Initiatives for environmental issues

The sustainability of the Earth environment is essential to the continuation of our business. We strive to reduce the negative impact on the environment brought about by our business activities because we recognize that it constitutes a great risk to our business.

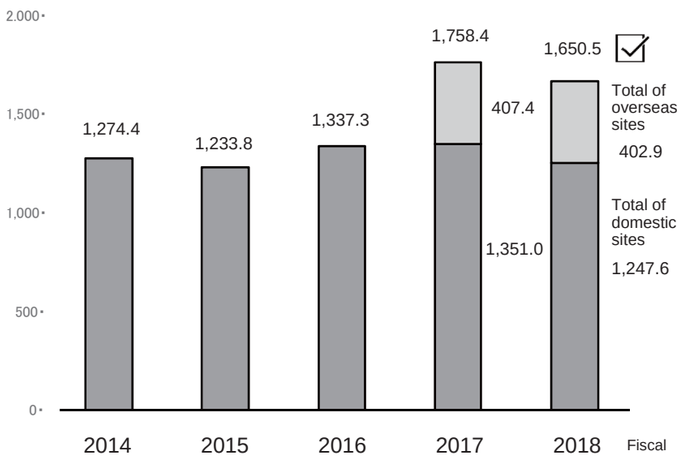
Environmental management

Mitsui Kinzoku Group has established the Supreme Safety & Environmental Meeting as a place to deliberate and determine the most important matters related to safety and the environment.
Guidelines and action plans determined at the Meeting are spread to each site by the Environmental and Safety Supervisory Manager (General manager of the Environmental and Safety Dept.) under the direction of the Chief Environmental and Safety Officer. Each site that operates under ISO14001 has a chief person that serves as the person responsible for managing environmental safety, and who makes sure that the required actions are being reliably executed.
In 2001, we established the Basic Policy on Environmental Conservation and formulated the Environmental Action Plan aiming to improve our environmental management system and minimize the environmental impact.
In 2018, we revised the Environmental Action Plan to meet the current needs of society. We have established targets to reduce greenhouse gas emissions and waste and create products that will contribute to the environment. We have also partially revised the Basic Policy on Environmental Conservation.

Response to climate change

We advance initiatives to reduce the emission of greenhouse gases, not only to contribute toward the prevention of global warming, but because we also recognize the risks that climate change poses to our business. Our Environmental Action Plan states the goal of reducing CO_2 emissions for the Group by 7% up to FY2030 (compared to FY2013). We conduct activities to reduce energy use, reduce CO_2 emissions, and create renewable energy.
In FY2018, CO_2 emissions originating from energy consumption by our Group both domestic and overseas amounted to 1,650.5 thousand tons of CO_2, down by 6.1% compared to FY2017.

CO_2 emissions from energy consumption (thousand t-CO_2)



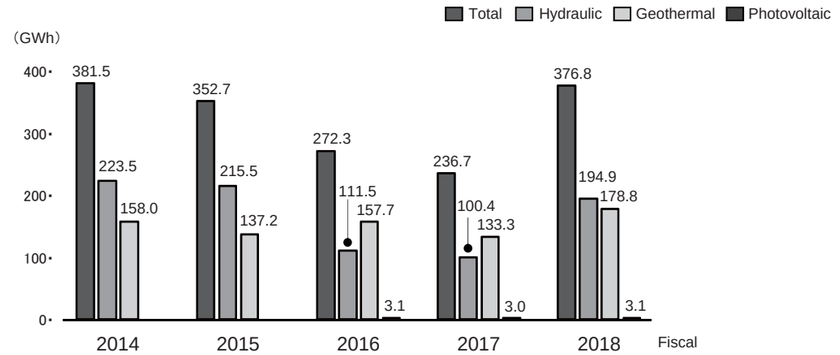
※ Emission amounts from overseas sites have been added to the total amount starting FY2017.

※ The emission amount in FY2017 from overseas sites that was disclosed in our CSR Report 2017, which stated that it was 449.8 thousand tons of CO_2, was recalculated and revised.

※ Figures for CO_2 emissions from energy consumption were calculated using emission factors derived in a manner conforming to the "Act on Promotion of Global Warming Countermeasures." CO_2 emissions derived from purchased electricity in Japan were calculated using the latest basic emission factors of electric power suppliers. For emission factors overseas, the per-country emission factors "CO_2 emission factors from electricity" reported by the International Energy Agency (IEA) were used.

※ We have received an independent practitioner's assurance for the figures for FY2018 in this information to which ☑ is attached.

Total power generation using renewable energy



Creation of renewable energy

Mitsui Kinzoku Group will further expand the use of renewable energy as clean energy in place of fossil fuels.
Kamioka Mining and Smelting Co., Ltd. has 10 hydroelectric power plants. The earliest one has started operating in 1917. The renewal construction work, which started in FY2015 with a total investment of 20.8 billion yen, was fully completed in FY2018, and the output totaled approximately 40,000 kW.
Hikoshima Smelting Co., Ltd. has started the solar PV which outputs around 2 MW (megawatts) since March 2016.
Okuaizu Geothermal Co., Ltd., which provides the steam for geothermal power generators, has been making efforts to achieve stable provision ever since the company began its operations in 1995.

Kanakido power plant, Kamioka Mining and Smelting Co., Ltd.

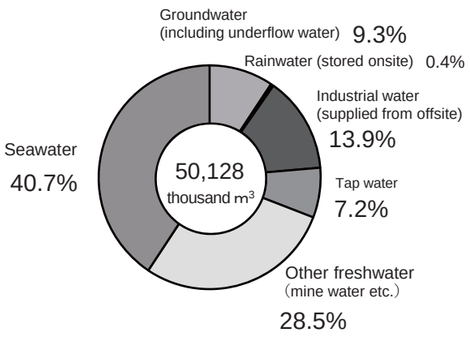
Okuaizu Geothermal Co., Ltd.

Solar power plant, Hikoshima Smelting Co., Ltd.

Water resource conservation

Mitsui Kinzoku Group strives to reduce and recycle water used in the business operations. The total water usage amount in FY2018 was 50,128 thousand m^3, a reduction of 3.2% compared to FY2017. Furthermore, the circulated water usage through reusing and recycling was 8,815 thousand m^3, an increase of 7.0% from FY2017.
Water-related risks that could have an impact on our business have not become apparent as of today, but we will advance efforts to evaluate water-related risks from multiple perspectives that include physical risks, such as the drying up of water resources and the lack of sufficient amounts of water, as well as regulatory risks related to the use of water. These efforts will also help us reduce the risks in our business.

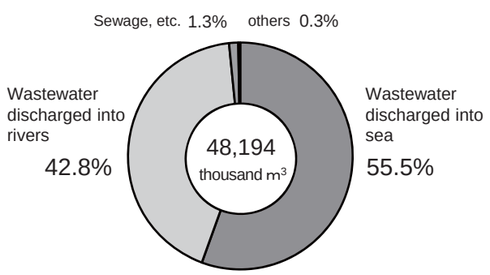
Breakdown of water use (FY2018)



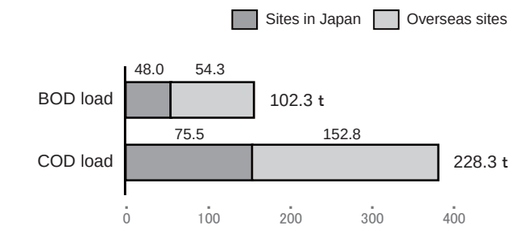
Prevent air and water pollution

Each manufacturing site of Mitsui Kinzoku Group monitors the following in accordance with laws, regulations and ordinances and voluntary standards: Sulfur oxide (SOx) emissions produced on the combustion of fossil fuels containing sulfur, nitrogen oxide (NOx) emissions from boilers, incinerators and other combustion equipment, and particulate matter, as well as water quality including BOD and COD which indicate the level of organic material in wastewater. We work on gathering and managing the monitoring results from each site, and sharing the initiatives and the technologies within the Group.

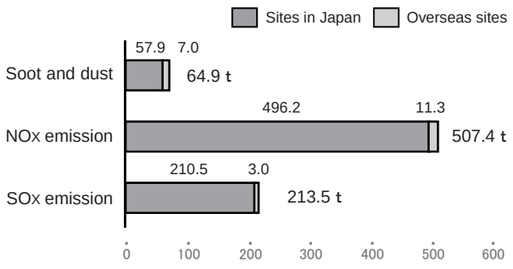
Breakdown of wastewater (FY 2018)



Emissions to the water (FY2018)



Emissions to the atmosphere (FY2018)

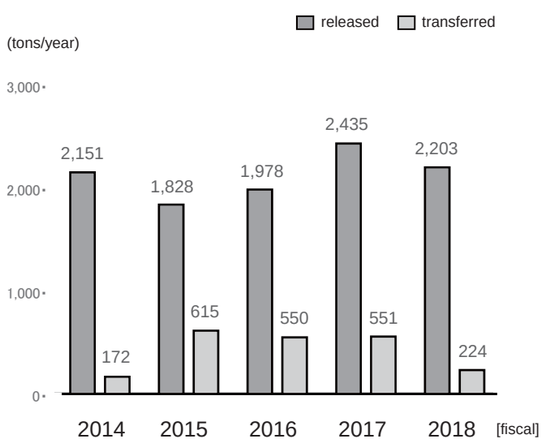


Reduction of chemical substance emissions

Each manufacturing site of the Group files the release and the transfer amount of chemical substances to the government under the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register [PRTR]). The management of hazardous chemical substances contained in products has become an essential requirement. We also respond to the guidelines for chemical substances contained in products, such as the RoHS Directive and the REACH regulations required by customers.

We aim to reduce the emission amount of environmental pollutants in accordance with our Environmental Action Plan, including our overseas sites. We continuously strive to collect and replace chemical substances that may cause environmental pollution. Thus we focus to reduce or remove use of such chemical substances from our products.

Volume of chemical substances released and transferred



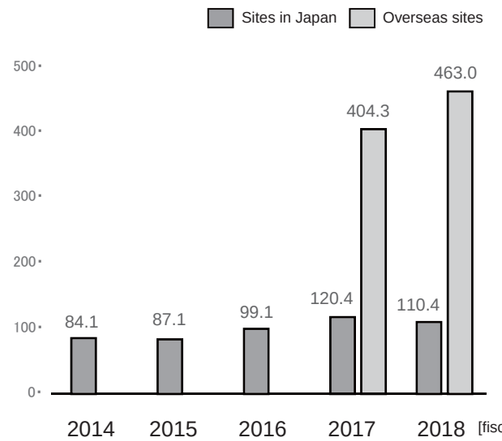
Initiatives to reduce waste

We strive to reduce the amount of waste generated in our business activities, and also conduct efforts to develop technology toward reusing and recycling.

In the Environmental Action Plan revised in 2018, we set a target basic unit (calculated by dividing the amount of waste generation excluding waste to be reused and recycled by net sales) at each business site.

In FY2018, as a result of the implementation of new initiatives as well as the increase and decrease in our production amounts, the amount of waste from our domestic sites was reduced by 8.3% from the previous year to 110.4 thousand tons, and increased by 14.5% at our overseas sites to 463.0 thousand tons. Of the amount of waste in FY2018, 69% within Japan and 11% overseas were recycled and used either within or outside of our company.

Amount of waste generation (thousand tons)



※ The amounts from overseas sites have been added starting FY2017.

※The value for the amount within Japan in FY2017 disclosed last year has been revised.

Use of recycled raw materials

Mitsui Kinzoku Group works on the recycling of waste by using resources as effectively as possible. During this process, it is essential that we establish separation and purification technologies in accordance with the materials, as well as make technological improvements and renew existing manufacturing equipment for each production process, and develop a network for collecting recycled raw materials.

In FY2018, the use of recycled raw materials exceeded its use of natural resources such as ore. Recycled materials account for 41.7% and 36.9% of the total raw materials used in domestic and overseas sites respectively. We achieved 41.3% in the percentage of recycled materials for the Group.

Breakdown of usage by type of raw material (FY2018)