

# Environmental Performance

## Basic Policy

Olympus is implementing a variety of environmental activities while assessing the environmental impact of its business activities with precision and with awareness of the scale of the impact on and risk to the environment. Also, following the diversification in our suppliers and with an awareness of climate change as a major environmental issue impacting our business activities, we continue to implement measures to assess information on energy conservation and regulations on reducing CO<sub>2</sub> levels and responding to sudden flooding.

At the same time, we recognize environmental risks as opportunities for us to actively develop and market environmentally conscious products that contribute to resolving issues with climate change and water risk and products designed to resolve environmental issues.

## Material Balance (Fiscal 2018)

| Resource and Energy Input  | Business Activities  | Discharge of Environmental Load Substances   |
|--|--|--|
| <b>Energy (total)</b> 269,229 MWh (-8%)★<br>Electric power  163,732 MWh (-12%)★ Gasoline  2 kl (-)★<br>City gas  4,120 million m <sup>3</sup> (-1%)★ Hot water  1,581 GJ (-12%)★<br>LPG  1,380 t (-1%)★ District heat  1,995 MWh (-7%)★<br>LNG  760 t (-7%)★ Green electricity  16,576 MWh (12%)★<br>Heavy fuel oil  201 kl (5%)★ Solar power  536 MWh (8%)★<br>Kerosene  60 kl (12%)★ Solar heat  458 GJ (3%)★<br>Diesel fuel  8 kl (-65%)★   | <b>Development and Manufacturing</b><br><br><b>Research &amp; Development</b><br><br><b>Production</b><br><br><b>Sales and Logistics</b><br>Logistics<br>Sales<br>Repair and Service | <b>Greenhouse Gases (Total)</b> 93,752 t-CO <sub>2</sub> e (-15%)★<br>CO <sub>2</sub> generated from energy  93,746 t-CO <sub>2</sub> e (-15%)★<br>CO <sub>2</sub> not generated from energy  6 t-CO <sub>2</sub> e (-27%)★<br><br><b>Substances Emitted</b><br>NO <sub>x</sub> 59 t (-11%)<br>SO <sub>x</sub> 0.3 t (5%)<br><br><b>Chemical Substances (PRTR substances emitted and transferred)</b> 19 t (8%)<br><br><b>Discharge to Water Systems</b> 1.187 million m <sup>3</sup> (-7%)<br>Water discharged (public waters)  0.519 million m <sup>3</sup> (4%)<br>Water discharged (sewage)  0.668 million m <sup>3</sup> (-14%)<br><b>BOD</b> 1 t (-35%)<br><br><b>Discharge (total)</b> 6,566 t (-3%)★<br>Amount recycled  5,338 t (-3%)★<br>Other waste  1,228 t (-1%)★<br><b>Landfill</b> 99 t (-33%)★<br><br><b>CO<sub>2</sub> Emissions during Transportation (total)</b> 52,486 t-CO <sub>2</sub> e (3%)★ |
| <b>Chemical Substances (PRTR Substances Handled)</b> 40 t (10%)<br><br><b>Water (total)</b> 1.187 million m <sup>3</sup> (-7%)★<br>Piped water  0.512 million m <sup>3</sup> (-18%)<br>Ground water  0.675 million m <sup>3</sup> (3%)<br><br><b>Raw Materials and Sub-Materials</b><br>Metals ..... Steel, aluminum, brass<br>Plastics ..... Optical plastics, ABS, PC, polyethylene, polypropylene<br><br><b>Office Supplies</b><br>Copy paper  211 t (4%)<br><br><b>Transportation Fuel</b><br>Transportation ..... Gasoline, diesel fuel, etc. |  | <b>Product Shipments</b><br><br><b>Major Products (total)</b> 2,667 t (2%)<br>Medical Business (Endoscopes)  1,423 t (8%)<br>Scientific Solutions Business (Microscopes)  739 t (3%)<br>Imaging Business (Digital cameras, Recorders)  505 t (-14%)<br><br>Production sites in Japan only     Global production sites    Percentage change from previous year in brackets  |

★ Indexes certified by external assurance.

## Energy/Atmospheric Release

### Internal (Scope 1, 2) Results

| FY2018 Targets   | FY2018 Results   | Main Measures   | FY2019 Targets  |
|--|--|---|---|
| Energy consumption rate: improve by <b>5.9% or more</b> (compared to FY2012)<br><br>Expand use of renewable energy | Energy consumption rate: improved by <b>12.8%</b> (compared to FY2012)<br>GHG Emissions: reduced by <b>18.3%</b> (compared to FY2012)<br>Amounts of renewable energy: <b>17,239MWh</b> (Improve by 12% over the previous year) | <ul style="list-style-type: none"> <li>● Ongoing implementation of manufacturing improvement activities</li> <li>● Introduction of energy saving equipment</li> <li>● Ongoing implementation of energy-saving activities on a daily basis, including switching off lights and adjusting air-conditioning temperatures</li> <li>● Effective use of renewable energy</li> </ul> | Energy consumption rate: improve by <b>1% or more</b> (compared to the previous year)<br><br>Expand use of renewable energy |

The Olympus Group set a target of improving its energy consumption rate by 7.73% or more, compared with fiscal 2012, by fiscal 2020 and among its energy-reduction activities is engaged in reducing its CO<sub>2</sub> emissions. In fiscal 2018, we made production process improvements, undertook continuous energy saving activities, and adopted renewable energy in major sites in Japan and overseas, as specified in our targets. For example, aiming to improve productivity, we integrated the production functions in Asia into Olympus Vietnam Co., Ltd. after ceasing Shenzhen factory operations. Olympus Vietnam Co., Ltd., also revised sterilization conditions in the production process for better working efficiency and changed their lighting to LED lighting. Gyrus ACMI, Inc. has changed the source of the electricity purchased in its Brooklyn Park center to 100% renewable energy. Their Bartlett and Norwalk centers also changed a portion of their purchased electricity to renewable energy. As a result, the volume of renewable energy usage in fiscal 2018 has increased compared to the previous year, making the renewable energy usage rate per total electricity consumption 9.5% (7.6% in the previous fiscal year).

### Green Energy Certificates



Gyrus ACMI, Inc. (U.S.A.)



Olympus Europa SE & Co. KG (Germany)



KeyMed (Medical & Industrial Equipment) Ltd. and Algram Group Ltd. (U.K.)

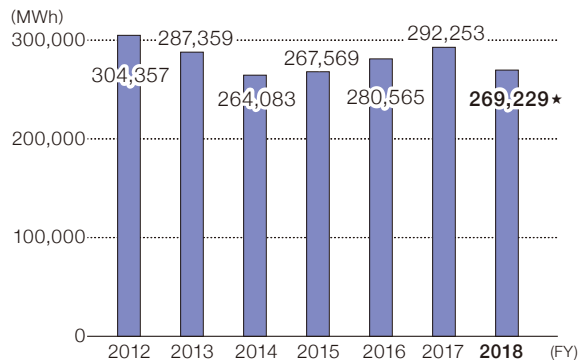
### External (Scope 3 [Category 4 Upstream transportation and distribution]) Results

| FY2018 Results   | Main Measures  |
|--|--|
| GHG Emissions: reduced by <b>5.9%</b> (compared to FY2012) | <ul style="list-style-type: none"> <li>● Enhanced loading efficiency by improving packaging size and strength</li> <li>● Reduced transportation weights by improving packing and packaging methods</li> <li>● Shortened lead times and transportation distances by improving logistics routes</li> <li>● Eliminating packaging materials by using returnable containers</li> </ul> |

Olympus is engaged in reducing logistics-related CO<sub>2</sub> emissions at each of its sites. We continued our modal shift in international transportation from aircraft to ships as improvements in logistics routes. We also revised shipping container sizes and enhanced their packaging efficiency by reducing packing and waste buffer zones. Logistic waste has also been reduced by expanding local use of returnable containers.



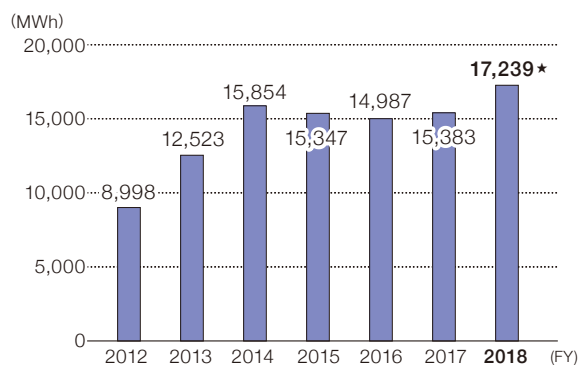
### Internal Energy Consumption



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded. Conversion coefficient based on Enforcement Regulation for the Act on the Rational Use of Energy

★ Indexes certified by external assurance.

### Renewable Energy Consumption



\* Renewable energy includes green electricity, solar power and solar heat.

★ Indexes certified by external assurance.

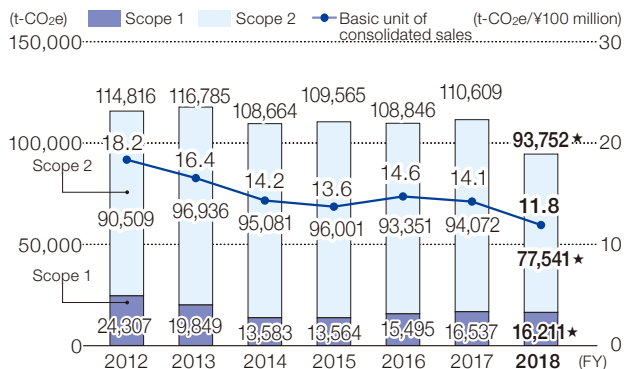
### Breakdown of Internal Energy Consumption

(MWh)

|          | FY 2012        | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018  |
|----------|----------------|---------|---------|---------|---------|---------|----------|
| Direct   | City gas       | 42,816  | 44,571  | 41,742  | 39,164  | 45,375  | 51,776*  |
|          | LPG            | 9,567   | 10,556  | 11,891  | 15,013  | 19,928  | 19,467*  |
|          | LNG            | 14,298  | 15,348  | 13,388  | 12,764  | 12,954  | 11,533*  |
|          | Heavy fuel oil | 4,163   | 3,417   | 3,178   | 3,525   | 2,492   | 2,183*   |
|          | Kerosene       | 484     | 379     | 378     | 536     | 574     | 612*     |
|          | Diesel fuel    | 43,955  | 23,791  | 1,002   | 184     | 132     | 80*      |
|          | Gasoline       | 0       | 4       | 2       | 4       | 3       | 15*      |
| Subtotal |                | 115,283 | 98,066  | 71,581  | 71,190  | 81,458  | 85,666*  |
| Indirect | Electricity    | 177,484 | 174,615 | 174,402 | 178,431 | 181,327 | 163,732* |
|          | Hot water      | 324     | 332     | 277     | 519     | 687     | 682      |
|          | District heat  | 2,268   | 1,823   | 1,969   | 2,082   | 2,106   | 2,145    |
|          | Green energy   | 8,700   | 12,213  | 15,536  | 14,990  | 14,423  | 14,763   |
|          | Solar power    | 168     | 181     | 175     | 251     | 479     | 497      |
|          | Solar heat     | 130     | 129     | 143     | 106     | 85      | 123      |
| Total    |                | 304,357 | 287,359 | 264,083 | 267,569 | 280,565 | 292,253  |

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### GHG Emissions/Basic Unit (Scope 1, 2)



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.

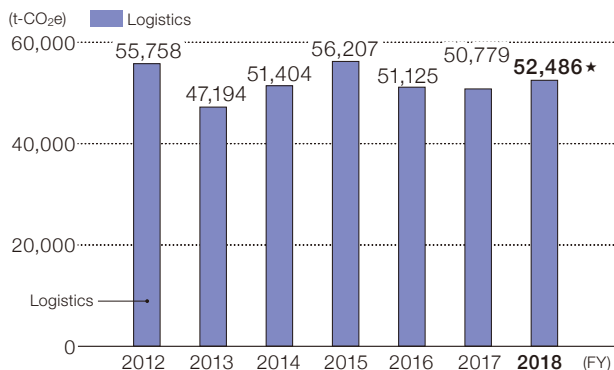
\* Reporting based on the following GHG Protocol scopes.

Scope 1: Greenhouse gas emission from direct use of fossil fuels

Scope 2: Greenhouse gas emission from secondary use, such as electric power purchase

★ Indexes certified by external assurance.

### GHG Emissions (Scope 3 [Category 4 Upstream transportation and distribution])



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#### Sources for CO<sub>2</sub> Conversion Coefficients

##### Electricity

Japan: Coefficients published annually by the national government under the Act on Promotion of Global Warming Countermeasures and coefficients after adjustment for each power utility per fiscal year. FY2017 conversion coefficient used for FY2018.

Overseas: Utilized the data per country per year published by the International Energy Agency (IEA). FY2016 conversion data was used for the data after FY2017. For the U.S. and Canada, the data per state as published by the United States Environmental Protection Agency (EPA) and the United Nations Framework Convention on Climate Change (UNFCCC) was used.

##### Fuels

Japan/overseas: Conversion coefficients based on Act on Promotion of Global Warming Countermeasures employed.

#### Coefficients for Converting GHG to CO<sub>2</sub>e

From FY2015 onward: 100-year GWP in IPCC Fourth Report used.

Up to and including FY2014: 100-year GWP in IPCC Second Report used.

#### Basic Unit of Consolidated Sales

Companywide CO<sub>2</sub> emission (t-CO<sub>2</sub>e) / Consolidated sales (100 million yen)

### GHG Emissions for the Entire Supply Chain

| Category |   | Emissions<br>(in thousands t-CO <sub>2</sub> ) |        | Calculation Method (Assumptions)   |
|----------|---|--|--------|--|
|          |   | FY2017   | FY2018 |  |
| Scope 1  |   | 16   | 16★    |  |
| Scope 2  |   | 98   | 78★    |  |
| Scope 3  | 1. Purchased goods and services   | 85   | 83     | Calculated by multiplying raw materials and parts of leading products by basic unit                                    |
|          | 2. Capital goods  | 198  | 200★   | Calculated by multiplying facility investment value by basic unit  |
|          | 3. Fuel- and energy-related activities (not included in Scope 1, Scope 2) | 10   | 5★     | Calculated by multiplying electric power and fuel purchased by basic unit  |
|          | 4. Upstream transportation and distribution                               | 51   | 52★    | Calculated by multiplying transport ton/kg of leading products by basic unit (including delivery logistics)            |
|          | 5. Waste generated in operations  | 8  | 5★     | Calculated by multiplying worksite waste output by basic unit  |
|          | 6. Business travel  | 20   | 20★    | Calculated by multiplying business travel expenses by basic unit   |
|          | 7. Employees' commuting   | 14   | 14★    | Standard commute model defined by region and calculated by multiplying the number of employees in region by basic unit |
|          | 8. Leased assets (upstream)   | 14   | 14★    | Calculated by multiplying gasoline consumption for corporate & leased vehicles by basic unit                           |
|          | 9. Downstream transportation and distribution                             | —  | —      | Classified as transport from dealers and sales companies to the customer but excluded due to small impact scale        |
|          | 10. Processing of sold products   | —  | —      | Excluded due to small impact scale and difficulty in tabulation in this category                                       |
|          | 11. Use of sold products  | 66   | 93     | Calculated by multiplying electric power consumption, etc., for lifetime of sold product by basic unit                 |
|          | 12. End-of-life treatment of sold products                                | 3  | 2★     | Calculated by multiplying product disposal weight by basic unit for waste material                                     |
|          | 13. Leased assets (downstream)  | —  | —      | Calculation including use of sold products, although some products are leased  |
|          | 14. Franchises  | —  | —      | Not calculated due to absence from Olympus's business range  |
|          | 15. Investments   | 10   | 4★     | Calculated by multiplying Scope 1 & Scope 2 emissions at investment targets by investment ratio                        |

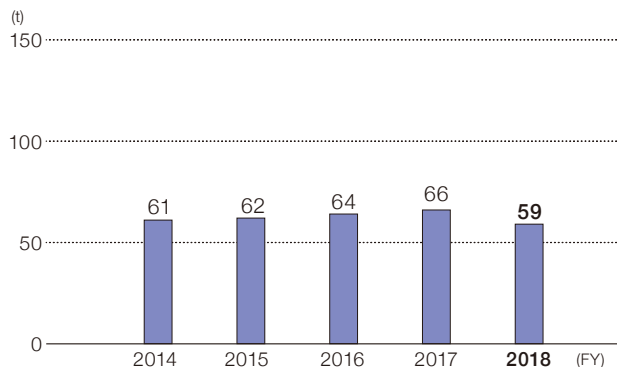
Scope 1: Direct emissions from facilities owned or controlled by the company (e.g., emission from use of town gas or heavy oil)

Scope 2: Emission from generation of energy consumed at facilities owned and controlled by the company

Scope 3: Other indirect emissions excluding Scope 1 and Scope 2

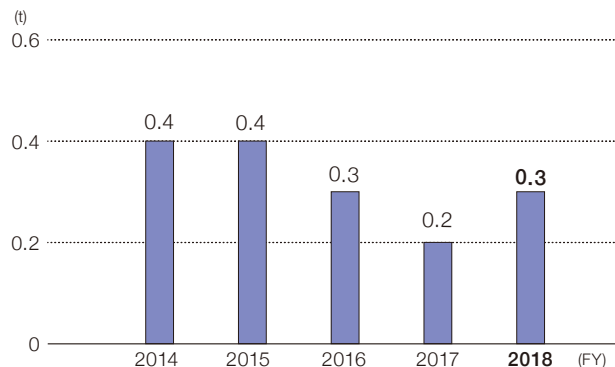
★ Obtained external assurance (Page 61) for total GHG emissions in Scope 1 and Scope 2, and assurance for Category 2-8,12,15 in Scope 3.

### NOx Emissions



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.

### SOx Emissions



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.

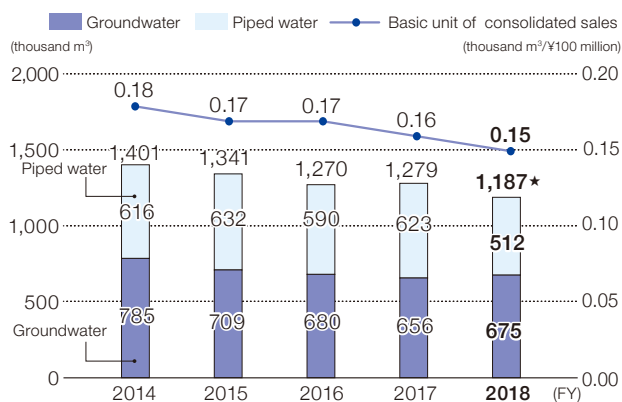
## Water/Waste

### Water Use/Wastewater Results

| FY2018 Targets                                   | FY2018 Results   | Main Measures  | FY2019 Targets                                   |
|--|--|--|--|
| Water use rate:<br>improve compared to<br>FY2017 | Water use rate:<br>improved by <b>6.3%</b><br>(compared to FY2017) | <ul style="list-style-type: none"> <li>Improvements in water use processes</li> <li>Implementation of anti-leak measures during equipment inspections</li> </ul> | Water use rate:<br>improve compared to<br>FY2018 |

The Olympus Group uses water mainly in production processes, such as for cleaning components and cooling, as well as in its dining halls. We implement thorough wastewater control by adopting stricter standards than the legal requirements in each region, and we continue to reduce water consumption and wastewater emissions by setting targets in those sites that have high water consumption. In fiscal 2018, Nagano Facility reduced water losses by inspecting water leakages and made repairs to buried pipes, and Shirakawa Facility and Aizu Olympus reduced water consumption by shortening component cleaning times.

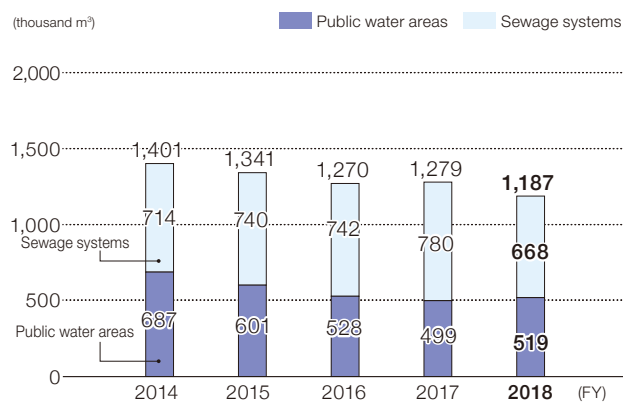
### Water Use



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★ Indexes certified by external assurance.

### Wastewater



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.

## Waste Results

| FY2018 Targets   | FY2018 Results  | Main Measures  | FY2019 Targets   |
|--|---|--|--|
| Waste recycling rate:<br>improve compared to<br>FY2017 | Waste recycling rate:<br>Same as previous fiscal year | <ul style="list-style-type: none"> <li>● Reduction of process defects</li> <li>● Recycling organic solvents</li> <li>● Improvement in recycling rate by thorough separation and other measures</li> <li>● Use of biodegradable plastics</li> </ul> | Waste recycling rate:<br>improve compared to<br>FY2018 |

The Olympus Group continues working to reduce waste volume and promote recycling, such as by improving production processes to minimize material loss and thorough waste separation.

In fiscal 2018, the volume of hazardous waste increased compared to the previous year due to an increase in the waste acid solutions used for product surface treatment and other wastewater generated in production tests. However, the total waste volume was reduced through the ongoing efforts made in each facility. One such example is KeyMed (Medical & Industrial Equipment) Ltd., which continued to work to reduce waste by displaying posters encouraging the reduction of disposable plastic waste. Gyrus ACMI, Inc. changed spoons and forks used in the dining halls to biodegradable plastic to reduce environmental impact from the disposal of such plastic cutlery. Aomori Olympus is optimizing waste volume control per type of waste by adopting a waste measurement system.

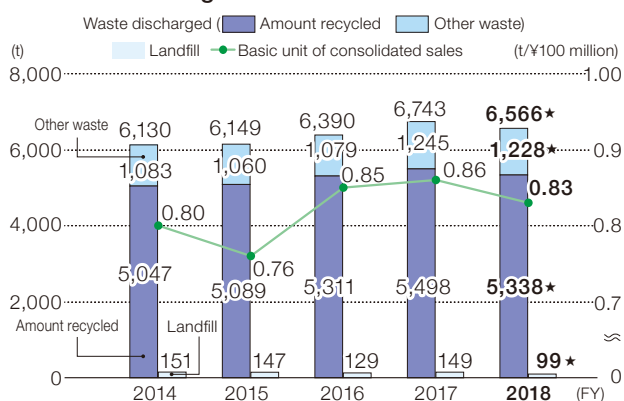


Posters encouraging the reduction of disposable plastic waste (UK)



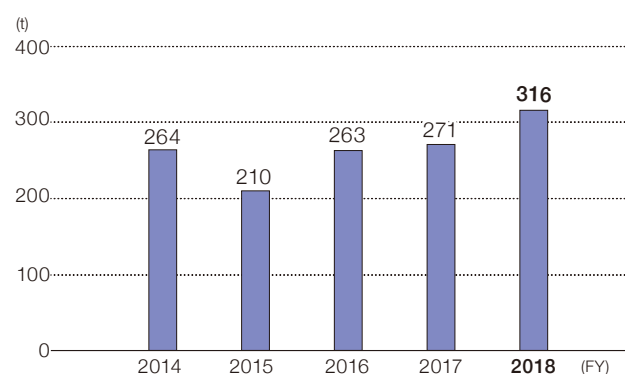
A waste measurement system (Aomori Olympus)

## Waste discharged/Landfill



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.  
★ Indexes certified by external assurance.

## Hazardous waste discharged



\* Scope: Domestic and overseas business enterprises of the Olympus Group. However, small businesses are excluded.

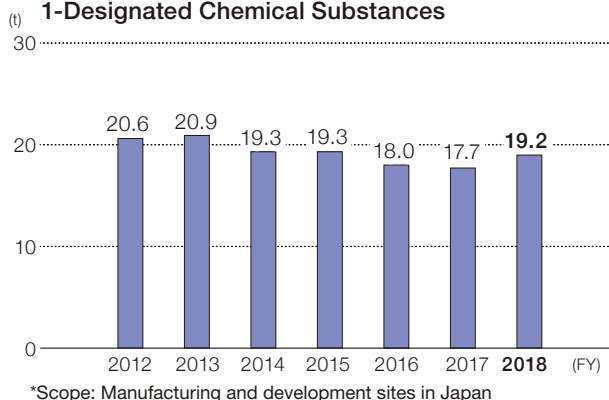


## Chemical Substance Safety and Control

| FY2018 Results   | Main Measures   |
|--|---|
| Emissions and Movements of PRTR Class 1-Designated Chemical Substances:<br>decreased by <b>6.8%</b> (compared to FY2012) | <ul style="list-style-type: none"> <li>● Substitution of PRTR-designated chemicals with other substances through material developments</li> <li>● Reduced usage of PRTR-designated chemical substances</li> </ul> |

The Olympus Group is striving for appropriate management and emissions reduction of chemical substances subject to the PRTR regulations in order to minimize the impact on people and the environment. In fiscal 2018 there was an increase in the volume of PRTR substances emitted and transferred due to a rise in usage volume of organic solvents etc. caused by an increase in production. However, Nagano Facility managed to reduce the use of 1-bromopropane, which is used as a cleaning agent, by improving the component cleaning process.

### Emissions and Movements of PRTR Class 1-Designated Chemical Substances



### Olympus Group Site Data (Fiscal 2018)

| Company/Facility |  |  | Location                                    | CO <sub>2</sub><br>(t-CO <sub>2</sub> e) | Water used<br>(thousand m <sup>3</sup> ) | Waste discharged<br>(t) | Amount recycled<br>(t) |
|------------------|--|--|---|--|--|-------------------------|------------------------|
| Japan            | Olympus Corporation                          | Technology Development Center, Ishikawa Facility | Hachioji-shi, Tokyo                         | 8,993                                    | 99                                       | 385                     | 385                    |
|                  |  | Technology Development Center, Utsugi Facility   | Hachioji-shi, Tokyo                         | 3,209                                    | 28                                       | 264                     | 264                    |
|                  |  | Technology Development Center, Takakura Facility | Hachioji-shi, Tokyo                         | 441                                      | 5  | 15                      | 15                     |
|                  |  | Nagano Facility Tatsuno                          | Tatsuno-machi, Kamiina-gun, Nagano          | 17,805                                   | 325                                      | 514                     | 507                    |
|                  |  | Nagano Facility Ina                              | Ina-shi, Nagano                             | 2,102                                    | 18                                       | 89                      | 81                     |
|                  | Olympus Medical Systems Corp.                | Hinode Plant                                     | Hinode-cho, Nishitama-gun, Tokyo            | 1,393                                    | 6  | 62                      | 62                     |
|                  | Aizu Olympus Co., Ltd.                       |  | Aizu-Wakamatsu-shi, Fukushima               | 13,776                                   | 254                                      | 466                     | 431                    |
|                  | Aomori Olympus Co., Ltd.                     |  | Kuroishi-shi, Aomori                        | 4,284                                    | 38                                       | 265                     | 265                    |
|                  | Shirakawa Olympus Co., Ltd.                  |  | Nishigo-mura, Nishishirakawa-gun, Fukushima | 3,692                                    | 39                                       | 394                     | 333                    |
|                  | Olympus Terumo Biomaterials Corp.            | Mishima Plant                                    | Nagaizumi-cho, Suntogun, Shizuoka           | 1,480                                    | 7  | 10                      | 7                      |
|                  | Olympus RMS Corporation                      |  | Hachioji-shi, Tokyo                         | 28                                       | 0.01                                     | 0.5                     | 0.5                    |
|                  | Olympus Logitex Co., Ltd.                    |  | Sagamihara-shi, Kanagawa                    | 656                                      | –  | 360                     | 360                    |
| Asia/Oceania     | Olympus (GuangZhou) Industrial Co., Ltd.     |  | Guangzhou, China                            | 307                                      | 3  | 105                     | 102                    |
|                  | Olympus Trading (Shanghai) Limited           |  | Shanghai, China                             | 289                                      | 1  | 9                       | 5                      |
|                  | Olympus Vietnam Co., Ltd.                    |  | Dong Nai Province, Vietnam                  | 15,848                                   | 207                                      | 984                     | 537                    |
|                  | Olympus Australia Pty Ltd                    |  | Victoria, Australia                         | 353                                      | 2  | 70                      | 35                     |
| Europe           | Olympus Winter & Ibe GmbH                    |  | Hamburg, Germany                            | 431                                      | 15                                       | 318                     | 318                    |
|                  | Olympus Medical Products Czech spol s.r.o.   |  | Olomouc, Czech Republic                     | 847                                      | 1  | 15                      | 0                      |
|                  | KeyMed (Medical & Industrial Equipment) Ltd. |  | Essex, U.K.                                 | 859                                      | 27                                       | 374                     | 328                    |
|                  | Algram Group Ltd.                            |  | Devon, U.K.                                 | 42                                       | 2  | 107                     | 75                     |
| Americas         | Olympus Corporation of the Americas          |  | Pennsylvania, U.S.A.                        | 4,859                                    | 17                                       | 594                     | 588                    |
|                  | Olympus Scientific Solutions Americas Corp.  |  | Massachusetts, U.S.A.                       | 1,447                                    | 35                                       | 191                     | 82                     |
|                  | Gyrus ACMI, Inc.                             |  | Massachusetts, U.S.A.                       | 6,331                                    | 16                                       | 486                     | 173                    |
|                  | Olympus Surgical Technologies America        | National Service Center                          | California, U.S.A.                          | 671                                      | 12                                       | 241                     | 241                    |

\* Olympus Group's production sites in Japan and overseas

## Environmentally Conscious Products

### Product Life Cycle Assessments

The Olympus Group works to develop products and production technologies that show consideration for safety and for the environment. Having in fiscal 2003 established its Eco-Products Administration Rules, a voluntary standard relating to the environmental considerations of our products, we continue to certify our products as Olympus Eco-Products.

In addition, a life cycle assessment (LCA) is performed at each stage of a product's life cycle to assess its impact on the environment at the product development stage and from procurement through manufacture, distribution, use and final disposal. Clarifying the environmentally conscious aspects that differ for each product, we have set them as items for the environmental consideration standard.

### Examples of Environmentally Conscious Products

The Olympus Group works to show consideration for the environment through the products in each of its business fields.

## Medical Business

### Rhino-Laryngo Videoscope OLYMPUS ENF-VH2

#### <Main Product Features>

1. Ergonomic new handle design with improved operability and easier insertion in otolaryngological examinations.
2. Reduced the weight of the control section by 30% compared to our conventional models\*<sup>1</sup> to lessen discomfort during examinations.
3. The NBI observation technology\*<sup>2</sup> exclusive to Olympus helps identify larynx cancer and other lesions at an early stage.

\*<sup>1</sup> ENF-VH and ENF-V3.

\*<sup>2</sup> NBI: Narrow Band Imaging. Minute vascular and mucosal patterns are visualized by casting the light in two narrow wavelengths that are easily absorbed by hemoglobin in the blood.



#### <Environmentally Conscious Aspects>

- Product weight reduction contributes to CO<sub>2</sub> emissions reduction from product transportation



## Scientific Solutions Business

### Industrial Videoscope IPLEX G Lite

#### <Main Product Features>

1. Improved operability through introduction of a touch panel monitor and electrically operated scope tip bending.
2. Higher image quality thanks to brightness doubled from previous models and enhanced image processing supports more efficient inspections.
3. Enhanced recording and playback functions, including still picture capture during video recording and automatic video recording of the previous 30 minutes.



### Semiconductor & FPD Inspection Microscopes MX63 & MX63L

#### <Main Product Features>

1. The newly added MIX observation unit provides better visibility for easier identification of faults previously difficult to detect.
2. LED light source enables observation under stable conditions over a prolonged period regardless of light source brightness.
3. The focus aid function enables quick and accurate focusing without the lens accidentally coming into contact with the sample.



**<Environmentally Conscious Aspects>** (shared by both products)

Adoption of LED light source prolongs bulb lifetime and reduces power consumption.

## Imaging Business

### Interchangeable Lens Camera OM-D E-M1X

#### <Main Product Features>

1. Stable grip and improved operability through integrated vertical grip design.
2. Smooth autofocus system with multi-point selector and cross-type phase detection AF sensor.
3. Continuous shooting up to 60 fps\*<sup>1</sup> and Pro Capture mode\*<sup>2</sup> starts recording before pressing the shutter.
4. High-speed response by double TruePic VIII image processors and Handheld High Resolution mode.
5. Sharp images with up to 7.5 EV of image stabilization – the world's highest.

\*<sup>1</sup> At 60 fps, autofocus and automatic exposure are locked as of the first frame. With AF/AE enabled, up to 18 fps continuous shooting is available.

\*<sup>2</sup> The shutter speed is limited to the high end (1/fps or faster) and the flash is disabled.



## IC Recorder Voice-Trek DP-401

### <Main Product Features>

1. Large buttons and easy operations for IC recorder beginners.
2. Voice guidance walks the user through how to operate the recorder.
3. The wideband FM radio function delivers news and music with clear sound.
4. Sound collector gathers and amplifies voices in conversations.

\* This product is available only in Japan.



### <Environmentally Conscious Aspects> (shared by both products)

- In accordance with the “Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment”<sup>\*1</sup> and the guidelines formulated by the Camera & Imaging Products Association (CIPA)<sup>\*2</sup>, battery recycling is encouraged by having not incorporated the batteries into the device bodies and by having adopted a rechargeable battery and a retractable battery compartment cover to facilitate battery removal.
- Reduced power consumption when in use and when on standby

\*1 For more details please visit:

<http://www.env.go.jp/recycle/recycling/raremetals/law.html> (Only in Japanese)

\*2 For more details please visit:

[http://www.cipa.jp/env/documents/j/assessmentguide\\_20160419.pdf](http://www.cipa.jp/env/documents/j/assessmentguide_20160419.pdf) (Only in Japanese)

## Products that Contribute to Solving Environmental Issues

Utilized even at the forefront of automobile and aircraft development with the aim of improving the efficient use of energy and the recycling facilities, Olympus products contribute to solving environmental issues.

### VANTA X-Ray Fluorescence Analyzer

Assisting in hazardous substance analysis and resource recycling

#### <Main Product Features>

1. Nondestructive measurement of substances (elements) in the target object by type and content
2. Small and light for easy measurement on the spot
3. Complies with dustproof and waterproof standard IP65<sup>\*3</sup>.
4. Use for quality inspections at production sites, selecting recycled raw materials, inspecting hazardous metals, etc.



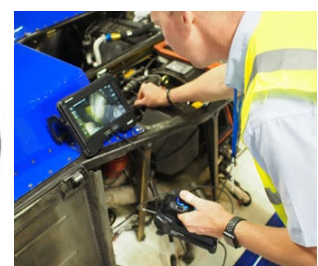
\*3 International standard on dust and moisture resistance established by the International Electrotechnical Commission. The tens digit shows the dust resistance grade and the ones digit shows the moisture resistance grade

### Industrial Videoscope

Contributing to the realization of a society that emits only small amounts of CO<sub>2</sub>

#### <Main Product Features>

1. Used in the inspection and diagnosis of the internal parts of machinery
2. Reproduces even the slightest defect in a sharp, clear image
3. Used for inspections of wind power generation facilities and of automobiles competing on low fuel consumption as well as of aircraft engines



## Recycling Small Rechargeable Batteries, Containers and Packaging Materials

Under the Act on the Promotion of Effective Utilization of Resources and as a member of the Japan Portable Rechargeable Battery Recycling Center (JBRC), Olympus is cooperating in collecting and recycling small rechargeable batteries. Containers for individual packaging and packaging materials used for products are being identified to allow sorted collection. Under the Act on the Promotion of Sorted Garbage Collection and Recycling of Containers and Packaging and as a member of the Japan Containers and Packaging Recycling Association, Olympus is also cooperating in recycling. At the same time, we are making efforts to promote effective use of resources to cut down the volume of container and packaging materials used.

## Environmental Accounting

### Environmental Conservation Costs

(Millions of yen)

| Grouping                                |  | FY2016     |       | FY2017     |       | FY2018     |       |
|---|--|------------|-------|------------|-------|------------|-------|
|   |  | Investment | Cost  | Investment | Cost  | Investment | Cost  |
| Costs inside Business Area              |  | 328        | 588   | 183        | 263   | 69         | 236   |
| Content                                 | Prevention of Public Nuisance Cost     | 38         | 397   | 24         | 119   | 31         | 113   |
|   | Global Environmental Conservation Cost | 290        | 35    | 144        | 8     | 38         | 3     |
|   | Resource Circulation Cost              | 0          | 156   | 16         | 136   | 0          | 120   |
| In Upstream Costs                       |  | 1          | 70    | 0          | 64    | 0          | 109   |
| In Downstream Costs                     |  | 0          | 5     | 0          | 3     | 0          | 5     |
| Environmental Management Activity Costs |  | 10         | 379   | 0          | 342   | 35         | 355   |
| R&D Costs                               |  | 0          | 34    | 0          | 695   | 0          | 468   |
| Costs of Social Activities              |  | 0          | 1     | 0          | 6     | 0          | 6     |
| Costs for Damaged Environment           |  | 0          | 0     | 0          | 0     | 0          | 0     |
| Total                                   |  | 339        | 1,077 | 183        | 1,373 | 104        | 1,179 |

### Environmental Conservation Effects

| Quantitative Effects of Environment Preservation |   | FY2016 | FY2017 | FY2018 |
|--|---|--------|--------|--------|
| Effects inside Business Area                     | CO <sub>2</sub> emissions (t-CO <sub>2</sub> e) | 54,899 | 55,440 | 57,864 |
|  | Waste Discharged (t)                            | 2,533  | 2,635  | 2,829  |
|  | Water Usage (10,000 m <sup>3</sup> )            | 80     | 78     | 82     |
|  | Chemical Substances Transferred/Discharged (t)  | 18     | 18     | 19     |

(Millions of yen)

| Economic Benefits of Environmental Protection |   | Change from Previous Fiscal Year |
|---|---|----------------------------------|
| Revenue Benefits                              | Revenues from Sales of Valuable Recycled Substances | -6                               |
|   | Energy Costs  | 224                              |
| Cost Savings                                  | Costs of Water Usage                                | 6                                |
|   | Disposal Contracting Costs                          | 11                               |

Target period: April 1, 2016–March 31, 2019

Scope: Head office functions, manufacturing companies and distribution companies in Japan

Notes: 1) Tabulation based on "Environmental Accounting Guideline 2005."

2) Cost and depreciation that cannot be separated clearly in environmental management are not divided proportionately. Full amount has been excluded from the calculations.