

Controlling Chemical Substances

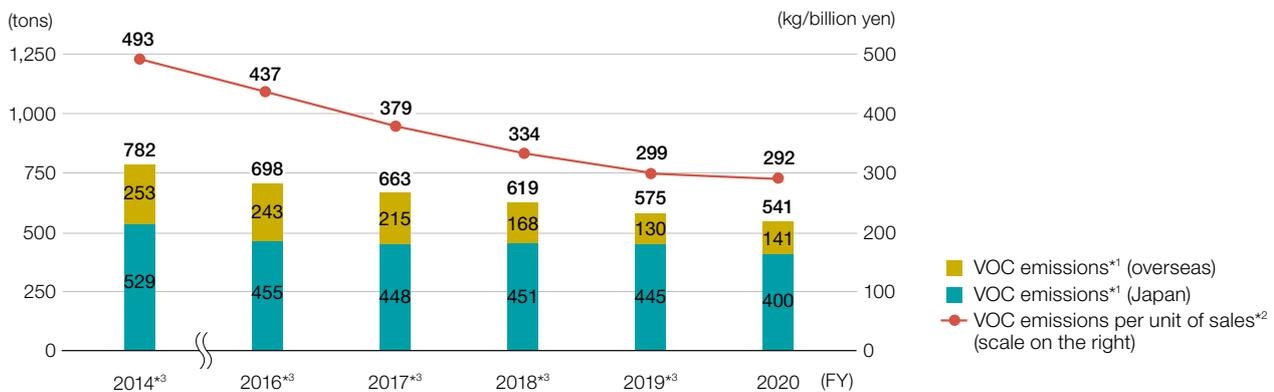
Chemical substances have become an essential part of our lifestyles. On the other hand, to control the impact of chemical substances on humans and ecosystems, countries are strengthening laws and regulations related to their use and management.

The Kubota Group sees controlling chemical substances as one of its materiality issues, and has been advancing initiatives toward reducing the burden on the environment from chemical substances, including the reduction of VOCs (volatile organic compounds) generated in coating processes at production sites, as well as the replacement of fluorocarbons and the prevention of leakage.

VOC Emissions

In FY2020, VOC emissions were 541 tons, a decrease of 5.9% compared to the previous reporting year. Additionally, VOC emissions per unit of sales improved by 2.5%. These results mainly reflect the suspension or decrease of production amid the COVID-19 pandemic, as well as an increase in products that use less paint, the curbing of VOC emissions due to conversion to different fuel types, and greater efficiency in the coating process.

Trends in VOC Emissions and Emissions per Unit of Sales



*1 VOCs comprise the six substances that are most prevalent in emissions from the Kubota Group: xylene, toluene, ethylbenzene, styrene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

*2 VOC emissions 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 FY2018.

*3 The VOC emissions and VOC emissions per unit of sales for FY2014 and FY2016-2019 (Japan, overseas and total) have been revised to improve accuracy.

Measures to Reduce VOCs

The Kubota Group has established its Medium-Term Environmental Conservation Targets (p.48). We have formulated plans for implementing measures to reduce VOCs over the medium term at all production sites (100%), and we revise these each year. The Group has been promoting the risk management of chemical substances handled at production sites and the reduction of VOC-containing materials, such as paint and thinner.

In FY2020, the Kubota Group worked to switch to VOC-free paints and expand the use of VOC removal devices. Additionally, by promoting the introduction of paint robots, the Group achieved not only a reduction in VOC, but also improved productivity.

As a result of the efforts toward achieving the Medium-Term Environmental Conservation Targets 2020 for VOC reduction, global production sites achieved a reduction of 50 tons in FY2020 compared with the case where countermeasures were not implemented from the base year (FY2014). The economic effects of these measures reached 110 million yen compared to FY2014. VOC emissions per unit of production in FY2020 improved by 37.7% compared to FY2014.

We will continue to promote the reduction of VOC emissions by introducing exhaust treatment equipment that is conscious of compliance with laws and the reduction of impacts on neighborhoods, in addition to the efforts to stop the use of VOC-containing paint and thinner or replace them with substitutes.

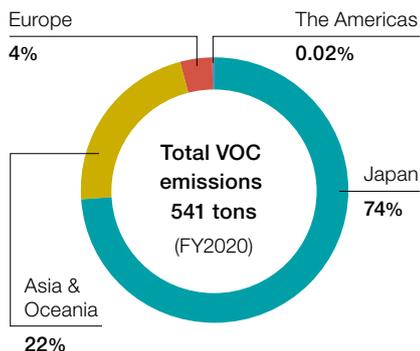


Kubota Construction Machinery (WUXI) Co., Ltd. (China) has increased quality and productivity while reducing revision of painting work by introducing painting robots. This has led to a reduction in the amount of paint used, and the amount of VOC emissions.

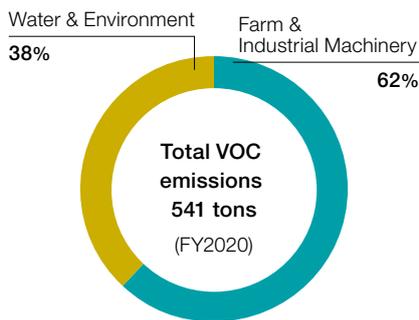


For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.98).

VOC Emissions by Region

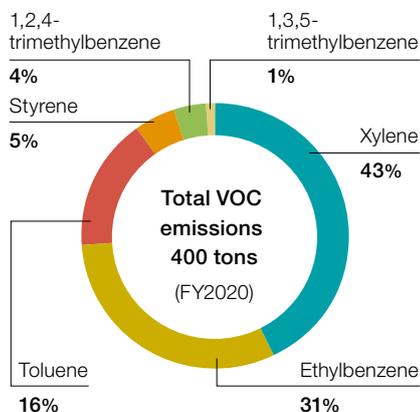


VOC Emissions by Business

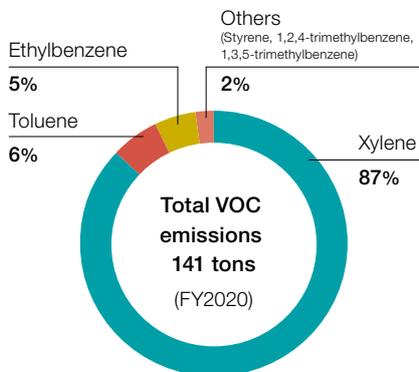


VOC Emissions by Substance

● Japan



● Overseas

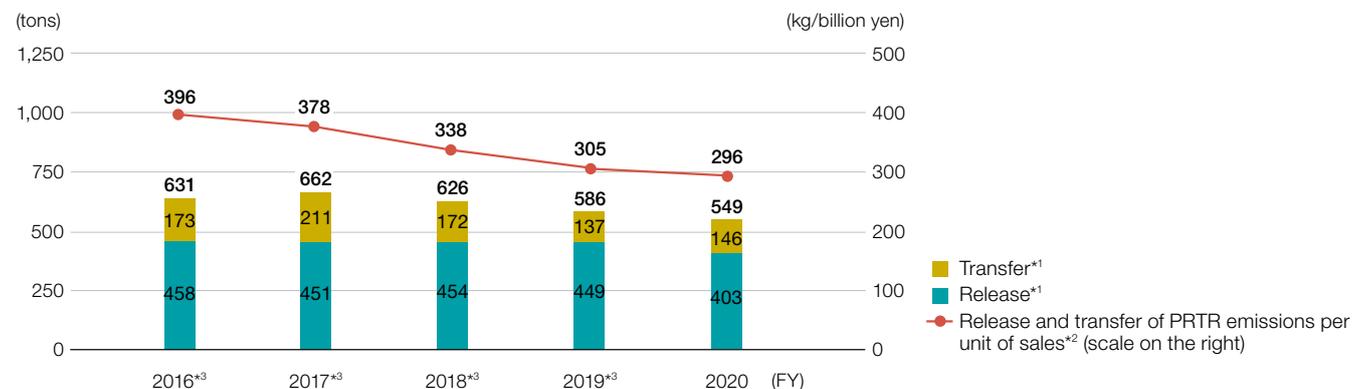


Release and Transfer of PRTR-designated Substances

In FY2020, a total of 549 tons of substances stipulated in the PRTR Law* were released and transferred, a reduction of 6.3% compared to the previous year. Additionally, the release and transfer per unit of sales reduced by 2.9% compared to the previous year. Similar to reduction of VOC emissions, the Group is promoting the ongoing measures to reduce the PRTR-designated substances.

* Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Trends in Release and Transfer of PRTR-designated Substances, and Release and Transfer per Unit of Sales (Japan)



*1 Total amount of reported substances that are handled at each site (annual volume of 1 ton or more (or 0.5 tons for Specific Class I designations))
 *2 Release and transfer of PRTR-designated substances 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 FY2018.
 *3 The values for Trends in Release and Transfer of PRTR-designated Substances and for the Release and Transfer per Unit of Sales have been adjusted from FY2016 to FY2019 to improve accuracy.

For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.98).

Control of Ozone-depleting Substances

The Kubota Group prohibits specified CFCs, which are ozone-depleting substances, from being contained in products or added*¹ in manufacturing processes of products. In Japan, replacement of materials containing dichloropentafluoropropane with substitute materials was completed during FY2016, and no ozone-depleting substances subject to notification under the PRTR Law*² are handled and released at present.

In Japan, CFCs that are used in air-conditioners and refrigerating or freezing equipment as refrigerant, are thoroughly managed to control leakage, in accordance with the standards specified by the Fluorocarbons Emission Control Law*³. However, in FY2020, there was an instance in which specified fluorocarbon gas used in the external unit of an air-conditioner was released into the atmosphere. The Group took measures to prevent a recurrence and has been working to control emissions of fluorocarbons.

*1 For HCFC, intentional adding in products as refrigerant or heat insulator is prohibited.

*2 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements in the Management Thereof

*3 Act on the Rational Use and Proper Management of Fluorocarbons

Control of Air Pollutants

The Kubota Group has set its own control values that are stricter than the emission standards of relevant laws and regulations. In order not to allow the exceeding of standard values, the Group implements thorough daily management activities, such as monitoring operation of the smoke and soot-generating facilities and inspecting the dust-collecting equipment. However, in FY2020, there was an instance in which a defective dust collector caused emissions of dust exceeding the regulation level in exhaust gas from a cupola furnace. The Group took measures to prevent a recurrence and has been working to control emissions of atmospheric pollutants.

The amounts of emissions of air pollutants in FY2020 were 6.6* tons for SOx (increased by 76.3% from the previous year), 49.7 tons for NOx (increased by 5.0%), and 12.2 tons for soot and dust (increased by 13.0%). We will continue to reduce emissions of air pollutants through initiatives such as controlling sources by fuel conversion and maintaining dust-collecting equipment.

* At some sites in Japan, sulfur emissions are calculated, not from actual measurements of exhaust gas concentrations and amounts, but by making estimates based on the sulfur weights of raw materials, materials produced, and waste.

(Atmospheric emissions = coal input - iron produced - waste slag - waste dust)

SOx emissions in FY2020 show an increase because some of the sulfur-containing slag generated at the above sites was managed onsite and not disposed of, and was not included in calculations of atmospheric emissions. If sulfur contained in the slag managed onsite at end of year (December 31, 2020) by these sites were included, SOx emissions for FY2020 amounted to 3.0 tons.



For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.98).

Monitoring Groundwater

Results of groundwater measurements conducted on the premises of the business sites that used organic chlorine-based compounds in the past are as shown below.

Groundwater monitoring (FY2020)

Business site	Substance	Measured groundwater value	Environmental standard
Tsukuba Plant	Trichloroethylene	Non-detected (less than 0.0001 mg/L)	Less than 0.01 mg/L
Utsunomiya Plant	Trichloroethylene	Non-detected (less than 0.001mg/L)	Less than 0.01 mg/L

Reduction of Chemical Substances Contained in Products

The Kubota Group has set rules for identifying and properly managing chemical substances in products in order to comply with REACH Regulations* in Europe and other chemical substance regulations.

Since 2010, chemical substances in products have been classified as one of the three following categories and managed appropriately. With cooperation from our suppliers, we investigate chemical substances in products on a global basis.

* The European Union (EU) Regulations for Registration, Evaluation, Authorization and Restriction of Chemicals

► Three Control Levels

1. Substances to be Prohibited: Should not be contained in products
2. Substances to be Restricted: Should not be contained in products under certain conditions and applications
3. Substances to be Controlled: Presence in products should be recognized