

### [Major Activities]

1. Providing opportunities for enhancing paper carton collection in local regions

①Hosting of a regional conference for promotion of carton recycling and a workshop on milk carton recycling (the latter is co-sponsored with the Japan Milk Carton Recycling Association, which is hereinafter referred to as JAMRA) ②Hosting of stakeholders' meetings among the parties

(2)Hosting of stakeholders' meetings among the parties involved

③Identifying people who can lead paper carton collection activities (individuals who have potential to lead local activities)

④Participation in environmental events (such as "Eco Products Exhibitions" and "Eco-Life Fairs")

⑤Supporting the "Friendly environment loop" forum (held by JAMRA)

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- 2. Promoting domestic paper carton collection
- ①Creation of opportunities for collection

②Promotion of collection of 500 milliliter and 200 milliliter paper cartons (smaller than the standard 1000 milliliter cartons)

③Setting up collection centers by installing paper carton collection boxes (in cooperation with JAMRA)

④Conducting an environmental campaign in which our environmental message advertisement is posted on paper carton products

⑤ Promoting paper carton recycling for plant tour participants

3. Promoting collection of paper cartons used outdoors and at the point of sale

①Study on how to collect paper cartons at workplaces and educational facilities such as high schools and colleges

②Support of collection of paper cartons used at food stores and restaurants (in cooperation with JAMRA)

4. Promoting activities in educational facilities and learning places

①Hosting of onsite lessons on milk carton recycling at primary schools (in cooperation with JAMRA)

②Promotion of recycling of milk cartons used for school lunches

③Production and distribution of the "Milk Packn's Expedition" DVD for children (in cooperation with JAMRA)

④Support of "Learn and Play" with Milk Cartons Contest5. Enhancing communication about recycling

①Utilization of "Milk carton recycling case studies" (in cooperation with JAMRA)

②Implementation of a basic survey on the present status and trends of beverage paper carton recycling

③Implementation of a Web survey on citizens' attitude towards recycling and associated behavior

④Enrichment of website contents of COMCEI and "Milk Packn's Expedition"

⑤International cooperation through paper carton recycling movement

### Activity Report of fiscal 2013

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"PLAN 2015" Action Plan for Recycling of Paper Cartons for Beverages -Report on achievements of the third year-

Our four committees have promoted the activities based on the action plan.

### 1. General Affairs Committee

(1) To achieve a collection rate of 50% or more

①The committee implemented a basic survey and Web survey on the paper carton recycling to identify problems to solve.

A questionnaire survey targeted at recycled paper manufacturers was conducted to ascertain the volume of their direct collection via the broader number of collection methods available today. These manufacturers had to date not been covered in the basic survey.

②Hosting of a regional conference for promotion of carton recycling

This time the committee visited local governments in Saitama Prefecture and Osaka to conduct a preliminary survey on paper carton collection and to ascertain the status of a citizens educational campaign in these areas. It also held a conference in Saitama and Osaka cities. Through the preliminary survey and conferences, the committee found there are differences among local governments in the methods used to notify citizens of how to separate trash. Explanations were lacking in some cities and descriptions were inappropriate in others.

③Installation of improved paper carton collection box This new box features an improved entry slot and box removal method. We have resumed distribution of the boxes to remind consumers about recycling. A smaller version is under development for use in small offices and stores.

(2) The committee reviewed implementation of the annual budget of COMCEI, and drafted the revised bylaws and rules.

2. Publicity Committee

(1) Promotional and educational projects

①Improvement of website

An analytical tool was employed to help reverse the decreasing trend of visitors. This tool analyzes the status of search keywords used in site visits.

②Revision of educational tool

The committee revised part of the children's booklet "A Story of a Milk Carton", on the occasion of the publication of its second edition.

③The committee worked to plan and edit the Annual Report 2014.

(2) Collection promotion projects

①The committee decided to update the "Nationwide Collection of 20 Cases" (third edition) based on newly gathered information due to various circumstances that have changed since the release of the initial plan.

②In the environmental slogan for education and promotion of paper carton recycling, the committee stressed the word "recycling" more than ever and modified the design to make the logo more suitable for smaller spaces. Members were notified of these modifications. 3. Event Committee

(1) Environmental education and expansion of activities through paper carton recycling

①The committee hosted the recycling workshop in five cities and onsite lessons on milk carton at seven primary schools with JAMRA.

②It also participated in local environmental fairs including the Eco-Iife Fair, Eco Products Kawagoe and Eco Products 2013.

(2) The committee conducted "Learn and Play" with the Milk Cartons Contest.

In order to cope with the decreasing trend of applicants, the committee requested the cooperation of local milk industry associations and local school boards to distribute the application procedures via new routes in addition to existing routes.

4. Local Organization Board

(1) Discover and support individuals who have potential to lead local paper carton recycling activities

①The board strove to activate and support local environmental events by expanding the number of participants by means such as the quiz panel to enhance awareness of environmental issues as well as distribution of educational tools and booklets

②The board exchanged information about the activity with local companies and supporters by issuing a mail magazine that enables readers to respond promptly to relevant issues that are raised.

Activities of each committee are reported to the Monthly Steering Committee to confirm accomplishment and to enable the Committee to conduct necessary modifications there to maintain lively activities.



Participants from the central government, various associations and civil corporations made presentations of their activities and case reports for building a recycling-based society.

### [Friendly Environment Loop Forum]

JAMRA hosted the 7th Friendly Environment Loop Forum on October 22 at Nakano Sunplaza with the support of COMCEI and backup of the Japan Dairy Industry Association on the theme of "Effects and Problems in Recycling of Containers and Packaging". Seventy people representing the central government, local authorities, relevant associations and civil corporations participated in this meeting.

In the speech by the host, Ms. Hirai, Director General of JAMRA, described the history of the Friendly Environment Loop Forum, the role of JAMRA that has cultivated relationship with relevant parties, and the Association's new campaign being promoted to commercial facilities. As a guest speaker, Mr. Yamato, Chairperson of COMCEI explained that the recycling obligation will be exempted for paper cartons in the amended Containers and Packaging Recycling Law and the current role allotment will be firmly maintained.

In a speech titled "Background and major details in the amendment of the laws related to saving of resources and promotion of recycling", Mr. Manjae Lee, Chairman, Institute of Dairy Technology Korea explained about the reformation of the producer responsibility system in recycling 10 years after its enactment. He concluded his speech with a lively question and answer session.

In the case report, JAMRA made an interim report on "Fact-finding survey on welfare work places involved in milk carton recycling". According to the report, collection of milk cartons and products made from milk cartons incorporated into work at 530 welfare work places around the country. It is becoming difficult to obtain used paper



Organizer: Speech by Ms. Hirai, Director General of JAMRA

cartons partly due to the recycling method specific to leading supermarkets.

**Activity topics** 

A representative of Sagamihara City listed problems to work on in relation to containers and packaging recycling such as how to maintain and improve the quality of bales and how to stave off the fall in delivery prices resulting from market conditions. He also said low-key efforts such as onsite lessons are important to enhance awareness among citizens and gain their cooperation.

In a report titled "3R of paper containers and packaging", the participant from the Paper Containers and Packaging Recycling Promotion Council pointed out that attaching the paper type identification mark has been made obligatory and that there is a difference in the recycling approach between the distribution route for used papers and that for recycling. In the distribution route for recycling, specific contractors entrust recycling to COMCEI, a designated corporation. He also introduced the activities of the council such as the survey of collection volumes in the cities and wards, chemical composition analysis of the collected paper cartons and packaging, and the council's recommendations concerning amendment of the Containers and Packaging Recycling Law.

Then the participant from the Recycling Promotion Department of Ministry of the Environment made a speech titled, "For building a recycling-based society -Current implementation status of the Containers and Packaging Recycling Law -". He introduced the implementation status of the Recycling Law, which has been reported to the deliberation council that convened for the amendment that is scheduled during the year, and the progress of the revision work. He said the amendment should reflect the concept of 3R more than ever. He also reported that sequential personal interviews with the council members are slated.

The forum was rewarding this year, too, with content-rich speeches and enthusiastic sharing of information among participants that continued into the convivial party.



Special speech: Mr. Manjae Lee, Chairman, Institute of Dairy Technology Korea

COMCEI held regional conferences to promote recycling through sharing information with local communities.

The "Regional conference for promotion of carton recycling" is held every year. Its objective is to increase the rate of paper carton recycling by understanding the current status and problems in each local community. The conferences in 2013 were held in two locations, Saitama and Osaka.

A diverse range of members including representatives from the local governments, relevant manufacturers, and citizens groups attended the conferences to report their activities and present the relevant issues. The conference helped deepen mutual understanding among the participants, encouraged them to exchange information, and confirmed their decision to further promote paper carton recycling.

### Regional Conference for Promotion of Carton Recycling in Saitama City, Saitama Prefecture

### Date held July 5, 2013

Participants Fifty two members from the Ministry of Agriculture, Forestry and Fisheries, Ministry of the Environment, local governments, citizens groups, dairy products manufacturers, paper and carton manufacturing companies, and paper recyclers.

### [Major reports and presentations on relevant issues]

- In a guest's speech, a participant from the Ministry of Agriculture, Forestry and Fisheries presented a report as follows. "The target value of paper carton collection in 2010 was 50% but the actual collection rate was 43.6%, which was below the target. I would like you to strive to achieve a higher target value in the future".
- COMCEI gave the following explanation. "In our voluntary action plan "PLAN 2015", which aims to achieve a collection rate of paper cartons in 2015 of more than 50%, we take a five-pronged approach.
   (1) Provision of opportunities for enhancing paper carton collection in local regions, (2) Promotion of domestic paper carton collection, (3) Promotion of collection of paper cartons used outdoors and in shops, (4) Promotion of activities at educational facilities and other places of learning and (5) Enhancement of communication about recycling. We will focus our efforts not only on collection but also on promoting use of recycled products".

- A participant from a local government said, "It is necessary for us to explain to children how the collected paper cartons are recycled to increase the collection rate".
- A participant from JAMRA reported that the current collection rate is very low compared with the processing capability of paper-manufacturing companies, the users, and about 60% of paper cartons that are high quality resources are not recycled.
- A member of a citizen's group reported that the group is carrying out educational activities to promote separation of used papers because it is a starting point for their effective use.
- Used paper recyclers and wholesalers of used papers pointed to problems including papers being stolen from collection areas and disruption of collection due to complicated distribution routes.
- A participant from a paper-manufacturing company said that since about 50% of used papers are imported as raw material, we must make further efforts to collect the cartons.

Through the regional conferences we have keenly felt the necessity to strictly observe the material separation rules, intensify educational activities, and rebuild the activity itself.



A scene of regional conference in Saitama

# Regional conference for promotion of carton recycling in Osaka city, Osaka prefecture

### Date held November 13, 2013

Participants Fifty participants from the Kinki Regional Agricultural Administration Office of the Ministry of Agriculture, Forestry and Fisheries, local governments, citizens' groups, research companies and business operators.

### [Major reports and presentations on relevant issues]

- In the speech made by a participant from the Kinki Regional Agricultural Administration Office, he said "Paper containers for beverages were considered to be valuable resources even before the Revised Containers and Packaging Recycling Law came into effect. I sincerely hope the concerned parties achieve the target rate of 50% by making greater efforts".
- The following findings are reported from a Web survey of consumers carried out by a research company. Although paper cartons are reused by a certain number of consumers, many of them take the paper cartons out along with other used papers because it is troublesome to separate them from others and, at any rate, the number of cartons is limited.
- COMCEI reported that paper carton collection rate in 2011 was 42.9%, and that it is promoting "PLAN 2015" to increase the rate to more than 50% in 2015.
- According to the status report of Osaka City, it expanded the separate collection of used papers from homes to the whole city in October. It is promoting an educational program for citizens with the support of the paper carton work class and the paper-making exchange center.
- Senri Recycle Plaza, a benevolent corporation, holds the paper-making class and onsite lessons for primary schools inviting citizens to act as teachers. These programs not only interest the participants but also teach them the importance of 3R as well as the high quality of paper cartons and their important roles in the natural environment.
- JAMRA posed a problem saying that "Recently, it seems that paper carton recycling carried out as part of



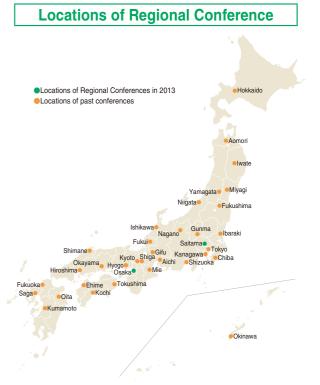
Regional conference in Osaka

local authorities' educational programs does not feature as highly as programs covering other containers (bottles, can and PET bottles). JAMRA also reported that it has expanded education activities related to recycling to shopping malls and supermarkets, too. In addition, according to their experience, demonstration of paper making is an effective means of communicating the importance of recycling.

**Activity topics** 

- A participant from the Paper-Making Exchange Center reported that paper making by use of about 5,000 milk and liquor cartons a day now provides meaningful work for impaired citizens. The presenter said the Center welcomes attendees' ideas for selling products made from paper made in this way.
- Kansai Milk Road Association, which primarily consists of vocational aid centers, collected 709 tons of milk cartons in 2011 and 713 tons in 2012.
- A participant from the used paper recyclers/wholesalers of used papers mentioned that recycling of paper cartons requires a greater amount of enthusiasm than that necessary for other used papers because you have to wash, open and dry the paper cartons.
- An attendee from a paper company said he has the impression that paper carton collection volumes are falling and, to stop this downward trend, cooperation from the eat-out food industry and intensified education campaigns targeted at consumers will be required.

The regional conference has clarified the necessity of supporting areas where recycling activities at vocal aid centers is thriving and also that educational activities for more efficient recycling is intensifying.



An important forum to exchange views on the current status and tasks of recycling among relevant organizations.

### [Symposium in memory of 20th Anniversary of Foundation] February 7

COMCEI hosted a symposium in memory of the 20th anniversary of its foundation in 1992 inviting 120 guests from the central government, local authorities, NPOs, relevant suppliers, OBs and citizens. Under the title "How to Promote Milk Carton Recycling in the Future", the symposium consisted of the keynote address, case reports, survey reports and a panel discussion.

COMCEI Chairperson Yamato said in the opening speech that although the collection rate of paper cartons in the last year dipped for the first time from the previous year, COMCEI plans to achieve a collection rate of more than 50% in 2015 based on its voluntary action plan "Plan 2015". He asked for continued support and cooperation from the concerned parties to accomplish this goal.

A guest from the Ministry of the Environment made the keynote address titled, "Review of Basic Plan for Recycling-Based Society and Ministry's Views on Recycling Law". He reported how the Recycling Law has been implemented and presented his evaluation five years after it was enforced. He said that concerned government ministries will continue to exchange views with relevant industries to promote "reduction" and "reuse", separate collection and separate storage, and also to clarify the scope of responsibility between the local authority and business operators.

Ms. Hirai, Director General of JAMRA, said we should maintain cooperation between citizens and business operators, which is a good point that is not very common in other industries. Ms. Hirai continued to say that JAMRA will collaborate with COMCEI for future development.

According to the report of COMCEI, possible causes of the dip in the collection rate in 2011 are the Great East Japan Earthquake and the increase in the number of local authorities including big cities where paper cartons are handled as miscellaneous recyclable papers. COMCEI's visit to North Europe has confirmed that there is nothing to worry about regarding the supply of base paper (raw paper) for paper cartons because of their systematic administration of forestry resources including raising of seedlings, tree planting, and foresting. Furthermore, COMCEI presented its new organization for the voluntary action plan "Plan 2015".

In the panel discussion that took place in the latter half of the meeting, guests from local authorities, relevant industry groups and paper companies reported respective cases of their efforts. Then, panelists discussed how to communicate to consumers that there is high market demand for paper cartons although it is somewhat troublesome to "rinse, open and dry" them. Many of the panelists agreed with the view that what matters at present is to build the system for collection and recycling.



Speech by the host: COMCEI Chairperson, Yamato



Attendants of panel discussion

An enjoyable workshop where people learn about the current status of recycling and experience it first hand.

COMCEI holds a Workshop on Milk Carton Recycling every year in order to win consumers' understanding of the current status of paper carton recycling and the status of forestry administration to secure materials for paper. The workshop also raises consumers' attention to milk carton collection through experiencing the collection rules. In 2013, the workshop was held in the following five locations.

### [Nakano Ward] July 27

A workshop held as part of an event called "Starting Eco-project Afresh" for children and their parents was attended by 20 primary school children and 13 parents. Inexperienced children seemed to have a little trouble in opening milk cartons with their hands but they understood the importance of the experience.

### [Sagamihara City] July 31

A "Parent-Child Onsite Recycling" event was held at Recycle Square of Sagamihara City in two parts. One was a "Lecture on environment and experience learning of paper making" held jointly by COMCEI and JAMRA, and the other was "Onsite garbage collection" by the Environment and Economic Affairs Bureau of the city. After experiencing paper making, the participants rode on a garbage truck and saw how rubbish is discharged at the garbage collection plant.



Lecture on Forestry Administration and Recycling (Nakano Ward)

### [Nishi Tokyo City] August 7

The 5th workshop was held for 4th to 6th graders in Nishi Tokyo City as part of an event called "Independent Research in Summer Holidays 2013" of Eco-Plaza Nishi Tokyo. It was attended by 36 children and 4 parents. In the popular postcard making from handmade papers event, all the participants successfully created their own unique postcards.

### [Saitama City] September 14

The workshop was held at Harigaya Primary School in Urawa Ward for the second time since last December. As last time, four people attended as instructors: one expert from COMCEI, two from OBs, and one cooperator. Thanks to the cooperation of the After-school class staff of Saitama City, we held a workshop for a total of 10 children and parents to help them develop an understanding of recycling.

### [Matsue City] October 9

The destination of the onsite lesson, Kashimahigashi Primary School, was called off when we visited because of Typhoon No.24. At the discretion of the primary school, we therefore held the workshop for the teachers who were attending on the day and nurses of nearby nurseries hoping that it will be of some use for their environmental classes.



Workshop (Milk cartons are unpacked by hand.)

At a children's learning place. "Onsite lessons" are welcomed every year at primary schools across the country.

In 2013, in collaboration with JAMRA, the Committee held "Onsite Lessons on Milk Carton Recycling" at primary schools across the country.

# [Yokohama City Hie Primary School, Kanagawa Prefecture] January 22

Onsite lessons were held as part "Activities of Friends" and attended by 21 children from Class 1 in the fourth grade and a parent. The annual objectives of Class 1 in the fourth grade in the "Comprehensive Activity Programs" of the school was "Aim to be a master of paper making!". Children who had already experienced paper making created very attractive postcards from handmade papers using techniques they had learnt such as adjusting the volume of pulp to be scooped at one time.

### [Motegi Cho Motegi Primary School, Tochigi Prefecture] May 31

Motegi Primary School hosted onsite lessons in November last year. This year's attendees, 50 fifth graders and three teachers, were great learners. The Environmental Section of Mogi Cho, which helps us distribute "Real Story of Paper Carton Recycling" to citizens, visited the school to interview us. Later, we heard good news that the fifth graders who participated in lessons this time are planning to teach what they have learned to fourth graders.

### [Hiroshima City Ushitashinmachi Primary School, Hiroshima Prefecture] June 12

Ushitashinmachi Primary School is located on the hillside of Kanda Mountain. The onsite lesson at this school was attended by 61 sixth graders from two classes and many parents. After creating postcards from handmade paper, the children playfully showed them to each other though the iron power happen to be turned off along the way. They all received a copy of the new booklet, "Story of Waste".

### [Kawaguchi City Tozukaminami Primary School, Saitama Prefecture] September 30

"Onsite lesson on the environment" was held in Kawaguchi City, Saitama Prefecture. This time it was held under the theme of "Story of recycling" with the lecturers from the Aluminium Can Recycling Association, Steel Can Recycling Association and COMCEI for about 160 fourth graders from four classes. Before and after watching "Milk Packn's Expedition", the children took part in brief quizzes. Thanks to the results of daily learning, they did very well in the quizzes.

### [Haga Cho Hagaminami Primary School, Tochigi Prefecture] November 9

Children of Hagaminami Primary School are in top form, and active in the areas of sports, art and music. The onsite lesson, though it was held on Saturday, was attended by 40 fourth graders, many parents and two teachers. Although at first the children were a little cautious about squashy pulp, which is used to make paper cartons, they successfully created postcards made from handmade paper under the instructor's guidance.

### [Toyama City Shinjo Primary School, Toyama Prefecture] November 19

Children of Shinjo Primary School welcomed us a lively "Good morning!" We heard that they are practicing rinsing and drying milk cartons used for school lunches as part of recycling activities. In the onsite lesson, 71 fourth graders from 2 classes (three were absent among them) tried their hand at creating postcards made from handmade paper after a lecture session that involved some quizzes. This onsite lesson was very enjoyable, The lesson was covered by a local newspaper and TV station, and attended by Yamato Alpine Dairy Co., which supplies milk for school lunches.



Completion of postcards made from handmade papers! (Yokohama City Hie Primary School)



Children listening to "Story of recycling" (Motegi Cho Motegi Primary School)



Rinse and dry milk cartons! (Toyama City Shinjo Primary School)



# [Mitoyo City Matsusaki Primary School, Kagawa Prefecture] November 28

Matsusaki Primary School, which is located on a low hill near Takuma Station on the JR line, has a long tradition that began in the early Meiji era despite its modern school building being built of steel. The onsite lesson was attended by 29 fourth graders, two city workers, and Shikoku Meiji Dairies Corporation, which supplies milk for school lunches. The children, surrounded by many adults, took the class in a relaxed fashion.



We received a letter of thanks for the onsite lessons (Hiroshima City Ushitashinmachi Primary School)



Hold your postcards and "Say cheese!" (Mitoyo City Matsusaki Primary School)

Raising awareness regarding importance of recycling. Participants disassembled milk cartons by hand and made paper.

### [Eco-life Fair 2013] June 1 and 2

The Ministry of the Environment and relevant associations have held an Eco-life Fair every year since the 1990's on Environment Day (June 5) in Yoyogi Park in Shibuya, Tokyo. The number of visitors who attended this year was about 78,000, which was an improvement on last year's count. COMCEI participated in the fair with JAMRA and received about 460 visitors.

With the help of the citizens group "Tanpopo", we demonstrated how postcards can be made from handmade paper and small items by using paper cartons in our exhibition booth. The demonstration was very popular and a long queue formed. We also held a workshop four times in a special large tent. About 40 visitors, after being served with milk, attempted to disassemble milk cartons by hand. Every person who successfully opened a milk carton received a box of tissue paper. Visitors learnt about recycling of milk cartons through the event.

COMCEI booth was thriving every day. We participated in one of the largest environmental exhibitions in Japan.

### [Eco Products 2013] December 12 to 14

Eco Products Exhibition, which was started in 1999, is one of the largest environmental exhibitions in Japan. Its 15th exhibition was held last December. COMCEI jointly participated in it with the Milk Carton Recycle Mark Promotion Council. COMCEI has participated in this event 10 times.

The total number of visitors was 169,076, which was slightly fewer than last year. Visitors to the COMCEI booth, however, increased to 1,722 from 1,502 the previous year. A range of events including a workshop titled, "Drink milk and open up empty carton with your hands", an annual event called "Postcard making from handmade papers" in cooperation with JAMRA, and exhibit panels on the environment and recycling issues that featured the "Story of Waste" were crowded every day with visitors.

### Best Prize went to "Ornamental hairpin" by Marina Hata.

Approximately 2,856 primary school children participated in the 13th "Learn and Play" with Milk Cartons Contest 2013. Among the many impressive creations, the following seven prize-winning creations were selected through impartial examination. Congratulations!



Best prize "Ornamental hairpin" Marina Hata

### ≪Prize-winning creations≫

- The Best Prize "Ornamental hairpin" Marina Hata (5th grader, Wakayama City Santa Primary School)
- Award for Excellence "Puck of Carton" Maiko Miura (1st grader, Gujo City Kawaai Primary School)
- Award for Excellence "Eco-Apron" Ayaka Nanbu (5th grader at Wakuya Cho Wakuya Daiichi Primary School)
- Prize of National Primary/Junior High schools **Environment Teachers' Association** "Milk-carton sprinkler" Chihiro Noba (2nd grader, Kawaguchi City Honcho Primary School)
- Prize of JAMRA "Conical hat adorned with flowers" Renji Suzuki (2nd grader at Yamagata City Sakurada Primary School)
- Prize of COMCEI "Peacock-shaped coin bank" Kaiku Nakazawa (1st grader, Kawaguchi City Asahinishi Primary School)
- Prize of Japan Dairy Industry Association "Bluebird of happiness" Yoshtaka Takeshita (6th grader, Saitama City Saido Primary School)



Our staff's explanation of exhibit panels on environment in the booth



Disassembly of milk cartons by hand in the special tent





Educational exhibits on recycling

The Best Prize was awarded for a handicraft (tsumami zaiku) "Ornamental hairpin" made by Hata, a sixth grader in Wakayama Prefecture. Taking an idea from her "jusanmairi (the practice of visiting a temple when a boy or girl turned 13 years old), she featured characteristics of a milk carton in the traditional ornamental hairpin making process. It was an elaborate handicraft. Hata won the best prize this year in "Learn and Play" with Milk Cartons Contest, the successor of the COMCEI Prize in 2012.

The awards ceremony of the prize-winning creations was held in the COMCEI booth at "Eco Products 2013". The diplomas, shields and sub-prizes were handed to the award winners by the Chairperson of the Review Board, Mr. Zeniya (Executive Director of Tokyo National Museum), Executive Committee Chairperson, Mr. Yamato (Chairperson of COMCEI), and other review board members.

The prize-winning creations are introduced on the COMCEI website for children "Milk Packn's Expedition".



The Best Prize winner Marina Hata



Awards ceremony held at Eco Products 2013

COMCEI provides DVDs and leaflets that explain characteristics of paper cartons and how they are recycled in an easy-to-understand manner.

### DVD "Milk Packn's Expedition"

COMCEI has prepared a detailed DVD version of the children-oriented website "Milk Packn's Expedition". This is an educational tool that helps them think about the environment and learn the importance of initiating their own activities. We will send it free of charge to schools and organizations that applied.



DVD "Milk Packn's Expedition

### "Real Story of Paper Carton Recycling"

This leaflet contains answers to the frequently asked questions in the course of promoting activities to improve the recycling rate of paper cartons. Using many illustrations it also clearly and simply explains that paper cartons are very environmentally-friendly products and they must be collected separately from other paper products to utilize this resource effectively.

### "Story of Waste"

"Real Story of Paper Carton Recycling" has been edited for children with intimate illustrations of the Milk Packn'.





"Story of Waste" "Real Story of Paper Carton Recycling"

COMCEI published various publications to help people think of the global environment through recycling.

### Book "Paper Carton Manifesto"

This book details characteristics of paper cartons and recycling activities in order to submit recommendations for the future of our planet while enhancing consciousness about the meaning of recycling.

The writers include Mr. Inose, president of ECOIPS, Ms. Hirai, Director General of JAMRA, and seven members of COMCEI, among others.

# "Milk Carton Recycling - Nationwide Collection of 20 Cases" 3rd volume

Currently, three methods have been established to collect paper cartons. These are: store collection, municipality collection, and voluntary group collection. To make strict separate collection a success, education of the local community and use of devices unique to individual communities are necessary. This case book introduces actual recycling activities carried out by citizen's groups, local governments and various business sectors throughout Japan to assist readers when they are confronted with problems.



### [Collaboration with mass merchandise store "Ario Hashimoto"]

On March 9, as part of "Operation Sagamihara Trash DE71", we held a workshop titled "Let's create greeting cards with milk cartons!" at a mass merchandise at Ario Hashimoto. More than 120 participants have created unique greeting cards. The most impressive of all was the card, which has been created by a group of junior high school students, with an illustration of a heart for White Day.



Trash separation characters of Sagamihara City "Lemon Chan and Shigenja"

### [Collaboration with mass merchandise store "LaLa garden Nagamachi"]

On September 23 and 24, we held an "Experience learning of paper making" event as the first paper carton recycling campaign in the Tohoku area in the "LaLa Autumn Culture Fest" of LaLa garden Nagamachi in Sendai City. This event, which consisted of a discussion meeting on paper carton recycling, a paper carton art exhibition, and an eco recycling panel exhibition, was very boisterous with many parents and children attending.



Paper carton art exhibition "Future city Nagamachi



Book "Paper Carton Manifesto" Nippon Hyoron Sha Co., Ltd.



3rd edition "Nationwide Collection of 20 Cases" **Activity topics** 

# Collection Box has been improved.

# [Promotion of activities with "the new, improved paper carton collection box"]

In order to expand the number of people who will work in the collection and collection centers, COMCEI and JAMRA have been engaged in creating easy-tohandle collection boxes and distributing them free since 2001.

The number of collection centers has increased to 20,700 as of the end of March, 2013 thanks to the efforts of milk carton collection groups across the country.

Using your opinions and comments as a reference, we have created a new, easier-to-handle collection box, and started to accept applications for the boxes in April 2013. A two-part structure of the main body and top lid has been employed for the new box to make it easier to take out the cartons and prevent overspilling. We intend to continue efforts to improve the collection rate of paper cartons.

The application form is provided on COMCEI's website "Paper carton collection box".

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### COMCEI's website (Japanese) http://www.yokankyo.jp

Website of Milk Packn's Expedition (Japanese) http://www.packun.jp

# 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)



- = 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)



= 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.

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

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.

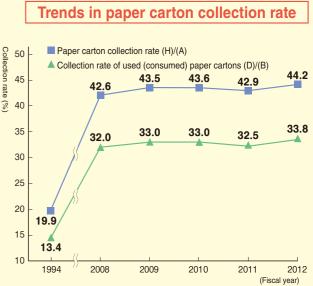
The collection volume of domestic paper cartons in fiscal 2012 was 107.5 thousand tons. This was an increase of 1.7 thousand tons (1.6%) over the previous year. The collection volume of used paper cartons in fiscal 2012 was 69.1 thousand tons. This was an increase of 1.5 thousand tons (2.1%) over the previous vear.

Trends in used volume of paper cartons and their collection volume are summarized in "Trends shown by major data".

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

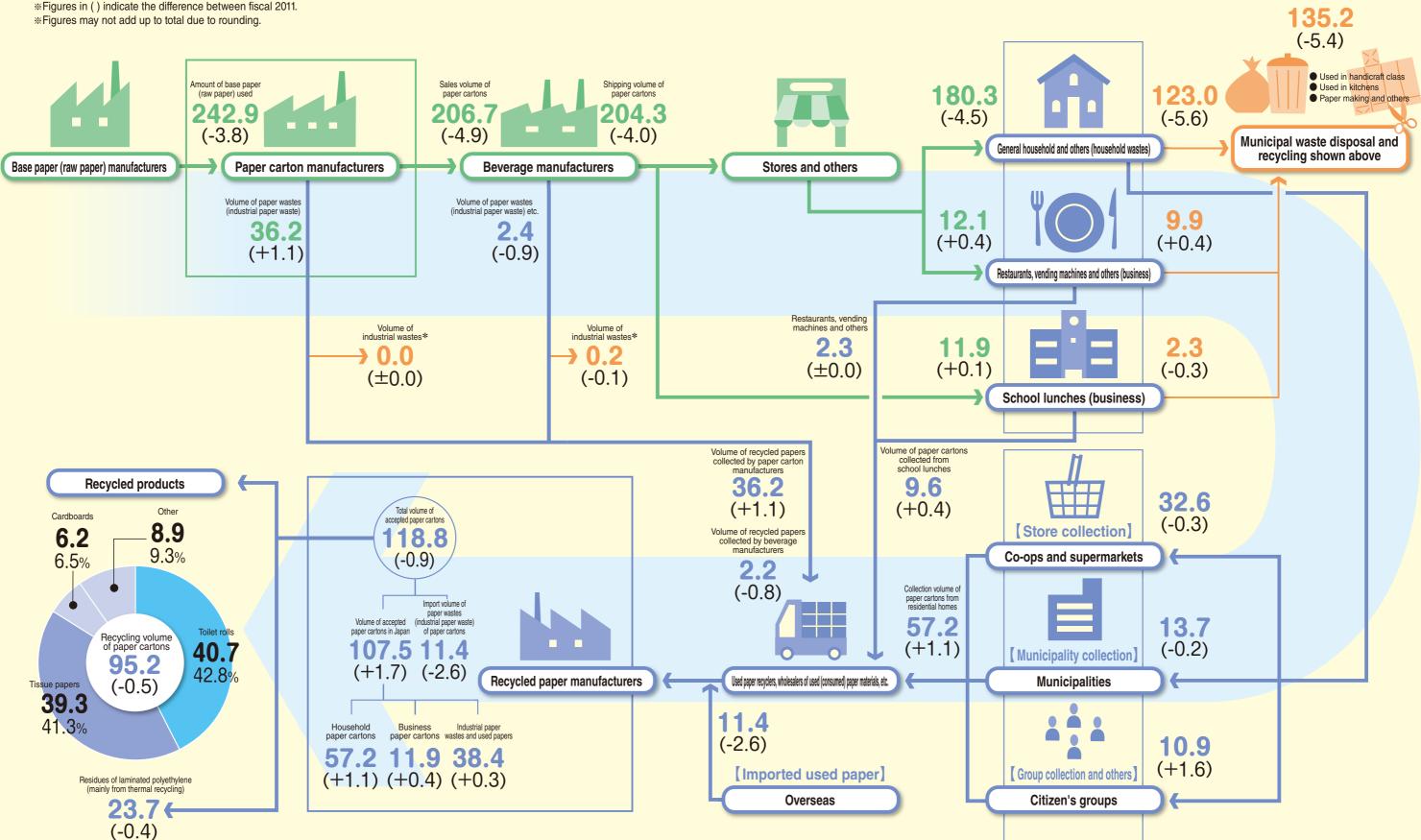


# Paper carton material flow in fiscal 2012

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.



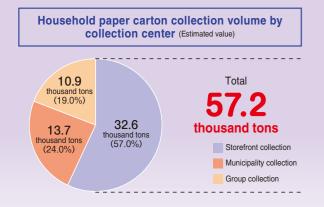


Storefront collection boxes such as at supermarkets collect a large volume of paper cartons.

Storefront collection boxes such as at supermarkets collect about 60% of paper cartons collected from homes.

Figures of the storefront collection are based on information provided by the Japan Chain Stores Association (JCSA), the Japanese Consumers' Cooperative Union (JCCU), and our independent survey. Volume of the storefront collection in 2012 was 32.6 thousand tons. This was a dip of 0.3 thousand tons from the previous year.

In keeping with changes in the types of the retail stores, the survey covers part of the drug stores.



### We are working on recycling!

### Izumiya Co., Ltd.

(Head office : Osaka City, Osaka)

Izumiya is a chain-store that operates Activity examples 91 stores mainly in Kansai area (as of October 2013). The company promotes its environmental policies by introducing the

environmental management system. "good-i Heartful" represents their environmentalfriendly products that are born as a result of the pursuit of reduced environmental load and friendliness to consumers in the entire life cycle of the products from production to consumption and disposal. Based on the unique development standards and a desire to meet customers' demands, Izumiya develops products that are, for instance, made of recycled materials, do not damage the natural environment and are friendly to atopic dermatitis and sensitive skin.

Izumiya has developed the resource circulation system in which they ask customers to bring recyclable resources that have now become unnecessary to them to the stores to "display the products made of collected resources again in the stores". Izumiya installs recycle boxes for milk cartons, aluminum cans, PET bottles and trays at every food-handling store in their chain. The volume of paper cartons collected was 297 tons in 2012.

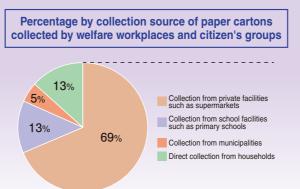
Collected containers are recycled as products such tissue paper and carpets at Tsumori Eco Center of Kanso Co., Ltd., a group company.

In addition to collection of paper cartons, they create products such as postcards using handmade paper made from paper cartons.

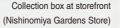
Welfare work places and citizen groups collect the biggest volume of paper cartons from the storefront collection boxes of supermarkets and other stores. It is followed by collection from homes, school facilities such as primary schools and local authorities. They have a range of collection sources. According to the basic survey of 2012, the collection volume was about 1 thousand tons. This volume was almost the same as in the past.

In addition to collection of paper cartons, many welfare work places create products such as postcards by use of recycled paper cartons.

The collection volume shown in the material flow reflects the information obtained from JAMRA's factfinding-survey on the welfare work places, too.







Collection box at storefront (Matsubara Chuo Store)



**Activity Report of fiscal 2013** 

### We are working on recycling!

### Welfare work place Hibiki Organization Activity Center Hibiki

(Higashi Osaka City, Osaka)

Activity examples

Hibiki Organization was opened in 1977 as an unauthorized joint work place for the disabled people. After

Hibiki was then authorized corporate body in 1984, it has consistently promoted the welfare service on the concept that disabled people are leading players of the welfare work place. It provides welfare service to disabled people under the five basic concepts of "Creation", "Safety", "Thankfulness", "Justice" and "Solidarity".

"Activity Center Hibiki", a business site of Hibiki Organization, strives to help disabled people through work. Sorting of paper cartons is in the work program as part of these efforts.

They collect paper cartons from cooperative supermarkets once a week (twice a week during summer) using a 2-ton truck. They sort the collected paper cartons by removing trays and cartons attached to aluminum that has been mixed in. As much as 10 tons of paper cartons are delivered each month to used paper wholesalers as valuable materials.



Paper carton sorting work



Loading the truck

(19)

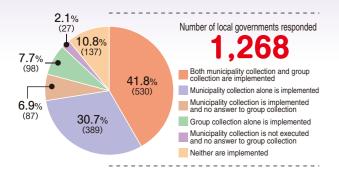
Collection of paper cartons is carried out in about 90% of local governments.

Among the 1,742 local governments in the country, our 2012 survey was conducted in 1,735 of them excluding 7 areas that have been affected by Fukushima nuclear accident. We received responses from 1,268 municipalities. The total population of municipalities that responded to the survey made up 88.8% of the total population.

Used (consumed) 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 79%, and the group collection rate was, excluding cases where no answers were received, 50%. Either municipality collection or group collection was executed in 87% of the municipality. It means almost 90% of local governments are collecting paper cartons in Japan.

Implementation rate of municipality collection and group collection

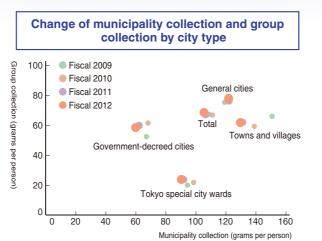


22.4 thousand tons of paper cartons are collected through the efforts of local governments.

The survey estimated the municipality collection volume and group collection volume after grouping the target municipalities into four types: "General cities", "Government-decreed cities", "Tokyo special city wards" and "Towns and villages". In fiscal 2012, the municipality collection volume was 13.7 thousand tons, and the group collection volume was 8.7 thousand tons. Total collection volume was 22.4 thousand tons.

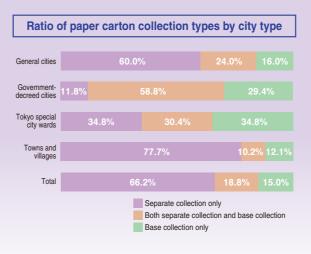
There was no large fluctuation in the collection volume per person (basic unit) because the collection volume in general cities, which share more than 60% of the national population, has remained stable over the past few years.

Estimated municipality and group collection volumes by city type							
		Total	General cities	Government- decreed cities	Tokyo special city wards	Towns and villages	
Munici	Estimated volume (1,000 tons)	13.7	9.8	1.6	0.8	1.5	
Municipality collection	Estimated collection ratio by city type	100%	72%	12%	6%	11%	
llection	Collection volume per person (grams per person)	108	123	60	91	130	
Grou	Estimated volume (1,000 tons)	8.7	6.2	1.5	0.2	0.7	
Group collection	Estimated collection ratio by city type	100%	72%	17%	2%	8%	
ction	Collection volume per person (grams per person)	68	78	57	23	63	
Pop	Population by city type (millions)         127         80         27         9         12						



Municipality collection of paper cartons is implemented in the separation-collection approach and the collection-center approach.

Used (consumed) paper cartons are collected in two ways in each municipality. One is the separationcollection approach and the other is the collectioncenter approach. The separation-collection refers to collection from homes and collection stations and the collection-center approach refers to collection from collection boxes at community halls and the like. By the city type, the separation-collection is more widely employed by general cities, towns and villages, and the collection-center approach is used more in the government-decreed cities and Tokyo's special wards.



### We are working on recycling!

### Osaka City, Osaka

Activity examples

Osaka City, thus far, has collected paper cartons by accepting the cartons brought in to the Environmental

Business Center by citizens and also by installing collection boxes at public facilities such as City Hall. However, in October 2013 it started separate collection of used papers and clothes in every ward (the separate collection was started in six wards ahead of other wards in February 2013), and paper cartons was included in the target items of the separate collection. The volume of the paper cartons collected was 211 tons from collection centers (in 2012) and separate collection was 4 tons (the volume collected in the preceding implementation from February to September 2013).

Osaka City started requesting citizens to strictly observe the separate collection rules from October 2013. The city does not collect garbage bags if recyclable trash, container and packaging plastics, used papers or clothes are mixed with regular trash. A warning seal is attached to such bags.

The city has set up a support system for groups engaged in collection of recyclable waste to promote their activities.



(21

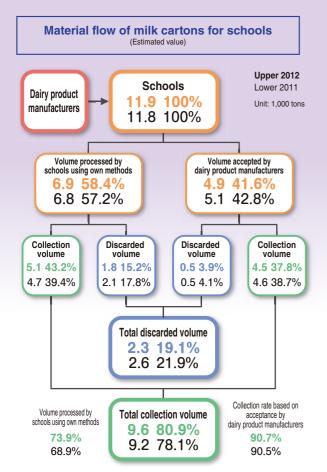
The city is also making efforts to launch new groups by use of information from recycling business operators, who receive used papers from group collection, and through collaboration with staff to reduce waste. The volume of paper cartons from the group collection was 5 tons (in 2012).

The city introduces stores that are implementing voluntary collection of paper cartons and toilet rolls on the website of Osaka Recycling Map to build a more functional recycling system.

Recycling of paper cartons of milk for school lunches also increasing.

Supply of paper cartons of milk for school lunches in 2012 was 11.9 thousand tons, roughly the same amount as the previous year. Out of the total supply, 9.6 thousand tons are collected for recycling. This figure is 0.4 thousand tons above the previous year.

In addition to recycling of paper cartons of milk for school lunches, reuse of paper cartons used in science and mathematics classes as well as collection of paper cartons from children's homes are implemented at primary schools.



Processing by schools using own methods refers to deliver paper cartons directly to local governments or used paper recyclers. \*Figures may not add up to total due to rounding

### We are working on recycling!

### Haga Cho Hagaminami Primary School

(Haga Cho, Tochigi Prefecture)

Activity examples

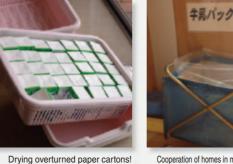
Haga Cho is located in the southeast of Tochigi Prefecture. The Gogyo and Nomoto rivers flow almost to the center

of town. This town is know as one of leading rice growing districts in the prefecture. Many companies are moving into the industrial complex that has been built on the highland in the western part of the town.

Hagaminami Primary School was established after three primary schools, Mizuhashi, Mizunuma and Takahashi, were integrated in 2006. There are 14 classes containing 289 children (as of April 1, 2012).

Recycling of milk cartons commenced when the school opened with the support from the Environmental Measure Section of the Haga Cho. They collect about 300 cartons a day. Cartons are collected into the specified bags. School children work to collect milk cartons and separate discharge of leftovers of school lunches in concert with the town's "Town of Virtuous Cycle - Haga" activity (a publicity activity focusing on recycling, trash separation and making compost from leftover meals, etc.). Every year they implement collection of waste materials such as PET bottles, newspapers, magazines, cans and milk cartons with the cooperation of the PTA. The rules "Rinse, open, dry and bundle" are practiced by the children. They collect an amount of waste materials that occupies almost half the area of the loading platform of a lightweight truck. The profits are used to reduce the costs of children's school activities.

Environmental consciousness of the children is heightened through the recycling of milk cartons and other environmental activities

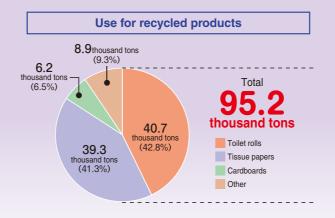


Cooperation of homes in milk carton collection

Collected paper cartons are recycled as highquality pulp fiber.

Among the 21 recycled paper manufacturers who answered the questionnaires, 17 manufacturers accept paper wastes (industrial paper waste) of paper cartons, used papers, and used paper cartons generated in Japan.

The total volume accepted by manufacturers, which consists of paper cartons collection in Japan and imported paper wastes (industrial paper waste) of paper cartons in 2012 is 118.8 tons. About 80% (95.2 thousand tons) out of them are recycled into toilet rolls and tissue paper. Paper cartons are used for these products as precious high-quality pulp fiber.





**Activity Report of fiscal 2013** 

## We are working on recycling!

### Ehime Pulp Cooperative Association

(Shikokuchuo City, Ehime Prefecture)

Activity examples

The Ehime Pulp Cooperative Association was founded in 1969 by member firms of eight paper companies in Ehime Prefecture. It develops and

produces "earth-friendly" recycled pulp made from 100% used paper. Kawanoe Cho, where the plant is located, is known as "paper town" due to its thriving paper-making and processing industry.

This association supplies recycled pulp to member companies without producing the final products. Used papers primarily collected from western Japan are converted into pulp on the three different facilities consisted of AP line 240 tons/day (it produces pulp using mainly used business paper and confidential documents), MCP line 45 tons/day (produces pulp by use of paper cartons for beverages alone) and SP line 60 tons/day (produces pulp with high whiteness by using copy paper). Using this pulp, the member companies produce paper for home use (toilet rolls, tissue paper, etc.). Through these processes, papers return to our life again. They are practicing the cycle of "making papers from paper".

The association has developed recycled pulp made from milk cartons alone (MCP) that have a level of quality comparable to natural pulp. MCP will be able to capture a certain portion of the market from the natural pulp. Thus, early establishment of the production system of such high-quality pulp is anticipated.



Collected paper cartons

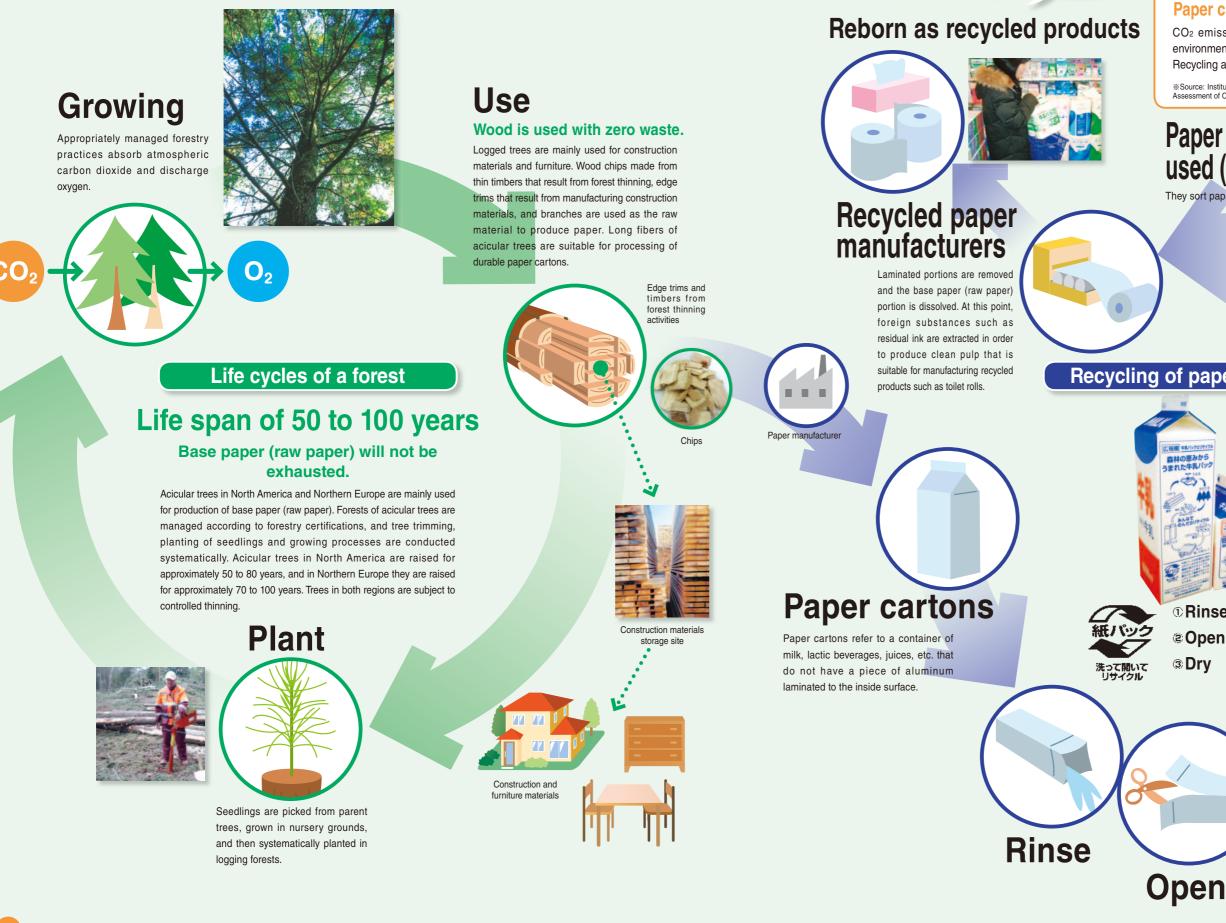


A pile of MCF



# **Dual loops of paper carton recycling**

A used paper carton is a high-quality resource. It is reborn as recycled products.



Paper cartons have lower environmental load\*

CO2 emissions from a 1000 ml paper carton total 32.4 g. The environmental load resulting from this is very small. Recycling a 1000 ml paper carton reduces CO<sub>2</sub> emissions by 23.4 g.

\*\*Source: Institute for Policy Analysis and Social Innovation "2004 Report of Survey on Life Cycle Assessment of Containers and Packaging" (Entrusted by the Ministry of Environment)

# Paper recyclers and wholesalers of used (consumed) paper

They sort paper cartons and transport them to recycled paper manufacturers.

このマークが入った

### **Recycling of paper cartons**

**® Rinse** 

Open

3 Dry

# Collection

Collection methods include store collection at supermarkets and other similar stores, municipality collection, group collection by citizen's groups, and collection at schools.

Dry



### International collaboration

# Introduction of Efforts in EU



# **History**

Fiscal yea	ar History	Applicable laws
1984	A group of housewives started a milk carton recycling movement to teach their children to recognize the value of things.	
1985	Japan Milk Carton Recycling Association" was established.	
1992	<ul> <li>"Committee for Milk Container Environmental Issues" was established.</li> <li>"Milk carton recycled products mark" was created.</li> </ul>	
1993	• COMCEI participated in "Forestry Fair" held by the Forestry Agency (COMCEI participated every year until 2008).	<ul> <li>The Basic Environmental I enacted.</li> </ul>
1995	• "Basic survey on the present status and trends of beverage paper container (paper carton) recycling" was started.	Containers and Packaging F Law was enacted.
1996	"The Beverage Paper Container Recycling Council" was established.	
1997	National case study on milk carton collection system was conducted.	<ul> <li>Containers and Packaging F Law was enforced.</li> </ul>
1998	<ul> <li>Model project for promotion of milk cartons used for school lunches was started (Hokkaido).</li> <li>An experimental projected was implemented to build a collection and recycling system of milk cartons used for school lunches (Fukuoka and Hyogo)</li> <li>Convivial meetings were held to promote collection of paper drink cartons (Locations of meeting * 1)</li> </ul>	
1999	Local conference to promote paper carton recycling was held (this has been continuing since then *1).	
2000	The Paper Carton Identification Mark was voluntarily established. Discussion Meeting to Promote Recycling of Paper Cartons for Beverages was started (this has been continuing since). <b>XPCTRUC XPCTRUC XPCTRUC</b>	<ul> <li>Containers and Packaging R Law was enforced.</li> <li>Basic Law for Establishing the Recycling-Based Society was e</li> <li>Law for the Promotion of Effect Utilities of Resources was enact</li> </ul>
2001	★ Movement for expansion milk carton collection centers was started. (Provision of collection boxes to local communities)	Act on Promoting Green Pu was enacted.
2002	<ul> <li>A symposium commemorating the 10th anniversary of COMCEI was held.</li> <li>Activities to expand milk carton collection centers to 10,000 locations was started.</li> <li>Survey on Paper Carton Life Cycle Assessment (LCA) was started (this has been continuing since).</li> </ul>	
2003	Survey on paper carton LCA in North America was conducted.	Part of End-of-life Vehicle R Law was enforced.
2004	<ul> <li>Environmental campaign was started (executed during Environment month and the 3R month each year).</li> <li>Workshop on milk carton recycling was held (this has been continuing since *2).</li> <li>Participated in one of the largest class environmental-related exhibitions, called "Eco Products Exhibition 2004" (this has been continuing every year).</li> </ul>	<ul> <li>Review of Containers and Pa Recycling Law was started.</li> </ul>
2005	<ul> <li>Goal of the paper carton collection rate in fiscal 2010 was set to 50% or greater.</li> <li>The voluntary action plan for promoting 3R of containers and packaging was announced (The Beverage Paper Container Recycling Council).</li> <li>The website for children's environmental education called "Milk Packn's Expedition" was started.</li> <li>Sponsoring of "Message Box Kit" for enlightening exhibition was started.</li> <li>Nishi Hari project (Construction of local collection system)</li> </ul>	

New ACE Website is Started!

ACE (The alliance for Beverage Cartons and the Environment) is consisted of Tetra Pak International S.A., SIG Combibloc and Elopak AS, they are European paper container manufacturer for beverages, and base paper (raw paper) manufacturers Korsnäs AB and Stora Enso Co., Ltd.

The website of ACE is referenced as the platform of the industry when European paper container manufacturers and base paper (raw paper) manufacturers evaluate and analyze environmental aspects of their packaging in terms of recycling and carbon content. Because of the strong ties with various environmental-related stakeholders and partners, ACE provides specialist knowledge to EU when it develops policies, sets down laws and establishes standards.



We have renewed the website to make it convenient for you to search trends of the paper container industry for beverages and the matters to be considered with respect to environmental issues. The new website offers information you search in an easy-to-find and attractive manner.

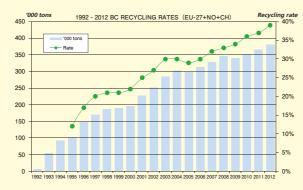
Source: Website of ACE http://www.ace.be/

Recycling Rate of Paper Containers for Beverages in Entire Europe Reached 40% in 2012!

Recycling rate of paper containers for beverages in EU reached 40% in 2012. This figure is an increase of 3 percentage points from 2011, indicating the accomplishment of continued efforts of the industry for improving the recycling rate of paper containers used for beverages. The total collection rate (recycling and collection of energy) in the EU reached 69%, and the recycling rate and total collection of all of Europe including Norway and Switzerland reached 39% and 70%, respectively.

"The amount of recycled paper containers for beverages was 6,000 tons more than that for 1992. That was an increase of approximately 380 thousand tons over 2012. We are very glad to see this increase in the recycling rate over the past 20 years. Manufacturers of paper containers for beverages proactively launch collection systems throughout Europe in order to ensure further advancement of recycling of paper containers," said Catherine Morin, Secretary General of ACE.

Recycling is definitely a widely supported waste management method. Entire Europe is making efforts along the lines of the Committee. The goal of the efforts is to come close to the recycling-based society set down in the road map for effective use of resources in Europe.



A paper container consists of 75% paper, 21% polyethylene and 4% aluminum. Paper fibers obtained from recycling of used paper containers for beverages are extremely high quality. Such characteristics of recycled papers assume a key role when they are recycled again to new, separate paper containers. Polyethylene and aluminium obtained from recycled paper containers have a range of uses. They may be used, for instance, for products made of complex material such as root tiles and as industrial raw materials.

While paper containers for beverages are mainly recycled into home-use paper such as toilet rolls in Japan, they are recycled into paper boards for paper boxes and paper bags in Europe.

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Fiscal yea	History	Applicable laws
2006	20th anniversary memorial meeting of JAMRA	<ul> <li>Revised Containers and Packaging Recycling Law was enacted.</li> </ul>
2007	<ul> <li>"Plan 2010 - Action Plan for Recycling of Paper Cartons for Beverages - Toward collection rate of 50%" was established and published.</li> <li>Participated in the main event of the environmental moth "Eco Products and Eco Fair 2007" (this has been continuing every year).</li> <li>Supported "Friendly environment loop - JAMRA" (this has been continuing every year).</li> <li>Onsite lessons on milk carton recycling were started (this has been continuing since * 3).</li> <li>The movement to expand the number of milk carton collection centers (20,000 locations were targeted) was developed further.</li> </ul>	
2008	<ul> <li>Participated in the Toyako Summit Memorial General Environmental Exhibition 2008.</li> <li>Conference on employment of CTMP for beverage cartons</li> </ul>	
2009	🖈 A book "Paper Cartoon Manifesto" was published	
2010	<ul> <li>"Milk Packn's Expedition" DVD was produced.</li> <li>The 1st "Japan and Korea Forum on Processed Milk Industry Environmental Management (in Seoul, Korea)</li> </ul>	
2011	<ul> <li>"Real Story of Paper Carton Recycling" pamphlet was published.</li> <li>Onsite lessons on paper carton recycling was held for the leaders of the movement in Korea (in Korea).</li> <li>Provision of collection boxes at 20,000 locations was achieved.</li> <li>"Plan 2015 - Action Plan for Recycling of Paper Cartons for Beverages" was established and published.</li> <li>The second voluntary action plan for promoting 3R of containers and packaging was announced (The Beverage Paper Container Recycling Council).</li> <li>Certified as PCR of "milk".</li> <li>The 2nd "Japan and Korea Forum on Processed Milk Industry Environmental Management (in Osaka)</li> <li>"The promotion council of Milk carton Recycle products mark" was established.</li> </ul>	
2012	<ul> <li>New organizations for operation of COMCEI were started. (General Affairs, local organizations, Event Committee)</li> <li>The 3rd "Japan and Korea Forum on Processed Milk Industry Environmental Management (in Kyongju, Korea)</li> <li>Survey on paper carton LCA in Northern Europe was conducted.</li> <li>"Friendly environment loop forum - Efforts for utilization of renewable energy" Workshop at a commercial facility "Ginza Mitsukoshi" (Tokyo)</li> </ul>	Review of Containers and Packaging Recycling Law was started.
2013	<ul> <li>A symposium commemorating the 20th anniversary of COMCEI was held.</li> <li>A booklet "Story of Waste" was published.</li> <li>Workshop at a commercial facility "Ario Hashimoto (Sagamihara City)" and "LaLa garden Nagamachi (Sendai City)".</li> <li>Supported "Friendly environment loop - Effects and problems of recycling of containers and packaging" <i>asymposium commemorating the 20th anniversary of COMCEI was held.</i></li> </ul>	Small-Appliance Recycling Law was enforced.

### \*1 Venues of local conference to promote paper carton recycling (1998 to 2013)

Hokkaido, Hakodate, Aomori, Iwate, Miyagi, Fukushima, Yamagata, Niigata, Nagano, Shiga, Gunma, Warabi, Saitama, Chiba, Ibaraki, Tokyo (northern and eastern parts), Akishima, Kanagawa, Yokohama, Kuwana, Kasuga, Shizuoka, Gifu, Ishikawa, Fukui, Mie, Aichi, Osaka, Kyoto, Hyogo (Kobe and Hanshin area), Akashi, Shimane, Okayama, Hiroshima, Tokushima, Kochi, Fukuoka, Pikuoka, Oita, Saga, Kumamoto, Okinawa

### \*2 Venues of workshop on milk carton recycling (2004 to 2013)

Asahikawa, Sapporo, Saitama, Shibuya, Shinagawa, Koto, Nakano, Kita, Nishitokyo, Yokohama, Sagamihara, Otsuki, Kofu, Chikusai, Nisshin, Osaka, Nishinomiya, Matsuyama, Kochi, Beppu, Naha

#### \*3 We visited the following schools to run the onsite lessons on milk carton recycling (2007 to 2013)

Sukagawa City Abukuma Primary School, Toyama City Shinjo Primary School, Chikusai City Isa Primary School, Haga Cho Hagaminami Primary School, Motegi Cho Motegi Primary School, Ota City Chuo Primary School, Konosu City Akamidaidaiichi Primary School, Kawaguchi City Tozukaminami Primary School, Shibuya Ward Kakezuka Primary School, Yokohama City Hie Primary School, Hiratsuka City Okazaki Primary School, Yamato City Shibuya Primary School, Komagane City Akaho Primary School, Hokuto City Mukawa Primary School, Hamamatu City Hamana Primary School, Kanazawa City Izumino Primary School, Tarui Cho Iwade Primary School, Konodo Cho Godo Primary School, Nisshin City Higashi Primary School, Nisshin City Mishi Primary School, Minamiise Cho Nantohigashi Primary School, Nashi City Mikata Primary School, Kishiwada City Joutou Primary School, Osaka City Bentenncho Primary School, Nosala City Turumachi Primary School, Nishinomiya City Takagi Primary School, Amagasaki City Wakaba Primary School, Hiroshima City Asamiku-omachi Primary School, Hiroshima City Ushitashinmachi Primary School, Kool, Hiroshima City Nukushina Primary School, Mitoyo City Omi Primary School, Mitoyo City Matsusaki Primary School, Yoshinogawa City Kamuda Primary School, Kocol, Hiroshima City Nukushina Primary School, Mitoyo City Omi Primary School, Hiroshima City Natusaki Primary School, Kocol, Kocol, Mitoyo City Matsusaki Primary School, Yoshinogawa City Kamuda Primary School

### 4 related associations

Japan Dairy Industry Association Japan Dairy Association National Association of Agricultural cooperative Dairy Federation of Milk Processors Co-operatives

#### 7 Carton manufacturers

Nippon Paper Industries Co., Ltd. Nihon Tetra Pak K.K. ISHIZUKA GLASS Co., Ltd, Dai Nippon Printing Co., Ltd. TOPPAN PRINTING CO., LTD. Hokuetsu Package Co., Ltd. TOKYO PAPER MFG, CO., LTD

### 133 dairy companies (Hokkaido)

Yotsuba Milk Products Co., Ltd. Satsuraku Dairy Agricultural Coop HOKKAIDO HOSHO MILK PLANT Co.,Ltd. SHIN SAPPORO NYUGYO CO., LTD KUMIAI DAIRIES LIMITED Hokkaido Milk Product Co.,Ltd. Hakodate Milk Hokkaido Dairy Corporation Co.,Ltd. MACHIMURA FARM ,Inc. kurasimamilk.Co,ltd. TOYOTOMI MILK PRODUCTS

### [Aomori]

HAGIWARA MILK PLANT Co.Ltd.

Fujiya Milk Co., Ltd. Oofunato Milk Co., Ltd.

### [Miyagi]

TOUHOKU MORINAGA MILK INDUSTRY CO., LTD furukawa milk industry Co. Ltd YAMADA MILK PRODUCTS Michinoku Milk Co., Ltd.

Touhoku Glico Dairy Products Co.,Ltd [Yamagata]

Fuji Milk Co., Ltd. GOTO Farm Co.,Ltd Ohu Dairy Cooperative

#### [Fukushima]

Rakuou milk products Co.,Ltd. Tohoku-kyodo Milk industry Co., Ltd Aizu Chuoh Nyugyo Corporation Matsunaga milk Co., Ltd. Fukushima Milk Co., Ltd.

#### [Ibaraki]

IBARAKI DAIRY PRODUCT INDUSTRY CO., LTD. TOMOE DAIRY PROCESSING CO., LTD Ibaraku Co.,Ltd.

KANTO MILK INDUSTRY CO., LTD.

### [Tochigi]

DAIRY TOCHIGI AGRI. CO-OP Tochiraku Milk Co.,Ltd. Harigai Milk Industry Co.,Ltd. Tochigi Meiji Milk Co. Ltd Tochigi Milk Co., Ltd. HORAI Co.,Ltd. Dairy Industry Division

#### [Gunma]

Haruna Dairy Cooperatives Tomo Dairy Cooperative GUNMA MILKJOINT BUSINESS COOPERATIVES

#### [Saitama]

MORI MILK Co., Ltd. SEIBU RAKUNOU JA Saihoku Rakunou osawa milk Co., Ltd.

### [Chiba]

FURUYA MILK PRODUCTS CO.,LTD Chiba Hokubu Rakuno Dairy Cooperative Chiba-raku Dairy Cooperative

### [Tokyo]

MEGMILK SNOW BRAND Co., Ltd Meiji Co., Ltd. MORINAGA MILK INDUSTRY CO.,LTD. KYODO MILK INDUSTRY CO.,LTD. Glico Dairy Products Co.,Ltd KOIWAI DAIRY PRODUCTS CO., LTD. Koshin Milk Products Co,Ltd

#### [Kanagawa]

Takanashi Milk Products Co.,Ltd. YOKOHAMA MILK INDUSTRY CO.,LTD. KONDO MILK PRODUCTS CO.,LTD. Ashigara Milk Products Co.,Ltd. Kyoudou Milk Co., Ltd.

### [Nagano]

YATSUGATAKE MILK Co.,Ltd. MATSUDA MILK co.ltd

### [Niigata]

Niigata-ken Nokyo Milk Co., Ltd. HARADA Daily Products.CO.,LTD. Tsukada Milk Products.Co.LTD Sado Milk Products Ltd.

### [Toyama]

Tonami Milk Co., Ltd. Kokuto milk [Ishikawa] i·Milk Hokuriku Co.,Ltd. [Fukui] MORINAGA-HOKURIKU MILK INDUSTRY CO.,LTD [Gifu] Hida Rakuno Dairy Cooperative

### Bokuseisha Ltd. Seki Milk Co., Ltd.

Mino Dairy Cooperatives



### [Shizuoka]

- Shimizu Milk Industry co.,Ltd INASA MILK ASSOCIATION Kannami toubu nougyoukyoudou kumiai
- TOKAI MEIJI.CO.Ltd
- Asagiri Milk Products Co.,Ltd

### Nagova

- Nagoya Gyunyu Co.,Ltd. MIDORI NYUGYO CO.,LTD
- CHUOSEINYU CO., LTD.
- toyota-nyugyou.co.jp
- Aichi Brother Company Co.,Ltd. TOKONAME MILK LIMITED PARTNERSHIP COMPANY Showa Milk Co., Ltd
- (Mie)

## Ouchiyama Dairy Agricultural Cooperative

- [Kyoto]
- HIRAYA MILK
- JA Kyoto Rakuno Center

### [Osaka]

- SEN-NAN Dairy Products Co.,Ltd. NIPPON DAIRY CO-OPERATED CO.,LTD. Takada Milk Co., Ltd.
- Vitamin Milk Products Co.,Ltd
- Ikaruga Milk Plant CO.,Ltd.

### [Hyogo]

Hyogo-tantan Dairy Agricultural Cooperative Awajishima Dairy Agricultural Cooperative

### [Tottori]

DAISEN Dairy agricultural cooperative

### [Shimane]

- KISUKI Daily Product Yasugi Milk Product Co.,Ltd
- YUGEN GAISHA YOEKISHA

### [Okayama]

OHAYO DAIRY PRODUCTS CO.,LTD KAJIHARA MILKPRODUCTS CO.LTD HIRUZENRAKUNOU NOUGYOU KYOUDOU KUMIAI okayamanisinougyoukyoudoukumiai

### [Hiroshima]

Sanyo Milk Industry Co., Ltd. TOYO MILK INDUSTRY CO.,LTD. Hiroshima Kyodo Milk Industry Co.,Ltd. Chichiyasu Co.,Ltd.

### [Yamaguchi]

Yamaguchi Kenraku Milk industry Co.,Ltd houfurakunou agricultural cooperative Nishimotobokujou

### [Kagawa]

Shikoku Meiji Dairies Corporation

### [Ehime]

SHIKOKU MILK PRODUCTS CO., LTD.

### [Kochi]

Himawari Milk

### [Fukuoka]

nishirakunyuugyou Co.,Ltd Omu Milk Products Co.,Ltd. NAGATOSHI-MILK CO., LTD.

### [Nagasaki]

SHIMABARA AREA DAIRY FARMERS COOPERATIVE

### [Kumamoto]

KUMAMOTO DAIRY CO-OPERATIVE ASSOCIATION KUMAMOTO MILK INDUSTRY CO., LTD. Kuma Dairy Agricultural Cooperative JA ASO

Limited Partnership (Corp.) HOTTA KOUNYUUSHA [Oita]

### KYUSYUNYUGYO CO.,LTD

JA-Shimogo

Koyama Dairies Co., Ltd

### [Miyazaki]

MINAMI NIHON RAKUNO KYODO CO., LTD

### [Kagoshima]

kagoshimakenrakunounyuugyoukabushikigaisya [Okinawa]

OKINAWA MEIJI MILK PRODUCTS CO.,LTD. OKINAWA MORINAGA MILK INDUSTRY CO., LTD. Mariya milk industry YAEYAMA GENKI Genki Seikatsu Co., Ltd. Miyahira Dairy Corporation

### 13 supporting members

Oji Eco Materials Co.,Ltd NISHINIHON EIZAI CO.,LTD Nissey Sangyo co.,Ltd. NIPPON PAPER CRECIA CO.,LTD DAIWA ITAGAMI CO., LTD. SHIN-EI PAPER MFG.CO.,LTD. Marutomi Paper Company YAMADAYOUJI SYOUTEN CO., LTD. CRESCO Corporation MeadWestvaco Asia K.K. Masukoo Paper Company Stora Enso Japan Weyerhaeuser Japan Ltd.

As of the end of October, 2013





Dairy product manufacturers and paper container manufacturers collaborate to preserve the environment.

## **Committee for Milk Container Environmental Issues**





### A message to the members of the paper carton collection associations

Please contact schools, local authorities, public facilities, retail stores, banks and post offices to gain their cooperation in installation of the collection box. At the same time, set up the system to enable collection on a regular basis. When you do not know from where to collect, contact the section in charge of the local government/public administration.

### For more information:

<Secretariat of Japan Milk Carton Recycling Association> Phone: 03-3360-1098 Fax: 03-3360-7090 4-6-7-201 Higashi Nakano, Nakano Ku, Tokyo 164-0003