A Brighter Future Through a Better Environment

IN THIS CHAPTER

- Environmental Management
- Climate Change
- Environmental Impacts Beyond Emissions

Overview

Our commitment to the health of patients includes taking actions that contribute to the health of our planet.

Today, pressure on environmental health, as evidenced by degrading air quality, increasing scarcity of clean water and other natural resources, waning biodiversity, and impacts of climate change, increasingly poses threats to human health. Because of this connection between the health of the planet and our patients, we have made environmental stewardship and resource conservation inherent to our business operations and practices. Moreover, our employees, future employees, customers, investors, and other stakeholders expect us to set a high standard in this respect — to care for the environment and take actions that reduce our environmental impact throughout the entire life cycle of our products. This obligation to environmental stewardship and sustainable business directly aligns with our values of Takeda-ism and our priorities of patient, trust, reputation, and business. In this way, environmental stewardship becomes one more way that we work to fulfill our mission of better health and a brighter future for patients everywhere.

Environmental Management

Takeda has actively engaged in environmental stewardship initiatives for almost 50 years, since establishing an Environmental Protection Committee in 1970.

We marked another milestone in 2019 when we updated our Global Environment, Health & Safety (EHS) Policy to reflect the evolution of our business and to meet the expectations of stakeholders. The manner in which we go about protecting the environment — namely by conserving natural resources and reducing the environmental impact of our products and operations — will shape our reputation with employees, patients, regulators, and society for years to come.

The new EHS policy provides for the following:

- Strong alignment with our values of Takeda-ism and our priorities.
- A clear foundation for our EHS programs that sets out our aspiration for world-class EHS performance as we integrate the acquisition of Shire.
- Alignment with international standards for EHS management systems such as ISO 14001 for environment and ISO 45001 for health and safety.
- Our commitment to proactively minimize negative environmental impact throughout the entire product life cycle.
- Our dedication to advancing environmental sustainability in our operations and reducing our impact on climate change, e.g., by minimizing waste and reducing energy use, water consumption, and CO_2 emissions.

We are proud of the strides made in EHS management, but we have much more to do. Twenty of our manufacturing sites have achieved certification to the International Standards Organization (ISO) 14001 standard. Our intent is to have all 34 manufacturing sites certified within three years.

EHS strategies and activities are overseen by our Corporate EHS Council and chaired by our Global Manufacturing and Supply Officer, who is also a member of the Takeda Executive Team (TET). The Council, which approves company-wide EHS strategy and targets and monitors progress against it, includes members from all Takeda business functions. Council activities are reported to Takeda's Business Review

Committee, which is chaired by our President and CEO. Our governance structure also includes site-level sustainability teams, and specifically energy and water conservation global working groups.

All of our manufacturing, research, and BioLife sites are required to establish and operate an EHS management system based on our Global EHS standards. Each Takeda site assesses its risks and opportunities, then prioritizes actions to mitigate them by aligning with a Plan-Do-Check-Act cycle. This process involves establishing goals based on risks and opportunities, developing and executing action plans to attain them, monitoring performance, and reviewing the outcomes for continuous improvement opportunities. The corporate EHS team continues to enhance EHS standards and the technical guidance to further reduce risk and improve EHS performance under the framework of the global EHS management system.

Manufacturing EHS Certifications[1]

	Country	City	ISO 14001 Environmental Management Systems	ISO 50001 Energy Management Systems	OHSAS 18001 or ISO 45001 Occupational Health and Safety Management Systems[2]
1	Austria	Linz	X		
2	Austria	Orth an der Donau	X		X
3	Austria	Vienna	X		X
4	Belgium	Lessines	X		X
5	Brazil	Jaguariúna	X		
6	China	Tianjin	X		
7	Germany	Oranienburg	X		X
8	Germany	Singen	X		
9	India	Vashi, Navi Mumbai	X		X
10	Ireland	Grange Castle		X	
11	Italy	Pisa	X		X
12	Italy	Rieti	X		X
13	Japan	Fukuchiyama	X		
14	Japan	Hikari	X		
15	Japan	Osaka	X		
16	Singapore	Singapore	X		X
17	Switzerland	Neuchatel	X		X
18	United States	Los Angeles, CA	X		X
19	United States	Round Lake, IL	X		
20	United States	Social Circle, GA	X		X
21	United States	Thousand Oaks, CA	X		X

[1] LIST IS INCLUSIVE OF LEGACY SHIRE AND LEGACY TAKEDA MANUFACTURING LOCATIONS.

[2] TAKEDA IS CURRENTLY TRANSITIONING SITES CERTIFIED UNDER THE OHSAS 18001 TO THE EQUIVALENT ISO 45001 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM STANDARD.

A Conversation with Thomas Wozniewski

Global Manufacturing & Supply Officer

WHAT MOST EXCITES YOU ABOUT THE WORK YOU ARE DOING TO CREATE SUSTAINABLE VALUE AT TAKEDA?

I am proud that Takeda actively pursues ambitious environmental, health, and safety targets, and the steps we have taken to position the company for success. Throughout our global manufacturing operation and supply chain, we have strong levers to reduce the environmental impact of our production. In addition, all of our employees are very much motivated to significantly contribute to the sustainable growth of Takeda.

WHAT DO YOU SEE AS YOUR MOST SIGNIFICANT CHALLENGE AND OPPORTUNITY TO CREATING THAT VALUE?

There are growing expectations from external stakeholders about how companies like Takeda can better manage their environmental and social impacts. To do so, we have a significant opportunity to foster the use of new technologies across Takeda. Digitalization, for example, enables us to better analyze and optimize the environmental impact of our production facilities. We also have programs in place to realize improvements in process safety, waste generation, and water consumption in our plants.

HOW DOES YOUR WORK HELP TAKEDA BETTER SERVE PATIENTS?

It's not enough just to keep patients healthy; we also have to keep our planet healthy. By working to decrease our environmental footprint, we're contributing to a world that has cleaner air, cleaner water, and a more sustainable future.

Goals and Progress

The Takeda Environmental Action Plan specifies environmental issues and targets for the medium- and long-term to combat global warming and promote responsible use of natural resources. We review targets annually and continuously promote activities to achieve them, such as the CO_2 roadmap created by our Energy Saving Working Group to increase sharing of environmental best practices among sites. Goals and progress against them for our business, excluding the recent acquisition of Shire, are set out below. Our intent is to set new goals by the end of FY2019 that reflect the integration of Takeda and Shire and our ambition to lead a world-class environmental sustainability strategy.

Environmental Reduction Goals

Impact Area	Reduction Goal	Baseline Year	Reduction Through End of FY2018[2]	Target Fiscal Year
CO_2 Emissions	30%	2015	7.8%	2030
CO_2 Emissions	25%	2005	33.7%	2020
NO_x Emissions[1]	20%	2005	59%	2020
SO_x Emissions[1]	75%	2005	99.1%	2020
Fresh Water Use	30%	2005	48%	2020
Waste Sent to Landfill (Japan only)	60%	2005	68.3%	2020

[1] SULFUR OXIDES (SO_x) AND NITROGEN OXIDES (NO_x) RESULTING FROM VARIOUS ON-SITE COMBUSTION PROCESSES.

[2] PERFORMANCE AGAINST GOALS EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION.

Another way we monitor our progress is through environmental protection investments and expenditures. Environmental protection investments refer to the costs of installation of new, and upgrading of existing, environmental equipment such as wastewater treatment solutions. Environmental expenditures refer to the purchase of goods and services for the maintenance of existing environmental equipment as well as materials used for environmental protection. In FY2018, environmental protection investments totaled JPY 1,956 million, and expenditures totaled JPY 5,086 million. The economic benefits of energy-saving measures for Takeda totaled approximately JPY 99 million.

Environmental Protection Investments[1]

Category		Investments (million ¥)	Expenditures (million ¥)
Business area costs	Pollution prevention	855	3,863
	Environmental protection	920	208
Resources recycling		150	813
Administrative costs		31	202
Total		**1,956**	**5,086**

[1] ENVIRONMENTAL INVESTMENTS AND EXPENDITURES DATA EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION.

Celebrating World Environment Day

For a week in 2019, Takeda employees around the world came together to collectively care for the planet in celebration of World Environment Day (WED) with the goal of raising awareness for the environment, as well as our obligation to protect it, while underscoring the connection to global health. Facilities around the world held activities supporting this goal, which became a top trending topic on our in-house message board. Based on employee participation in WED events, Takeda partnered with the Arbor Day Foundation to plant 40,000 trees. WED is one of the ways we engage our employees on the importance of Takeda's environmental work and our progress toward goals.

Centralized EHS Auditing

EHS audits serve as an important governance and oversight mechanism to assure that our EHS management systems are effective. A centralized global EHS audit function leads the program, which includes management systems and compliance audits. We engage independent external auditors who have expertise in the relevant national and regional regulations to work with internal auditors for the EHS legal-compliance audits. Through these audits, we verify each site has internal controls in place to meet Takeda management's expectations, Takeda standards and operating procedures, as well as regulatory requirements.

Based on the results of the audits, sites develop Corrective and Preventive Action (CAPA) plans, which the audit leader and regional EHS teams approve and track to completion. We also analyze audit trends and review them to identify areas of focus for the coming year and required support as a part of our EHS governance process. The Corporate Head of EHS, along with the Head of EHS Audit, reports audit results and CAPA progress to the Risk, Ethics, and Compliance Committee.

The EHS audit function determines audit frequency based on the level of EHS risk inherent in each operation, with manufacturing and research facilities typically audited every two to three years. Site EHS risk often depends on the type of operations, the complexity and size of the operation, past EHS performance, and other factors. In FY2018, we performed 27 EHS audits.

Working Greener

Environmental sustainability efforts extend beyond our manufacturing operations to office buildings around the world. Recent initiatives include:

- Launching Takeda Goes Green, an initiative for sharing best practices in office settings. This program resulted in an 8.2 percent reduction in CO_2 emissions at our Osaka office and a 16.3 percent year-over-year reduction at our Takeda-operated office facilities in Japan.
- Instituting a new waste management concept at our building in Zurich to strengthen recycling habits. The building replaced individual wastebaskets at desks with centralized recycling stations on each floor with separate sections for general waste, aluminum, polyethylene terephthalate (PET), and mixed plastics. The new system is expected to save more than 90,000 plastic bin bags per year.
- Certifying our Takeda laboratory and office space on Binney Street in Cambridge, Massachusetts, to Leadership in Energy and Environmental Design (LEED) Gold by the U.S. Green Building Council.
- Forming green teams at many office locations to address sustainability goals for the coming year.

Climate Change

The impacts of climate change and associated global warming continue to become increasingly visible and, if unabated, will have profound impacts on the health and well-being of people across the globe.

That's why climate change has been a priority of our agenda since 1974, when we established an Energy Conservation Committee. Today, we continue to implement countermeasures globally to help mitigate the effects of our business activities on the natural environment, especially with respect to energy use and greenhouse gas emissions.

Takeda recognizes the importance of working with the international community on this global issue and is responding to global calls for action. We have joined the Paris Pledge for Action and the Science Based Targets Initiative, committing to doing our part in keeping the climate safe and stable in alignment with climate science. We also participate in Caring for Climate, the world's largest corporate-led initiative on climate change and publicly disclose our climate change strategy, initiatives, and impacts through annual participation in CDP.

Governance

Oversight for climate change initiatives is managed at the highest levels of our company. Currently, the Global Manufacturing & Supply Officer (GMSO) — appointed by the president and CEO and a member of the TET — has ultimate responsibility. The GMSO chairs a cross-departmental committee, the Corporate EHS Council. This council approves corporate strategies and activities, as well as enterprise-wide targets. The GMSO also controls a fund for capital

expenditures directed at energy-saving projects. Sites can apply to the fund for projects, such as renewable-energy installations. In addition, a Global Energy-Saving Working Group, which includes members of all manufacturing and R&D sites, accelerates energy-saving activities by sharing best practices and undertaking initiatives to raise employee awareness.

Responding to Climate Risks

Takeda recognizes that climate-related risks may have a major impact on our business activities. We manage this risk by establishing reporting lines to the Business Review Committee, made up of the President and CEO and the TET. Using internally developed guidelines, we have also worked to assess climate-related risks at manufacturing and R&D locations globally. When audits and other activities identify any new significant climate-related risks, these are reported to the Risk, Ethics, and Compliance Committee, which centralizes company-wide risk management. Takeda continues to enhance its disclosure in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

Takeda is also developing vaccines and medicines for diseases likely to be exacerbated by climate change, such as dengue, a serious viral disease transmitted by mosquitos. About 50 percent of the global population is at risk for dengue, which is estimated to cause 390 million infections each year. We also participate in the World Intellectual Property Organization (WIPO) Research Consortium, a joint enterprise hosted by WIPO for promoting R&D on treatments and vaccines for Neglected Tropical Diseases (NTDs), malaria, and tuberculosis. As part of the consortium, we are taking steps to strengthen our healthcare platforms in developing countries. See the Health section for more information beginning on page 17.

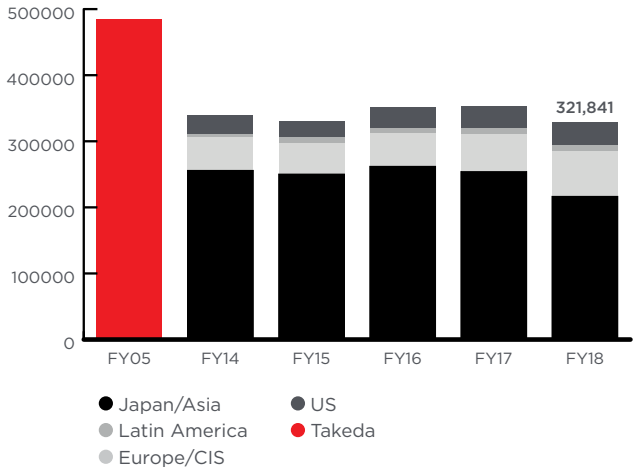
Strategy and Performance

Responding to climate change — especially for a global enterprise — is a complex issue. Takeda's strategy for managing it consists of multiple elements to reduce our carbon footprint and operate in a sustainable manner across our operations and throughout our supply chain.

Under the Takeda Environmental Action Plan (EAP) formulated in 2015, we have set a goal to reduce CO_2 emissions from energy sources by 25 percent by 2020. We met this target ahead of schedule, in 2017, and subsequently set a new goal, aligned with climate science, to reduce emissions by 30 percent from 2015 levels by 2030.

CO_2 Emissions[1,2]

(Metric Tonnes CO_2)



[1] DATA COLLECTION SITES: ALL PRODUCTION AND RESEARCH SITES (TAKEDA PHARMACEUTICAL COMPANY LIMITED INCLUDES ITS HEADQUARTERS AND SALES OFFICES). CONTRIBUTIONS FROM SHIRE ACQUISITION EXCLUDED.

[2] DUE TO DIVESTMENTS, PAST DATA HAS BEEN RESTATED.

CALCULATION METHOD

EMISSIONS INCLUDED IN THE CALCULATION CO_2 EMISSIONS REFER TO DIRECT EMISSIONS GENERATED BY COMBUSTION OF FOSSIL FUELS AND INDIRECT EMISSIONS FROM ENERGY SOURCES.

CO_2 EMISSIONS FACTOR EMISSIONS OF TAKEDA IN JAPAN ARE CALCULATED BASED ON THE "LAW CONCERNING THE RATIONAL USE OF ENERGY," AND THE CO_2 EMISSION FACTOR FOR PURCHASED ELECTRICITY IS THE EMISSION FACTOR FOR EACH ELECTRIC POWER PROVIDER IN FISCAL FY2005. THE CO_2 EMISSION FACTORS FOR ELECTRICITY PURCHASED OUTSIDE JAPAN ARE BASED ON THE EMISSION FACTORS FOR EACH ELECTRIC POWER PROVIDER, OR THE EMISSION FACTORS PROVIDED BY THE INTERNATIONAL ENERGY AGENCY (IEA) FOR EACH COUNTRY.

Managing Greenhouse Gas (GHG) Emissions From Our Operations

To promote energy conservation and CO_2 emissions reductions globally, we have begun to implement a company-wide standard on energy management systems that fulfills the requirements of the ISO 50001 standard. The Global Energy Saving Working Group will lead the implementation of this standard. Our Global Engineering team will support sites as they implement the new energy management system with the intent to reduce energy usage, improve energy efficiency, reduce CO_2 emissions, and optimize processes. All sites are required to establish an Energy Management Team as they implement the new system.

Sharing best practices can be a powerful tool in promoting sustainability and combating climate change. Even when a successful strategy is already based upon a common technology, seeing the evidence of its success can encourage others to adopt it. For example, a successful energy assessment project in Singen, Germany, has now been shared across our global manufacturing network. The plan resulting from the energy assessment includes 19 quick wins and projects that can lead to reductions in energy use, operating costs, and CO_2 emissions. We strongly encourage sites to engage in this way, and we have captured more than 75 such tips in a Best Practice booklet.

Increasing renewable energy use is also an important strategy in the pursuit of our long-term goals. Takeda promotes the use of low-carbon energy sources and continues to explore options for introducing on-site solar power generation capacity when constructing new facilities. We have installed photovoltaic systems at several facilities, including our manufacturing facilities in China, Germany, Indonesia, and Japan, and we plan to introduce renewable energy at several more of our European manufacturing facilities in the future. At our Asker, Norway, manufacturing facility, we have successfully switched from fossil fuels to bio-fuels, thereby reducing CO_2 emissions and achieving zero SO_x emissions.

FY2018 CO_2 Emission Summary[1]

6% Scope 1 Direct emissions (resulting from fossil fuel burned at Takeda facilities) 157,958 t-CO_2

7% Scope 2 Indirect emissions (resulting from the consumption of purchased electricity and steam) 163,883 t-CO_2

87% Scope 3 Indirect emissions (not including Scope 2, that occur in Takeda's value chain) 2,224,643 t-CO_2

- Scope 1 Direct emissions
- Scope 2 Indirect emissions
- Scope 3 Indirect emissions

Scope 3 Emissions detail

83%	Purchased goods and services
6%	Fuel and energy-related activities not included in Scope 1 and 2
4%	Upstream transportation & distribution
3%	Employee commuting
2%	Upstream leased assets

[1]GHG EMISSION GRAPHIC EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION.

Working With Our Partners to Curb Climate Change

Beginning in 2018, we began to estimate global Scope 3 emissions for our entire value chain, which includes the activities of suppliers, customers, and others. The goal is to improve our understanding of our GHG emissions at each step in the value chain. To do so, we have partnered with Trucost, which has led to improved Scope 3 emissions data for FY2018. This detailed analysis of our downstream and upstream activities will help us assess the most significant GHG emissions sources, allowing us to establish targets for our Scope 3 emissions.

Finding ways to reduce the carbon footprint of product transportation is an important aspect of our GHG reduction efforts. Through several initiatives, Takeda has reduced CO_2 emissions from product transport by 14 percent in FY2018. For example, combining multiple transportation modes for a single shipment has decreased costs and overall GHG emissions. Takeda is advancing measures to achieve a modal shift in transportation from CO_2-intensive transport modes, such as air freight, to lower CO_2 modes, such as sea freight. We have also optimized our regional distribution network in several ways, including load consolidation and better utilization of truck capacity. This work has reduced 100 tonnes of CO_2 emissions, equivalent to removing 21 passenger vehicles from the road for one year. We have also implemented the use of several innovative technologies, such as hybrid shipping containers that are lighter and keep a consistent temperature without a power source. These innovative technologies save time and money while improving environmental performance. We also work to reduce the weight and size of shipping containers and invest in reusable shipping solutions. As Takeda continues its integration with Shire, we expect greater synergies that will reduce costs and GHG emissions.

As we work to reduce our carbon footprint, we face several challenges, which we are working to overcome:

- Increasing energy usage and CO_2 emissions as a result of increased production demand, as well as acquisitions.
- Good Manufacturing Processes (GMPs) that impose limitations on process optimization opportunities, for example, cleaning operations and ventilation.
- The scarcity of green electricity for purchase in countries with low penetration and promotion of renewable energy.
- Incineration of high potent Active Pharmaceutical Ingredients (APIs) and other toxic substance wastewater streams rather than relying upon biodegradation or other low-energy alternatives.
- Challenges associated with reducing Scope 3 emissions and engaging our suppliers to set their own emissions reductions targets, which fall outside of our direct control.

FY2018 Takeda Scope 3 Emissions[1,2]

	Value Chain (Scope 3) Category	Total GHG (tCO_2e)	Scope 3 Share (%)
Upstream	1. Purchased goods and services	1,850,033	83%
	2. Capital goods	16,115	<1%
	3. Fuel- and energy-related activities	138,710	6%
	4. Upstream transportation and distribution	81,425	4%
	5. Waste generated in operations	1,155	<1%
	6. Business travel	17,613	<1%
	7. Employee commuting	61,385	3%
	8. Upstream leased assets	43,526	2%
Downstream	9. Downstream transportation and distribution	N/A	N/A
	10. Processing of sold products	7,464	<1%
	11. Use of sold products	N/A	N/A
	12. End-of-life treatment of sold products	6,123	<1%
	13. Downstream leased assets	N/A	N/A
	14. Franchises	N/A	N/A
	15. Investment	1,094	<1%
	TOTAL	**2,224,643**	

[1] SCOPE 3 GHG EMISSIONS TABLE EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION.

[2] SEE APPENDIX PAGE 92 FOR THE METHODOLOGY WE USE TO CALCULATE SCOPE 3 EMISSIONS.

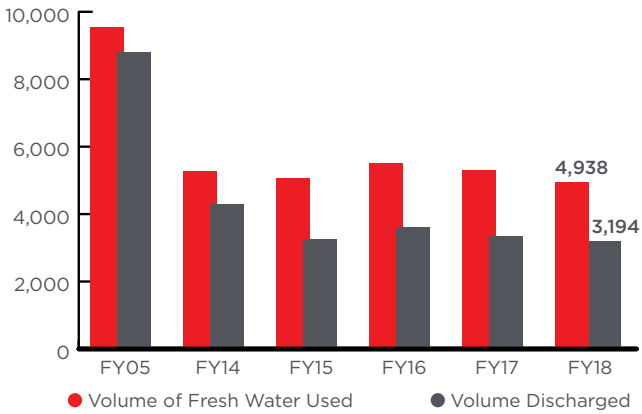
Environmental Impacts Beyond Emissions

Water

As water scarcity becomes a threat for more of the world's population, Takeda has taken steps to better understand and reduce water usage at each of our manufacturing and research sites. Using the Global Water Tool[1] developed by the World Business Council for Sustainable Development, we have found that 45 percent of our manufacturing sites are located in areas considered to have "low" water risk; 28 percent of our manufacturing sites are located in areas considered to have "medium" water risk; and 27 percent of our manufacturing sites are located in areas considered to have "high or extremely high" water risk.

[1] A TOOL FOR INDEXING WATER-RELATED RISKS, PROVIDED BY THE WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT.

Volume of Fresh Water Used and Discharged (1,000 m³)[1,2]



[1] WATER CONSUMPTION AND DISCHARGE DATA INCLUDES ALL PRODUCTION AND RESEARCH SITES AND EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION. THE DATA DOES NOT INCLUDE NONCONTACT COOLING WATER.

[2] DUE TO DIVESTMENTS, PAST DATA HAS BEEN RESTATED.

Under the Takeda Environmental Action Plan, we have a target of reducing our fresh water usage by 30 percent from FY2005 levels by 2020. In FY2018, we used 4,938 thousand m^3 of fresh water, a reduction of 48 percent from FY2005, exceeding our goal.

Takeda manages the quality of effluent wastewater in line with the following principles:

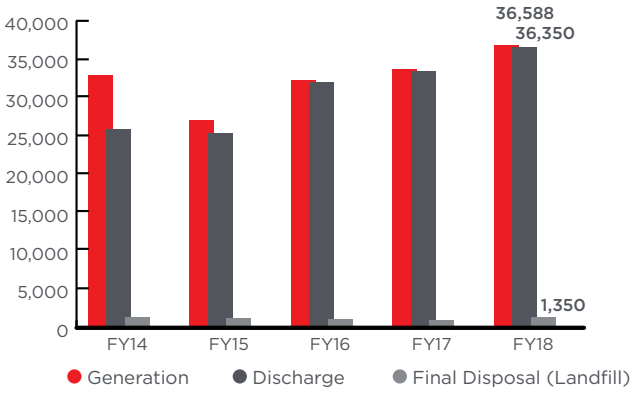
- Prevent negative effects on people and the eco-system due to chemical substances in wastewater.
- Comply with relevant laws.
- Manage wastewater rationally based on scientific evidence, substance concentrations, and environmental toxicity.

We have programs and monitoring tools in place to ensure that these principles are upheld. For example, we collect and incinerate waste Active Pharmaceutical Ingredients (APIs) to prevent the release of harmful substances in wastewater and conduct Whole Effluent Toxicity testing at our facility in Hikari, Japan, to monitor the impact of treated wastewater released directly into the ocean. Takeda also works to prevent contamination of soil and groundwater through periodic groundwater monitoring at sites where this could be a concern.

Waste Reduction

Takeda strives to reduce the amount of waste sent to landfill, first by curtailing the amount of waste generated and then by promoting on-site reuse and waste reduction with off-site recycling. Under the Takeda Environmental Action Plan, we have set a target to reduce the volume of waste sent to landfill in Japan by 60 percent compared with FY2005 levels by 2020 and are conducting ongoing activities to achieve this goal. Takeda in Japan sent 124 tonnes of waste for final disposal in FY2018, a decrease of 68 percent compared with FY2005, thus exceeding our 2020 goal through the prioritization of waste minimization and recycling activities at these locations.

Trends in Waste Generation, Discharge, and Final Disposal (tonnes)[1,2]



[1] WASTE DATA INCLUDES ALL PRODUCTION AND RESEARCH SITES AND EXCLUDES CONTRIBUTION FROM OFFICES AND SHIRE ACQUISITION.

[2] DUE TO DIVESTMENT, PAST DATA HAS BEEN RESTATED.

Chemical Substance Release Reduction

Takeda handles a wide variety of chemical substances, including our pharmaceutical products. We work to appropriately manage chemical substances in line with our policy of reducing environmental emissions of chemical substances by using risk assessments to prioritize emissions reduction efforts.

Takeda works to better understand and minimize the potential impact of APIs and the larger issue of pharmaceuticals in the environment (PiE) within our manufacturing and R&D operations.

We specifically manage requirements for PiE in our manufacturing facilities through robust waste management and wastewater treatment processes, while continuing to comply with federal, state, and local discharge regulatory obligations. Takeda partners and communicates EHS requirements to our contract management organizations (CMOs) to prevent the release of hazardous substances and byproducts into the environment.

We comply with regulatory requirements to perform environmental risk assessments and toxicological

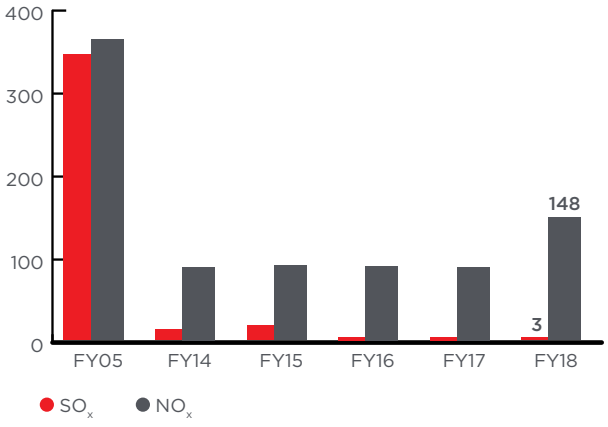
and safety assessments to evaluate and ensure environmental and patient safety as part of our marketing authorization applications in the U.S. and internationally. Takeda continually reviews product regulatory requirements and impact on commercial products and those in development through its stage gate development processes, for products we manufacture internally and through CMOs, to minimize the impact on the environment. And finally, Takeda is part of the European Federation of Pharmaceutical Industries and Associations (EFPIA) consortium that is involved in developing a position and roadmap for addressing PiE at the industry level.

In FY2018, Takeda's atmospheric volatile organic compounds (VOC) emissions were 104.8 tonnes. Takeda in Japan handled 12 Pollution Release and Transfer Register (PRTR)-designated substances, of which 7 tonnes were released into the atmosphere.

Other Emissions

At each of our operating sites, Takeda has established a plan to reduce NO_x (nitrogen oxides), SO_x (sulfur oxides), dust emissions, and chemical oxygen demand (COD) load. Under the Takeda Group Environmental Action Plan, Takeda aims to reduce its NO_x emissions by 20 percent from FY2005 levels and SO_x emissions by 75 percent by FY2020. In FY2018, we reduced NO_x emissions by 59 percent from 2005 levels and SO_x emissions by 99 percent, well exceeding our 2020 goals.

NO_x and SO_x Emissions[1,2]
(tonnes)



[1] NO_x AND SO_x EMISSIONS DATA INCLUDES ALL PRODUCTION AND RESEARCH SITES AND EXCLUDES CONTRIBUTION FROM SHIRE ACQUISITION.

[2] DUE TO DIVESTMENTS, PAST DATA HAS BEEN RESTATED.

Biodiversity Conservation

Takeda recognizes the importance of biodiversity to the health of the planet. Our Global EHS Policy incorporates guidelines to protect biodiversity. Each of our business sites promotes initiatives that align with the objective of the Convention on Biological Diversity.

Takeda uses biological resources as ingredients for products and indirectly utilizes these resources in our R&D activities. These resources are used as ingredients in Chinese and other herbal medicines, which are over-the-counter drugs. Most ingredients are sourced from cultivated plants, but some are sourced from wild plants. We are studying the feasibility of switching to cultivated plants in order to ensure stable procurement, which should help conserve the biodiversity of natural habitats. When using genetic resources in R&D, we give consideration to the Convention on Biological Diversity.

Takeda was an early adopter of in-house cultivation of medicinal plants, putting less stress on plants in the wild. Licorice root, for example, is an important herbal medicine in Japan because it is present in many Japanese traditional herbal medicine formulas. As part of our efforts to ensure stable supplies of medicinal plants and to conserve the environment, Takeda has been conducting research into in-house cultivation of licorice since 1996. In 2014, we registered the first Japanese-produced variety. By 2020, we plan to start using Japanese-produced licorice in our products, eventually switching to Japanese-produced licorice in all Takeda products.

A Brighter Future Through Better Business

IN THIS CHAPTER

- Corporate Governance
- Quality Management
- Ethics and Compliance
- Medical Ethics
- Supply Chain Management

Overview

Our primary mission of putting the patient at the center requires a sound business as a competitive, values-based, R&D-driven global biopharmaceutical leader.

Developing the right frameworks and systems to ensure the strength and integrity of our business is critical. We have established a system of governance that is optimized for a global enterprise. It includes well-crafted approaches to quality, ethics, compliance, codes of conduct, and supply chain management to ensure that, as we serve our stakeholders, we continue to serve the patient. These systems and controls provide transparency and allow us to make sound decisions quickly in our quest to maximize corporate value and positive impacts on patients.

Corporate Governance

The Takeda Board of Directors determines the fundamental policies for the company, while the Takeda Executive Team (TET) executes management and business operations in accordance with those decisions.

The Board currently consists of 15 members, 11 of whom are independent, external directors. Board members bring a deep knowledge of business and experience in large-scale integration. Our TET currently includes 19 leaders and is notable for its diversity in gender, age, and geography, with representatives from 11 nations. We believe external directors help us take business execution to a higher level by bringing valuable perspectives from both inside and outside the pharmaceutical industry — perspectives that enable sound decision-making.

The primary function of the Board is to observe and oversee business execution. Board members also engage in decision-making for strategic matters or other particularly important matters regarding company management. The TET, which consists of the president and chief executive officer and executives who manage each function of Takeda, has ultimate responsibility for managing business operations. This creates an efficient division of roles between the Board and the TET and also expedites decision-making in a rapidly changing business environment.

Other oversight matters are handled by a series of committees whose members consist of external Board members. The Audit and Supervisory Committee conducts audits of directors' performance of duties and performs any other duties stipulated in laws and regulations and in the articles of incorporation. The Nomination and Compensation Committees advise the Board.

The Board delegates responsibilities for decision-making regarding some of the important business decisions to management under the company's Articles of Incorporation. They are delegated to the directors through decision-making bodies such as the Business Review Committee; Portfolio Review Committee; and Risk, Ethics, and Compliance Committee. The Business Review Committee is responsible for general management matters, while the Portfolio Review Committee is responsible for R&D and product-related matters. In May 2019, the company changed the name of the Audit, Risk and Compliance Committee to the Risk, Ethics & Compliance Committee to reflect our goal of managing risk in a more effective manner. We also modified the committee structure, roles, and responsibilities. The Risk, Ethics & Compliance Committee is responsible for risk management, business ethics, and compliance matters.

Internal controls are also an important part of our governance system. Risks we face in the course of global business operations are managed by the risk management team within each business and function. We also clarify roles and responsibilities for each function, based on Takeda Group's Management Policy (T-MAP). We carry out periodic audits and apply our Compliance Monitoring Program to ensure compliance and appropriate business operations at each business and function in Takeda.

The Group Internal Audit and the Corporate Environment, Health and Safety (EHS) departments in the Global Manufacturing & Supply division conduct regular internal audits of each function of the company and each group company based on the "Group Internal Audit Charter" and "Global Policy and Guideline on EHS," respectively.

Total Rewards Philosophy

Takeda strives to provide competitive total compensation to the TET and the global employee base, which rewards purposeful performance and delivers on our commitments to patients, employees, and shareholders.

Competitive Differentiation

Global Mindset/ Local Application

Performance Impact

Employer of Choice

To show our commitment to a successful integration, while building the company for the long term, we have structured our Key Performance Indicators (KPIs) for both the short- and long-term incentive plans for FY2019. This redesign appropriately aligns rewards for the CEO, TET, and our employees to the most critical business priorities for the company. Further details on the company's FY2019 KPIs can be found here.

Director Compensation

To achieve our goal of becoming a best-in-class global, values-based, R&D-driven biopharmaceutical leader, it is essential that that we attract diverse, highly skilled business leaders to serve on our Board of Directors. Compensation for our directors must be competitive on a global basis. The Compensation Committee, comprised of external directors, advises the Board on pay practices for the Board of Directors, including internal directors. Compensation for external directors and those who serve on the Audit and Supervisory Committee consists of basic compensation, which is paid in a fixed amount, and stock compensation. Equity pay is designed to strengthen the links between compensation, company performance, and share price, and to reinforce the commitment to increasing corporate value in the mid- and long-term.

In setting directors' compensation, the Compensation Committee is guided by the following principles and goals:

- To attract, retain, and motivate managerial talent to realize our vision.
- To increase corporate value through optimizing the company's mid- and long-term performance, while reinforcing our patient-focused values.
- To closely link compensation to company performance and be highly transparent and objective.
- To support a shared sense of profit with share-holders and improve the managerial mindset, focusing on shareholders.
- To encourage directors to challenge and persevere, and to be aligned with the values of Takeda-ism.
- To establish transparent and appropriate governance of directors' compensation to establish the credibility and support of our stakeholders.

Risk Management

Takeda is committed to serving our patients, protecting our reputation, executing our strategy, managing risks, seizing opportunities, and minimizing disruption to business operations. In order to support these objectives, we emphasize sound risk management as an important pillar of our corporate governance and culture.

We view risk management as the responsibility of the Board of Directors, TET, business units, business functions, local operating companies, employees, and business partners.

Our Global Risk Management Policy provides a common set of principles to manage risk. The Policy covers the following areas, each supported by a relevant Standard Operating Procedure (SOP):

- Enterprise Risk Management (ERM)
- Business Continuity Management (BCM)
- IT Disaster Recovery (ITDR)

Risks that have materialized may be subject to further intervention by the Crisis Management Committee as referenced in the Global Crisis Management Policy. The ERM Program was designed to be consistent with prevailing industry practices and now is used to identify our principal risks that may impact our strategic and operational objectives. Understanding these risks, assessing their exposure, and taking appropriate action should help preserve and maximize our long-term value. Our ERM Program provides a consistent set of risk-related methods, tools, and approaches to support the business. We assess likelihood, impact, and risk-mitigation effectiveness over a three-year horizon, in line with our Mid-Range Planning. Principal risks are presented to the Risk, Ethics, & Compliance Committee, and Board of Directors on an annual basis.

Risk management is embedded in the business, and each relevant area is responsible for managing their major risks. Typical risk mitigation stategies may include, but are not limited to: business continuity planning, crisis planning, process redesign, management and technology implementation, monitoring, communications, training, and third-party engagement.

Risks in our industry may include R&D exposure, legal and regulatory compliance, intellectual property, patent expirations, adverse events, industry reforms, impacts associated with changing government policies, mergers and acquisitions (M&A) and integration-related issues, supply continuity, environmental compliance, competition, geopolitical events, cybersecurity, and natural- or man-made disasters.

Crisis Management

Takeda also takes a proactive approach to crisis management. The Group Global Crisis Management Policy lays out basic policies, rules, and standards for crisis management. The Policy underpins the systems and operations we have in place to respond to each type of crisis swiftly and effectively, in order to minimize potential harm to employees, impact on Takeda's finances, and any effect on society at large.

As with risk management, our businesses and functions are responsible for establishing their own crisis management systems, implementing preventive measures, and taking appropriate action if a crisis occurs. In the event of a crisis requiring company-wide action, a Global Crisis Management Committee chaired by the President and CEO of Takeda is charged with coordinating the response.

Crisis Training

Takeda's CEO, many TET members, and senior executives participate in robust crisis management training with a focus on different hypothetical topics each year including the following:

2016

- Large-scale earthquake in metropolitan area
- Cybercrisis

2017

- Disruption of production and supply chain caused by mega-quake in Japan
- Social media crisis

2018

- Armed gunman attacking Takeda sites in the U.S.

2019

- Global pandemic
- Product crisis stemming from misconduct at a subsidiary

Taxation

Takeda's operations incur a significant amount of business tax in a number of forms, including corporate income taxes, customer duties, excise taxes, property taxes, stamp duties, and employment taxes, such as those for public benefit and retirement plans. We also collect and remit employee taxes and indirect taxes such value-added tax. The taxes that we collect and pay are part of our contribution to local economies and their well-being.

We are committed to ensuring compliance with the prevailing tax laws where we do business and building transparent, professional, and constructive relationships with all relevant tax authorities globally. We support increasing public trust and transparency in national and international tax regimes. Regularly engaging and partnering with our stakeholders creates awareness of the consequences of business taxation everywhere we operate.

To comply with applicable disclosure regulations and to support our transparent approach to taxation, Takeda has published "Takeda's Position on Taxation" on our external website. This document explains our approach to the following items:

- Governance, risk management, and compliance
- Transfer pricing policies
- Tax strategy
- Interactions with tax authorities
- Current framework of international taxation
- Level of tax risk we are prepared to accept

Quality Management

Quality, in the decisions we make and the medicines we produce, is the foundation for carrying out our vision, mission, and values.

It is an essential element of how we serve the patient. Takeda's Global Quality organization continually reinforces and supports the need for all quality decisions to align with our priorities of Patient, Trust, Reputation, and Business. Takeda's focus on quality also helps to drive change throughout the business by incorporating innovation, continuous improvement, knowledge, and best-practice sharing as key components in the Takeda culture.

Quality Governance

Quality governance is key to our quality program. Our Global Quality Organization is built on three pillars: Science, System, and People and is fully aligned with Takeda's functions and business partners. The Quality organization is led by the Global Quality Officer, who reports to the president and CEO. The Global Quality Council provides oversight on global performance, trends, and opportunities. Importantly, Takeda has created a standard site structure for the Quality organizations in our manufacturing sites, in order to maintain consistent functions, roles, and responsibilities across the network and to align with global functions.

In keeping with our "as global as needed, as local as possible" approach, we have established local Quality Councils, which help to demonstrate governance, monitor quality and compliance, and ensure engagement of senior management.

Quality Councils allow for both escalation of information from sites via regional councils up to Global Quality Councils, as well as the cascading of information. This process drives engagement to resolve issues at the lowest possible level, while providing a mechanism to escalate for further visibility and review.

Quality Strategy

We strive for consistency and excellence in our quality efforts. Global Quality continually reinforces that quality decisions throughout the company must always be aligned with Takeda's priorities, commitment to compliance, and putting the patient at the center. Our single Quality Policy, the highest-level document in our Quality document architecture, reflects this approach.

Global Quality has made significant progress on its Quality roadmap in support of Takeda's vision. The roadmap is both dynamic and strategic. It is reviewed annually and updated as needed to ensure that it reflects advancements in the regulatory and pharmaceutical environment and the company. In the past year, we have made significant progress in laboratory transformation, supplier quality management, and defining and clarifying global versus local strategies, all while maintaining a favorable regulatory profile and focusing on delivering innovative products to our patients.

Quality Road Map to 2025

FY2017 — 2019	FY2020 — 2022	FY2022 — 2025
Foundational & Continued Global Trans-formations	**Proactive**	**Competitive Advantage**
Science		
Established & understood	Enabled	Forefront
Systems		
Data collected & understood	Data reliable & integrated	Data driven, predictive
People		
Development & behaviors	Flexibility & culture	Talent chooses quality

Shire Integration

A significant task in 2019 for the integration of our companies is melding our well-performing Quality Management Systems (QMS) into one. During the integration process, we redesigned our proposed Global Quality organization with the combined business in mind. The revised architecture results in a single Quality Policy with focused global standards and procedures. This revised approach provides improved clarity and compliance with current industry expectations.

Throughout 2019, we are harmonizing a system of key metrics and beginning to integrate key Quality IT systems. To ensure a seamless transition, we created a QMS bridging document to help with governance as we integrate the two systems. At the same time, we have taken clear steps to ensure that integration activities do not distract attention from areas that are not involved in the integration, so they can remain focused on delivering products to our patients.

The Global Quality Leadership Team (GQLT) is the senior Quality leadership team that combines the two legacy quality organizations. This includes a world-class Global Pathogen Safety function, Manufacturing Sciences Quality, Plasma & BioLife Quality, and Product Quality & Incident Management — all led by leaders from the former Shire Quality leadership team. The GQLT has also updated and aligned with the Global Quality roadmap.

As part of integration, we prioritized aligning our processes and programs. We play a key role in AGILE, a Global Manufacturing and Supply and Global Quality (GMSGQ) program specifically driving Lab Excellence. We are continuing the program within the entire GMSGQ network of Takeda sites as a part of Agile 4.0. By applying Lean tools, we have been able to realize lab efficiencies as well as increased analyst engagement and empowerment.

Another top integration priority is our electronic Quality systems. We focus on standardization, simplicity, and alignment with industry best practices in order to accelerate integration, manage costs and complexity, and lay a foundation for advanced analytics. Integration planning is underway for our three key systems platforms. Each project will represent a partnership between Information Technology and Quality.

Product Quality and Safety

We strive for consistency and excellence in our quality efforts. Global Quality continually reinforces those decisions throughout the company.

We employ best practices for research, development, and safety evaluation throughout the entire product life cycle. This focus enables Takeda to develop innovative, safe, and effective medicines.

Global Quality partners with R&D to ensure compliance with governing laws and regulations, as well as with our own internal rules and standards.

In research and nonclinical studies, we insist on high data integrity standards. Our clinical studies, regardless of the phase or market where they are conducted, are designed to protect the safety and well-being of our patients and the integrity of our clinical trial data. We ensure that our studies are conducted in accordance with scientifically sound protocols and that data are collected, analyzed, and reported in a transparent and responsible manner.

As our products reach the production and distribution stage, standards are just as high. All investigational medicinal products and pharmaceutical products are produced and controlled in accordance with current Good Manufacturing Practice. The integrity and security of our products are protected by our compliance with Good Distribution Practice. Once products are released, we continue to ensure quality by collecting important information from clinical investigators and the market. In this way, we strive to detect potential quality issues at an early stage and build continuous improvement into our quality processes.

We monitor the safety of all Takeda products, continuously collecting safety information in the development phase of new drugs and throughout the time they are marketed. We use this information to detect any signals of safety problems. Should potential problems be identified, we promptly notify health authorities, healthcare providers, and companies marketing our products. We also provide information on appropriate product use.

Regulatory Engagement

We strive to maintain and strengthen relationships with regulatory bodies. For example, we are active participants in a number of industry trade groups such as International Society for Pharmaceutical Engineering (ISPE), Parenteral Drug Association (PDA), Global Pharmaceutical Manufacturing Leadership Forum (GPMLF), and Pharmaceutical Research and Manufacturers of America (PhRMA). This involvement includes active contributions to working teams and proposals for improving overall current good manufacturing practices (cGMPs).

In addition, we participate in external conferences where global regulators, including the U.S. Food and Drug Administration (FDA), Brazilian Health Regulatory Agency (ANVISA), and European Medicines Agency (EMA), routinely present, and engage as applicable. Additionally, Takeda is recognized as a global leader in virology; our Global Quality Pathogen Safety team routinely engages with global regulatory and medical groups in addressing pathogen safety and proactive approaches to addressing emerging viral agents.

Ethics and Compliance

As a value-based company, we believe our obligation to meet ethical standards goes beyond compliance with laws and regulations.

This is expressed through our priorities, Patient, Trust, Reputation, Business, which in turn are based on our values of "Takeda-ism" — Integrity, Fairness, Honesty, and Perseverance. To promote ethical behavior and provide guidance to our employees, we have created the Takeda Global Code of Conduct, which is available in 18 languages and lays out a core set of principles for conducting business at Takeda.

Promoting ethics and compliance across Takeda's operations is the responsibility of the Chief Ethics & Compliance Officer and the Risk, Ethics & Compliance Committee. Both ensure a coordinated, company-level approach on ethics and compliance matters. Takeda group companies execute and reinforce their ethics and compliance programs in line with the Takeda Global Code of Conduct and applicable global policies. These policies are approved by the Business Review Committee (BRC).

Takeda aims to maintain the highest level of corporate ethics. The Takeda Ethics Line is available online and by phone to all employees around the world, 24 hours a day. Employees can contact the Takeda Ethics Line, which is available in 18 languages, and ask a question or voice a concern. In the first six months of FY2019, we received 94 calls and web entries through the Takeda Ethics Line. Takeda has a policy of nonretaliation for any employee who raises a concern in good faith.

Anti-Corruption

Takeda is committed to conducting business with integrity at all times. This includes ensuring that our business practices and decisions are conducted in line with Takeda's values and in compliance with external regulations.

The Global Anti-Corruption Policy and the Global Policy on Interactions with Government Officials and Government Entities outline key principles that guide the conduct of Takeda employees. Illegal or improper inducements, bribes, or corrupt transfers of anything of value may not be offered or used. Facilitation payments may not be paid or authorized.

Our Global Anti-Corruption Policy prohibits Takeda from conducting, through third-party intermediaries, activities that Takeda is prohibited from conducting itself. Third-party intermediaries must adhere to the requirements of the Global Anti-Corruption Policy. Takeda must conduct a due diligence assessment of third-party intermediaries in order to identify and address issues that pose any actual or potential risks for Takeda.

We conduct regular internal audits to assess instances of bribery and corruption, and we also have in place a monitoring program through which we review a sample of high-risk transactions to ensure compliance. In 2019, Takeda is also deploying a new enterprise risk assessment process, which includes an assessment of compliance risks. Our Global Code of Conduct and internal policies require all employees to keep accurate books, records, and accounts in reasonable detail to ensure no payments are made for any purpose other than those that are accurately described.

Medical Ethics

A range of medical ethics issues arise during the course of research and development into new medicines, from the use of human tissue in research to providing protections for vulnerable populations.

Takeda has developed policies and procedures that reflect our commitment to protect patients in our studies and adhere to the highest ethical standards in our research activities.

Medical research depends on the availability of human-derived specimens, such as blood, tissue, cells, and other substances in order to predict the safety and efficacy of new medicines. In line with our values and ethical standards, Takeda is particularly careful with regard to how these specimens are collected and used. Our Research Ethics Review Committee in Japan handles issues associated with human-derived specimens and confirms specimens are used in line with the Declaration of Helsinki.

In many cases animal studies are essential to determine the therapeutic relevance of novel treatments for a multitude of human diseases. Every proposal for the use of animals in research is thoroughly evaluated and approved by the site Institutional Animal Care and Use Committee.

Takeda is also committed to the 3R's of animal research and actively pursues their promotion:

- Refining research procedures to avoid or minimize pain or distress.
- Reducing the number of animals used in any study conducted to the minimum necessary for valid results.
- Replacing the need for animal research through non-animal research methods.

In addition, our Takeda R&D facilities that conduct animal research are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC), a private, nonprofit organization that promotes the humane treatment of animals in science through voluntary programs.

We also apply our values and ethical standards to the design and conduct of clinical trials, informed consent processes, and stewardship of participant data. Clinical trials are designed to contribute to the well-being of research participants and patients, and to help build knowledge. Trials are conducted in compliance with legal and regulatory requirements and are consistent with the Declaration of Helsinki 2013; the Good Clinical Practice (GCP) Standard of the International Conference on Harmonization (ICH); EFPIA/PhRMA Principles, developed by the European Federation of Pharmaceutical Industries and Associations and Pharmaceutical Research and Manufacturers of America; and other applicable international principles and standards.

We take care to protect the rights of all participants in our clinical studies, paying particular attention to vulnerable populations, such as participants in developing and emerging countries, trial participants who are socially underprivileged, and other cases requiring special attention. We provide participants with a thorough explanation of expected benefits and potential side effects, and follow an informed-consent process that supports participants' ability to choose to participate in the trial. Processes are designed to ensure the well-being of research participants and to respect patient privacy and confidential information.

As the frontiers of research extend into new areas, such as research on the human genome, gene analysis, and stem cell research, additional ethical concerns may arise. We continually review our ethical guidelines to keep pace. For example, Takeda has developed a position on the use of stem cells from various sources that address key ethical issues. Our Research Ethics Review Committee and Bioethics Committee Concerning Human Genome and Gene Analysis Research ensure that we conduct our R&D activities with the highest standards of ethics and integrity.

Takeda stays ahead of emerging trends related to ethics and compliance in R&D by actively participating in pharmaceutical industry associations such as PhRMA and the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA). In addition, Global Ethics & Compliance function members regularly review media outlets such as the Foreign Corrupt Practices Act blog and BioCentury report.

Ethical Sales and Marketing

Putting the interests of the patient first extends to marketing activities. Under the Takeda Global Code of Conduct, Takeda's first consideration when making any decisions about business activities is "putting the patient at the center," followed in order by "building trust with society," "reinforcing our reputation," and "developing the business." We do not exert unjustified influence over the prescription, use, administration, purchase, or recommendation of Takeda products. We do not promise, offer, or provide any money, gifts, services, hospitality, or other benefits as an inducement for using our products.

To underscore this position, Takeda has established various global policies, including the Global Policy on Interactions with Healthcare Professionals and Healthcare Entities, the Global Policy on Interactions with Patients and Patient Organizations, the Global Policy on Interactions with Government Officials and Government Entities, and the Global Anti-Corruption Policy. Our activities are conducted in compliance with the pharmaceutical laws of each country and the International Federation of Pharmaceutical Manufacturers & Associates (IFPMA) Code of Practice, and codes of practice established by local industry associations.

Medical information is provided in an accurate, fair, and balanced manner through appropriate channels. We conduct reviews of our promotional materials based on internal and external guidelines. These reviews may involve independent organizations, and regular monitoring also takes place. Reviews and monitoring are governed by separate Standard Operating Procedures (SOPs).

Training and education are an important part of our ethical marketing efforts. New employees receive training in the Code of Conduct, the Anti-Corruption policy, other policies and SOPs relevant to their position, and external requirements where applicable. Training needs for existing employees are assessed on an ongoing basis. Ethical decision-making exercises are organized on a regular basis for employees to practice putting our values into action.

Product Stewardship

Product stewardship is an important part of our environment, health and safety strategy. We extend our responsibility for product stewardship throughout the entire value chain. We also give consideration to the impact of our products on the environment and on people's health and safety throughout the product life cycle, from research through consumption and disposal. We continue to advance product stewardship across all of our business activities by working to strengthen our efforts related to:

- Disclosure of risk information pertaining to product safety.
- Consideration of green chemistry in our R&D process.
- Chemical hazard assessments.
- Ensuring compliance with the growing body of regulations related to materials and articles used in pharmaceutical manufacturing.
- Establishment of work methods that reduce the impact on workers involved in product manufacturing.
- Occupational exposure management.
- Adoption of environmentally friendly packaging.
- Reduction of CO_2 emissions in product transport.
- Product environmental risk assessments.

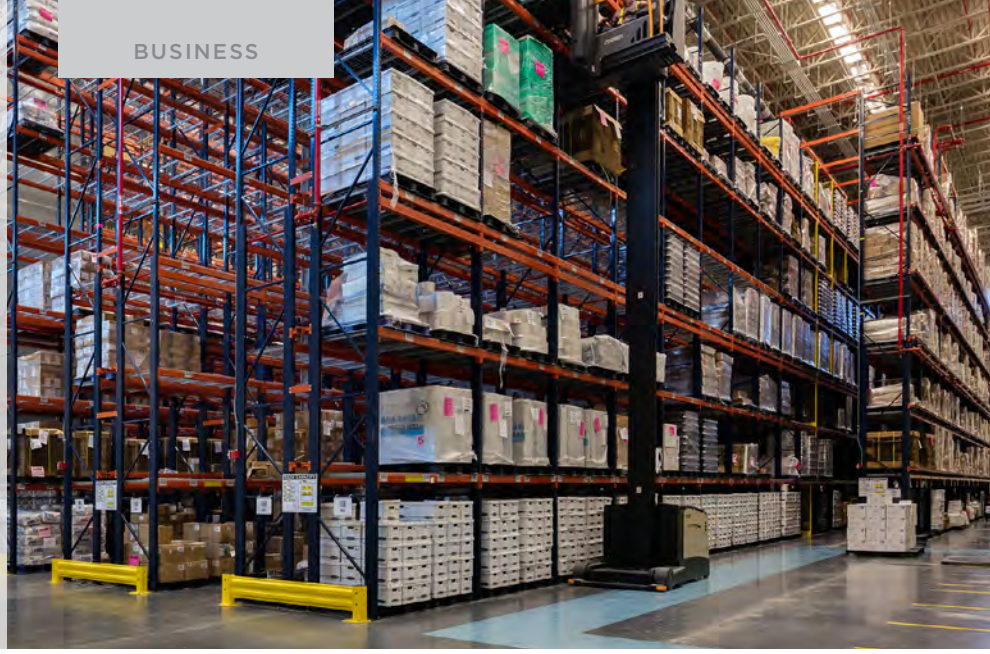
Product Anticounterfeiting Measures

The sale of counterfeit drugs is a growing problem, one that poses a significant threat to consumers and patients around the globe. As part of Takeda's mission to improve lives worldwide, our Global Product Protection (GPP) team is committed to protecting patients by securing the supply chain and taking measures to combat illegal activity.

We partner with international and local law enforcement, regulatory agencies, other pharmaceutical companies, and industry organizations to combat counterfeiting and illegal trading, while also educating patients, supply chain partners, and customers on the dangers associated with these activities. Through partnerships with such groups as the IFPMA "Fight the Fakes" Campaign, and Alliance for Safe Online Pharmacies (ASOP Global), we contribute to efforts that educate patients.

We set high security standards and requirements for supply chain partners worldwide, perform due diligence, and audit against these requirements. We have also developed innovative anticounterfeiting solutions for products and packaging to deter and detect counterfeiting, theft, diversion, and tampering.

Supply Chain Management



As a global pharmaceutical company, Takeda procures materials that are needed to manufacture and distribute our products from some 60,000 suppliers around the world.

Managing supplier relationships, as well as the flow of materials through our supply chain, is critical to the sustainability, quality, and safety of our medicines — and the well-being of our patients.

Takeda's Ethical Sourcing and Supplier Risk Management efforts are based on our values of Takeda-ism and our business priorities of putting patients at the center while building trust with stakeholders and enhancing Takeda's reputation. Through Ethical Sourcing and Supplier Risk Management, we ensure that suppliers conduct business in the same manner we do.

Ethical Sourcing and Supplier Risk Management Governance

The Procurement Center of Excellence is responsible for managing risk and enhancing sustainability in the supply chain while strengthening relationships with suppliers. The Center of Excellence has three focuses: Supplier Performance and Innovation (SP&I), Ethical Sourcing and Risk Management, and Supplier Diversity. The SP&I team facilitates supplier relationship management through a scorecard that uses objective data to measure and leverage supplier capabilities. This scorecard includes a KPI that measures social

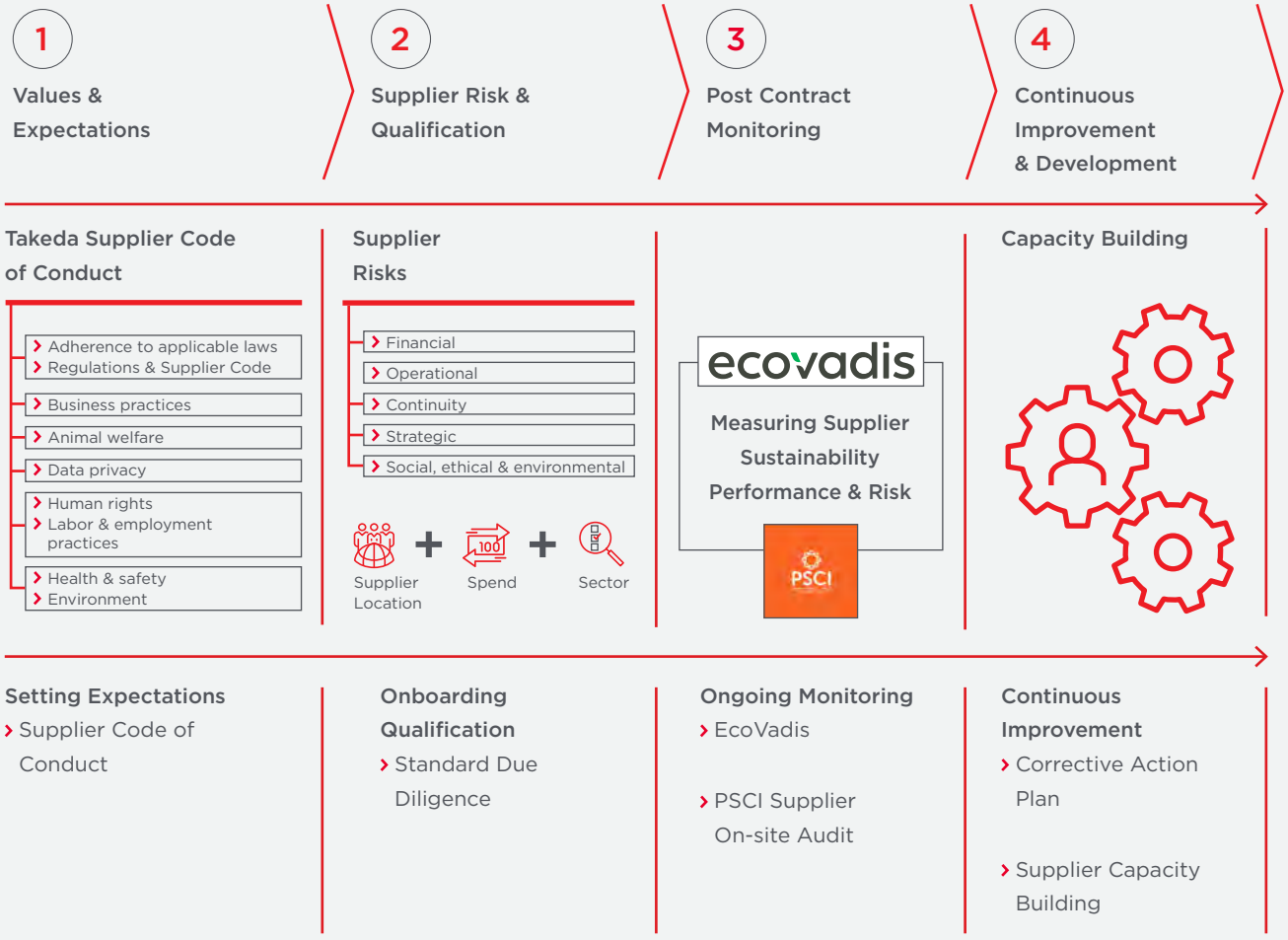
and environmental risk and performance. The SP&I team also works with suppliers to identify external sources of innovation, remediate performance issues, and provide continuous improvement opportunities, such as workshops.

In FY2018, the Ethical Sourcing and Supplier Risk Management program transitioned from a regional to a strategic approach as the organization introduced new sustainable procurement goals by supply category cluster. Each cluster agrees to, and is held accountable for, sustainable procurement goals that include:

- Acknowledgement of Supplier Code of Conduct by key and strategic suppliers.
- Completion of standard due diligence for key and strategic suppliers.
- On-site sustainable procurement audits of suppliers.
- Engagement with suppliers via the EcoVadis platform.
- Spend targets with small and diverse suppliers.

Ethical Sourcing and Supplier Risk Management

Ethical Sourcing and Supplier Risk Managment ensures that Takeda's suppliers conduct business in line with our expectations, avoid exposing the business to any unnecessary risk, and support the delivery of value beyond cost.



FY2018 Performance

Our Ethical Sourcing and Supplier Risk Management program measures progress through an annual process that sets targets around a set of core KPIs focused on:

- Managing risks and enhancing the sustainability of the supply chain.
- Measuring and improving supplier CSR performance.
- Increasing business with small and diverse suppliers.

In FY2018, we were pleased to exceed all targets. In the past three years since the Ethical Sourcing and Supplier Risk Management Program began tracking performance, we have been able to apply the KPIs to 10 percent of our supplier base with procurement managed addressable spend. Continued expansion into that base represents a significant opportunity to close gaps in the years ahead, especially working collaboratively through the integration of Shire.

Ethical Sourcing & Supplier Risk Management KPIs

Program KPI	2016		2017		2018	
	Target	Achievement	Target	Achievement	Target	Achievement
KPI 1 Number of Supplier Code of Conduct Acknowledgements Obtained from Top Spend, Strategic, and Preferred Suppliers	50	88	Add 50	92	Add 50	89
KPI 2 Number of PSCI Sustainability Audits Conducted	30	28	40	40	40	47[1]
KPI 3 Number of EcoVadis CSR & Sustainability Scorecards Obtained	Successful Pilot	31	Add 100	131	Add 125	233
KPI 4 Supplier Diversity Spend	No Official Target Set	$137 million	$131 million[2] $190 million[3]	$234 million[2] $187 million[3]	$162 million[2] $190 million[3]	$179 million[2] $231 million[3]

[1] INCLUDES TWO EHS SUPPLIER ON-SITE ASSESSMENTS
[2] SMALL AND SMALL DIVERSE SUPPLIERS
[3] ALL DIVERSE CATEGORIES INCLUDING SMALL AND OTHER DIVERSE BUSINESSES

Supplier Code of Conduct

Our Global Procurement Policy and Takeda Supplier Code of Conduct are foundational to our Ethical Sourcing Supplier Risk Management efforts and underscore our commitment to assess and improve oversight of supplier practices — with a focus on social, environmental, and economic good.

The Supplier Code of Conduct communicates Takeda's position on the performance standards suppliers are expected to work toward as a part of doing business with Takeda. The Code covers principles in business ethics and anti-corruption; human rights; fair labor and employment standards; data privacy; animal welfare; environment, health, and safety, as well as general management systems addressing the topics covered in the code. Takeda has incorporated the Supplier Code of Conduct as part of its procurement-managed supplier qualification process and uses its risk assessment model to prioritize suppliers for further review.

In FY2018, more than 4,700 suppliers, including 89 of the company's key and strategic suppliers, committed to advancing sustainable procurement at Takeda, based on the Supplier Code of Conduct. Cumulatively, 60 percent of Takeda's procurement-managed spend is addressed through the Supplier Code. We continue to monitor this metric with the goal of reaching 80 percent of spend.

Industry Collaboration: PSCI

Our supplier code is consistent with the Pharmaceutical Supply Chain Initiative (PSCI) Principles, a set of industry supplier standards and expectations established and used by more than 39 member companies of the PSCI. The PSCI is committed to promoting responsible supply chain practices through both supplier audits and supplier capability-building conferences and webinar training sessions. In FY2018, Takeda, along with other member companies, organized PSCI Supplier Conferences in China and India. A total of 124 suppliers and member companies attended the China conference, and 77 suppliers and member companies attended the India conference.

Supplier Due Diligence and Sustainability Engagement

As a crucial initiative for delivering high-quality pharmaceuticals to patients, Takeda has integrated a six-step standard diligence process into the sourcing process to assess supplier risks from a holistic perspective, including sustainability and business continuity risks. The standard diligence process evaluates whether there are potential risks in the areas of animal welfare, EHS, labor and human rights, financial health, corruption and bribery, and data privacy and information security. While this is not a comprehensive list of the risks Takeda screens for, it provides a view of what type of information business stakeholders can expect to receive in order for them to make well-informed decisions when it comes to supplier selection.

If specific risks are identified during standard diligence, Takeda conducts enhanced diligence, with experts from across the company as well as external resources as required. In FY2018, Takeda conducted due diligence across 2,333 suppliers. We also partnered with Takeda Business Services to design a more efficient and effective process for supplier registration and qualification, better ensuring the completion of due diligence and flagging of potential risks.

We have also furthered the use of EcoVadis, a digital supplier-sustainability assessment and scorecard system to help monitor the sustainability performance of strategic, high-risk, or other types of suppliers. The platform enables us to monitor KPIs for suppliers as a basis for supplier engagement and improvement. In 2018, Takeda improved the utilization of the platform and gained access to an additional 233 scorecards. We see an opportunity to further advance supplier performance by increasing their ability to manage their own supply chain impacts.

When we identify supplier sustainability risks related to Takeda's Supplier Code of Conduct principles, or if a supplier receives a low score from EcoVadis, we begin a program of annual on-site labor, ethical, EHS, and management system assessments based on PSCI protocols using third-party audit companies. In FY2018, Takeda conducted on-site assessments at 47 suppliers in 13 countries. These assessments result in corrective action plans (CAPs) to improve a supplier's sustainability performance that are periodically reviewed by Takeda and the supplier. Since starting the supplier PSCI sustainability audit program in 2016, we have achieved a 55.8 percent CAP closure rate of all initial supplier audits, excluding any follow-up assessments.

FY2018 Procurement Supplier Due Diligence Results & CSR Performance

Suppliers with Standard Diligence (SDD) Performed by Region n=2333

Takeda Supplier Code of Conduct

FY18 - 4701 | Supplier Acknowledgments

Americas

- Suppliers w/SDD — 710
- PSCI Assessments — 10
- EcoVadis — 74 suppliers

EMEA

- Suppliers w/SDD — 811
- PSCI Assessments — 5
- EcoVadis — 117 suppliers

Japan

- Suppliers w/SDD — 185
- PSCI Assessments — 0
- EcoVadis — 25 suppliers

APAC

- Suppliers w/SDD — 627
- PSCI Assessments — 30
- EcoVadis — 17 suppliers

Human Rights in the Supply Chain

Takeda's extensive supply chain reaches around the world, including emerging markets where protections for workers may not be robust. We realize that respecting human rights, including the rights of workers, is one of our greatest responsibilities with regard to our procurement activities and supplier relationships.

In markets where we have identified the potential for supply chain risks related to human rights, we use a number of enhanced assessment approaches. In FY2018, these assessments did not identify modern slavery risk in the form of forced or child labor, human trafficking, slavery, or servitude.

Summary of PSCI Sustainability Audit for Suppliers Findings by Finding Type

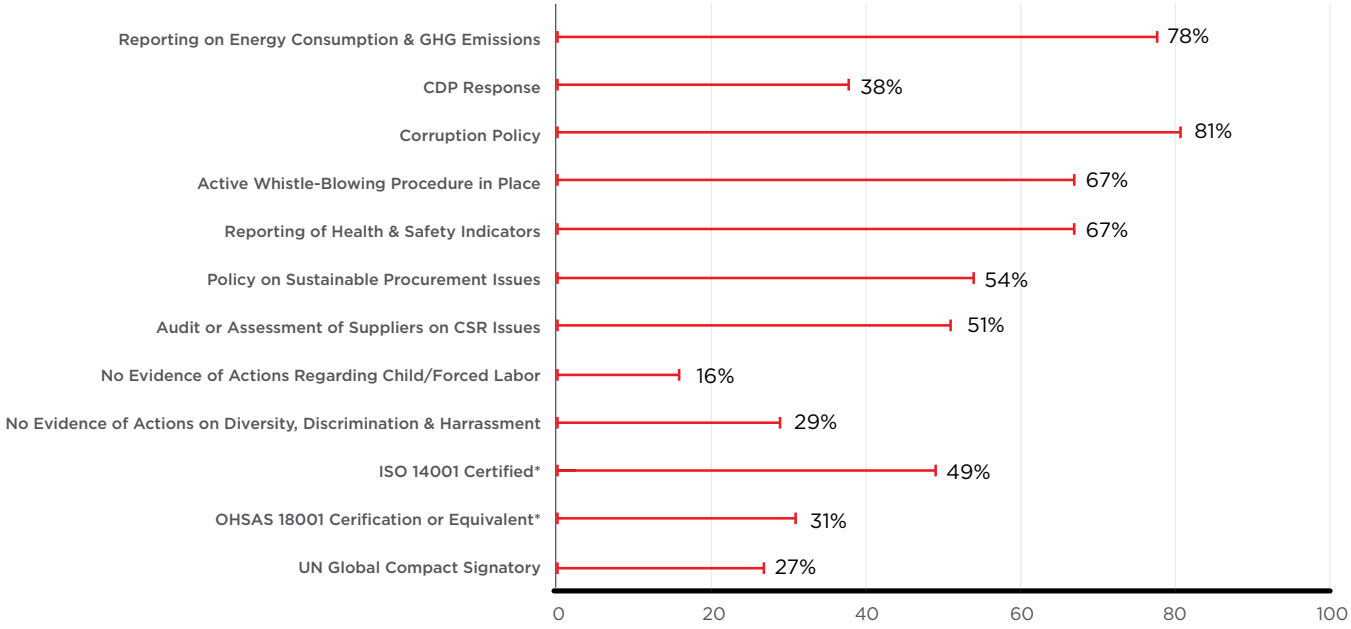
(Excluding follow-up assessments)

- **33%** Health & Safety Compliance
- **25%** Management System
- **16%** Labor/Social Responsibility
- **14%** Environmental Compliance
- **12%** Ethics

Nevertheless, we are strengthening initiatives for responding to these and other issues across the entire value chain through our Global Procurement Policy and the Takeda Supplier Code of Conduct. Takeda also publishes an annual statement in accordance with the United Kingdom's Modern Slavery Act of 2015

Supplier Sustainability Key Performance Indicators (EcoVadis)

Percentage of suppliers demonstrating evidence toward CSR aspect



*AT LEAST ONE OPERATIONAL SITE

Top Product Risk

In addition to due diligence programs, Global Procurement has implemented a process for reviewing supplier-related risks for Takeda's top products, with the goal of ensuring supply continuity for our patients. These products represent nearly 70 percent of Takeda revenue and cover Takeda's core therapeutic areas. The risks reviewed include sourcing status, unique materials, financial health, sustainability & reputation risk, contractual terms & relationship strength, compliance risk, and quality risks. This allows us to prioritize risk mitigation activities, drive remediation plans, and ensure that our suppliers continually improve, innovate, and generate added value for Takeda's patients.

Supplier Diversity

Our commitment to enabling a better future for people everywhere extends to our communities and to people of every background. As a global enterprise, sourcing materials from around the world, we build diversity and inclusion into our supplier network as a way to make a difference through the power of our spend.

We show this commitment in a variety of ways. For example, our Procurement Policy calls for including at least one small or diverse supplier in each request for proposal. In the U.S., we continue to work toward a goal to increase our spend with small and diverse businesses. In FY2018, we achieved $179 million in spend with small businesses, and with all diverse businesses (small and large) we achieved $231 million. We completed an economic impact study and video showing the impact Takeda has made by engaging with small and diverse suppliers, particularly the

impact on communities, through our supplier diversity program. The video was screened at our 2018 Supplier Day and broadcast to all employees as well. We provide internal training courses explaining what supplier diversity is to Takeda, and internal updates and stories about our supplier diversity program that highlight our small and diverse suppliers.

To find small and diverse suppliers that meet our needs, representatives from Takeda's Supplier Diversity Program and Procurement leaders participate in a variety of advocacy events. In 2018, Takeda participated in Diversity Alliance for Science, Women's Business Enterprise National Council (WBENC), National Minority Supplier Development Council (NMSDC), Massachusetts LGBT Chamber of Commerce, Center for Women and Enterprise, and others. Takeda was also a founding sponsor in the 2018 launch of the Massachusetts LGBT Chamber of Commerce.

One barrier to increasing business with small and diverse suppliers is suppliers' lack of knowledge about Takeda's needs and the daunting task of supplying a large, global enterprise. A number of initiatives have addressed this challenge including:

- A supplier diversity day for R&D and Vaccines for current and potential suppliers to engage with our Procurement staff and internal stakeholders.
- A one-day, on-site session to give small and diverse suppliers the opportunity to present their capabilities to U.S. marketing stakeholders.
- A supplier diversity mentorship program, with Procurement and internal Takeda stakeholder participation. In 2018, Takeda mentored three small or diverse businesses.
- Providing one-on-one training or other resources for our small or diverse businesses, to assist them in navigating Takeda supplier requirements.

In recognition of these and other efforts, Takeda received the Program Manager of the Year Award in 2018 for our Supplier Diversity Program from Diversity Alliance for Science.

Appendix

IN THIS CHAPTER

- Disaster Relief
- Social Value Reference List
- Scope 3 Methodology
- Environment, Health & Safety Performance Data
- UNGC Advanced Level CoP Reference Table
- GRI Standards Reference Table
- Independent Assurance
- Legal Disclaimers

Disaster Relief

When natural disasters strike in areas where our employees live and work, Takeda empowers its regions to respond as they see most appropriate. This can range from financial giving to employee volunteerism. For example, in our home market of Japan, Takeda is an active supporter of disaster relief, particularly for the victims of earthquakes. Our Takeda Life and Livelihood Reconstruction Program is a donation program to benefit victims of the Great East Japan Earthquake of 2011. Currently, the program is in the last phase, which is expected to run through 2021. We donate part of the profits from sales of ALINAMIN to the program. Other initiatives include support for employee volunteers and in-house marketplace events, in which products from disaster-affected local businesses are available for purchase by employees. Marketplace events are operated jointly by management and employees.

Support for Disaster-Affected Areas of the Kumamoto Earthquake

Takeda supported the areas affected by the April 2016 Kumamoto Earthquake with a donation of JPY 22.3 million to an aid organization, including a donation by employees with a matching gift from the company as well as provision of over the counter products and other support supplies during the emergency response period immediately following the earthquake.

We also implemented matching gifts through labor-management cooperation for the heavy rain event of July 2018 in West Japan and donated JPY 8.2 million to Central Community Chest of Japan, a social welfare corporation.

Recipients in the "Support for Japan's Vitality and Recovery" Program

	Program	Recipient	Timeframes	Donation Amount
Life and Livelihood	Takeda Life and Livelihood Reconstruction Program	Japan NPO Center	10 years (2011–2021)	¥1,200 million
	Takeda-Akailhane Nationwide Evacuee Support Program	Central Community Chest of Japan	5 years (2014–2018)	¥290,087,207
	Disaster Relief Volunteer & NPO Support Fund	Central Community Chest of Japan	7th donation (2012)	¥20 million
	Takeda Capacity Building Initiative	Japan Earthquake Local NPO Support Fund	3 years (2012–2014)	¥20 million
	Psychological support by CliniClowns in Tohoku	Japan CliniClowns Association	6 years (2013–2018)	¥10,522,223
Industrial Revitalization	IPPO IPPO NIPPON Project	Keizai Doyukai (Japan Association of Corporate Executives)	4 years (2011–2015)	¥829,720,912
	Tohoku Future Creation Initiative	Tohoku New Business Council	5 years (2012–2016)	¥20 million
Empowering the Next Generation	TOMODACHI	U.S.-Japan Council	10 years (2011–2020)	¥180 million
	BEYOND Tomorrow	Global Fund for Education Assistance	3 years (2011–2013)	¥60 million
	ARK NOVA Music Program for Children	ARK NOVA Project	3 years (2013–2015)	¥40 million
	OECD TOHOKU SCHOOL	Fukushima University	1 year (2013)	¥10 million
Policy Proposals	Rebuild Japan Initiative	Rebuild Japan Initiative Foundation	10 years (2011–2020)	¥500 million
	Integrated Health and Lifestyle Support Project for Elderly People Living in Yamada Town, Iwate Prefecture	Health and Global Policy Institute	2 years (2012–2014)	¥25 million

Social Value Reference List

Indicator	Valuation Approach	Multiplier	Source	Link
Economic value retained in the company	Net profit — dividend + depreciation, amortization, and impairment losses	N/A	Takeda Annual Securities Report [p.136]	https://www.takeda.com/investors/reports/quarterly-announcements/quarterly-announcements-2018/
Economic value offered to stakeholders	Salaries and bonus, interest on loans, taxes paid, and dividends	N/A	Takeda Annual Securities Report [p.136]	https://www.takeda.com/investors/reports/quarterly-announcements/quarterly-announcements-2018/
Strategic social investments	Amount invested in community projects multiplied by a specific social return on investment (SROI) multiplier based on project characteristics The SROI is dependent per project	22.6	Masters R, Anwar E, Collins B, et al. (2017). Return on investment of public health interventions: a systematic review. J Epidemiol Community Health. 71:827-834.	https://jech.bmj.com/content/71/8/827
		11.8	Hutton, Guy. (2012). Global costs and benefits of reaching universal coverage of sanitation and drinking-water supply. Journal of Water and Health. 11. 1-12.	https://iwaponline.com/jwh/article/11/1/1/2773/Global-costs-and-benefits-of-reaching-universal
		3.2	Montenegro, C. & Patrinos, H. (2014). Comparable Estimates of Returns to Schooling Around the World. Policy Research working paper; no. WPS 7020. Washington, DC: World Bank Group.	http://documents.worldbank.org/curated/en/830831468147839247/pdf/WPS7020.pdf
		22.6	Masters R, Anwar E, Collins B, et al. (2017). Return on investment of public health interventions: a systematic review. J Epidemiol Community Health. 71:827-834.	https://jech.bmj.com/content/71/8/827

Social Value Reference List (continued)

Indicator	Valuation Approach	Multiplier	Source	Link
Strategic social investments	Amount invested in community projects multiplied by a specific social return on investment (SROI) multiplier based on project characteristics The SROI is dependent per project.	21.48	White et al. (2011). Costs and cost-effectiveness of malaria control interventions — a systematic review. Malaria Journal, 10. 337	https://malariajournal.biomedcentral.com/articles/10.1186/1475-2875-10-337
		21.48	White et al. (2011). Costs and cost-effectiveness of malaria control interventions — a systematic review. Malaria Journal, 10. 337	https://malariajournal.biomedcentral.com/articles/10.1186/1475-2875-10-337
		$27	Resch, S. et al. (2011). Economic returns to investment in AIDS treatment in low and middle income countries. Plos one, 6. 10.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3187775/
		2.87	Masters R, Anwar E, Collins B, et al. (2017). Return on investment of public health interventions: a systematic review. J Epidemiol Community Health. 71:827-834.	https://jech.bmj.com/content/71/8/827
		22.6	"Safe Work Australia (2012). The cost of work-related injury and illness for Australian employers, workers and the community: 2008-2009. HSE (2016-2017). Costs to Great Britain of workplace injuries and new cases of work-related Ill Health — 2016/17	https://www.safeworkaustralia.gov.au/system/files/documents/1702/cost-of-work-related-injury-and-disease-2012-13.docx.pdf http://www.hse.gov.uk/statistics/pdf/cost-to-britain.pdf

Social Value Reference List (continued)

Indicator	Valuation Approach	Multiplier	Source	Link
Health & safety	Number & type of occupational incidents multiplied by employee & community cost per incident	3,300 — 3,550,000 USD/ incident	Safe Work Australia (2012). The cost of work-related injury and illness for Australian employers, workers and the community: 2008-2009. HSE (2016-2017). Costs to Great Britain of workplace injuries and new cases of work-related ill health — 2016/17	https://www.safeworkaustralia.gov.au/system/files/documents/1702/cost-of-work-related-injury-and-disease-2012-13.docx.pdf http://www.hse.gov.uk/statistics/pdf/cost-to-britain.pdf
Waste	Total waste sent to landfill with energy recovery (tonnes) multiplied by shadow price for waste and correction coefficient impact waste disposal method	Dependent on waste disposal method between 24 USD/tonne 250 USD/tonne	CE Delft (2017) Handbook Environmental Prices. Dijkgraaf, Elbert & Herman R.J. Vollebergh (2003) Burn or Bury?: A Social Cost Comparison of Final Waste Disposal Methods	https://www.cedelft.eu/en/publications/2012/environmental-pricing-manual-2017
Air Pollution	Tonnes of pollutants multiplied by shadow price of air pollutants and correction coefficient population density	Dependent on air pollutant	Department for Environment and Rural Affairs (2019). Air Quality Damage Costs	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770576/air-quality-damage-cost-guidance.pdf
Carbon Emissions	Total GHG emissions multiplied by internal carbon price	$137.40/tCO$_2$e	N/A	N/A
Water	Direct net water consumption [per level of scarcity] multiplied by social cost of water	0.12-17.79 USD/ m3	TEEB for Business Coalition (2013) Natural Capital at Risk: the top 100 externalities of business.	https://www.trucost.com/publication/natural-capital-risk-top-100-externalities-business/

Takeda Pharmaceutical Scope 3 Emissions Calculation Methodology per Category

Source of Scope 3 Emissions	Evaluation Status	Emissions Calculation Methodology
1) Purchased goods and services	Relevant, calculated	Takeda's business sectors and revenue data are multiplied by an emission factor for each sector/supplier derived from the Trucost economic input output (EEI-O) model, to calculate the supply chain GHG emissions of suppliers through all tiers up to and including raw material extraction. For fuel- and energy-related activities, only emissions related to fuel extraction and distribution/transmission loss are included.
2) Capital goods	Relevant, calculated	
3) Fuel- and energy-related activities	Relevant, calculated	
4) Upstream transportation and distribution	Relevant, calculated	
5) Waste generated in operations	Relevant, calculated	Emissions are calculated by using Takeda's waste data and emission factors from Defra (2018) — UK Government GHG Conversion Factors for Company Reporting.
6) Business travel	Relevant, calculated	Takeda's spend data by mode of transport, which are captured by a business travel arrangement system, are multiplied by an emission factor for each mode of transport derived from the Trucost EEI-O model.
7) Employee commuting	Relevant, calculated	Takeda's global employee head count by country is used, combined with OECD's published country averages for commuting time and other publicly available data on transportation mode and distance, to calculate GHG emissions from employee commuting.
8) Upstream leased assets	Relevant, calculated	Using Takeda data on leased office space square footage, average intensities for energy consumption (US Energy Information Administration data) are applied to estimate total consumption by energy source for each office. Emissions from fuel consumption for leased cars are also included in this category. Country-specific electricity grid factor from IEA and fuel emission factors from Defra (2018) UK Government GHG Conversion Factors for Company Reporting are used.
9) Downstream transportation and distribution	Not relevant, not calculated	N/A[1]
10) Processing of sold products	Relevant, calculated	Emissions are calculated by multiplying electricity and steam used for processing products sold, which are estimated based on energy required to process a unit of each product sold, by IEA grid electricity factors (country-specific) and a steam emissions factor specified in the Japanese Global Warming Countermeasures law.
11) Use of sold products	Not relevant, not calculated	N/A
12) End-of-life treatment of sold products	Relevant, calculated	Using packaging materials spend data, weight of those materials are estimated based on average price of material (e.g. plastic, metals, paper) gathered from metals exchange and B2B platforms. World waste treatment and disposal percentages published by World Bank and emission factors from Defra (2018) — UK Government GHG Conversion Factors for Company Reporting are used.
13) Downstream leased assets	Not relevant, not calculated	N/A
14) Franchises	Not relevant, not calculated,	N/A
15) Investment	Relevant, calculated	Sum of Scope 1 and Scope 2 emissions*[2] of the equity investment*[3] multiplied by the share of equity (%) held by Takeda.

[1] BASED ON MATERIALITY RE-ASSESSMENT. EVALUATION OF THIS CATEGORY MIGHT BE CHANGED IN SUBSEQUENT YEARS

[2] THE ADJUSTED EMISSIONS IN FISCAL 2015 DISCLOSED UNDER THE ACT ON PROMOTION OF GLOBAL WARMING COUNTERMEASURES ARE USED

[3] THE INVESTEE COMPANIES FOR WHICH THE COMPANY'S SHAREHOLDING RATIOS ARE 5 PERCENT OR ABOVE ARE COVERED

Environment, Health & Safety Performance Data

Indicator or Metric	Units	Takeda Operations (FY 2018)	KPMG Verfied	Shire Operations (Jan 2019 — Mar 2019)	Apex Companies LLC Verified	Total (FY 2018)
Total Energy Used	Tera Joules	7,469 [1]	X	957	X	8,425
Scope 1 GHG Emissions	Metric Tonnes	157,958 [2]	X	37,100 [3]	X	195,058
Scope 2 GHG Emissions, Market Based	Metric Tonnes	163,883 [4]	X	24,500 [5]	X	188,333
Scope 2 GHG Emissions, Location Based	Metric Tonnes	204,125 [6]		29,500 [7]	X	233,625
Scope 3 GHG Emissions	Metric Tonnes	2,224,643	X	425,700 [8]		2,654,343
Fresh Water Used	Thousand Cubic Meters	4,938 [9]	X	1,082	X	6,020
Chemical Oxygen Demand (COD) Load	Metric Tonnes	19 [10]	X	—		
Nitrous Oxides (NOx) Emissions	Metric Tonnes	148	X	11 [11]	X	159
Sulphur Oxides (SOx) Emissions	Metric Tonnes	3	X	<1 [11]	X	<4
Volatile Organic Compound (VOC) Emissions	Metric Tonnes	104.8	X	—		
Dust Emissions	Metric Tonnes	3				
Total Waste Generated	Metric Tonnes	36,588	X	7,449	X	44,355
Regulated Waste Generated	Metric Tonnes	25,922 [12]		2,553	X	28,521
Non-Regulated Waste Generated	Metric Tonnes	10,666 [13]		4,896	X	15,934
Total Waste Recycled	Percentage	83%		64%	X	78%
Total Occupational Injury Frequency Rate	Per Million Hours Worked	2.69	X	7.38	X	3.48
Lost Time Injury Frequency Rate	Per Million Hours Worked	0.76	X	1.00	X	0.80

THE SCOPE OF TAKEDA OPERATIONS IS AS FOLLOWS:

- FOR TOTAL ENERGY USED, SCOPE 1 AND SCOPE 2 MARKET, AND LOCATION-BASED GHG EMISSIONS, THE SCOPE OF TAKEDA OPERATIONS INCLUDES ALL MANUFACTURING AND R&D SITES (TAKEDA PHARMACEUTICAL COMPANY LIMITED INCLUDES ITS HEADQUARTER AND SALES OFFICE LOCATIONS). CONTRIBUTIONS FROM THE SHIRE ACQUISITION NOT INCLUDED.
- FOR ALL OTHER ENVIRONMENTAL PERFORMANCE INDICATORS THE SCOPE OF TAKEDA OPERATIONS INCLUDES ALL MANUFACTURING AND R&D SITES. CONTRIBUTIONS FROM OFFICE LOCATIONS AND THE SHIRE ACQUISITION ARE NOT INCLUDED.
- FOR SAFETY PERFORMANCE INDICATORS THE SCOPE OF TAKEDA OPERATIONS INCLUDES ALL MANUFACTURING, R&D, AND OFFICE SITES COVERING APPROXIMATELY 95 PERCENT OF ALL EMPLOYEES. CONTRIBUTIONS FROM THE SHIRE ACQUISITION NOT INCLUDED.

Environment, Health & Safety Performance Data Footnotes

[1] ENERGY FROM PURCHASED ELECTRICITY CONVERTED INTO PRIMARY ENERGY INPUT USING CONVERSION FACTORS FROM THE JAPAN "LAW CONCERNING THE RATIONAL USE OF ENERGY."

[2] SCOPE 1 EMISSIONS ASSOCIATED WITH COMBUSTION OF FOSSIL FUELS CALCULATED USING EMISSIONS FACTORS FROM THE JAPAN "LAW CONCERNING THE RATIONAL USE OF ENERGY."

[3] SCOPE 1 EMISSIONS ASSOCIATED WITH COMBUSTION OF FOSSIL FUELS CALCULATED USING EMISSIONS FACTORS FROM THE GREENHOUSE GAS PROTOCOL "CROSS-SECTOR TOOLS — STATIONARY COMBUSTION — (APRIL 2014)."

[4] SCOPE 2 MARKET-BASED EMISSIONS CALCULATED USING AN EMISSION FACTOR FOR EACH ELECTRIC POWER PROVIDER IN JAPAN FOR FY2005 AND THE EMISSION FACTORS PROVIDED BY THE INTERNATIONAL ENERGY AGENCY (IEA) FOR ALL OTHER LOCATIONS.

[5] SCOPE 2 MARKET-BASED EMISSIONS CALCULATED USING EMISSION FACTORS PUBLISHED IN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY "EMISSIONS & GENERATION RESOURCE INTEGRATED DATABASE 2016" FOR UNITED STATES OPERATIONS; EUROPEAN ASSOCIATION OF ISSUING BODIES' "EUROPEAN RESIDUAL MIXES 2017" FOR EUROPEAN OPERATIONS; AND EMISSION FACTORS PROVIDED BY THE IEA FOR ALL OTHER LOCATIONS.

[6] SCOPE 2 LOCATION-BASED EMISSIONS CALCULATED USING AN EMISSION FACTOR PROVIDED BY THE IEA FOR EACH COUNTRY.

[7] SCOPE 2 LOCATION EMISSIONS CALCULATED USING EMISSION FACTORS PUBLISHED IN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY "EMISSIONS & GENERATION RESOURCE INTEGRATED DATABASE 2016" FOR UNITED STATES OPERATIONS, AND EMISSION FACTORS PROVIDED BY THE IEA FOR ALL OTHER LOCATIONS.

[8] SCOPE 3 EMISSIONS FOR JANUARY 2019 THROUGH MARCH 2019 ESTIMATED BASED ON CALCULATED SCOPE 3 EMISSIONS FOR CALENDAR YEAR 2018.

[9] WATER USAGE DATA EXCLUDES WATER USED FOR NON-CONTACT COOLING PURPOSES.

[10] COD EMISSION DATA REFLECTS COD LOADING ASSOCIATED WITH THE DIRECT DISCHARGE OF TAKEDA-TREATED WASTEWATER TO A RECEIVING WATERWAY.

[11] NOx AND SOx EMISSIONS CALCULATED BASED ON FUEL CONSUMPTION AND EMISSION FACTORS FROM THE EPA PUBLICATION "COMPILATION OF AIR POLLUTANT EMISSION FACTORS, AP-42, FIFTH EDITION, VOLUME I: STATIONARY POINT AND AREA SOURCES."

[12] WASTE GENERATED FROM JAPAN OPERATIONS AND CLASSIFIED AS INDUSTRIAL WASTE INCLUDED IN REGULATED WASTE TOTALS.

[13] WASTE GENERATED FROM JAPAN OPERATIONS AND CLASSIFIED AS DOMESTIC WASTE INCLUDED IN NON-REGULATED WASTE TOTALS.

United Nations Global Compact Advanced Level CoP Reference Table

Implementing the Ten Principles Into Strategies & Operations

UNGC Principle	Report Links
Criterion 1: The Communication on Progress (CoP) describes mainstreaming into corporate functions and business units	APPROACH CEO Message Corporate Philosophy Global Scale and Scope — Our Strategic Roadmap Governance
Criterion 2: The CoP describes value chain implementation	BUSINESS Quality Management — Quality Strategy Medical Ethics — Product Anticounterfeiting Measures Supply Chain Management ENVIRONMENT Climate Change — Working With Our Partners to Curb Climate Change

Robust Human Rights Management Policies & Procedures

UNGC Principle	Report Links
Criterion 3: The CoP describes robust commitments, strategies or policies in the area of human rights	APPROACH Materiality BUSINESS Supply Chain Management — Supplier Code of Conduct, Ethical Sourcing and Supplier Risk Management Governance
Criterion 4: The CoP describes effective management systems to integrate the human rights principles	APPROACH Governance BUSINESS Supply Chain Management — Human Rights in the Supply Chain
Criterion 5: The CoP describes effective monitoring and evaluation mechanisms of human rights integration	BUSINESS Supply Chain Management — Ethical Sourcing and Supplier Risk Management Governance — Ethical Sourcing & Supplier Risk Management KPIs, Supplier Due Diligence and Sustainability Engagement, Supplier Sustainability KPIs (EcoVadis)

Robust Labour Management Policies & Procedures

UNGC Principle	Report Links
Criterion 6: The CoP describes robust commitments, strategies or policies in the area of labour	WORKPLACE A Brighter Future Through a Better Workplace — Overview Diversity and Inclusion Occupational Health and Safety BUSINESS Supply Change Management — Supplier Code of Conduct, Industry Collaboration: PSCI
Criterion 7: The CoP describes effective management systems to integrate the labour principles	WORKPLACE Occupational Health and Safety — Safe Takeda, Manufacturing Safety Initiatives BUSINESS Ethics and Compliance
Criterion 8: The CoP describes effective monitoring and evaluation mechanisms of labour principles integration	WORKPLACE Occupational Health and Safety — Safe Takeda BUSINESS Supply Chain Management — Ethical Sourcing and Supplier Risk Management, Ethical Sourcing & Supplier Risk Management KPIs, Supplier Sustainability KPIs (EcoVadis)

United Nations Global Compact (continued)

Robust Environmental Management Policies & Procedures

UNGC Principle	Report Links
Criterion 9: The CoP describes robust commitments, strategies or policies in the area of environmental stewardship	**ENVIRONMENT** Overview Environmental Management — Environmental Protection Investments, Working Greener Climate Change — Strategy and Performance **BUSINESS** Supply Chain Management — Supplier Code of Conduct
Criterion 10: The CoP describes effective management systems to integrate the environmental principles	**ENVIRONMENT** Environmental Management — Goals and Progress — Environmental Reduction Goals Climate Change — Governance, Responding to Climate Risks, Managing Greenhouse Gas Emissions From Our Operations, Working With Our Partners to Curb Climate Change
Criterion 11: The CoP describes effective monitoring and evaluation mechanisms for environmental stewardship	**ENVIRONMENT** Environmental Management — Centralized EHS Auditing Environmental Impacts Beyond Emissions **BUSINESS** Supply Chain Management — Supplier Due Diligence and Sustainability Engagement, Supplier Sustainability KPIs (EcoVadis)

Robust Anti-Corruption Management Policies & Procedures

UNGC Principle	Report Links
Criterion 12: The CoP describes robust commitments, strategies or policies in the area of anti-corruption	**BUSINESS** Ethics and Compliance Medical Ethics Supply Chain Management — Supplier Code of Conduct **HEALTH** Access to Medicines — Innovative Partnership Framework: the Blueprint for Innovative Access to Strengthen Healthcare Systems Across the Whole Patient Journey
Criterion 13: The CoP describes effective management systems to integrate the anti-corruption principle	**BUSINESS** Ethics and Compliance Medical Ethics Supply Chain Management — Supplier Due Diligence and Sustainability Engagement
Criterion 14: The CoP describes effective monitoring and evaluation mechanisms for the integration of anti-corruption	**BUSINESS** Supply Chain Management — Supplier Due Diligence and Sustainability Engagement, Supplier Sustainability KPIs (EcoVadis)

United Nations Global Compact (continued)

Taking Action in Support of Broader UN Goals and Issues	
UNGC Principle	**Report Links**
Criterion 15: The CoP describes core business contributions to UN goals and issues	APPROACH Our Approach to Sustainable Value — How We Integrate ESG to Generate Sustainable Value Materiality HEALTH (entire section) WORKPLACE Diversity and Inclusion Occupational Health and Safety ENVIRONMENT Climate Change Environmental Impacts Beyond Emissions BUSINESS Ethics and Compliance
Criterion 16: The CoP describes strategic social investments and philanthropy	APPROACH Our Approach to Sustainable Value HEALTH Access to Medicines Global CSR Program and Partnerships
Criterion 17: The CoP describes advocacy and public policy engagement	APPROACH Our Approach to Sustainable Value HEALTH Global CSR Program and Partnerships
Criterion 18: The CoP describes partnerships and collective action	APPROACH Strategic Engagement HEALTH Global CSR Program and Partnerships
Corporate Sustainability Governance and Leadership	
UNGC Principle	**Report Links**
Criterion 19: The CoP describes CEO commitment and leadership	APPROACH CEO Message
Criterion 20: The CoP describes Board adoption and oversight	APPROACH Global Scale and Scope — Our Strategic Roadmap Governance BUSINESS Corporate Governance
Criterion 21: The CoP describes stakeholder engagement	APPROACH Evaluation of Social Value — Methodology Materiality Strategic Engagement

GRI Standards Reference Table

Disclosure Number	Description	2019 Reference/Response
GRI 102: General Disclosures		
Organizational Profile		
102-1	Name of the organization	Takeda Pharmaceutical Company Limited
102-2	Activities, brands, products, and services	**APPROACH** Our Products and Brands 2019 Annual Securities Report pages 8-18
102-3	Location of headquarters	Tokyo, Japan
102-4	Location of operations	**APPROACH** Global Scale and Scope 2019 Annual Securities Report pages 8-11
102-5	Ownership and legal form	2019 Annual Securities Report page 137
102-6	Markets served	We have presence in approximately 80 countries, with leading positions in Japan and the U.S.
102-7	Scale of the organization	**APPROACH** Global Scale and Scope 2019 Annual Securities Report pages 2-12
102-8	Information on employees and other workers	**APPROACH** Global Scale and Scope **WORKFORCE** Global Talent Management 2019 Annual Securities Report page 12
102-9	Supply chain	**BUSINESS** Supply Chain Management
102-10	Significant changes to the organization and its supply chain	2019 Annual Securities Report page 13
102-11	Precautionary Principle or approach	Takeda does not follow the precautionary approach, but has a comprehensive risk management plan in place.
102-12	External initiatives	**APPROACH** Our Approach to Sustainable Value — ESG Disclosure and Transparency Strategic Engagement **HEALTH** Access to Medicines — Sustainable and Targeted Partnerships Global CSR Program and Partnerships **ENVIRONMENT** Climate Change **BUSINESS** Supply Chain Management — Industry Collaboration: PSCI
102-13	Membership of associations	We work with biopharmaceutical industry groups in many countries in which we operate, including, but not limited to European Federation of Pharmaceutical Industries and Associations (EFPIA), Global Pharmaceutical Manufacturing Leadership Forum (GPMLF), International Federation of Pharmaceutical Manufacturers & Associates (IFPMA), International Society for Pharmaceutical Engineering (ISPE), Parenteral Drug Association (PDA), Pharmaceutical Research and Manufacturers of America (PhRMA), and the Pharmaceutical Supply Chain Initiative (PSCI).
Strategy		
102-14	Statement from senior decision-maker	**APPROACH** CEO Message

GRI Standards Reference Table (continued)

Disclosure Number	Description	2019 Reference/Response
Ethics and Integrity		
102-16	Values, principles, standards, and norms of behavior	**APPROACH** Corporate Philosophy **BUSINESS** Ethics and Compliance
102-17	Mechanisms for advice and concerns about ethics	**BUSINESS** Ethics and Compliance The Takeda Ethics Line is available online and by phone to all employees around the world, 24 hours a day. Employees can contact the Takeda Ethics Line, which is available in 18 languages, and ask a question or voice a concern. Takeda Code of Conduct — pages 36-37
Governance		
102-18	Governance structure	**BUSINESS** Corporate Governance
102-19	Delegating authority	**BUSINESS** Corporate Governance
102-21	Consulting stakeholders on economic, environmental, and social topics	**APPROACH** Strategic Engagement
102-22	Composition of the highest governance body and its committees	**BUSINESS** Corporate Governance Executive Leadership: https://www.takeda.com/who-we-are/company-information/executive-leadership/ Annual Securities Report pages 98, 103-110
102-23	Chair of the highest governance body	Executive Leadership: https://www.takeda.com/who-we-are/company-information/executive-leadership/ Annual Securities Report pages 98, 103
102-24	Nominating and selecting the highest governance body	Annual Securities Report page 98
102-25	Conflicts of interest	Annual Securities Report page 113
102-26	Role of highest governance body in setting purpose, values, and strategy	**APPROACH** Governance
102-28	Evaluating the highest governance body's performance	Annual Securities Report page 101
102-29	Identifying and managing economic, environmental, and social impacts	**APPROACH** Governance
102-30	Effectiveness of risk management processes	Annual Securities Report page 98
102-31	Review of economic, environmental, and social topics	Annual Securities Report page 98
102-35	Remuneration policies	**BUSINESS** Director Compensation, Annual Securities Report page 118
102-36	Process for determining remuneration	Annual Securities Report pages 116-118
102-37	Stakeholders' involvement in remuneration	Annual Securities Report pages 116-118
Stakeholder Engagement		
102-40	List of stakeholder groups	**APPROACH** Our Approach to Sustainable Value Strategic Engagement
102-41	Collective bargaining agreements	Annual Securities Report page 12
102-42	Identifying and selecting stakeholders	**APPROACH** Strategic Engagement

GRI Standards Reference Table (continued)

Disclosure Number	Description	2019 Reference/Response
102-43	Approach to stakeholder engagement	**APPROACH** Strategic Engagement
102-44	Key topics and concerns raised	**APPROACH** Materiality
Reporting Practice		
102-45	Entities included in the consolidated financial statements	Annual Securities Report pages 8-11
102-46	Defining report content and topic Boundaries	About This Report
102-47	List of material topics	**APPROACH** Materiality
102-48	Restatements of information	Due to divestments, past Environment data has been restated: CO_2 Emissions, Volume of Fresh Water Used and Discharged, Trends in Waste Generation, Discharge and Final Disposal, NOx and SOx Emissions
102-49	Changes in reporting	About This Report
102-50	Reporting period	The reporting period covers Fiscal 2018 (April 1, 2018 to March 31, 2019).
102-51	Date of most recent report	Issue Date: October 2018
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	sustainablevalue@takeda.com
102-54	Claims of reporting in accordance with the GRI Standards	Core Option
102-55	GRI content index	**APPENDIX** GRI Standards Reference Table
102-56	External assurance	**APPENDIX** Independent Assurance
GRI 200: Economic		
GRI 203: Indirect Economic Impacts		
103-1	Explanation of the material topic and its Boundary	**HEALTH** Access to Medicines
103-2	The management approach and its components	**HEALTH** Access to Medicines
103-3	Evaluation of the management approach	**HEALTH** Access to Medicines
203-1	Infrastructure investments and services supported	**HEALTH** Access to Medicines
203-2	Significant indirect economic impacts	**HEALTH** Access to Medicines, Global CSR Program and Partnerships
GRI 205: Anti-corruption		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Ethics and Compliance
103-2	The management approach and its components	**BUSINESS** Ethics and Compliance

GRI Standards Reference Table (continued)

<table>
<tr><th>Disclosure Number</th><th>Description</th><th>2019 Reference/Response</th></tr>
<tr><td>103-3</td><td>Evaluation of the management approach</td><td>BUSINESS
Ethics and Compliance</td></tr>
<tr><td>205-2</td><td>Communication and training about anti-corruption policies and procedures</td><td>BUSINESS
Ethics and Compliance</td></tr>
<tr><td colspan="3">GRI 300: Environmental</td></tr>
<tr><td colspan="3">GRI 302: Energy</td></tr>
<tr><td>103-1</td><td>Explanation of the material topic and its Boundary</td><td>ENVIRONMENT
Environmental Management — Goals and Progress

Climate Change</td></tr>
<tr><td>103-2</td><td>The management approach and its components</td><td>ENVIRONMENT
Environmental Management — Goals and Progress

Climate Change</td></tr>
<tr><td>103-3</td><td>Evaluation of the management approach</td><td>ENVIRONMENT
Environmental Management — Goals and Progress

Climate Change</td></tr>
<tr><td>302-1</td><td>Energy consumption within the organization</td><td><table><tr><th></th><th>Mwh from renewable sources</th><th>Mwh from nonrenewable sources</th><th>Total Mwh</th></tr><tr><td>Total energy consumption</td><td>42.887</td><td>1,320,764</td><td>1,363,651</td></tr></table>Excludes Shire plc.</td></tr>
<tr><td colspan="3">GRI 305: Emissions</td></tr>
<tr><td>103-1</td><td>Explanation of the material topic and its Boundary</td><td>ENVIRONMENT
Climate Change</td></tr>
<tr><td>103-2</td><td>The management approach and its components</td><td>ENVIRONMENT
Climate Change</td></tr>
<tr><td>103-3</td><td>Evaluation of the management approach</td><td>ENVIRONMENT
Climate Change</td></tr>
<tr><td>305-1</td><td>Direct (Scope 1) GHG emissions</td><td>ENVIRONMENT
Climate Change — Managing Greenhouse Gas Emissions From Our Operations - FY2018 CO_2 Emission Summary</td></tr>
<tr><td>305-2</td><td>Energy indirect (Scope 2) GHG emissions</td><td>ENVIRONMENT
Climate Change — Managing Greenhouse Gas Emissions From Our Operations — FY2018 CO_2 Emission Summary</td></tr>
<tr><td>305-3</td><td>Other indirect (Scope 3) GHG emissions</td><td>ENVIRONMENT
Climate Change — Managing Greenhouse Gas Emissions From Our Operations — FY2018 CO_2 Emission FY2018 Summary, Working With Our Partners to Curb Climate Change — FY2018 Takeda Scope 3 Emissions</td></tr>
<tr><td>305-5</td><td>Reduction of GHG emissions</td><td>ENVIRONMENT
Climate Change — Strategy and Performance — CO_2 Emissions</td></tr>
<tr><td colspan="3">GRI 307: Environmental Compliance</td></tr>
<tr><td>103-1</td><td>Explanation of the material topic and its Boundary</td><td>ENVIRONMENT
Environmental Management</td></tr>
<tr><td>103-2</td><td>The management approach and its components</td><td>ENVIRONMENT
Environmental Management</td></tr>
<tr><td>103-3</td><td>Evaluation of the management approach</td><td>ENVIRONMENT
Environmental Management</td></tr>
<tr><td>307-1</td><td>Non-compliance with environmental laws and regulations</td><td>No incidences of noncompliance with environmental laws and regulations to report.</td></tr>
</table>

GRI Standards Reference Table (continued)

Disclosure Number	Description	2019 Reference/Response
GRI 308: Supplier Environmental Assessment		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Supply Chain Management
103-2	The management approach and its components	**BUSINESS** Supply Chain Management
103-3	Evaluation of the management approach	**BUSINESS** Supply Chain Management
308-2	Negative environmental impacts in the supply chain and actions taken	**BUSINESS** Supply Chain Management — Supplier Due Diligence and Sustainability Engagement
GRI 400: Social		
GRI 403: Occupational Health and Safety		
103-1	Explanation of the material topic and its Boundary	**WORKPLACE** Occupational Health and Safety
103-2	The management approach and its components	**WORKPLACE** Occupational Health and Safety
103-3	Evaluation of the management approach	**WORKPLACE** Occupational Health and Safety
403-1	Occupational health and safety management system	**WORKPLACE** Occupational Health and Safety — Safe Takeda
403-2	Hazard identification, risk assessment, and incident investigation	**WORKPLACE** Occupational Health and Safety — Safe Takeda, Manufacturing Safety Initiatives
403-3	Occupational health services	**WORKPLACE** Occupational Health and Safety — Safe Takeda, Manufacturing Safety Initiatives
403-4	Worker participation, consultation, and communication on occupational health and safety	We ensure the participation and consultation of our employees, employee representatives, and partners, where appropriate, when developing and improving our processes.
403-5	Worker training on occupational health and safety	**WORKPLACE** Occupational Health and Safety — Safe Takeda, Manufacturing Safety Initiatives
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	**WORKPLACE** Occupational Health and Safety — Safe Takeda, Manufacturing Safety Initiatives
403-9	Work-related injuries	**WORKPLACE** Occupational Health and Safety — Safe Takeda — Safe Takeda Performance

GRI Standards Reference Table (continued)

Disclosure Number	Description	2019 Reference/Response
GRI 404: Training and Education		
103-1	Explanation of the material topic and its Boundary	**WORKPLACE** Global Talent Management
103-2	The management approach and its components	**WORKPLACE** Global Talent Management
103-3	Evaluation of the management approach	**WORKPLACE** Global Talent Management
404-2	Percentage of employees receiving regular performance and career development reviews	**WORKPLACE** Regular performance reviews are given to 92 percent of Takeda employees.
GRI 408: Child Labor		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-2	The management approach and its components	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-3	Evaluation of the management approach	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
408-1	Operations and suppliers at significant risk for incidents of child labor	In markets where we have identified the potential for supply chain risks related to human rights, we use a number of enhanced assessment approaches. In FY2018, these assessments did not identify modern slavery risks in the form of forced or child labor, human trafficking, slavery, or servitude.
GRI 409: Forced or Compulsory Labor		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-2	The management approach and its components	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-3	Evaluation of the management approach	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	In markets where we have identified the potential for supply chain risks related to human rights, we use a number of enhanced assessment approaches. In FY2018, these assessments did not identify modern slavery risks in the form of forced or child labor, human trafficking, slavery, or servitude.
GRI 412: Human Rights Assessment		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-2	The management approach and its components	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
103-3	Evaluation of the management approach	**BUSINESS** Supply Chain Management — Human Rights in the Supply Chain
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	**BUSINESS** Supply Chain Management — Ethical Sourcing & Supplier Risk Management KPIs, Supplier Code of Conduct
GRI 413: Local Communities		
103-1	Explanation of the material topic and its Boundary	**APPROACH** Our Approach to Sustainable Value
103-2	The management approach and its components	**APPROACH** Our Approach to Sustainable Value
103-3	Evaluation of the management approach	**APPROACH** Our Approach to Sustainable Value
413-1	Operations with local community engagement, impact assessments, and development programs	**APPENDIX** Disaster Relief

GRI Standards Reference Table (continued)

Disclosure Number	Description	2019 Reference/Response
GRI 414: Supplier Social Assessment		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Supply Chain Management
103-2	The management approach and its components	**BUSINESS** Supply Chain Management
103-3	Evaluation of the management approach	**BUSINESS** Supply Chain Management
414-1	New suppliers that were screened using social criteria	**BUSINESS** Supply Chain Management — Supplier Code of Conduct, Supplier Due Diligence and Sustainability Engagement
GRI 416: Customer Health and Safety		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Quality Management — Product Quality and Safety
103-2	The management approach and its components	**BUSINESS** Quality Management — Product Quality and Safety
103-3	Evaluation of the management approach	**BUSINESS** Quality Management — Product Quality and Safety
416-1	Assessment of the health and safety impacts of product and service categories	**BUSINESS** Quality Management — Product Quality and Safety
GRI 419: Socioeconomic Compliance		
103-1	Explanation of the material topic and its Boundary	**BUSINESS** Ethics and Compliance Medical Ethics
103-2	The management approach and its components	**BUSINESS** Ethics and Compliance Medical Ethics
103-3	Evaluation of the management approach	**BUSINESS** Ethics and Compliance Medical Ethics
419-1	Non-compliance with laws and regulations in the social and economic area	There are no fines or nonmonetary sanctions for noncompliance to report.

Independent Assurance

Independent Assurance Report

To the President and CEO of Takeda Pharmaceutical Company Limited

We were engaged by Takeda Pharmaceutical Company Limited (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with ☑ (the "Indicators") for the period from April 1, 2018 to March 31, 2019 included in its 2019 Sustainable Value Report (the "Report") for the fiscal year ended March 31, 2019.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information', 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing of the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting the Grange Castle site of Takeda Ireland Limited selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
November 11, 2019

Independent Assurance (continued)

INDEPENDENT ASSURANCE STATEMENT

Introduction and objectives of work

Apex Companies, LLC (Apex) was engaged to conduct an independent assurance of environmental, health and safety (EHS) data to be reported by Shire plc, now part of Takeda Pharmaceutical Company Ltd. for the first quarter of calendar year 2019 (January 1 through March 31, 2019). This Assurance Statement applies to the related information included within the scope of work described below.

Scope of work

The scope of our work was limited to assurance over the following EHS Data included within Takeda's Annual Sustainability Report ('the Report') for the first quarter of calendar year of 2019 (the 'Selected Information'):

- Air Emissions (NOx and SOx emissions from stationary equipment);
- Energy (consumption and renewable energy);
- Greenhouse Gas Emissions (Scope 1 emissions and Scope 2 emissions);
- Water consumption;
- Waste generation and disposition;
- Reportable Spills and Releases; and
- Health & Safety data.

Reporting Criteria

The Selected Information needs to be read and understood together with the Global Reporting Initiative (GRI) Standards and the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard used by Shire as the basis of their reporting.

Limitations and Exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Data outside the defined assurance period, the first quarter of calendar year of 2019.
- Any financial data (e.g., revenues) previously audited by an external third party.

Responsibilities

The preparation and presentation of the Selected Information in the Report are the sole responsibility of the management of Shire.

Apex was not involved in the determination of the Selected Information. Our responsibilities were to:

- obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- report our conclusions to Shire's management.

Independent Assurance (continued)

Assessment Standard

We performed our work in accordance with International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after December 15, 2015), issued by the International Auditing and Assurance Standards Board.

Summary of work performed

As part of Apex's limited assurance, Apex undertook the following activities:

1. Assessing the appropriateness of the Reporting Criteria for the Selected Information;
2. Conducting interviews with relevant Shire personnel responsible for collecting and reporting EHS performance data. These interviews included discussions with staff members responsible for contributing data within the scope of this assurance;
3. Reviewing the data collection and consolidation processes used to compile Selected Information, including assessing assumptions made, and the data scope and reporting boundaries;
4. Reviewing documentary evidence produced by Shire to support EHS data within the scope of this assurance;
5. Comparing a selection of the Selected Information to the corresponding source documentation;
6. Reviewing Shire data and information systems used for collection, aggregation, analysis and review of the Selected Information;
7. Assessing the disclosure and presentation of the Selected Information to ensure consistency with assured information; and
8. Conducting other verification activities including:
    a. conducting remote review of data from manufacturing sites located in Lexington, Massachusetts, USA; Los Angeles, California, USA; and Lessines, Belgium;
    b. reperforming a selection of aggregation calculations of the Selected Information;
    c. reperforming greenhouse gas emissions conversions and calculations;
    d. comparing the Selected Information to the prior year amounts taking into consideration changes in business activities, acquisitions and divestitures; and
    e. evaluating the design of internal systems, processes and controls to collect and report the Selected Information.

Conclusion

On the basis of our methodology and the activities described above:

- Nothing has come to our attention to indicate that the Selected Information is not fairly stated in all material respects;
- It is our opinion that Shire has established appropriate systems for the collection, aggregation and quantitative analysis of EHS data within the scope of this assurance.

A summary of the Selected Information within the scope of this assurance is attached.

Statement of Independence, Integrity and Competence

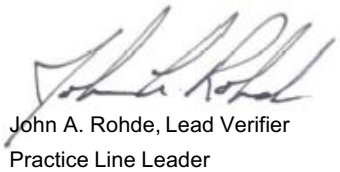
Apex is an independent professional services company that specialises in environmental, health, safety and social accountability with over 30 years history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest.

Independent Assurance (continued)

No member of the assurance team has a business relationship with Shire, its Directors or Managers beyond that required of this assignment. We have conducted this verification independently, and there has been no conflict of interest.

The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has over 20 years combined experience in this field and an excellent understanding of Apex's standard methodology for the verification of environmental, social, ethical and health and safety information, systems, processes and data.



John A. Rohde, Lead Verifier
Practice Line Leader
Sustainability and Climate Change Services
Health, Safety and Environmental Services

Trevor A. Donaghu, Technical Reviewer
Principal Sustainability Consultant
Sustainability and Climate Change Services
Health, Safety and Environmental Services

Apex Companies, LLC
Lakewood, Colorado
November 5, 2019

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For the purposes of this notice, "report" means this document, any oral presentation, any question and answer session and any written or oral material discussed or distributed by Takeda Pharmaceutical Company Limited ("Takeda") regarding this report. This report (including any oral briefing and any question-and-answer in connection with it) is not intended to, and does not constitute, represent or form part of any offer, invitation or solicitation of any offer to purchase, otherwise acquire, subscribe for, exchange, sell or otherwise dispose of, any securities or the solicitation of any vote or approval in any jurisdiction. No shares or other securities are being offered to the public by means of this report. No offering of securities shall be made in the United States except pursuant to registration under the U.S. Securities Act of 1933, as amended, or an exemption therefrom. This report is being given (together with any further information which may be provided to the recipient) on the condition that it is for use by the recipient for information purposes only (and not for the evaluation of any investment, acquisition, disposal or any other transaction). Any failure to comply with these restrictions may constitute a violation of applicable securities laws.

The companies in which Takeda directly and indirectly owns investments are separate entities. In this report, "Takeda" is sometimes used for convenience where references are made to Takeda and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies.

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This report and any materials distributed in connection with this report may contain forward-looking statements, beliefs or opinions regarding Takeda's future business, future position and results of operations, including estimates, forecasts, targets and plans for Takeda. Without limitation, forward-looking statements often include words such as "targets", "plans", "believes", "hopes", "continues", "expects", "aims", "intends", "ensures", "will", "may", "should", "would", "could" "anticipates", "estimates", "projects" or similar expressions or the negative thereof. Forward-looking statements in this document are based on Takeda's estimates and assumptions only as of the date hereof. Such forward-looking statements do not represent any guarantee by Takeda or its management of future performance and involve known and unknown risks, uncertainties and other factors, including but not limited to: the economic circumstances surrounding Takeda's global business, including general economic conditions in Japan and the United States; competitive pressures and developments; changes to applicable laws and regulations; the success of or failure of product development programs; decisions of regulatory authorities and the timing thereof; fluctuations in interest and currency exchange rates; claims or concerns regarding the safety or efficacy of marketed products or product candidates; the timing and impact of post-merger integration efforts with acquired companies; and the ability to divest assets that are not core to Takeda's operations and the timing of any such divestment(s), any of which may cause Takeda's actual results, performance, achievements or financial position to be materially different from any future results, performance, achievements or financial position expressed or implied by such forward-looking statements. For more information on these and other factors which may affect Takeda's results, performance, achievements, or financial position, see "Item 3. Key Information—D. Risk Factors" in Takeda's most recent Annual Report on Form 20-F and Takeda's other reports filed with the U.S. Securities and Exchange Commission, available on Takeda's website at: https://www.takeda.com/investors/reports/sec-filings/ or at www.sec.gov. Future results, performance, achievements or financial position of Takeda could differ materially from those expressed in or implied by the forward-looking statements. Persons receiving this report should not rely unduly on any forward-looking statements. Takeda undertakes no obligation to update any of the forward-looking statements contained in this report or any other forward-looking statements it may make, except as required by law or stock exchange rule. Past performance is not an indicator of future results and the results of Takeda in this report may not be indicative of, and are not an estimate, forecast or projection of Takeda's future results.

Medical information

This report contains information about products that may not be available in all countries, or may be available under different trademarks, for different indications, in different dosages, or in different strengths. Nothing contained herein should be considered a solicitation, promotion or advertisement for any prescription drugs including the ones under development.

Financial information

Takeda's financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS").

The revenue of Shire plc ("Shire"), which were presently, presented in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"), have been conformed to IFRS, without material difference.

The Shire acquisition closed on January 8, 2019, and our consolidated results for the fiscal year ended March 31, 2019 include Shire's results from January 8, 2019 to March 31, 2019. References to "Legacy Takeda" businesses are to our businesses held prior to our acquisition of Shire. References to "Legacy Shire" businesses are to those businesses acquired through the Shire acquisition.

This report includes certain pro forma information giving effect to the Shire acquisition as if it had occurred on April 1, 2018. This pro forma information has not been prepared in accordance with Article 11 of Regulation S-X. This pro forma information is presented for illustrative purposes and is based on certain assumptions and judgments based on information available to us as of the date hereof, which may not necessarily have been applicable if the Shire acquisition had actually happened as of April 1, 2018. Moreover, this pro forma information gives effect to certain transactions and other events which are not directly attributable to the Shire acquisition and/or which happened subsequently to the Shire acquisition, such as divestitures and the effects of the purchase price allocation for the Shire acquisition, and therefore may not accurately reflect the effect on our financial condition and results of operations if the Shire acquisition had actually been completed on April 1, 2018. Therefore, undue reliance should not be placed on the pro forma information included herein.

Takeda Pharmaceutical Company Limited
Takeda Global Headquarters
1-1, Nihonbashi-Honcho 2-chome, Chuo-ku, Tokyo
103-8668, Japan
Tel:+81-3-3278-2111 Fax:+81-3-3278-2000