

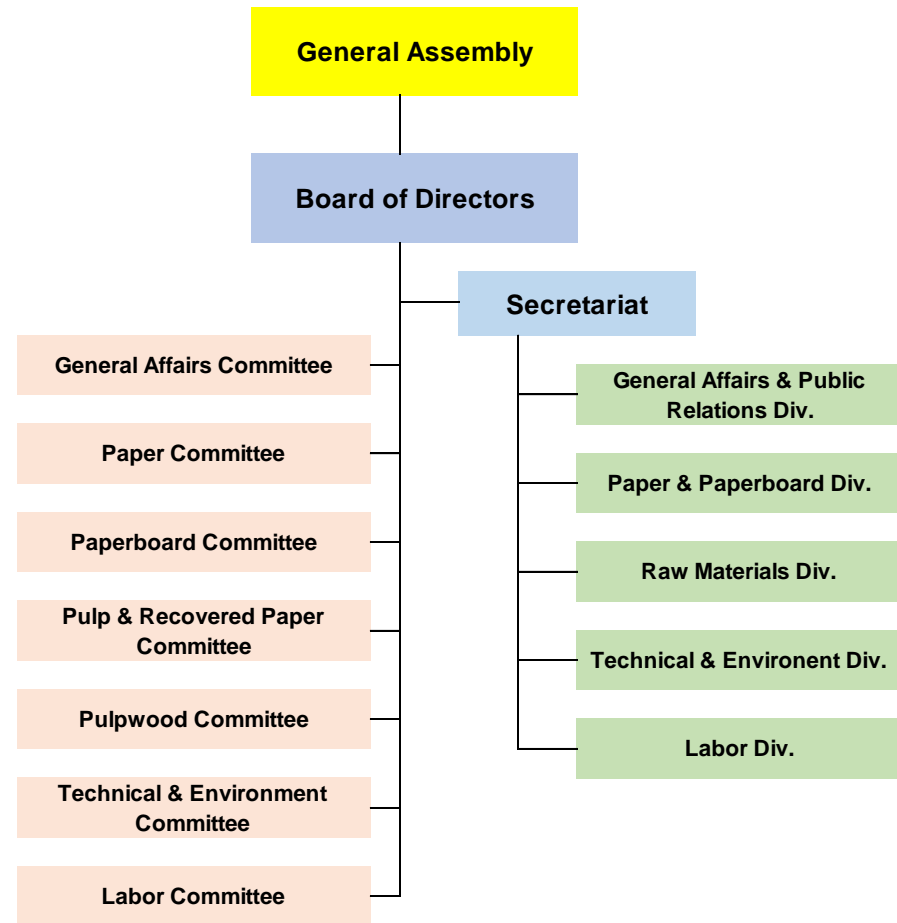
Current Situation of The Japanese Paper Industry

Akiyama Tamio
Japan Paper Association

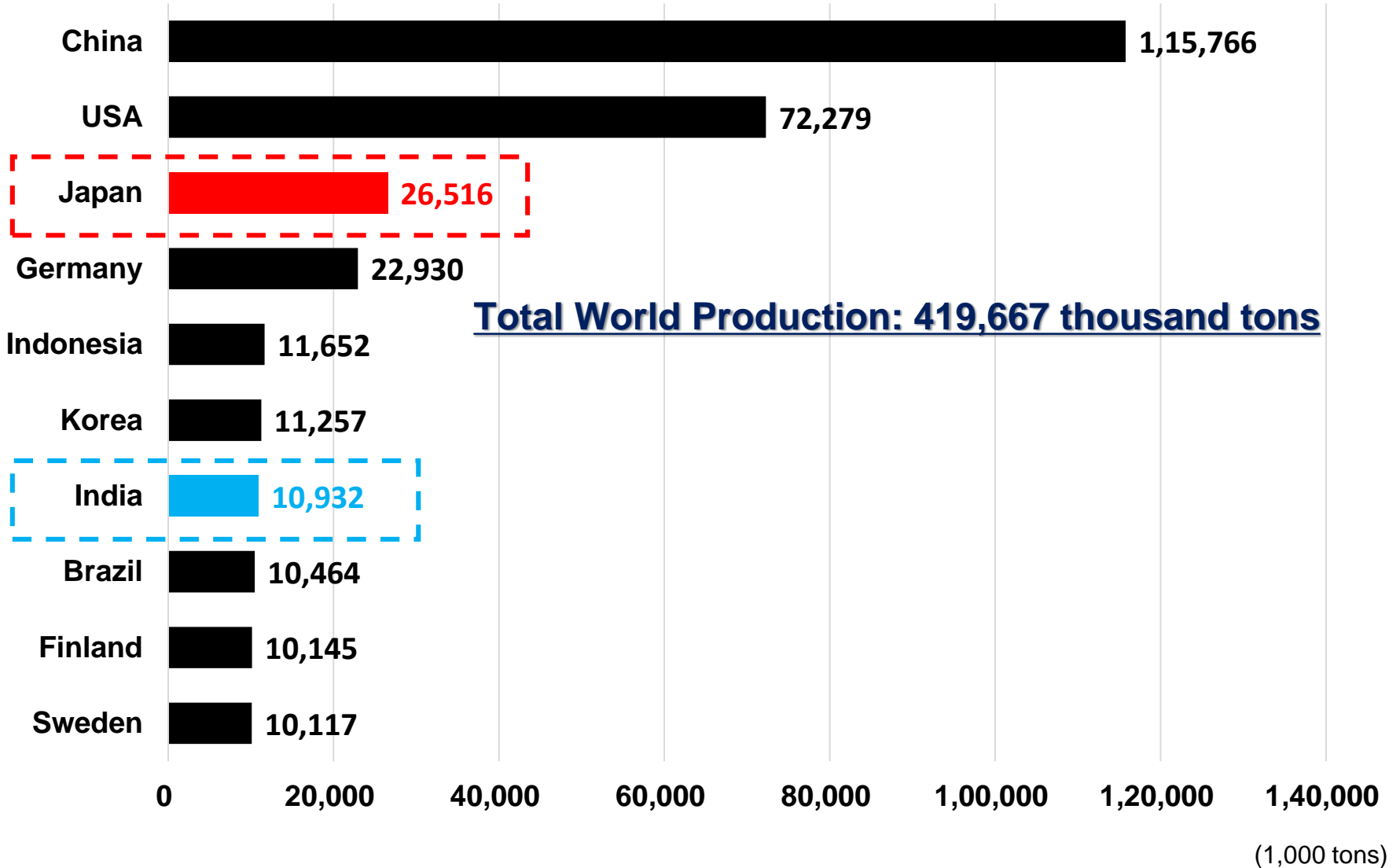
December 10, 2019

Japan Paper Association (JPA)

1. Established in April 1972
2. Member (as of December 2019)
 - Regular members
30 companies and 6 associations
 - Associate members
41 companies and 1 association
3. Total paper & paperboard production of member companies (2018) : 23,118MT (88.7% of Total Production in Japan).



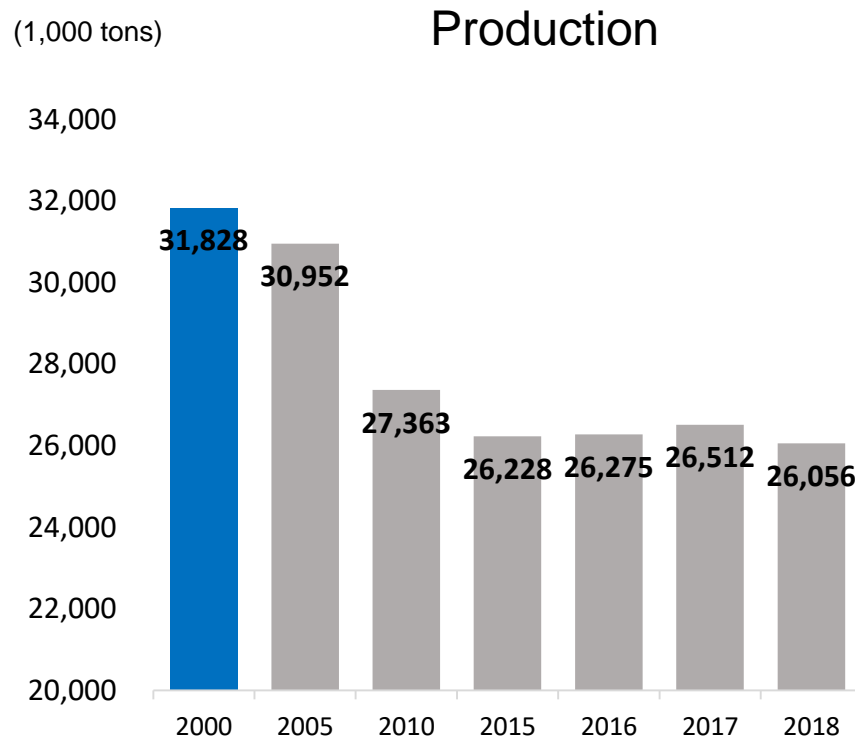
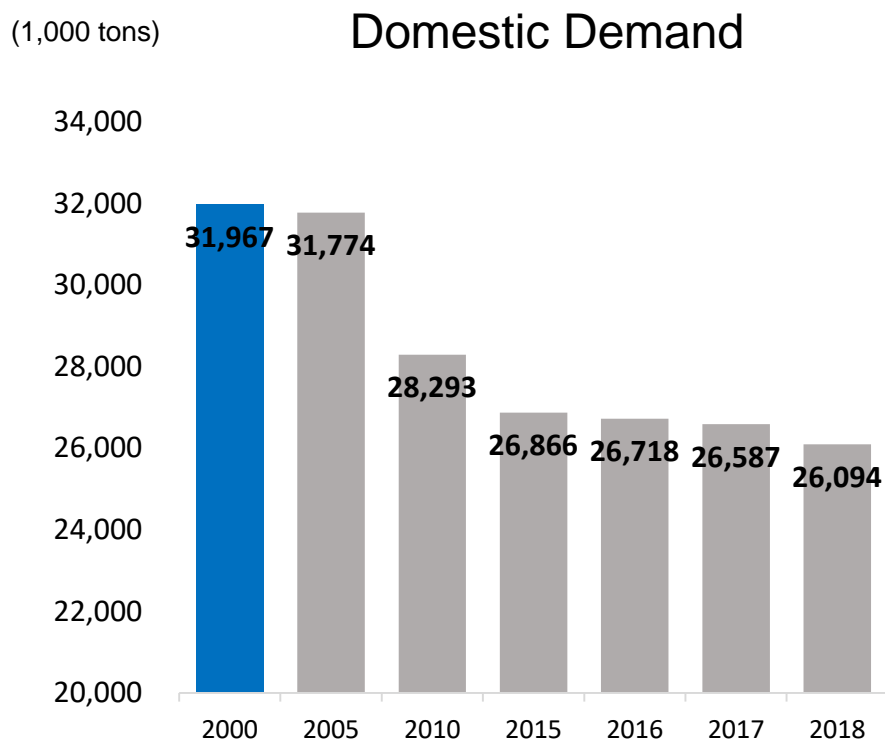
World Paper and Paperboard Production and Top 10 Producers (2017)



Source: RISI Annual Review

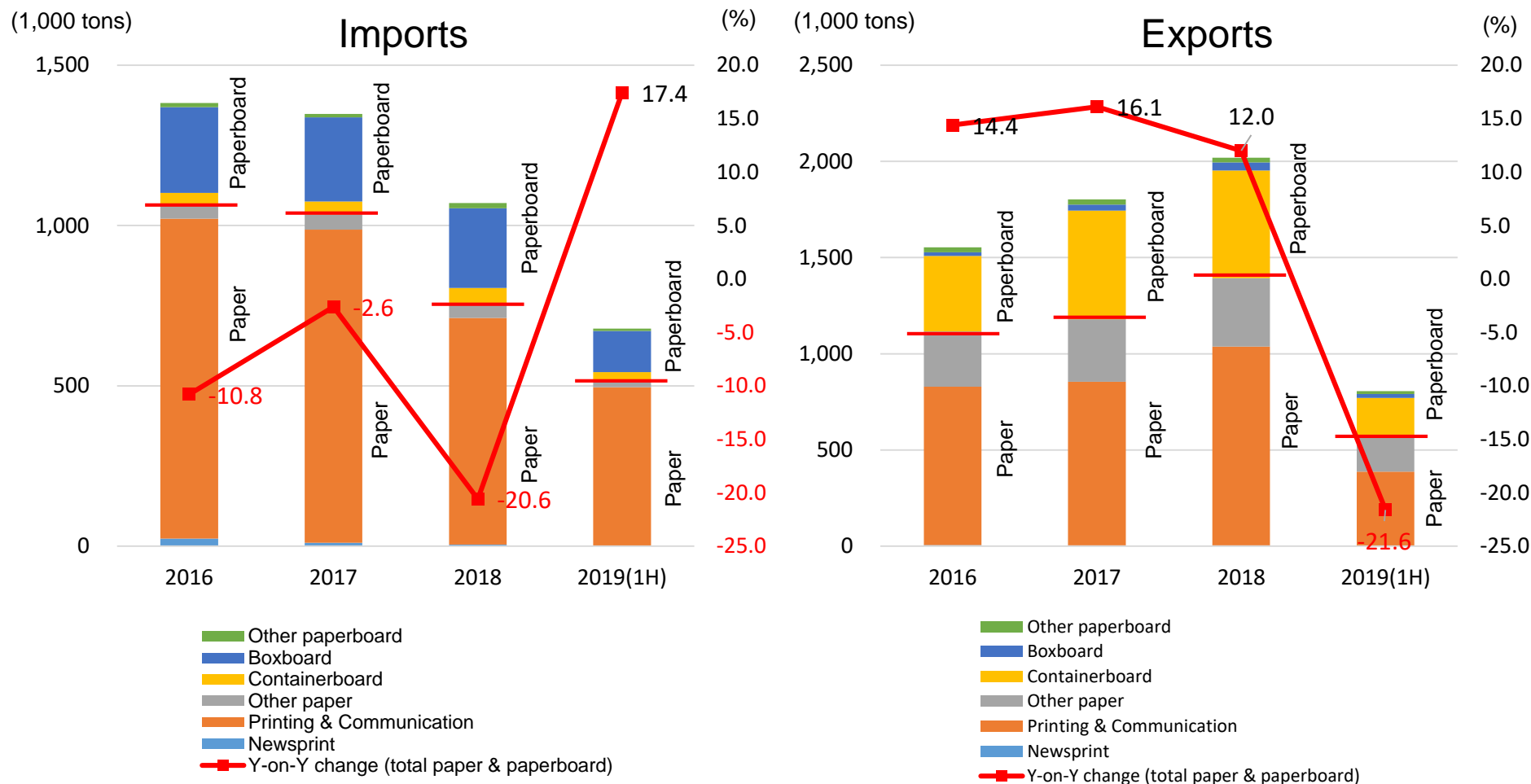
Domestic Demand & Production in Japan

- Domestic demand and production have remained at around 27 million tons in recent years.
- By grade, while demand for graphic papers (newsprint and printing paper) continues to decline, demand for sanitary paper and containerboard have remained stable.



Imports & Exports

- Exports have posted a record high for the third consecutive year since 2016.
- However, in the 1H of 2019, the exports dropped by 21.6% over the same period of 2018.



Domestic Demand and Production Capacity in Japan (2000 vs. 2018)

(1,000 tons, %)

Grade	Domestic demand			Production capacity		
	2000	2018	18/00	2000	2018	18/00
Newsprint	3,699	2,609	▲ 29.5	3,667	2,951	▲ 19.5
Printing & Communication	11,866	8,019	▲ 32.4	12,467	9,721	▲ 22.0
Uncoated paper	3,512	1,912	▲ 45.6	3,081	2,392	▲ 22.4
Coated paper	6,462	4,296	▲ 33.5	7,113	5,799	▲ 18.5
Communication paper	1,891	1,811	▲ 4.3	2,273	1,530	▲ 32.7
Wrapping paper	1,041	723	▲ 30.5	1,156	1,023	▲ 11.5
Sanitary paper	1,725	1,974	14.5	1,896	1,866	▲ 1.6
Other paper	924	743	▲ 19.5	1,266	1,169	▲ 7.7
Total paper	19,254	14,069	▲ 26.9	20,452	16,730	▲ 18.2
Containerboard	9,392	9,314	▲ 0.8	10,366	10,307	▲ 0.6
Linerboard	5,719	5,614	▲ 1.8	6,180	5,992	▲ 3.0
Corrugating medium	3,673	3,700	0.7	4,186	4,315	3.1
Boxboard	2,314	2,029	▲ 12.3	2,335	1,940	▲ 16.9
Other paperboard	1,006	682	▲ 32.2	1,144	785	▲ 31.4
Total paperboard	12,713	12,025	▲ 5.4	13,845	13,032	▲ 5.9
Total paper & paperboard	31,967	26,094	▲ 18.4	34,297	29,762	▲ 13.2

Factors for the decrease in the demand of paper and paperboard

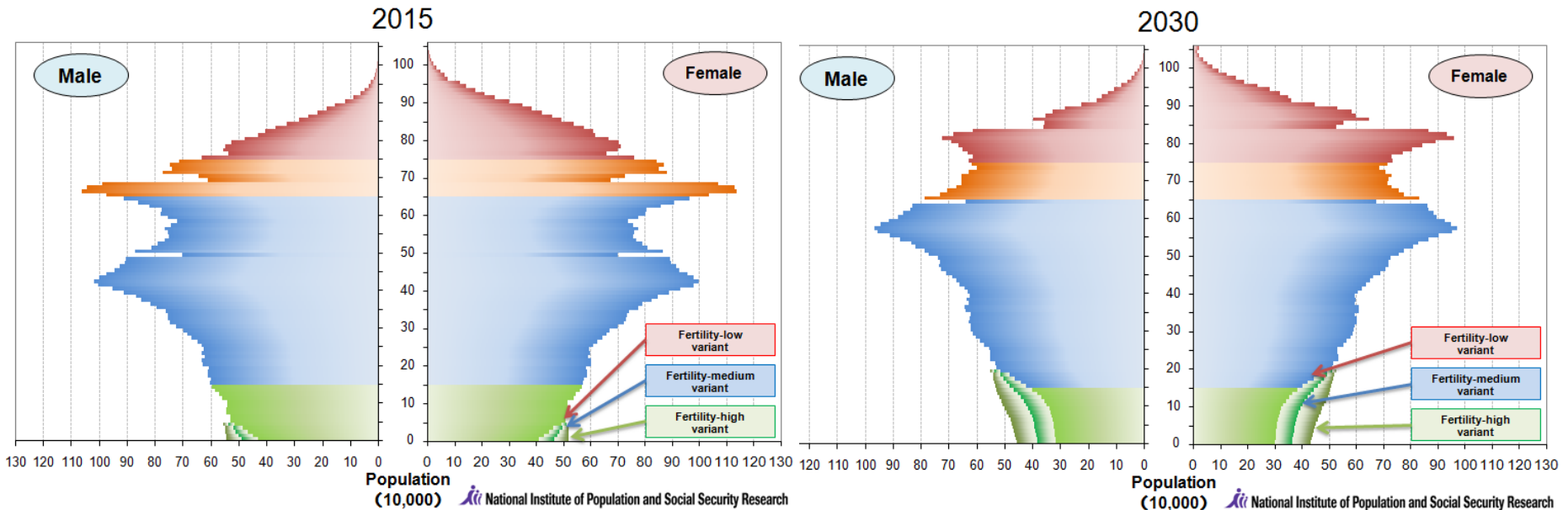
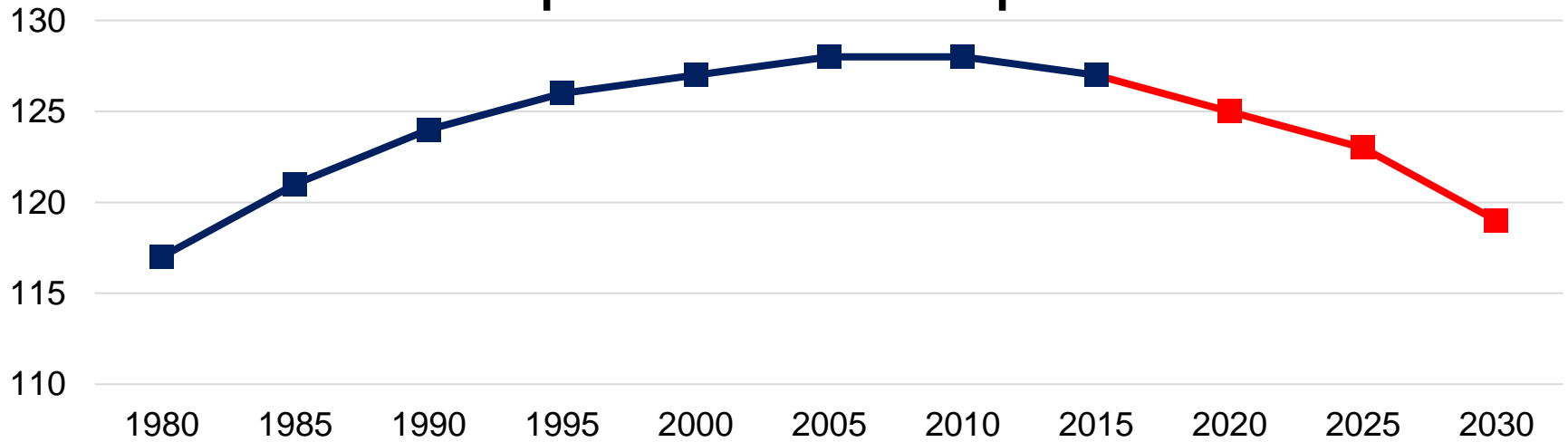
1. Decreased population

- Population in Japan has gradually decreased since 2010 (126.4 million).
- Population in June 2019: 123.8 million
- Aging population and a lower birth rate

2. E-media

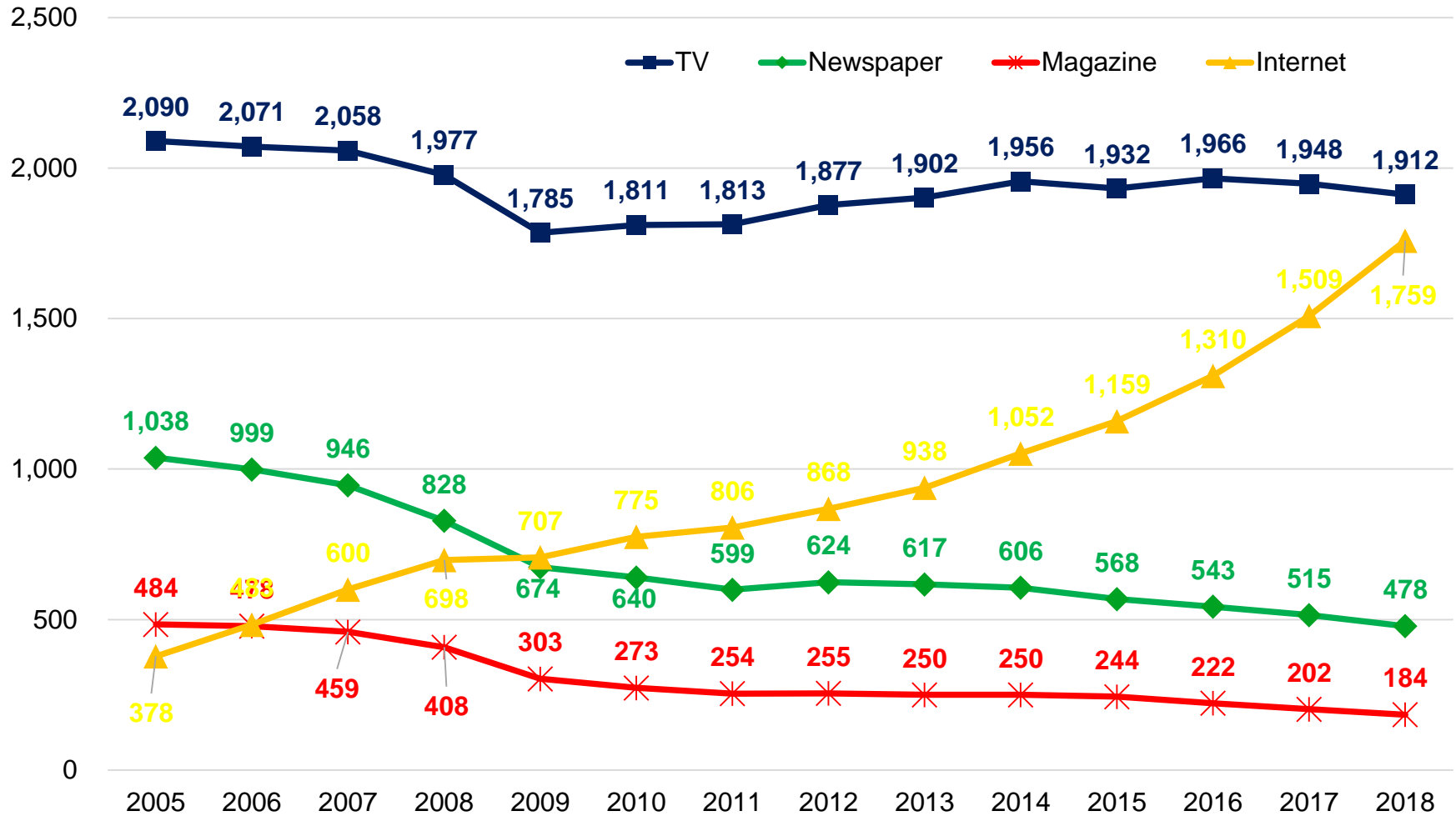
- Decreased paper-based publication.
- Growing Internet advertising.
- Efforts to go paperless in companies and governmental agencies.

Population in Japan



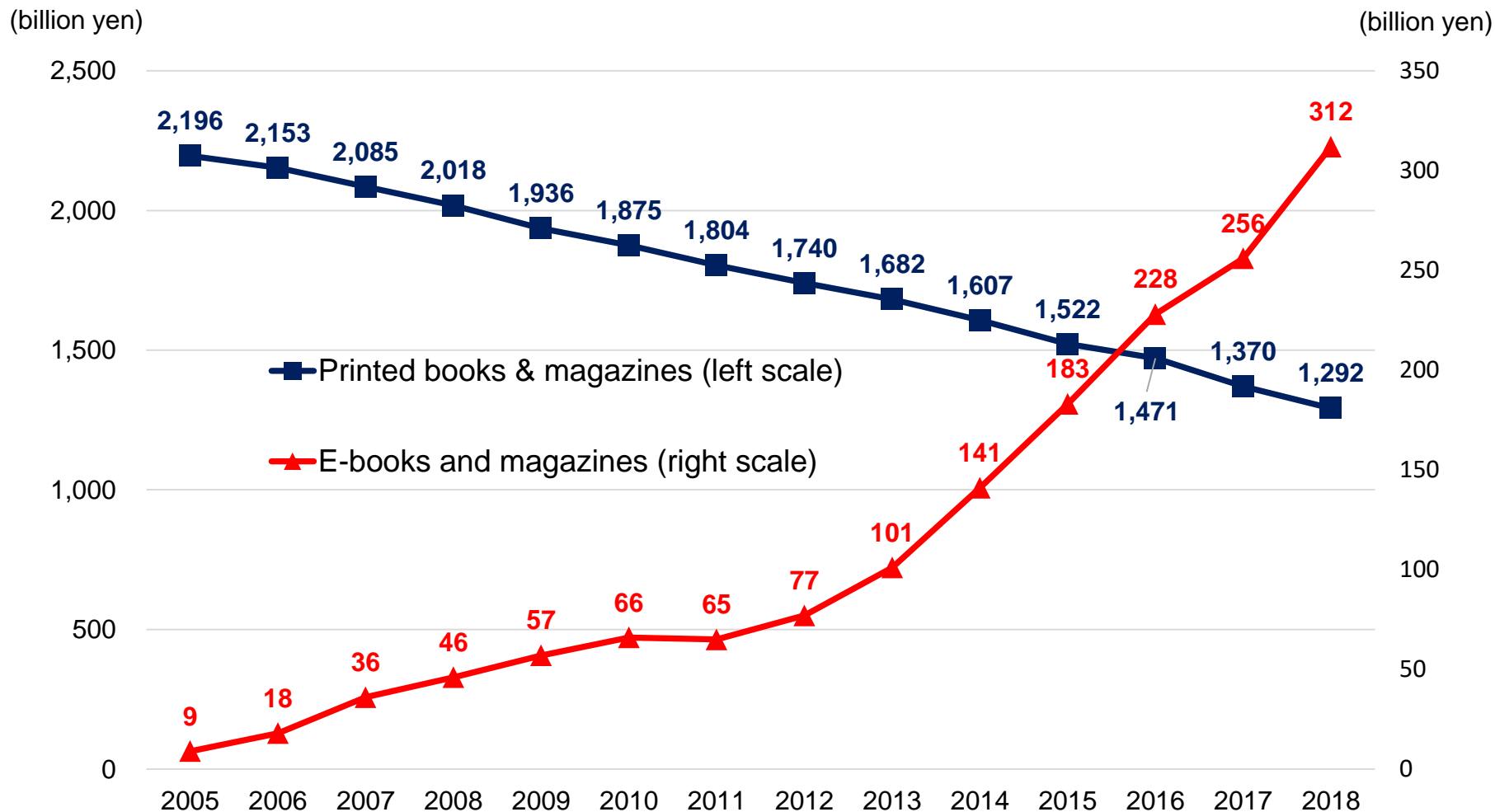
Advertising Expenses of Major Media

(billion yen)



Source: Dentsu Inc.

Sales of Publication



Source: Research Institute for Publications, Impress Corp.

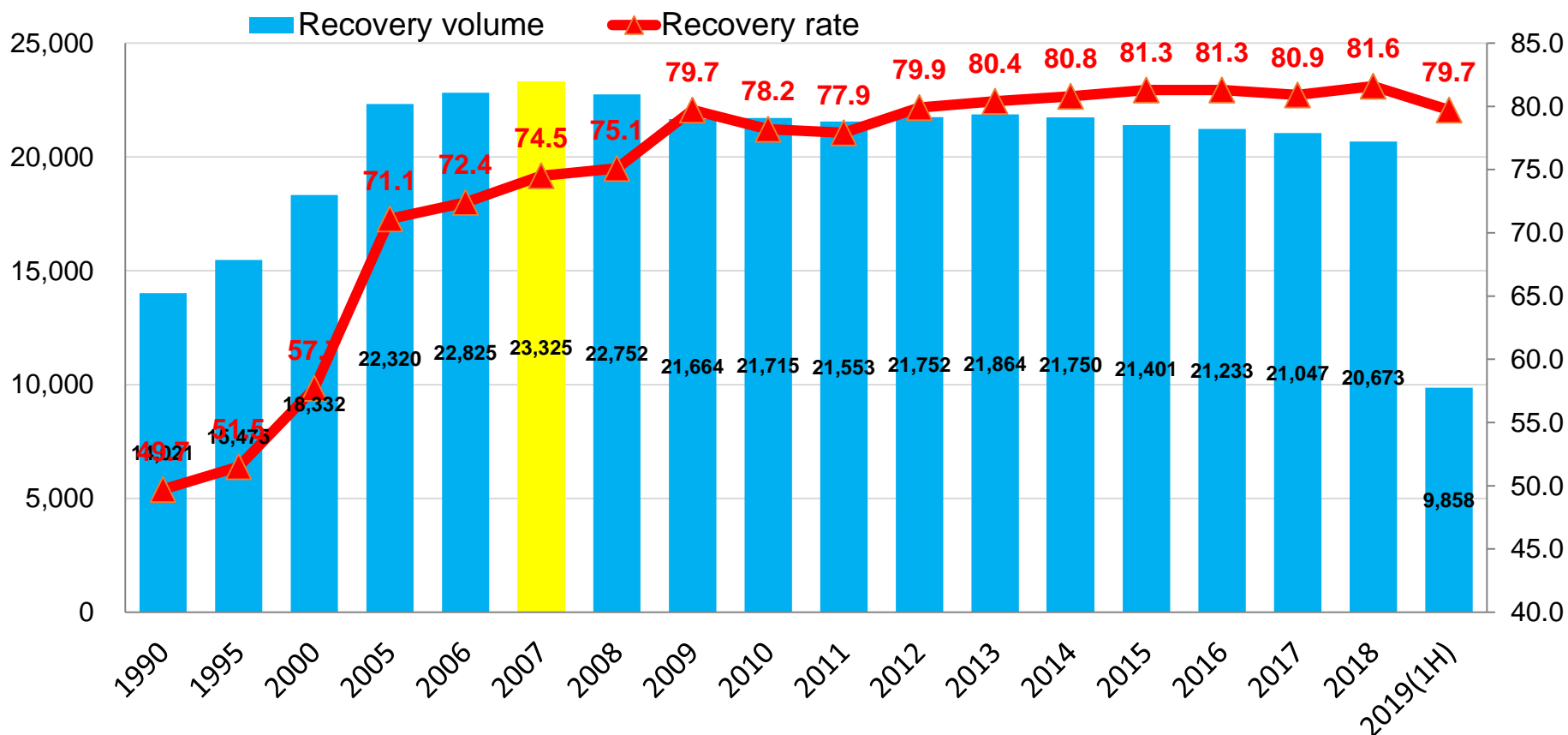
Note:

1. Sales of printed books and magazines are calendar year basis
2. Sales of e-books and magazines are fiscal year basis

Recovered Paper Collection in Japan

(1,000 tons)

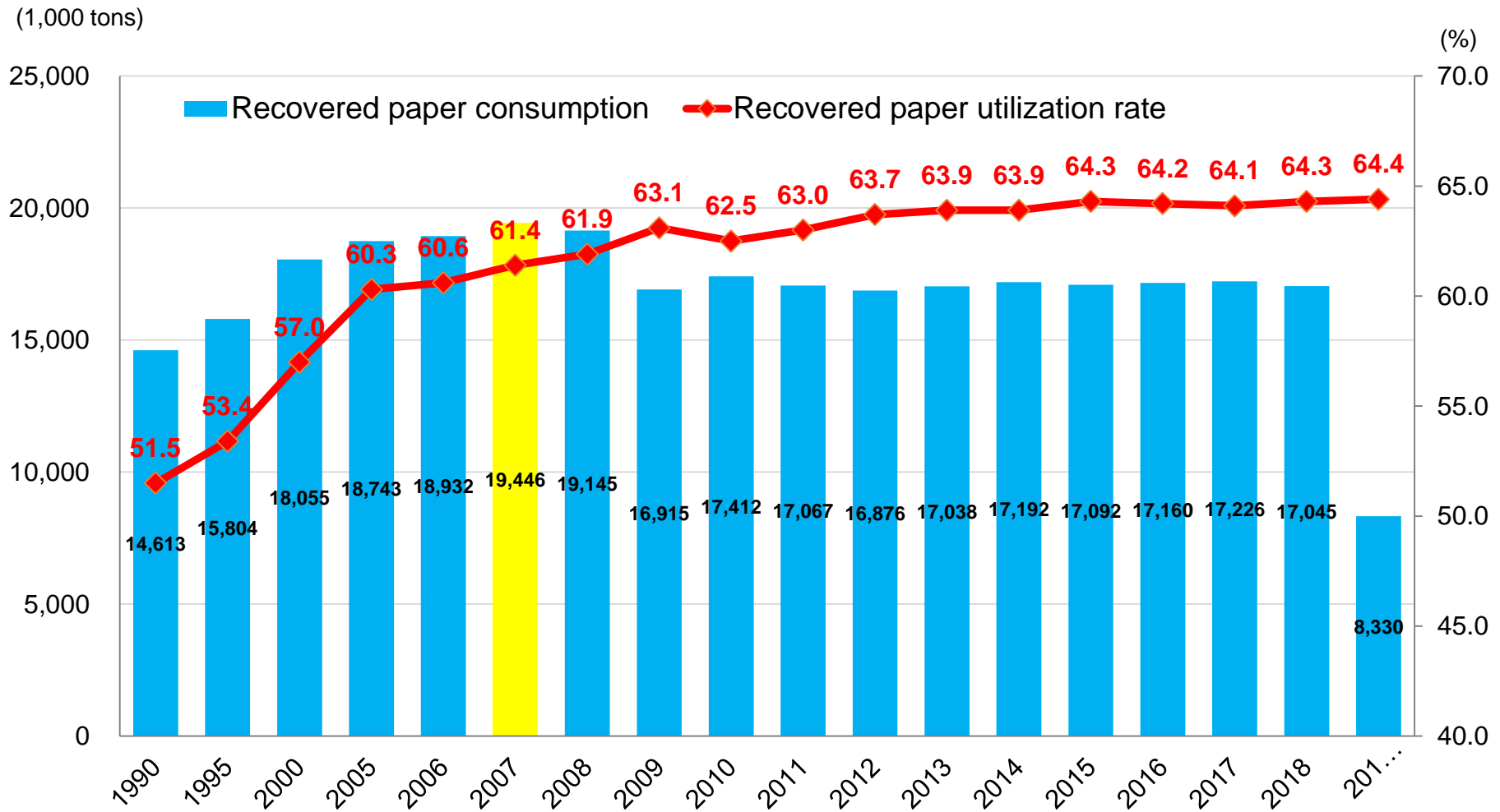
(%)



Source: Ministry of Economy, Trade and Industry, Ministry of Finance

Note:
Recovered Paper (RCP) Recovery Rate = RCP Collection (RCP Shipments to Paper Manufacturers + RCP Exports – RCP Imports) / Domestic P&B Consumption

Recovered Paper Consumption in the Japanese Paper Industry

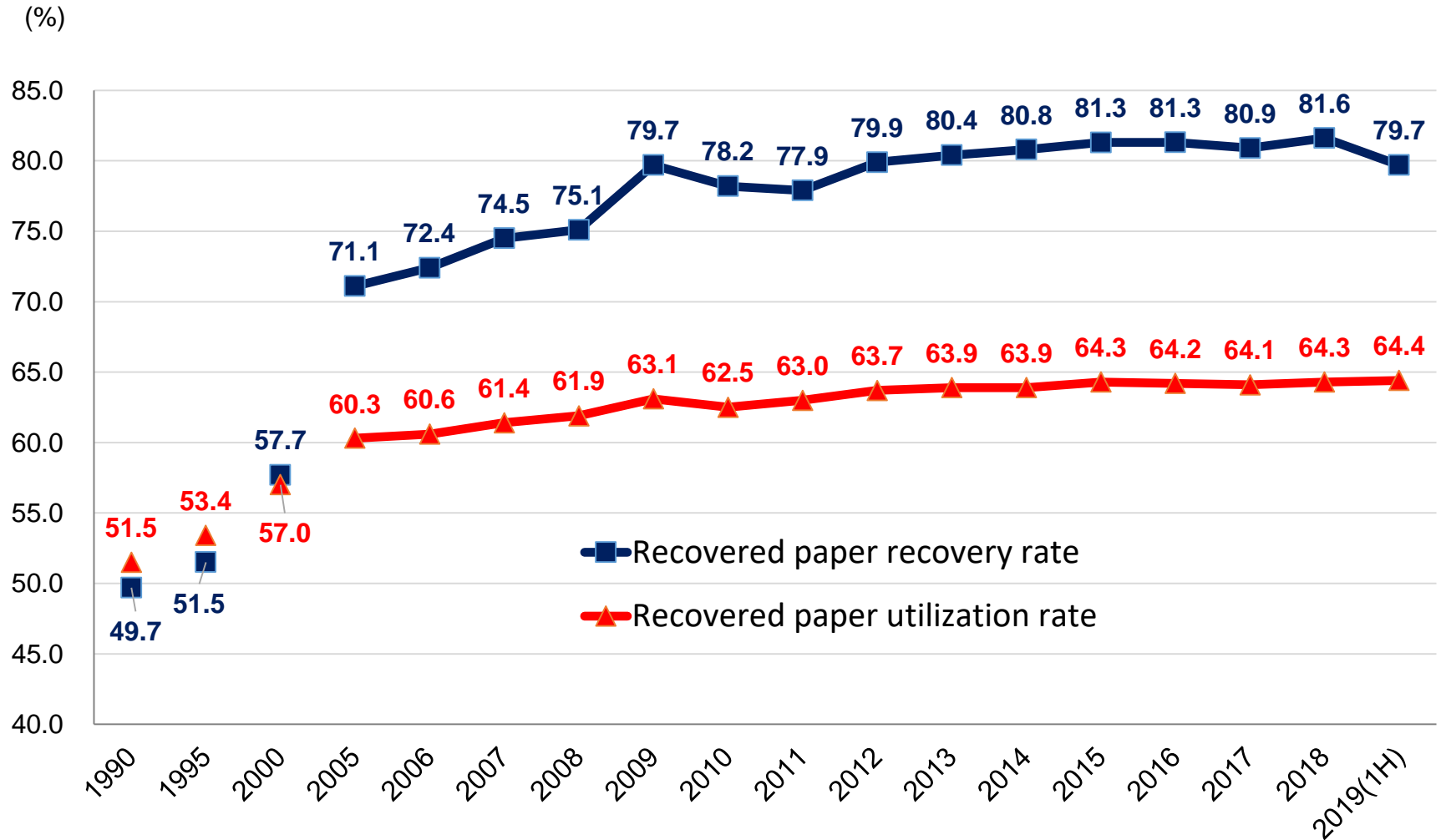


Source: Ministry of Economy, Trade and Industry, Ministry of Finance

Note:

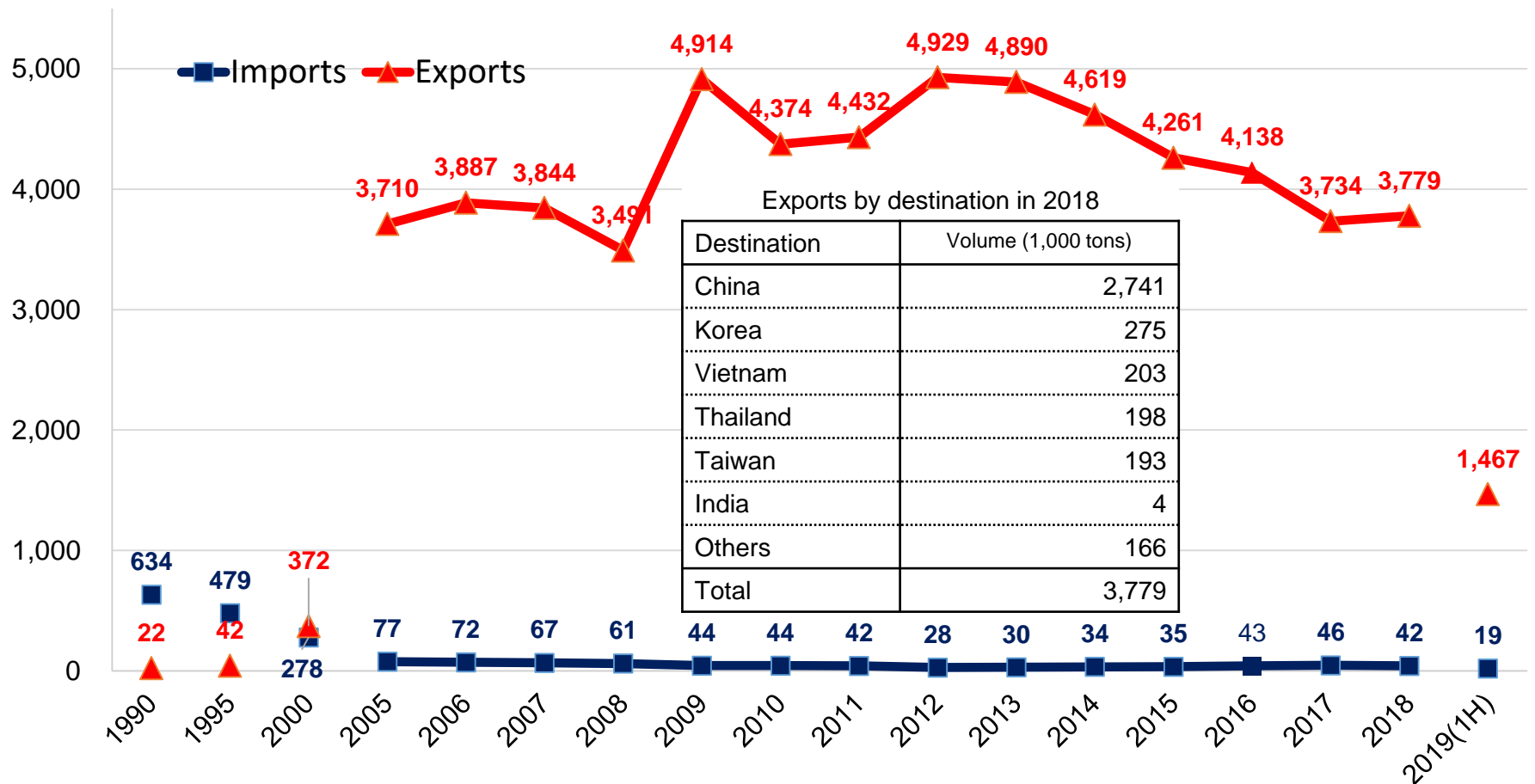
Recovered Paper (RCP) Utilization Rate = RCP Consumption (RCP consumption + Recycled pulp consumption) / Total Raw Material Consumption

Recovery Rate vs. Utilization Rate



Recovered Paper Imports and Exports

(1,000 tons)



Source: Ministry of Finance

Japanese Paper Industry

-Transformation of Business Structure-

1. Structural transformation of traditional business

-Strengthening international competitiveness through streamlining production system and further cost reduction.


2. Expanding overseas business

-Expanding overseas investment and sales network.

-Especially, the companies focus on Southeast Asia along with economic growth, population growth, and improvement in living standard.

3. Business diversification

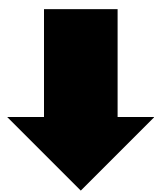
-Developing new businesses based on the accumulated technologies and know-how in P&P business

 Power supply, new products (e.g. cellulose nanofiber (CNF) , alternatives for plastic products).

Business Diversification

Power Supply Business

- Restructuring of nuclear power-dependent energy supply due to Great East Japan Earthquake in 2011.
- Feed-in Tariff (FIT) started in July 2012.



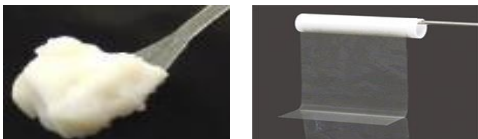
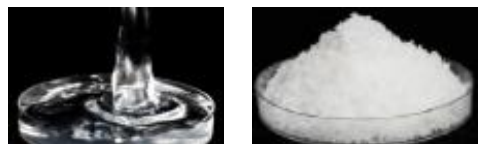
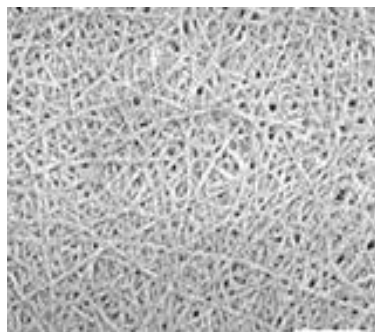
With an affluent know-how on power generation in the background, Japanese paper industry entered into power business.



Cellulose Nanofiber (CNF)

- CNF is expected to be put to practical use in a variety of products such as automotive products, food products, cosmetics and etc. in the future.
- Japanese paper manufacturers have been focusing on the development of CNF.
- The Japanese government expects a 1 trillion yen market for CNF by 2030.

CNF



- Light and strong (5 times stronger than steel)
- Ultra fine fibers
- Low thermal expansion
- High gas barrier
- High transparency
- Environmentally-friendly, and more.

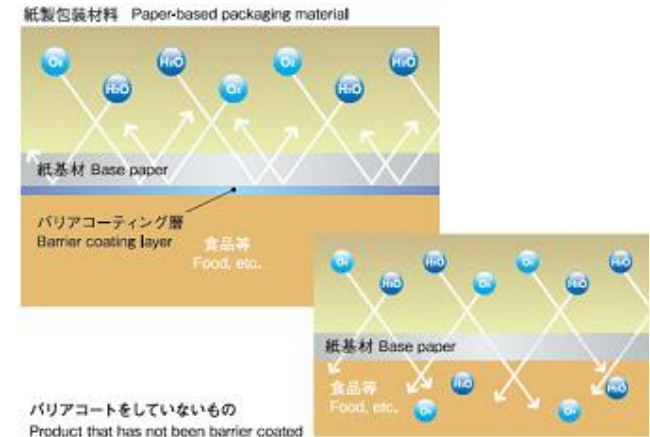
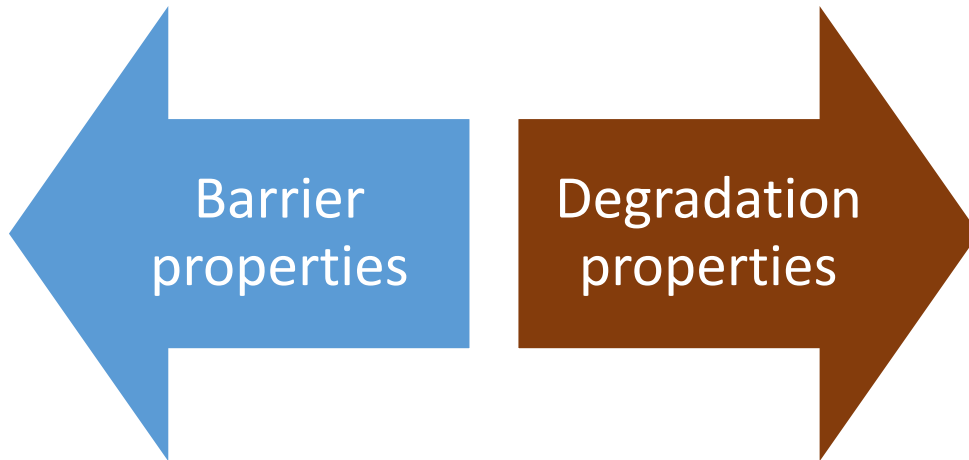
1 trillion yen market by 2030

- Packaging materials
- Food
- Chemicals
- Cosmetics
- Pharmaceuticals
- Filter
- Electronic materials
- Automobile parts
- Aircraft materials
- And more,



Trend Surrounding the Movement of Ban on Plastic Products in Japan

- Movement to shift to paper straws from plastic ones.
- Biodegradable plastics are hampered by high manufacturing cost.
- Paper manufacturers are focusing on the development of new paper products with both barrier and degradation properties.



Packaging materials with high barrier properties

Sustainability Efforts in the Japanese P&P Industry

JPA's Environmental Action Plan

1. Measures against Global Warming Issues (CO₂ emissions reduction)

(1) FY 2020 target:

Reduce fossil-energy-derived CO₂ emissions by 1.39 million tons from FY 2005 BAU levels.

(2) FY 2030 target:

Reduce fossil-energy-derived CO₂ emissions by 4.66 million tons from FY 2005 BAU levels.

2. Efforts for Building a Recycling Society

(1) Paper recycling

Target: Achieve recovered paper utilization rate of **65%** by FY 2020.

(2) Final disposal of industrial wastes

Target: Reduce the volume of final disposal to 130 thousand tons on a wet weight basis by FY 2020.

3. Promotion of Effective Utilization of Wood Resource and Ensuring a Stable Supply

• Target:

-Promote the effective utilization of domestic thinned wood.

-Expand the forest plantation area at home and abroad to 700 thousand ha by FY 2020

Sustainability Efforts in the Japanese Paper Industry

JPA's Action Guideline for Biodiversity Conservation (established in 2014)

JPA member companies shall:

- Develop their corporate action guideline;
- Actively disclose information about their biodiversity conservation efforts; and
- Promote sustainable forest management through acquisition of forest certification



Safety and Health Efforts in the Industry

1. National Conference of the Pulp and Paper Industry on Safety and Health

- Facilitate communication and share information concerning the safety and health among members to improve their safety and health level.

2. Active Participation in Public-Private Council for Safety Measures in the Manufacturing Industry

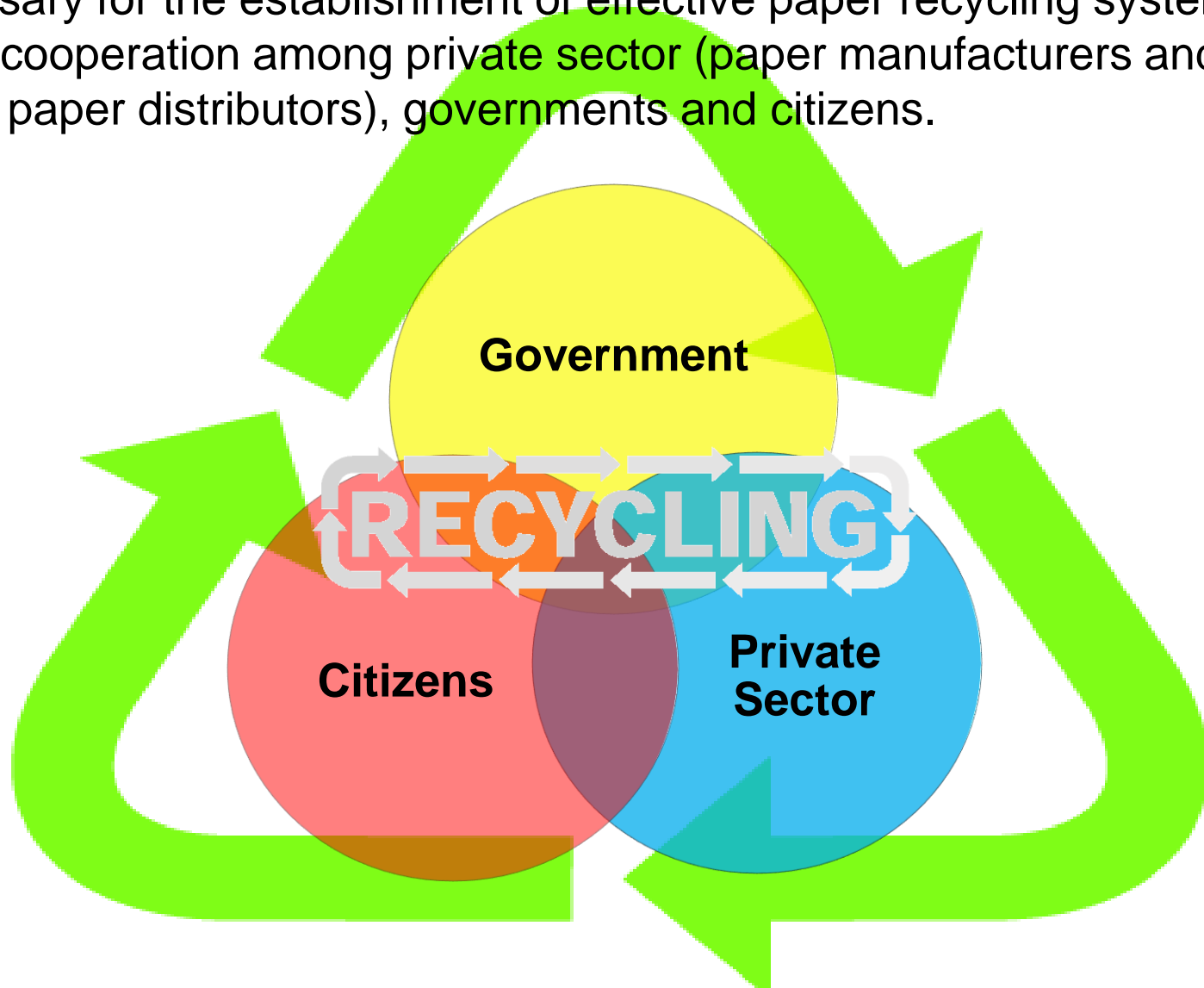
- Promote information sharing with other manufacturing industries.

3. Efforts for elimination of fatal accidents

- JPA sets the target “Zero Fatal Accident in the Worksites of Member Companies”
- To achieve this, JPA is working to identify the potential risks of fatal accidents in each worksite and process to take countermeasures one by one.

Towards the Establishment of Effective Paper Recycling System

It is necessary for the establishment of effective paper recycling system that close cooperation among private sector (paper manufacturers and recovered paper distributors), governments and citizens.



Thank you