

Working towards a Recycling-based Society

As a result of being a mass-production, mass-consumption and mass-disposal society, we now face many problems such as the depletion of resources and increasing waste. The increase in plastic waste that resulted in marine plastic pollution in the world's oceans has now become a new problem for society.

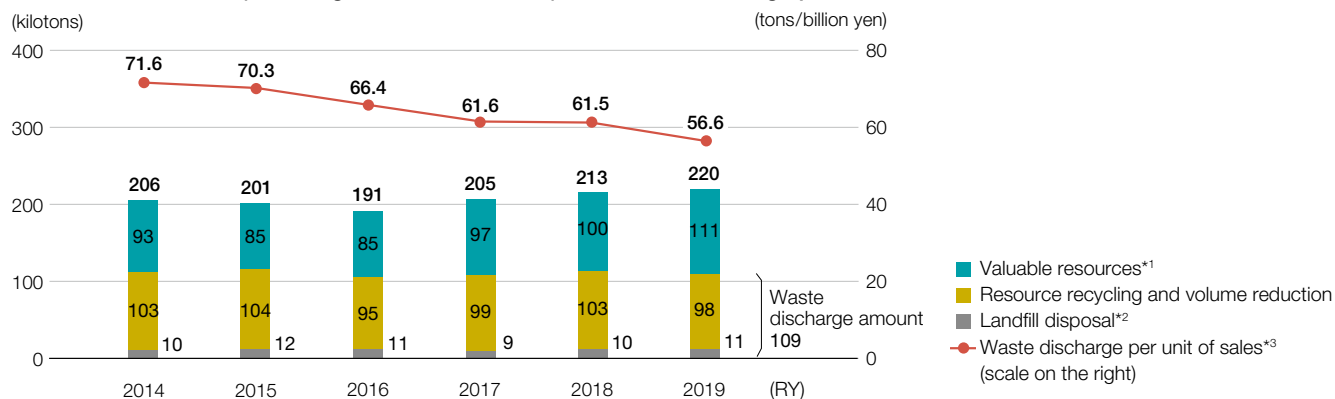
The Kubota Group sees working towards a recycling-based society as one item of its materiality, and has been advancing initiatives to promote “reduce” (reducing the amount generated), “reuse” (internal recycling and reuse), and “recycle” (improving the recycling ratio) of waste, in addition to initiatives to promote the effective use of resources and resource saving.

Waste, etc., from Business Sites

In RY2019, the waste discharge amount was 109 kilotons, a decrease of 4.4% compared to the previous reporting year. Additionally, waste discharge per unit of sales improved by 7.9%. These are mainly due to promoting conversion to valuable material of the waste casting sand at cast iron production sites, as well as a reduction in production volume at cast iron production sites in Japan.

Of the waste, etc., discharge amount in RY2019, the amount of hazardous waste discharge was 3.1 kilotons in Japan and 2.7 kilotons overseas.

Trends in Waste, Etc. (including valuable resources) and Waste Discharge per Unit of Sales



*1 To reduce overall emissions to the outside of the Group, including valuable resources, metal scraps generated at machinery production and related sites are collected for recycling at cast iron production sites within the Group. From RY2019, as a way of evaluating the progress of these activities, calculation standards have been changed so that transfer of valuable resources between business sites within the Group is no longer included in the valuable resources figure, but is counted instead as in-house recycling and reuse. The valuable resources figure for RY2019 calculated using the previous standard would be 117 kilotons.

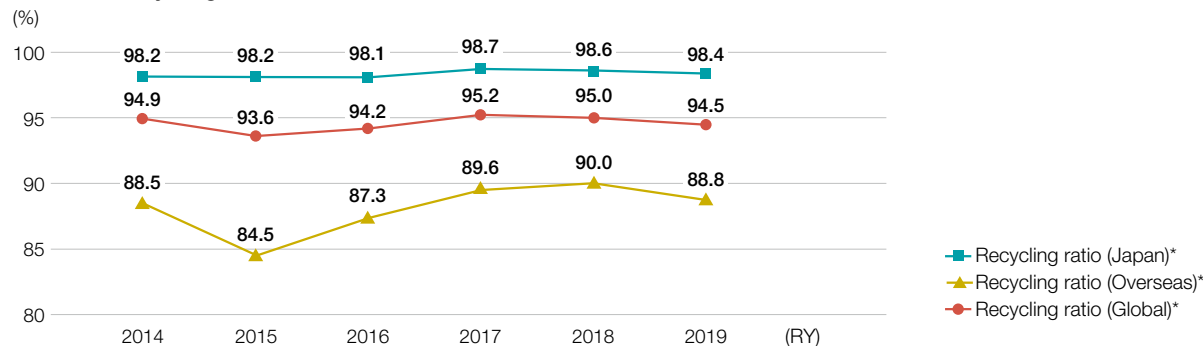
*2 Landfill disposal = Direct landfill disposal + Final landfill disposal following external intermediate treatment

*3 Waste discharge per unit of consolidated net sales. The Kubota Group adopted International Financial Reporting Standards (IFRS) instead of accounting principles generally accepted in the United States of America from RY2018.

Waste discharge = Resource recycling and Volume reduction + Landfill disposal

The recycling ratio in RY2019 was 98.4% in Japan, maintaining about the level of previous years. The recycling ratio overseas was 88.8%, a 1.2-point decrease compared to the previous reporting year. We will make continuous efforts to further improve the resource recycling ratio.

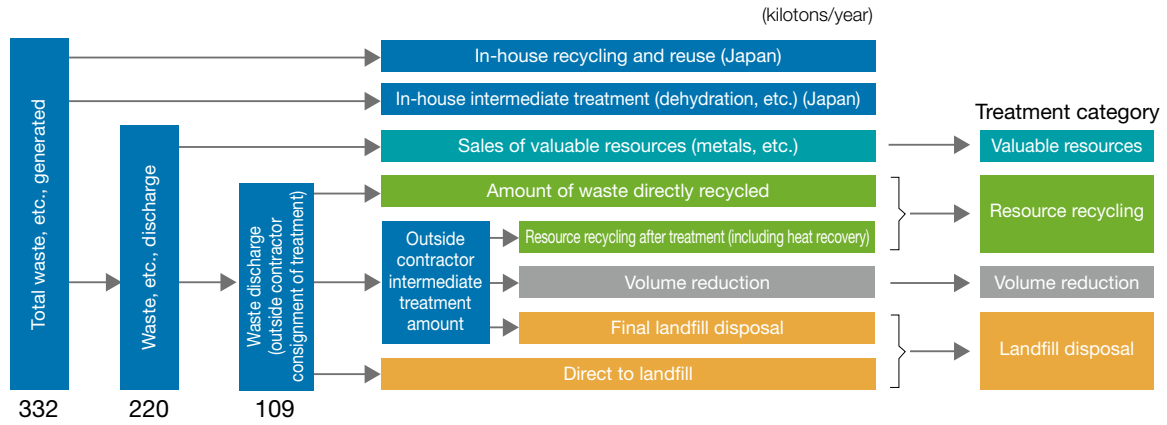
Trends in Recycling Ratio



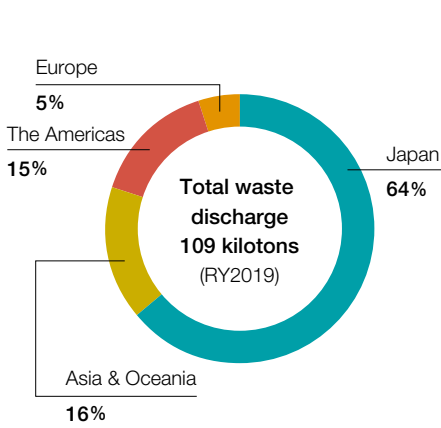
* Recycling ratio (%) = (Sales amount of valuable resources + External recycling amount) / (Sales amount of valuable resources + External recycling amount + Landfill disposal) × 100.

For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.86).

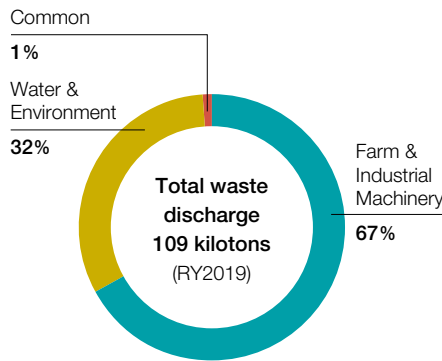
Waste Recycling and Treatment Flow (RY2019 results)



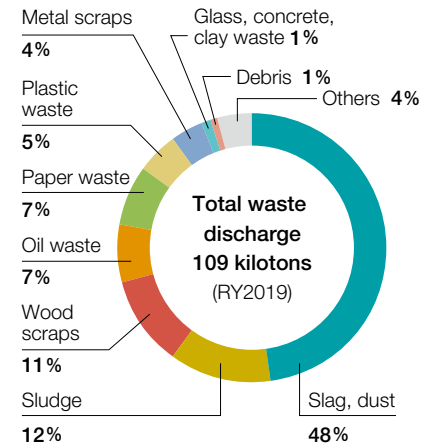
Waste Discharge by Region



Waste Discharge by Business

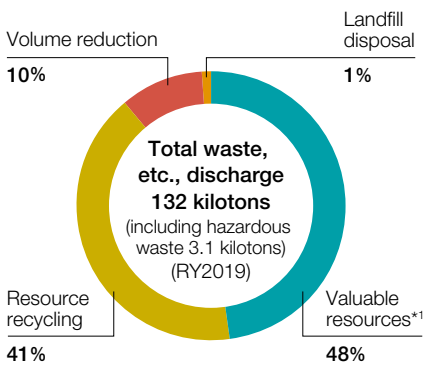


Waste Discharge by Type

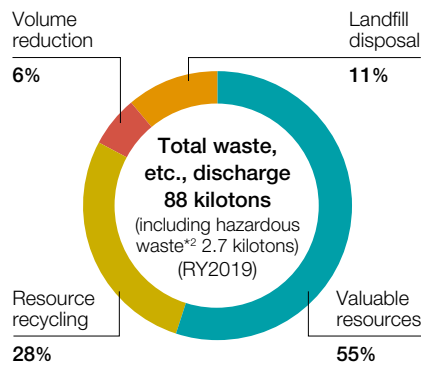


Waste, Etc., Discharge by Treatment Category

● Japan



● Overseas



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If calculated according to the previous calculation standards, the RY2019 figures would be as follows: waste, etc., discharge amount in Japan 137 kilotons; valuable resources 50%; resource recycling 39%; volume reduction 10%; landfill disposal 1%.

*2 Overseas hazardous waste includes items sold as valuable resources.

For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.86).

Measures to Reduce Waste

The Kubota Group has established its Medium-Term Environmental Conservation Targets 2020 (p.36) and is working on the reduction of waste discharge from its business sites and the improvement of the recycling ratio. The Group has been promoting various measures, such as the thorough separation of waste according to the type and disposal method of waste, the introduction of returnable packaging materials, and shared waste recycling between sites. The Group is also committed to the reduction of hazardous waste through ensuring thorough monitoring and management thereof.

In RY2019, cast iron production sites, which generate a large amount of waste, achieved a reduction of approximately 12,000 tons in the amount of discharged waste through conversion of casting sand to valuable resources. Machinery production sites continued working to reduce the amount of sludge generated in the painting booth as well as volumes of waste oil and oil-containing wastewater. Meanwhile, as measures to reduce disposable plastics, we introduced initiatives at certain worksites to withdraw the use of disposable tableware in the employee cafeteria and reduce the issue of plastic carrier bags in on-site stores.

As a result of the efforts toward achieving the Medium-Term Environmental Conservation Targets 2020 for waste reduction, global production sites achieved a reduction of 15,800 tons of waste in RY2019 compared with the case where countermeasures were not implemented from the base year (RY2014). The economic effects of these measures reached 52 million yen compared to RY2014. Waste discharge per unit of production in RY2019 improved by 21.4% compared to RY2014. The recycling ratio was 99.7% at production sites in Japan and 91.8% at production sites overseas, both achieving the targets of the Medium-Term Environmental Conservation Targets 2020.

Moreover, production sites in Japan have raised the utilization rate of electronic manifests to 96.3%, enabling real-time assessment of the reduction effects. We will continue to promote the reduction of waste through promoting sharing of good reduction practices and visualization of waste by utilizing electronic manifests.



Conversion of waste casting sand to valuable resources led to a major reduction in the amount of waste discharged.

SIAM KUBOTA Metal Technology Co., Ltd.
(Thailand)

VOICE

Reduction in Waste Discharge through Introduction of Recycling Equipment for Transmission Oil

At the Kubota Utsunomiya Plant, we introduced equipment to recycle transmission oil removed from products, thus promoting the reuse of raw materials and reducing the amount of waste materials.

Our plant manufactures rice transplanters, combine harvesters, and other agricultural machinery. On the rice transplanter assembly line, after quality inspection of the product's functioning in the final process, we remove the transmission oil supplied to the machine. Once used, deterioration in the quality of the oil means that it cannot be reused and it had previously been discarded.

We worked to find a way of recycling the removed oil. Taking the required quality as a benchmark, we undertook regeneration tests and quality checks using samples to design and evaluate the equipment specifications. Introduction of the equipment has allowed us to successfully recycle and reuse waste oil. This not only promotes reuse of raw materials and waste reduction, but also contributes to business efficiency by reducing the yearly amount of oil purchased by around 100 kiloliters.

Going forward, we are committed to further action to reduce environmental burden.



Kubota Utsunomiya Plant
Staff members involved in the initiative:

Kyohei Takezawa
Shinji Takayama
Takashige Tajima
Yuta Hiratsuka
Ryota Kobayashi
Takuma Yuki
Tatsuya Mizunuma
Sadayuki Suzuki
Yuki Sakamaki

Reducing Plastic

Marine plastic pollution caused by used plastic that flows down rivers and waterways to be discharged along coasts and oceans has become a global issue. The Kubota Group's business sites promote the 3Rs and efforts to convert the plastic waste generated through their business activities into valuable resources.

Kubota ChemiX Co., Ltd., involved in the manufacture and sale of plastic pipes and fittings, manufactures and sells recycled rigid PVC pipes made from recycled waste material (PVC made by reusing discarded PVC pipe collected in cities) as a way of promoting the effective use of resources. Kubota Environmental Service Co., Ltd., involved in business activities related to the construction, maintenance, and operational management of water and environmental facilities, provides engineering services to facilities that pulverize and sort plastic waste for use as fuel. Meanwhile, logistics services provider KBS Kubota Co., Ltd. is promoting the reduction of plastic usage in logistics services, including the reduction of stretch film usage through the introduction of returnable packaging materials.

The Kubota Group works to reduce the plastic emissions through initiatives including the effective use of resources and reducing waste throughout the business value chain.

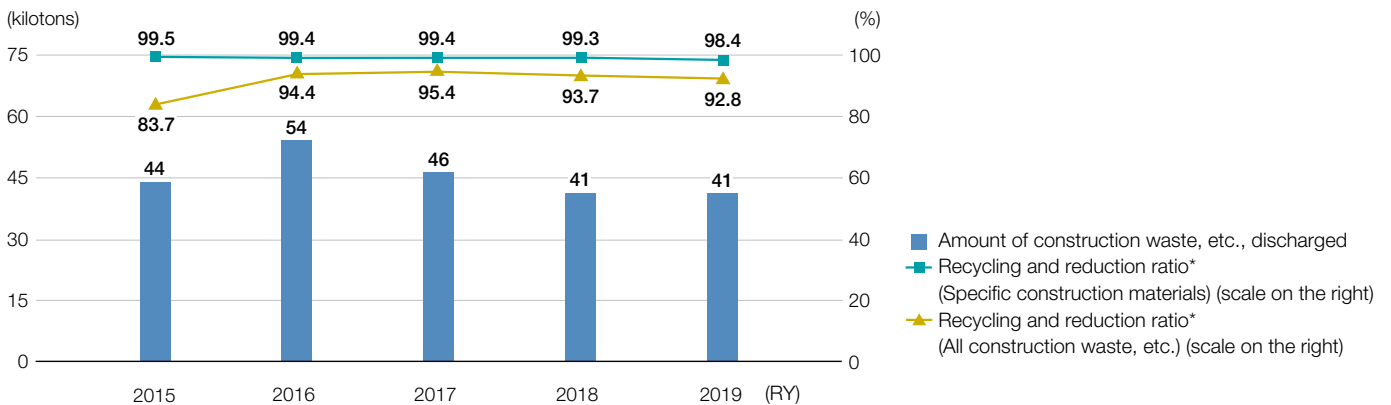


Returnable packaging materials
(left: environmentally friendly strapping;
right: environmentally friendly cover)
KBS Kubota Co., Ltd.


Waste, etc., Generated from Construction Work

The type and the amount of waste generated from construction work vary depending on the type of work being done, resulting in fluctuation in the amount of discharge, and the recycling and reduction ratio. However, the Kubota Group has maintained its existing recycling and reduction ratio.

Trends in Discharge, and Recycling and Reduction Ratio of Construction Waste, Etc. (Japan)



* Recycling and reduction ratio = [Sales of valuable resources + Resource recycling (including heat recovery) + Volume of reduction] / Amount of construction waste, etc. discharged (including sales amount of valuable resources) x 100 (%)

 For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.86).

Handling and Storage of Equipment Containing PCB (in Japan)

Transformers, capacitors and other equipment containing polychlorinated biphenyls (PCB) are properly reported, stored and handled based on the Japanese Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, and the Japanese Waste Management and Public Cleansing Law. Waste with a high concentration of PCB is being disposed of steadily, beginning with sites where PCB-treatment facilities are available. Waste with a low concentration of PCB will be properly disposed of by the disposal deadline of March 2027.

PCB-containing equipment in storage is thoroughly managed by multiple means, such as the locking of storage cabinets, periodic inspection, and environmental audits.