

Controlling Chemical Substances

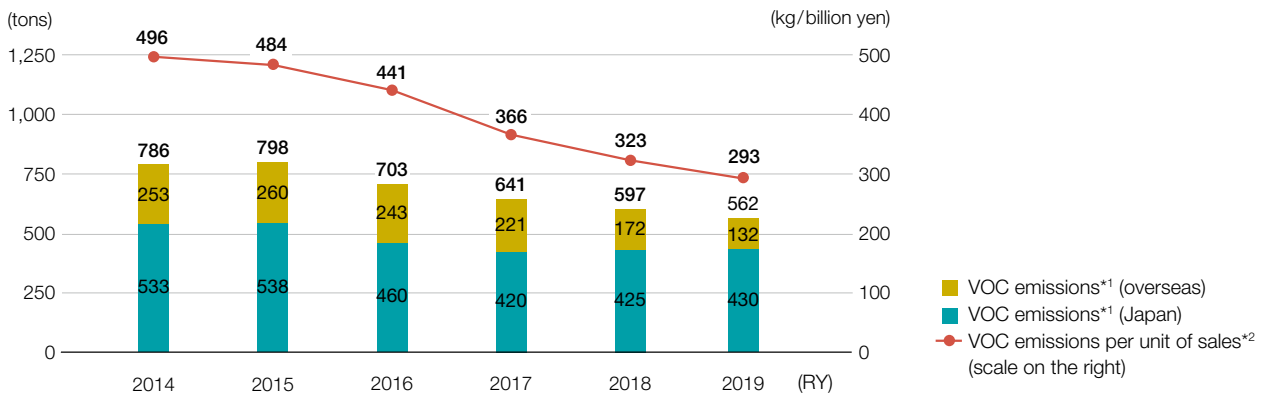
The World Summit on Sustainable Development (WSSD) held in 2002 adopted a resolution that chemical substances would be managed in such a manner as to minimize the impact of the chemical substances on human health and the environment, and relevant regulations therefore have been formulated by each member country.

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 RY2019, VOC emissions were 562 tons, a decrease of 5.9% compared to the previous reporting year. Additionally, VOC emissions per unit of sales improved by 9.3%. These were mainly due to increased use of low-solvent paint and reduced use of solvent-based paint at overseas machinery production sites as well as a reduction in production volume at cast iron production sites in Japan.

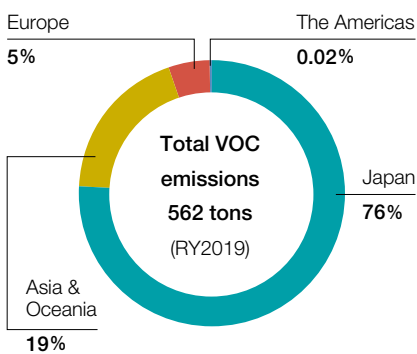
Trends in VOC Emissions and Emissions per Unit of Sales



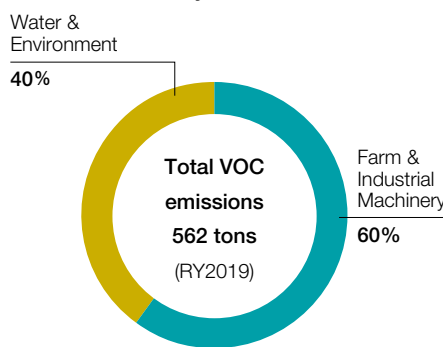
*1 VOCs comprise the six substances that are most prevalent in emissions from the Kubota Group: xylene, toluene, ethylbenzene, styrene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.


*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 RY2018.

VOC Emissions by Region



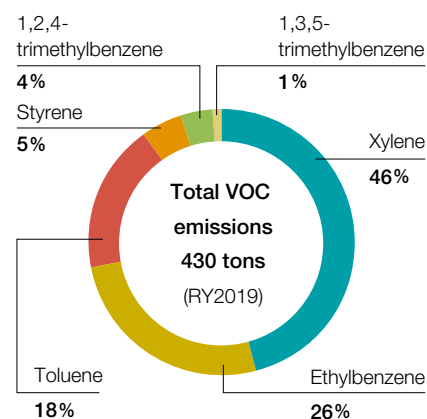
VOC Emissions by Business



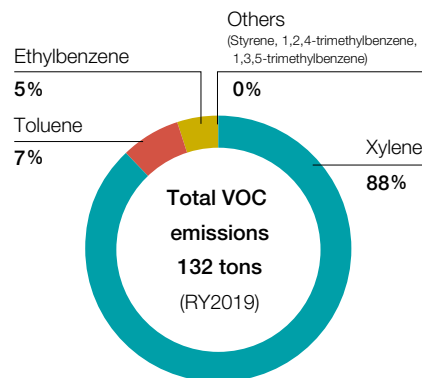
 For the calculation method of each item of environmental data, see the Calculation Standards of Environmental Performance Indicators (p.86).

VOC Emissions by Substance

● Japan



● Overseas



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

Measures to Reduce VOCs

The Kubota Group has established its Medium-Term Environmental Conservation Targets (p.36) and is working on the reduction of VOC emissions from its business sites. 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 RY2019, the Kubota Group continued to adjust the pressure setting and nozzle diameter of paint guns for improved painting efficiency. Among its other ongoing initiatives to reduce VOC use were switching to VOC-free materials and recycling used thinner. 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 72 tons in RY2019 compared with the case where countermeasures were not implemented from the base year (RY2014). The economic effects of these measures reached 59 million yen compared to RY2014. VOC emissions per unit of production in RY2019 improved by 38.1% compared to RY2014.

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.



Reducing Use of Chemical Substances (VOC) through Measures Including Revision of Solvent Use and Introduction of Recycling Equipment

At Kubota Farm Machinery Europe S.A.S (KFM) (France), we took steps to reduce our use of chemical substances (VOC), including a revision of operations in the painting process and introduction of thinner recycling equipment.

In addition to paints, the paint workshop of our plant, which manufactures tractors, uses large amounts of other chemicals with high VOC content. Previously, cleaning with solvent and replacement of the liquid used in the degreasing pretreatment were carried out at regular fixed intervals, so that the same amount of chemicals was used regardless of fluctuations in production volume. From 2017, we adjusted the replacement of the painting pre-treatment liquid and the cleaning of the heat exchanger and paint gun to match production status in order to reduce the use of chemicals. Also, we introduced thinner recycling equipment in the paint workshop.

Besides, the disposal of the spray cans used for cleaning of parts in the assembly and inspection processes had caused release into the atmosphere of solvent residue. We introduced spray can refilling equipment to promote reuse of the cans and reduce solvent residue waste to zero.

With these measures, we achieved a reduction of approximately 4,370 kg in VOC use over a two-year period. Going forward, we will continue with initiatives to reduce VOC emissions to contribute further to global environmental conservation.



Kubota Farm Machinery Europe S.A.S Staff members involved in the initiative:

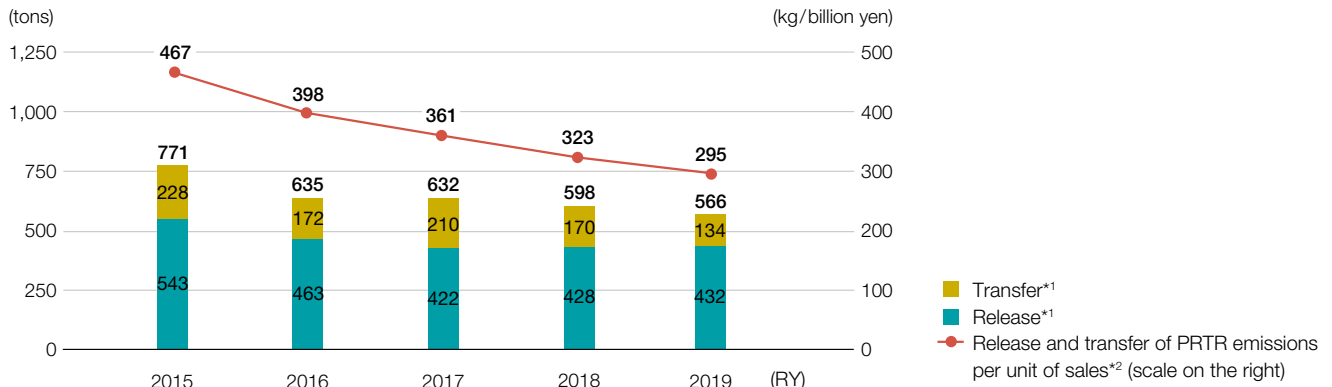
- Nicolas Huyghe
- Thomas Godin
- Arnaud Cousin
- Michaël Mercier
- Romain Ruchebusch
- Steven Bruwaert
- Rachid Benkhouia
- Jean Vanhille
- Elodie Vanhee
- Masashi Tsuchiya

Release and Transfer of PRTR-designated Substances

In RY2019, a total of 566 tons of substances stipulated in the PRTR Law* were released and transferred, a decrease of 5.2% compared to the previous reporting year. Additionally, the release and transfer per unit of sales improved by 8.7% compared to the previous reporting 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 RY2018.



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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 RY2016, 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

*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

Emissions 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.

The amounts of emissions of air pollutants in RY2019 were 3.7* tons for SOx (down by 60.2% from the previous year), 47.3 tons for NOx (down by 4.3%), and 10.8 tons for soot and dust (up by 9.5%). We will continue to reduce emissions of air pollutants through initiatives such as controlling sources by fuel conversion and maintaining dust-collecting equipment.

* If sulfur contained in the slag managed onsite at end of year (December 31, 2019) by some sites in Japan is included, SOx emissions for RY2019 amounted to 5.2 tons.



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

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 (RY2019)

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