



**SONY**

**CSR REPORT**

**2015**

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## About CSR Reporting

Sony first issued its environmental report in 1994, then enhanced the information related to corporate social responsibility (CSR) and changed the name of report to "CSR report" in 2003. In 2012 and 2013, Sony issued its Annual Report which included its financial and CSR information.

In order to update disclosure information rapidly against the changes of Sony's business area and its circumstances, Sony is disclosing its CSR activities mainly on this website from 2014.

You also find more detail of Sony's CSR activities on this website.

### Reporting Scope and Composition

- This website summarizes the CSR activities of the Sony Group worldwide during fiscal 2014 (which began on April 1, 2014 and ended on March 31, 2015). It also includes reporting on some material activities, such as major organizational changes, up to the end of July, 2015. In this website, the Sony Group refers to Sony Corporation - the parent company that operates in Japan - and all consolidated subsidiaries in which Sony Corporation holds a capital stake of more than 50%. "Sony" and "the Group" refer to the Sony Group. For consolidated subsidiaries, please see "Affiliated Companies (Japan)" and "Affiliated Companies (Outside Japan)."
- Sony discloses its operating and financial results on its "[Investor Relations](#)" website and information on its CSR activities on its CSR website.
- This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines and the Environmental Reporting Guidelines (Fiscal year 2012 version) published by Japan's Ministry of the Environment. For comparative tables charting content covered in accordance with the GRI Sustainability Reporting Guidelines, please see below.

### [GRI Sustainability Reporting Guidelines G4 and Content Index](#)

- Materiality for defining content has been identified by two axes (materiality matrix): Sony views CSR materiality assessment as a process for understanding issues of importance to its various stakeholders as well as its business and for validating its CSR agenda in a manner which will help to prioritize its CSR initiatives.

#### CSR at Sony

- A third-party report on verification of environmental data is available below.

#### Independent Verification Report

## Management Message



Updated on August 21, 2015

Sony's mission is to inspire curiosity, providing deeply appealing products, content, and services that excite customers all over the world. To achieve this, we are determined to live out the spirit expressed in Sony's Founding Prospectus -innovation and challenge, which are the roots of our unique corporate culture.

The Sony Group conducts business in a vast range of fields, so operating conditions and stakeholders' interests and expectations of Sony vary widely depending on our business presence in each of these areas. Recognizing this tremendous diversity, we are carrying out our corporate social responsibility (CSR) initiatives as a good global corporate citizen, and have set a CSR agenda comprised of seven key areas that span broadly across all of Sony's specific businesses: corporate governance, compliance, human resources, responsible sourcing, quality and services, environment, and community engagement. By operating businesses that are innovative, ethical, sound and responsible, we intend to continuously enhance corporate value while striving to help build a better, more sustainable world for all.

A new Corporate Governance Code was introduced by a cross-industry council of experts in Japan in June 2015, aiming to establish fundamental principles for effective corporate governance at listed companies. This new Code encourages companies to take self-motivated actions to achieve sustainable growth and increase corporate value over the mid- to long-term and also sets expectations that Japanese companies ensure accountability, establish appropriate relationships with stakeholders and promote diversity and inclusion.

Sony has long recognized that corporate governance is extremely important in operating in a way that increases corporate value over the mid- to long-term. Thus, Sony strengthened its corporate governance structure under the "Company with Three Committees" system in 2003 and since then has worked to further enhance it through several initiatives. Sony will continue to do so, embracing the principles of the Code and reviewing them thoroughly with its management team and Board of Directors.

Sony's corporate culture has always given high regard to diversity, and I believe this is the source of Sony innovation and is absolutely essential for creating new value while achieving business growth. To realize the broader mission of our business, it is crucial that Sony employees around the world make the most of their diverse talents and backgrounds to explore new ways to innovate and constantly take on new challenges, unconstrained by the status quo.

Sony also continuously devotes its talents to preserving the natural environment for future generations. Sony's long-term vision is to achieve a "zero environmental footprint" throughout all stages of its product lifecycles and business activities by 2050. To that end, we introduced our new "Green Management 2020" group environmental mid-term targets in June 2015 for the 2016 to 2020 period, which aim for a 30% reduction in the average annual energy consumption of electronic products, as well as other ambitious environmental goals.

While working to help build a better and more sustainable world, Sony will continue fostering a corporate culture that values CSR by pursuing initiatives in the seven key areas mentioned above. As we pursue these endeavors, we look forward to engaging in meaningful dialogue with our stakeholders that will help inform how we approach this important work.

A handwritten signature in black ink, appearing to read 'Kazuo Hirai', enclosed within a simple hand-drawn oval shape.

Kazuo Hirai  
President and Chief Executive Officer  
Representative Corporate Executive Officer  
Sony Corporation

## CSR at Sony

"It is the core corporate responsibility of Sony Group to the society to pursue its corporate value enhancement through innovation and sound business practice."

(Sony Group Code of Conduct, adopted in May 2003)



Sony's corporate social responsibility (CSR) activities reflect its philosophy of implementing sound business practices; innovating to realize products, services and content that inspire and excite; assisting the communities in which we operate; and helping to shape a better, more sustainable society. Sony believes that these activities both benefit society and enhance corporate value.

## Verifying Key CSR Agenda and Determining Materiality

### Objective of Conducting Materiality Assessment

Sony currently promotes CSR initiatives in line with its CSR agenda, which sets seven key areas of focus - corporate governance, compliance, human resources, responsible sourcing, quality and services, environment and community engagement - with the aim of strengthening its operating foundation and continuously enhancing its corporate value. Stakeholder input on CSR-related issues and suggestions are fed back to management and to pertinent Sony departments (e.g., legal, compliance, environment, product quality, procurement



and human resources), to be incorporated into key actions, including the formulation of Sony Group policies. Sony's CSR section is tasked with monitoring the progress of initiatives and disclosing information about Sony's efforts by preparing CSR reports and promoting dialogue with stakeholders.

### CSR Organizational Structure

To align and respond effectively to evolving social imperatives and changes in the business environment, Sony recently conducted a CSR materiality assessment with BSR (Business for Social Responsibility), an independent organization with expertise in global CSR trends and international standards, with the aim of validating its CSR agenda by incorporating the perspectives of stakeholders and to identify emerging CSR topics relevant to new business areas.

### CSR Materiality Assessment Process

The Sony Group is a global organization with a broad business portfolio. Sony is engaged in the development, design, manufacture, and sale of various kinds of electronic equipment and devices for consumer and professional markets as well as game consoles and software. Sony is also engaged in the production and distribution of motion pictures, television programs, music, and digital networks. Further, Sony is also engaged in various financial services businesses through its Japanese insurance subsidiaries and banking operations through a Japanese Internet-based banking subsidiary. Given the diversity of the Group's operations, the expectations of its stakeholders regarding its CSR initiatives also vary. Sony views CSR materiality assessment as a process for understanding issues of importance to multi-stakeholders as well as business and validating its CSR agenda which will help us prioritize our CSR initiatives.

In conducting the CSR materiality analysis, we first identified global CSR issues of particular relevance to Sony. We then looked at issues that are most significant today as well as emerging issues to its external stakeholders, which include nongovernmental organizations (NGOs), customers, and socially responsible

investors, as well as at stakeholders' views regarding the changes in roles and responsibilities of corporations. Sony then assessed those issues likely to have the most importance to business and identified topics that are material from both a stakeholder and a business perspective.

### Stakeholder Engagement and Partnership

## Key Findings

Sony's materiality assessment reaffirmed the importance of the seven key areas of its CSR agenda, so Sony will continue to focus on these areas. The assessment also showed a cluster of topics related to Sony's electronics business, including managing its operations' social and environmental impact and improving transparency across the supply chain, as being of particular concern to stakeholders. In addition, the assessment identified emerging topics such as those concerning the management of content and information with the growth of Sony's network and entertainment businesses. The assessment also identified topics over which Sony has limited influence or which have already been addressed through ongoing programs. At the same time, the assessment showed that stakeholders have high expectations regarding innovation in developing sustainable products and services and creating value for society.

Going forward, Sony pledges to continue working to better understand the expectations of its stakeholders and to address the challenges and opportunities identified through the materiality assessment.

## CSR at Sony

Updated on August 21, 2015

### CSR Organizational Structure

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Sony has established an internal organizational structure for CSR implementation, led by an organization based at Sony Corporation headquarters and overseen by the executive officer in charge of CSR. The organization plans and sets objectives for CSR-related initiatives, makes these initiatives known throughout the Sony Group, and provides relevant information to the public.

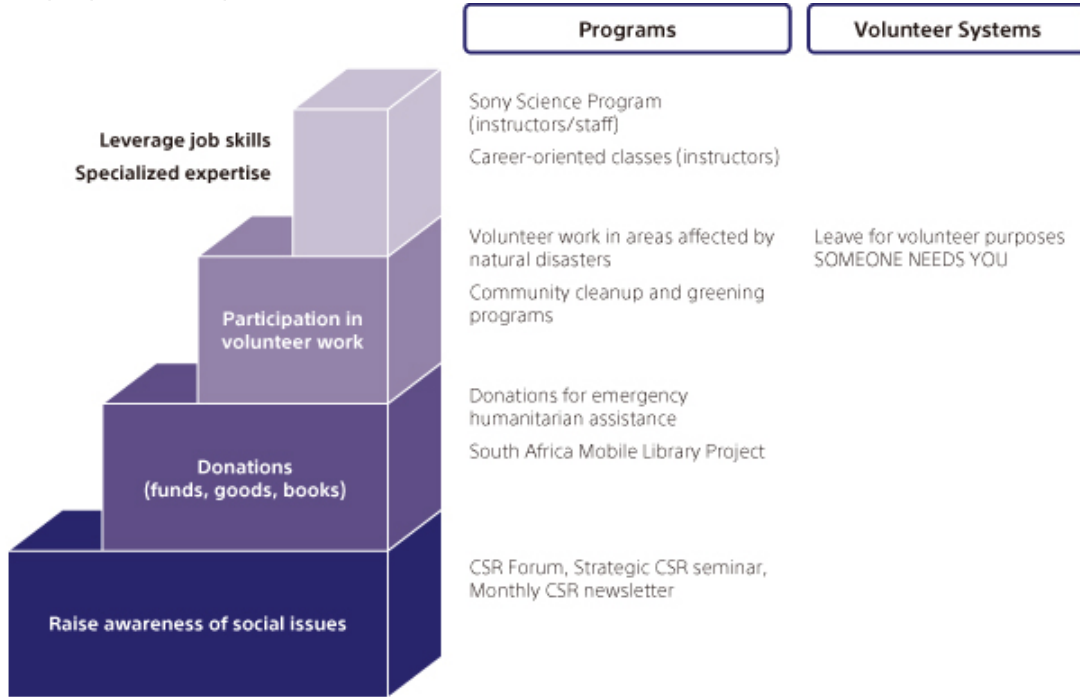
The department also discloses CSR-related information to the public, promotes dialogue with stakeholders, reports on various external inputs to the CSR officer, and works to ensure that these external inputs reach pertinent managers and relevant departments at headquarters (including those in charge of legal affairs and compliance, the environment, product quality, procurement, human resources, and marketing) and are incorporated into management's actions. The relevant departments then implement CSR activities throughout the Group by ensuring policies and initiatives thus incorporated are conveyed to Group companies.

### Raising Awareness

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Recognizing the importance of raising employee awareness with regard to the effective promotion of CSR, Sony offers a variety of educational programs based on a three-level approach, whereby employees are encouraged first to learn about CSR, second to participate in CSR activities and third to incorporate CSR into their day-to-day work.

Employee Participation in CSR Activities



e-learning

CSR training for new employees and managers focuses on instilling know-how and introducing Sony's CSR program.

CSR Update (Newsletter)

Sony publishes *CSR Update*, a monthly newsletter for Sony Group employees detailing Sony's principal CSR initiatives and reporting on related awards received from third parties and CSR trends.



CSR Forum

Held after hours and completely voluntary, the CSR Forum provides Sony employees in Japan with the opportunity to increase their knowledge of CSR. This event features lectures by invited experts, film screenings and other activities, and addresses a variety of themes, including emergency relief, the environment,

human rights, poverty, international understanding, employment opportunities for persons with disabilities, work-life balance and diversity, base-of-the-pyramid (BOP) businesses and social innovation. Employees of Sony Group companies were able to view the proceedings via streamed video or other media, substantially boosting participation in the event.

## Employee Participation

Sony believes that employee participation is crucial to ensuring its community engagement activities are truly meaningful. Accordingly, Sony encourages employees to be aware of social issues, strive constantly to deepen their understanding and then participate in fundraising initiatives, community projects and/or other activities. Sony also encourages employees to act as instructors for workshops organized for children and students and in other capacities that capitalize on their specialized skills.

### Volunteer systems for employees

- Leave for volunteer purposes
- "SOMEONE NEEDS YOU" (employee volunteer program)

### Volunteer initiatives

- [Employee volunteer work in areas affected by the Great East Japan Earthquake](#)
- [Instructors and staff for Sony Science Program](#)
- Cleanup activities and tree-planting, among others

### Fundraising and donation programs

- Emergency humanitarian assistance
- [South Africa Mobile Library Project](#)

#### Related information:

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[Volunteer systems for employees](#)

# CSR at Sony

Updated on August 21, 2015

## Stakeholder Engagement and Partnership

Recognizing that conduct that is socially and professionally acceptable in one culture or region may be viewed differently in another, personnel are required to give careful consideration to cultural and regional differences in performing their duties. (Sony Group Code of Conduct)

### Relations with Stakeholders

Sony understands that addressing issues of interest to its many stakeholders is intrinsically linked to its ability to ensure a strong operating foundation, which is in turn vital to ensuring the well-being and sustainability of its business activities and to achieving sustainable growth. Sony's CSR initiatives reflect this understanding. Sony works to earn the trust of its stakeholders through its business activities, as well as through a range of CSR initiatives.

Stakeholders	Principal Goals	Page to Visit
Customers	<ul style="list-style-type: none"> <li>● Provide products that deliver satisfaction, safety and peace of mind from the customer's perspective</li> <li>● Provide customer service that further enhances customer satisfaction</li> <li>● Enhance usability and accessibility</li> </ul>	<a href="#">Quality and Services</a>

<p><b>Shareholders</b></p>	<ul style="list-style-type: none"> <li>● Ensure swift and appropriate disclosure</li> <li>● Achieve continued growth in corporate value</li> </ul>	<p><a href="#">Investor Relations</a></p>
<p><b>Business partners</b></p>	<ul style="list-style-type: none"> <li>● Ensure appropriate, transparent and fair procurement practices, in line with the Sony Group Code of Conduct</li> <li>● Ensure that procurement practices are in harmony with the environment and society (including labor issues, human rights and conflict minerals)</li> </ul>	<p><a href="#">Responsible Sourcing</a></p>
<p><b>Employees</b></p>	<ul style="list-style-type: none"> <li>● Support employees with diverse backgrounds</li> <li>● Promote diversity in hiring</li> <li>● Foster global business leaders and engineers who will drive growth in the future</li> <li>● Support individual career-building efforts)</li> <li>● Promote dialogue through employee surveys and town hall meetings</li> </ul>	<p><a href="#">Human Resources</a></p>

<p><b>Local communities</b></p>	<ul style="list-style-type: none"> <li>● Promote initiatives that contribute to communities in fields where Sony is best able to do so</li> <li>● Provide emergency relief</li> <li>● Work with NGOs and NPOs to help resolve issues facing society</li> </ul>	<p>Community</p> <p>Community Engagement</p> <p>Environment</p>
<p><b>Global environment</b></p>	<ul style="list-style-type: none"> <li>● Reduce the environmental footprint of Sony's business activities and products throughout their life cycle to zero             <ul style="list-style-type: none"> <li>- Reduce CO2 emissions of Sony's business activities and products throughout their life cycle to zero</li> <li>- Reduce the volume of virgin resources used and maximize the use of recycled resources; conserve water resources; and promote the collection and recycling of end-of-life products</li> <li>- Prevent pollution by reducing the volume of chemical substances used</li> <li>- Promote the conservation and restoration of biodiversity and the sustained use of biodiversity-friendly products</li> </ul> </li> </ul>	<p>Environment</p>



<p>NGOs, NPOs and other organizations</p>	<ul style="list-style-type: none"> <li>● Collaborate with NGOs and NPOs to help address social challenges</li> <li>● Participate in global frameworks</li> <li>● Participate in CSR-related organizations and projects</li> </ul>	<p>Community Engagement</p> <p>Partnership and Participation in Multi-stakeholder Frameworks</p>
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## Partnership and Participation in Multi-stakeholder Frameworks

For Sony, engaging and working together with various stakeholders is vital for pursuing CSR activities. Sony not only promotes engagement with stakeholders in implementing its CSR activities but also encourages the participation of multi-stakeholder groups in the planning of those activities, thereby contributing to the creation of a global framework for social responsibility.

### Collaboration with Environmental NGOs

In July 2006, Sony joined the Climate Savers Programme, which is a partnership between the World Wide Fund for Nature (WWF), a leading environmental protection NGO, and various



companies in the drive to reduce greenhouse gas emissions. Through the Climate Savers Programme, leading corporations partner with the WWF to establish targets for reducing absolute emissions of CO2 and other greenhouse gases. Progress toward these targets is monitored by an independent body. As of May 2015, 29 corporations worldwide had signed on as Climate Savers Programme partners.

As a member of the programme, Sony committed to achieving a 7% reduction in emissions of greenhouse gases from all of its sites compared to the fiscal 2000 level by the end of fiscal 2010, as well as to lowering energy consumption by its products and working with the WWF to communicate with customers.

In November 2009, Sony announced a new set of climate change-related targets for fiscal 2011 and beyond. These are to (a) achieve an absolute reduction in greenhouse gas emissions - measured in CO<sub>2</sub> emissions - from Sony Group sites of 30% compared to the fiscal 2000 level by the end of fiscal 2015; and (b) achieve a reduction in power consumption per product of 30% from the fiscal 2008 level by the end of fiscal 2015. These targets were reviewed and approved by the WWF as revised targets for Sony under the Climate Savers Programme.

In February 2008, Sony and the WWF co-hosted the Climate Savers Tokyo Summit 2008, which was held at Sony's Tokyo headquarters and attended by representatives of current and prospective programme participants. The highlight of the event was the announcement by then Sony Chairman and CEO Howard Stringer of the Tokyo Declaration, signed by 12 Climate Savers Programme participants. On behalf of the signatory companies, Mr. Stringer declared support for the Intergovernmental Panel on Climate Change (IPCC) and its conclusion that global greenhouse gas emissions must peak and begin to drop in the next 10–15 years, to well below half the level recorded in 2000, by the middle of the 21st century. He further declared that the signatory companies will take further action to build a low-carbon society, including trying to widen the scope of emissions reduction activities through greater cooperation with business partners and promoting low-carbon lifestyles to consumers and customers.

## Participation in the Development of a Global Framework

Sony undertakes a wide range of activities with the aim of promoting CSR initiatives. One example was its role as joint chair of the working group on the formulation of the ISO 26000 international guidance standard on social responsibility, published in November 2010, on which Sony submitted reports in

Japan through the Japanese Industrial Standards Committee (JISC). Sony was also involved in the development of a global CSR framework, which includes participating in the multi-stakeholder planning and revision process for the Global Reporting Initiative's (GRI's) *GRI Sustainability Reporting Guidelines*.



## Participation in CSR-Related Organizations and Projects

Sony is a member of numerous global CSR organizations, including Business For Social Responsibility (BSR) and the Council for Better Corporate Citizenship (CBCC). The CBCC was originally established in 1989 as The Council for Better Investment in the United States,\* under an initiative of Nippon Keidanren (Japan Business Federation), with the purpose of promoting good relations between Japan-affiliated companies and various stakeholders, including local communities and employees, by encouraging good corporate citizenship. Sony's founder, Akio Morita, served as the organization's first chairman. Sony intends to continue its active involvement in the CBCC going forward.

\* The Council for Better Investment in the United States was authorized as a public interest incorporated association and its name changed to CBCC in June 2010.



As a member of the Electronic Industry Citizenship Coalition (EICC), an alliance of companies dedicated to CSR in the electronics industry, Sony works to ensure responsible sourcing throughout the supply chain, encompassing consideration for human rights, maintenance of sound labor practices, and conservation of the environment.

## Responsible Sourcing



In addition, Sony is promoting diversity through its involvement in external organizations in countries and regions around the world.

## Collaboration with External Organizations Promoting Diversity

### Launch of the "Eco-Patent Commons"

On 2008, Sony joined forces with IBM (USA), Nokia (Finland), Pitney Bowes (USA) and the World Business Council for Sustainable Development (WBCSD) to launch the "Eco-Patent Commons." This portfolio of patented environmental technologies released by founding and participating members has been made publicly available on the web for anyone to use. As of July 2015, 11 companies in a wide range of industries had released more than 100 patents.

The patents that make up the portfolio include some that address environmental issues, as well as some covering innovative manufacturing and business processes. Releasing these patents encourages their application in the development of innovative products, processes and services that contribute to environmental preservation.

## Eco-Patent Commons





## Corporate Governance



Sony is continuously strengthening its corporate governance system, recognizing that sound corporate governance is extremely important in operating the company effectively, efficiently, and in a way that increases corporate value over the mid- to long-term. To achieve this, Sony approaches its corporate governance through two basic precepts:

(i) The Board of Directors, on which a significant majority of the members are independent outside Directors, focuses on effective oversight of management's operation of the business, including through the activities of the Nominating, Audit and Compensation committees, and maintains a sound and transparent governance framework.

(ii) The Board of Directors determines the fundamental management policies of Sony Group and other material matters and also delegates to each of the Corporate Executive Officers decision-making authority to conduct business operations of Sony Group broadly in line with their respective responsibilities as defined by the Board of Directors, thereby promoting efficient decision-making of Sony Group in a timely manner.

In furtherance of these efforts, in 2003 Sony adopted the "Company with Three Committees" corporate governance system under the Companies Act of Japan. Since then, in addition to complying with the requirements of applicable corporate governance laws and regulations, Sony has introduced its own requirements to help improve and maintain the soundness and transparency of its governance by strengthening the separation of the Directors' function from that of management; maintaining the proper size of the Board, which enables the members of the Board to actively contribute to discussion; and advancing the proper functioning of the statutory committees.

The Mid-Term Corporate Strategy for the Sony Group, which was approved by the Board and announced in February 2015, is available at the following URL:

<http://www.sony.net/SonyInfo/IR/strategy/>

[Governance Structure](#)

[Primary Roles of the Governance Entities](#)

[Sony Initiatives](#)

[Meeting Record](#)

[Cooperation of the Audit Committee and the Internal Audit Function](#)

[Governance Related to the U.S. Sarbanes-Oxley Act](#)

[Board of Directors' Determination Regarding Internal Control and Governance Framework](#)

Risk Management System

Crisis Management System

Business Continuity Plan

# Corporate Governance

Updated on August 21, 2015

## Governance Structure

Sony Corporation is governed by its Board of Directors, which is elected at the annual shareholders' meeting. The Board has three committees (the Nominating Committee, Audit Committee and Compensation Committee), each consisting of Directors named by the Board of Directors. Corporate Executive Officers are appointed by resolution of the Board of Directors. In addition to these statutory bodies and positions, Sony has Corporate Executives who carry out business operations and corporate functions within designated areas.





# Corporate Governance

Updated on August 21, 2015

## Primary Roles of the Governance Entities

### Board of Directors :

- Determines the fundamental management policies of the Sony Group
- Oversees the management of Sony Group's business operations
- Appoints and dismisses the statutory committee members
- Appoints and dismisses Representative Corporate Executive Officers and Corporate Executive Officers

### Nominating Committee:

- Determines the content of proposals regarding the appointment/dismissal of Directors
- Evaluates management succession plans

### Audit Committee:

- Monitors the performance of duties by Directors and Corporate Executive Officers
- Oversees and evaluates the work of the independent auditor, including to propose its appointment/dismissal or non-reappointment, to approve its compensation, to evaluate the appropriateness of its audit regarding the financial results and internal control over financial reporting, and to pre-approve its engagement for any other services than audit services to be provided.

**Compensation Committee:**

- Sets policy on the contents of individual compensation for Directors, Corporate Executive Officers, Corporate Executives and Group Executives, and determines the amount and content of individual compensation of Directors and Corporate Executive Officers in accordance with the policy

**Corporate Executive Officers:**

- Make decisions regarding the execution of Sony Group business activities within the scope of the authority delegated to them by the Board of Directors

**Corporate Executives:**

- Carry out business operations within designated areas, including business units, headquarters functions, and/or research and development, in accordance with the fundamental policies determined by the Board of Directors and the Corporate Executive Officers

## Supervision

### Board of Directors

<p><b>Chairman of the Board: Osamu Nagayama*</b> Representative Director, Chairman and Chief Executive Officer, Chugai Pharmaceutical Co., Ltd.</p> <p><b>Kazuo Hirai</b> Representative Corporate Executive Officer, President and CEO, Sony Corporation</p> <p><b>Kenichiro Yoshida</b> Representative Corporate Executive Officer, Executive Deputy President and CFO, Sony Corporation</p> <p><b>Kanemitsu Anraku*</b> Former Representative Director and Executive Vice President, Nissan Motor Co., Ltd.</p> <p><b>Takaaki Nimura*</b> Certified Public Accountant</p>	<p><b>Eikoh Harada*</b> Representative Director, Chairman and CEO, Benesse Holdings, Inc. Representative Director and CEO, Benesse Corporation</p> <p><b>Joichi Ito*</b> Director, MIT Media Lab, Massachusetts Institute of Technology</p> <p><b>Tim Schaaff</b> Former President, Sony Network Entertainment International LLC Independent Startup Advisor</p> <p><b>Kazuo Matsunaga*</b> Former Vice-Minister of Economy, Trade and Industry</p> <p><b>Koichi Miyata*</b> <b>John V. Roos*</b> <b>Eriko Sakurai*</b> President, Sumitomo Mitsui Financial Group, Inc. Former United States Ambassador to Japan Chairman and CEO, Dow Corning Toray Co., Ltd.</p>
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#### Nominating Committee

Osamu Nagayama\* (Chair)  
Koichi Miyata\*  
John V. Roos\*  
Kazuo Hirai

#### Audit Committee

Takaaki Nimura\* (Chair)  
Kanemitsu Anraku\*  
Kazuo Matsunaga\*

#### Compensation Committee

Eikoh Harada\* (Chair)  
Eriko Sakurai\*  
Kenichiro Yoshida

\* An Outside Director who satisfies the requirements under Item 15, Article 2 of the Companies Act of Japan

## Management

### Corporate Executive Officers

<p><b>Kazuo Hirai**</b> Representative Corporate Executive Officer, President and Chief Executive Officer</p> <p><b>Kenichiro Yoshida**</b> Representative Corporate Executive Officer, Executive Deputy President and Chief Financial Officer</p> <p><b>Tomoyuki Suzuki</b> Executive Deputy President, Officer in charge of Device Solutions Business and RDS Platform</p>	<p><b>Shiro Kambe</b> Executive Vice President, Officer in charge of Legal, Compliance, Corporate Communications, CSR and External Relations</p> <p><b>Masashi Imamura</b> Executive Vice President, Officer in charge of Manufacturing, Logistics, Procurement, Quality and Environmental Platform and Engineering Platform</p> <p><b>Shigeki Ishizuka</b> Executive Vice President, Officer in charge of Imaging Products &amp; Solutions Business</p>
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\*\* Representative Corporate Executive Officer concurrently serving as Director

(Name and positions of Directors and Corporate Executive Officers as of July 1, 2015)

[Click to enlarge](#)



Board of Directors, Sony Corporation

# Corporate Governance

Updated on August 21, 2015

## Sony Initiatives

To strengthen its governance structure beyond legal requirements, Sony Corporation includes several provisions in its Charter of the Board of Directors to help ensure the separation of the Board of Directors from the execution of business; to maintain the proper size of the Board, which enables the members of the Board to actively contribute to discussion; and to advance the proper functioning of the statutory committees. The main provisions are as follows:

- separating the roles of the Board chairperson/vice chairperson and Representative Corporate Executive Officers;
- limiting the number of terms of outside Directors;
- appointing chairs of statutory committees from the ranks of outside Directors;
- setting forth qualifications for Directors for the purpose of eliminating conflicts of interest and ensuring independence;
- requiring that at least a Director of the Nominating Committee be a Corporate Executive Officer;
- suggesting that, as a general rule, at least one Director of the Compensation Committee be a Corporate Executive Officer
- prohibiting the CEO or COO of Sony Group (or persons in any equivalent position) from serving on the Compensation Committee;
- discouraging the concurrent appointment of Audit Committee members to other committees; and
- requiring that the Board of Directors consist of not fewer than ten Directors and not more than 20 Directors

## Corporate Governance

Updated on August 21, 2015

### Meeting Record

During the fiscal year ended March 31, 2015, the Board of Directors convened ten times. The Nominating Committee met five times, the Audit Committee met nine times and the Compensation Committee met six times. All 12 Directors participated in all meetings of the Board of Directors held during his/her tenure period of the fiscal year ended March 31, 2015 except for Joichi Ito (Joichi Ito participated in nine meetings out of ten). Also, all nine outside Directors who are members of Committees participated in all of the meetings of each Committee held during the fiscal year ended March 31, 2015. All three outside Directors who are members of the Audit Committee participated in all meetings of the Audit Committee held during his/her tenure period of the fiscal year ended March 31, 2015.

## Corporate Governance

Updated on August 21, 2015

### Cooperation of the Audit Committee and the Internal Audit Function

Sony Corporation has a department in charge of Internal Audit, which coordinates closely with the internal audit departments of major subsidiaries around the world to promote Sony Group's internal audit activities on a global basis. The Sony Corporation Internal Audit department makes periodic presentations to the Audit Committee, the CFO, and the Corporate Executive Officer in charge of Internal Audit. To help assure its independence, the appointment and dismissal of the person in charge of the Sony Corporation Internal Audit department is subject to the prior approval of the Audit Committee.

## Corporate Governance

Updated on August 21, 2015

### Governance Related to the U.S. Sarbanes-Oxley Act

Sony is subject to the Sarbanes-Oxley Act (SOX) regulations because it is a foreign private issuer of equity securities registered with the U.S. Securities and Exchange Commission (SEC) and subject to SEC reporting requirements. Among other requirements, SOX requires the CEO and the CFO of Sony Corporation to sign certain certifications to accompany the Sony Annual Report on Form 20-F filed with the SEC, relating to the "fair presentation" of the consolidated financial statements, disclosure controls and procedures, and internal control over financial reporting. Sony has established "Disclosure Controls and Procedures," outlining the process through which potentially material information is reported from important business units, subsidiaries, affiliated companies and corporate divisions and is reviewed and considered for disclosure in light of its materiality to the Sony Group. The "Disclosure Committee," comprised of officers and senior management of the Sony Group including those who oversee investor relations, accounting, corporate planning, legal, corporate communications, finance, internal audit, human resources and group risk, supervises the preparation of Sony's annual reports, current reports, quarterly earnings releases and other material disclosure, and assists the management in the establishment and implementation of this system and also in undertaking appropriate and timely disclosure. Effective since the fiscal year ended March 31, 2007, SOX also requires the inclusion of a management report on the company's internal control over financial reporting in the Form 20-F. In order to ensure compliance with this requirement, Sony formed a cross-functional steering committee comprised of management in charge of the principal Sony Group headquarters functions to monitor necessary actions including documentation, testing and evaluation of controls and to perform oversight and assessment of the global evaluation. Based on the company's evaluation, management has concluded that Sony maintained effective internal control over financial reporting as of March 31, 2015.

# Corporate Governance

Updated on August 21, 2015

## Board of Directors' Determination Regarding Internal Control and Governance Framework


At a Board meeting held on April 26, 2006, the Board of Directors reaffirmed the internal control and governance framework in effect as of the date of determination and resolved to continue to evaluate and improve such framework going forward, as appropriate. At Board meetings held on May 13, 2009 and April 30, 2015, the Board of Directors amended and updated the internal control and governance framework and resolved to continue to evaluate and improve such framework going forward, as appropriate. These determinations were required by and met the requirements of the Companies Act of Japan.

### Related Links

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[Board of Directors' Determination Regarding Internal Control and Governance Framework Pursuant to the Japanese Companies Act](#)

 [Charter of the Board of Directors](#)

 [Basic policy regarding remuneration for Directors and Corporate Executive Officers and amount of such remuneration \(pages 95-96\)](#)

[Significant differences between the New York Stock Exchange's corporate governance standards and Sony's corporate governance practices \(including the explanation of "outside Directors"\)](#)



## Corporate Governance

Updated on August 21, 2015

### Risk Management System

Each Sony Group business unit, affiliated company and corporate division is expected to review and assess business risks on a regular basis and to detect, communicate, evaluate and respond to risks in its particular business area. In addition, Sony Corporation's Corporate Executive Officers have the authority and responsibility to establish and maintain systems for identifying and controlling risks that have the potential to cause losses or reputational damage to the Sony Group in the areas for which they are responsible. A corporate executive officer in charge of group-wide risk works together with relevant departments to enhance their management systems. Meanwhile, the Group Risk Office of Sony Corporation is responsible for promoting Group-level risk management initiatives, including the enhancement of business continuity plans (BCPs).

## Corporate Governance

Updated on August 21, 2015

### Crisis Management System

One aspect of risk management is the proper handling of crises if and when they arise, and the proper preparation for such crises. Sony's crisis management and business continuity activities predominately occur at the business and operational level closest to the events the Company may encounter. Since some events can have a significant impact on the entire Sony Group as a whole, Sony has established a Group crisis management procedure to enable a swift and organized Group-wide response to crises as needed. Under this system, crises are evaluated and classified into three levels to ensure dynamic and appropriate responses. Level 1 is defined as a crisis with the possibility of significant impact on the Sony Group, and the possibility of serious negative impact on the business of the Sony Group or its reputation, and will be handled under the direction of the CEO. Level 2 is a crisis that is determined not to be Level 1, but which still has the possibility of widespread impact within the Sony Group, and will be addressed by a cross-functional committee composed of headquarters executives relevant to the issue. Level 3 is a crisis that the Corporate Executive Officer in charge of the subject area determines may be resolved within his/her authority.

## Corporate Governance

Updated on August 21, 2015

### Business Continuity Planning

Sony places significant emphasis on the development and maintenance of business continuity plans (BCPs), which include disaster prevention and mitigation, with the objective of reducing the risk of its business being interrupted in the event of a natural disaster, accident or other such event. The BCPs function to try to ensure that critical business operations are not interrupted, even in the event of a disaster, as well as to facilitate the earliest possible recovery of operations, should interruption be unavoidable.

In the fiscal year ended March 31, 2012, the electronics industry struggled to cope with the impact of the Great East Japan Earthquake and severe flooding in Thailand. Sony's employees and top management rallied together, capitalizing on their experiences in implementing measures to ensure business continuity, and succeeded in minimizing the impact of production disruptions.

In the ensuing years, Sony's headquarters and each of the Sony Group's business units and subsidiaries have been conducting ongoing reviews of their respective BCPs. They are working to update and improve plans by identifying, analyzing, and evaluating risks based on new criteria. Recognizing the implementation of effective BCPs as a crucial management responsibility, Sony will also continue to capitalize on its experience in coping with major disasters and to implement effective measures such as enhancement of risk management across its group-wide supply chain.



## Ethics and Compliance



Sony has a strong and well-established commitment to ethical business conduct and compliance with applicable laws and regulations. Our leadership strives continually to demonstrate this commitment by leading through example. The company has also established a Global Compliance Network. The Global Compliance Network is comprised of compliance personnel from around the world who implement Sony's commitment to ethics and compliance, through a mix of messaging, policies, training and auditing.

The Sony Group Code of Conduct anchors the compliance program and provides a statement of our core values and general guidance on key subjects and risk areas. We openly and repeatedly encourage our personnel to raise ethics concerns and ask about the best course of action, and we protect against retaliation for good faith reports of wrongdoing. We have many resources and reporting channels available to help personnel answer ethics questions or raise concerns, including the Sony Ethics & Compliance Hotline ("Hotline"). The Hotline operates independently of ordinary internal reporting structures. Reports to the Hotline are administered by an independent third party, are handled confidentially, and may be anonymous to the extent allowed by local law.

Sony Group Ethics and Compliance System

Sony Group Code of Conduct

Reporting Ethical Concerns

Ethics and Compliance Communications and Training

Compliance Monitoring Program

Sony Group Antitrust/Competition Law Compliance Program

Sony Group Anti-Bribery Program

Basic Approach and Systems to Exclude Anti-Social Forces

Information Security and Privacy

# Ethics and Compliance

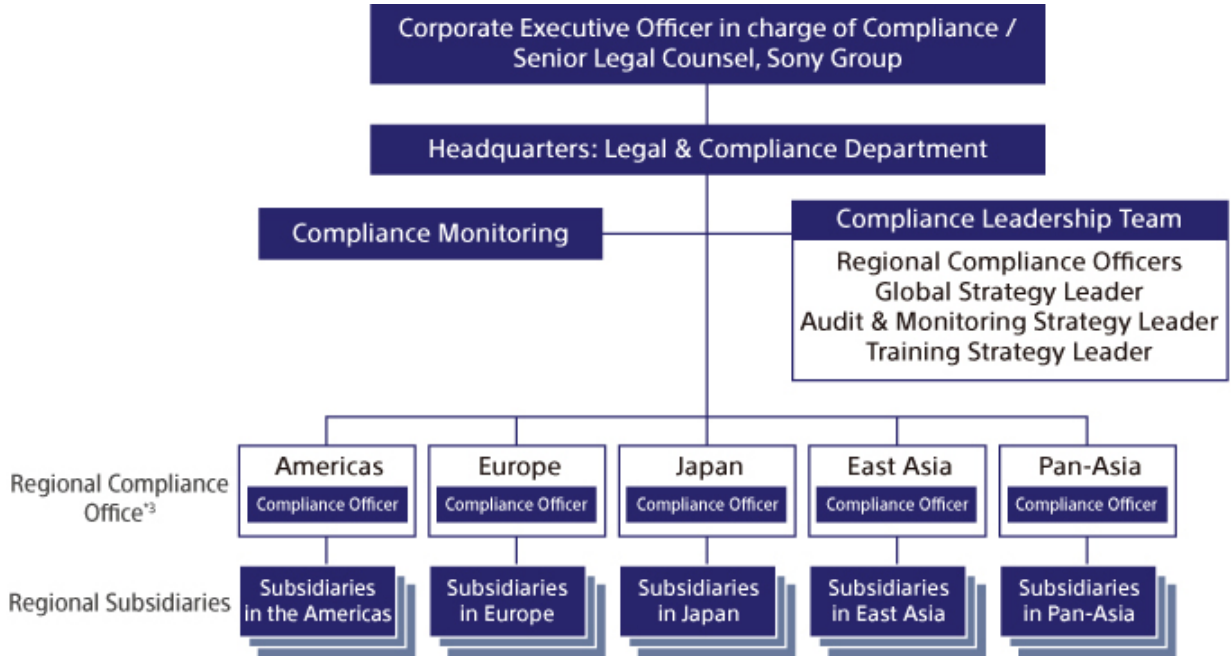
Updated on August 21, 2015

## Sony Group Ethics and Compliance System

The company's Global Compliance Network, which is responsible for active development and implementation of our compliance program, is comprised of a compliance department at the corporate headquarters, regional compliance networks, a global compliance leadership team and a compliance monitoring team. The compliance department at our corporate headquarters (currently, the Legal & Compliance Department) establishes compliance policies and structures for all Sony Group companies. There is also a regional compliance office in each of the following regions: Americas, Europe, Japan, East Asia\*1 and Pan-Asia\*2. Regional Compliance Officers ("RCOs") and legal/compliance personnel from Sony Group companies in each of these regions are charged with implementation of Sony's global compliance programs as well as any additional risks relative to the operations of the specific regional business unit and/or local culture. RCOs have the authority to issue instructions concerning compliance activities in their respective regions and, by coordinating with one another, they maintain a comprehensive global compliance structure. The Compliance Leadership team assists the Legal & Compliance Department by identifying, developing and implementing best-practice compliance strategies and compliance-related measures, and the Compliance Monitoring team monitors and evaluates compliance program activities on an on-going basis. The Sony Corporation Audit Committee receives monthly reports of compliance program and Hotline activities, as well as periodic in-person updates.

\*1 Coverage area of East Asia compliance office: Mainland China, Hong Kong, Taiwan and South Korea

\*2 Coverage area of Pan-Asia compliance office: Southeast Asia, Middle East, Africa and Oceania



\*3 The Americas Office is responsible for Sony Corporation of America, the Sony Pictures Entertainment Group, and the Sony Music Entertainment Group, as well as Electronics Group companies in the America's Region. The Europe, East Asia and Pan-Asia Offices are responsible for the Electronics Group companies in their respective regions. The Japan Office is responsible for Sony Corporation, the Sony Computer Entertainment Group, and Sony Financial Holdings Group, in addition to the Electronics Group Companies in Japan.

# Ethics and Compliance

Updated on August 21, 2015

## Sony Group Code of Conduct

The Sony Group Code of Conduct sets forth our core values and establishes standards of ethical business conduct to be observed by all directors, officers and employees of Sony Group. It also establishes our basic policies on such topics as compliance with laws and rules, fair competition in business dealings, anti-corruption, protection of confidential information and intellectual property, respect for human rights, safety of products and services, environmental conservation and information disclosure.

### [Sony Group Code of Conduct:](#)

The principles set out in the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the United Nations Global Compact and the United Nations Universal Declaration of Human Rights are reflected in the Sony Group Code of Conduct. Sony also participated in the formulation of and observes the standards outlined in the Charter of Corporate Behavior of Keidanren (Japan Business Federation), an alliance of Japan's leading corporations.

[OECD Guidelines for Multinational Enterprises](#)

[United Nations Global Compact](#)

[United Nations Universal Declaration of Human Rights](#)

[Keidanren Charter of Corporate Behavior](#)



Our Code of Conduct has been adopted and implemented by each Sony Group company and is the subject of frequent "tone from the top" messaging both from Sony Corporation top management and local management, as well as training. To date, the Code has been translated into 26 languages. Localized codes of conduct and specialized policies designed to address key risks further support the Sony Group Code of Conduct.

## Ethics and Compliance

Updated on August 21, 2015

### Reporting Ethical Concerns

The company's group-wide ethics and compliance hotline system, the Sony Ethics & Compliance Hotline, is a confidential resource for employees to report concerns or seek guidance about possible violations of laws or internal policies, allowing Sony to respond swiftly to any potential violations.

The Hotline is available to all Sony Group personnel, worldwide, at all times, day or night, via the telephone (toll-free) or via the web. Reports to the Hotline are administered by an independent third party that provides specially trained operators with broad language capabilities. Anyone who reports issues in good faith is protected from retaliation for making the report.

Summaries of hotline reports, results of investigations and updates on the operation of the system are provided periodically to senior management and the Audit Committee.

During fiscal year 2014, the Hotline received approximately 290 reports covering issues primarily relating to employment, labor, work environment, information management and possible conflicts of interest. All reports received are promptly investigated for purposes of verification and appropriate action by Sony compliance personnel, who are supervised by the Corporate Executive in charge of Compliance and the Senior Legal Counsel, Sony Group. We take appropriate disciplinary and/or remedial action when warranted. Any confirmed violations of Sony policies and procedures result in corrective actions such as training, strengthening routines, disciplinary actions and simplifying or updating processes and controls.

Sony Group compliance hotline system



## Ethics and Compliance

Updated on August 21, 2015

### Ethics and Compliance Communication and Training

To help assure consistent global activity to support ethical conduct and compliance with laws and Sony Group policies, and promote the use of the Sony Ethics & Compliance Hotline, Sony established a Compliance Education Protocol that sets forth minimum mandatory global communications and training requirements.

In accordance with this protocol, Sony Group personnel are required to complete periodic comprehensive code of conduct training as well as training on other key risks. These risks include fairness in competition and business dealings, anti-bribery, and the prevention of discrimination and harassment in the workplace. Booklets, wallet cards, posters, online training videos and in-person training (modified for local law and/or culture), are used to raise awareness of the Sony Group Code of Conduct, other key risks and the Hotline. In addition, legal/compliance personnel provide specific guidance and training on key local risks that include real-life examples. Sony continually strives to adapt and improve its ethics and compliance training and communications in light of evolving risks and changes in the business environment and the business.

Sony Corporation's CEO and other members of its senior management also remind employees of the importance of ethical conduct and the need to report ethical concerns through ongoing communications. Through these varied communication and training efforts, Sony continues to promote an understanding of the importance of its core values and ethical business conduct as set forth in the Sony Group Code of Conduct.



In addition, Sony Group executives and senior management are required to submit an annual certification stating that they understand that all personnel must comply with applicable laws, regulations and internal policies (including the Code of Conduct) and the need, in their roles as managers, to communicate the importance of acting ethically and in compliance with applicable laws, regulations and internal policies.

## Ethics and Compliance

Updated on August 21, 2015

### Compliance Monitoring Program

A global Compliance Monitoring team helps to ensure adherence to the Code of Conduct, internal policies and other protocols, and relevant laws. The monitoring program relies on risk assessments, self-assessments, audits and reporting.

Sony Group companies worldwide periodically undertake mandatory compliance self-assessments, which involve self-inspection and detailed reporting of enumerated compliance-related activities, accompanied by supporting documentation submitted for review through an automated Governance Risk and Compliance (GRC) system. The Compliance Monitoring team evaluates the responses and supporting documentation provided and reports the results to senior headquarters management, who in turn reports the information to the Audit Committee. The Compliance Monitoring team also works with the Regional Compliance Officers to perform compliance audits, address reported issues, monitor any necessary remediation and perform investigations as necessary.

## Ethics and Compliance

Updated on August 21, 2015

### **Sony Group Antitrust/Competition Law Compliance Program**

Antitrust and competition laws ("Antitrust Laws") are the foundation upon which a free and competitive market system is built. By guaranteeing free competition in markets, Antitrust Laws enable companies that provide superior products and services on the best terms to achieve ultimate success. Strict compliance with applicable Antitrust Laws is essential, and every individual officer and employee of Sony Group is required to observe all applicable Antitrust Laws in the course of his or her business activity. Sony has adopted the Sony Group Global Policy on Antitrust/Competition Law Compliance to help assure compliance with these Laws. This Policy provides personnel with a broad overview of Antitrust Laws as well as guidance for compliance.

## Ethics and Compliance

Updated on August 21, 2015

### Sony Group Anti-Bribery Program

Sony does not tolerate corrupt behavior under any circumstances. The company has adopted the Sony Group Anti-Bribery Policy, which builds on the anti-bribery and accurate record-keeping requirements in the our Code of Conduct, to help ensure that Sony Group personnel do not violate, or appear to violate, any applicable anti-corruption laws or regulations. This Policy reflects Sony's strong commitment to business ethics and, in particular, establishes procedures that must be followed to help ensure integrity in our dealings with government officials.



## Ethics and Compliance

Updated on August 21, 2015

### Basic Approach and Systems to Exclude Anti-Social Forces

Sony strongly opposes organized crime and other anti-social forces that threaten to disrupt the order and safety of our community. We will not have relationships with members of organized crime and/or other anti-social forces, and we will not give economic benefits to or accept illegal demands from them.

We maintain anti-money laundering policies, supplemented by anti-money laundering "Know Your Customer" procedures and training, to help ensure that we do not do business with inappropriate individuals or entities. These policies thereby also help assure that we do not do business with members of anti-social forces.

## Ethics and Compliance

Updated on August 21, 2015

### Information Security and Privacy

Like many companies, Sony faces an increasingly advanced threat environment in the area of information security. Third parties wishing to compromise the information of global companies continue to increase in number, capability, and persistence. To address this reality, Sony has established an Information Security and Privacy organization headed by a Chief Information Security Officer (CISO). Sony also has established global information security policies and standards, and global privacy policies, which set forth Sony's commitment to information security and privacy and define practices and procedures to be followed by Sony personnel. The CISO and his organization are charged with developing and overseeing the implementation of these policies and standards globally. This organization coordinates with individuals responsible for information security and privacy at Sony Group companies globally to create a Group-wide information security and personal information management system. Under the supervision of the CISO, Sony continuously reinforces internal rules and business processes to further strengthen the information security management framework of the Sony Group and contribute to the protection of personal information. Recognizing that employee awareness of information security and privacy is vital, Sony requires training programs for its employees to raise awareness and improve the overall level of information security and protection for individuals' privacy. The protection of Sony's sensitive information, in particular that which belongs to Sony's employees and customers, remains a global priority.

[Sony Group Privacy Policy](#)



## Human Resources



Sony endeavors to create a rewarding corporate climate that supports the efforts of a diverse range of employees.

Since its establishment in 1946\*, Sony has sought to remain at the forefront of technological development, building continuously on its achievements to create new lifestyles for people everywhere. Sony has also fostered groundbreaking new businesses, adopting an innovative approach to this challenge that exceeds national and regional boundaries. In these efforts, Sony recognizes its employees to be one of the most crucial aspects of its corporate foundation.

To fulfill its commitment to providing uniquely Sony products, services and user experiences that inspire dreams, excite curiosity and enrich lives, Sony acknowledges the importance of securing and fostering talented employees with a wide range of values and personalities, irrespective of nationality, culture, race, gender, age, or the presence or absence of physical limitations. Guided by the concepts of diversity and inclusion, Sony recruits individuals from various backgrounds. Sony also strives to create positive working environments and opportunities that enable individuals with diverse backgrounds to fulfill their potential by learning from one another, believing these to be essential to a rewarding corporate climate.

\* Established as Tokyo Tsushin Kogyo K.K., the company changed its name to Sony Corporation in January 1958.

Employee Data		
Diversity	Basic Policies on Diversity	Human Rights and Equal Opportunities
	Promoting Greater Opportunities for Women	Fostering an Environment Conducive for Global Career Development
	Creating Accessible Working Environments and Promoting Greater Opportunities for Individuals with Disabilities	Systems That Support a Healthy Work-Life Balance
	Support for Employees Undertaking Child Care or Nursing Care	Collaboration with External Organizations Promoting Diversity
Recruitment	Basic Policies on Recruitment	Recruitment of Diverse Employees in and outside of Japan
	Recruiting Practices	

<p><b>Training &amp; Talent Development</b></p>	<p>Basic policies on Training &amp; Talent Development</p>	<p>Training Activities</p>
	<p>Development and Recruitment of Core Human Resources Capable of Excelling Globally</p>	<p>Measures for Enabling Employees to Extend Their Experience and Career Globally</p>
	<p>Nurturing and Leveraging Engineering Talent</p>	<p>Support for Career Building</p>
<p><b>Employee Communication</b></p>	<p>Basic Policies on Employee Communication</p>	<p>Facilitating Dynamic Communication</p>
	<p>Global Employee Survey</p>	
<p><b>Occupational Health &amp; Safety</b></p>	<p>Basic Policies on Occupational Health &amp; Safety</p>	<p>Basic Policy and Management System</p>
	<p>Establishing an OH &amp; S Management System</p>	<p>Global OH &amp; S Initiatives</p>
	<p>Global Workplace Injury Statistics</p>	<p>Helping Employees Stay Healthy</p>
<p>External evaluation</p>		

# Human Resources

Updated on August 21, 2015

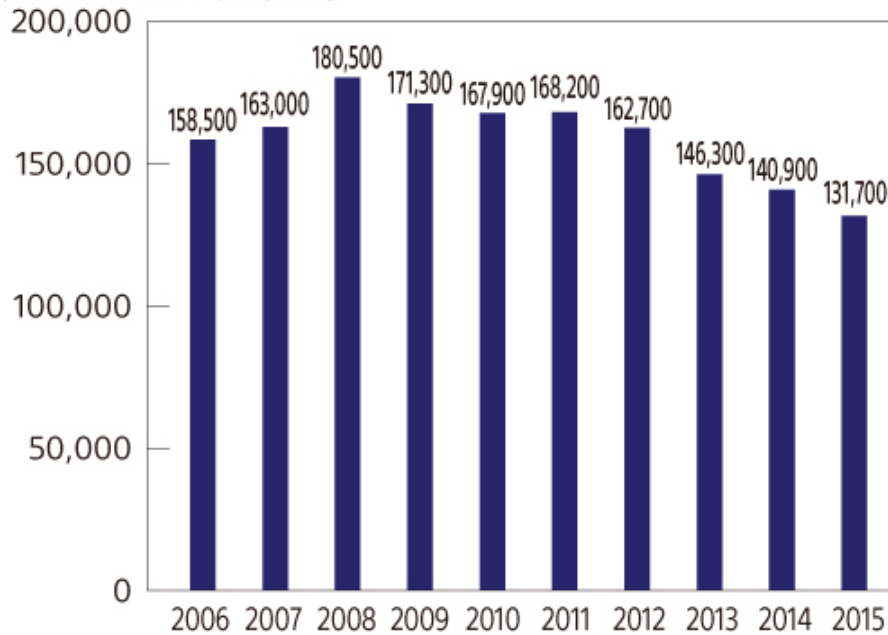
## Employee Data

The total number of employees in the Sony Group at the end of fiscal year 2014 was 131,700, a decrease of 9,200 compared with the end of the previous fiscal year. Although there were increases in the financial services, pictures and music businesses, there was a large decrease in employees in the electronics business as a consequence of restructuring initiatives taken mainly in Japan and North America.

Sony Corporation's workforce peaked at 23,000 in 1993, and in ensuing years it has generally remained fairly consistent at approximately 17,000. As of March 31, 2015, Sony Corporation employed approximately 12,300 persons.

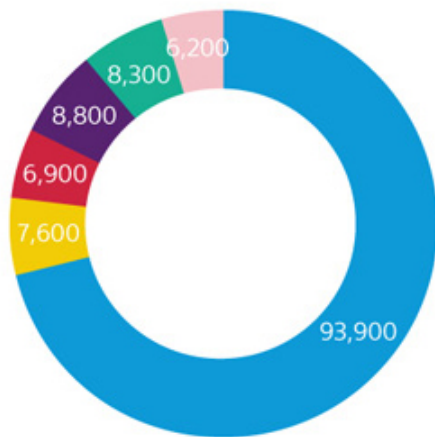
### Total Number of Employees (Sony Group)

(Number of employees)



(As of March 31)

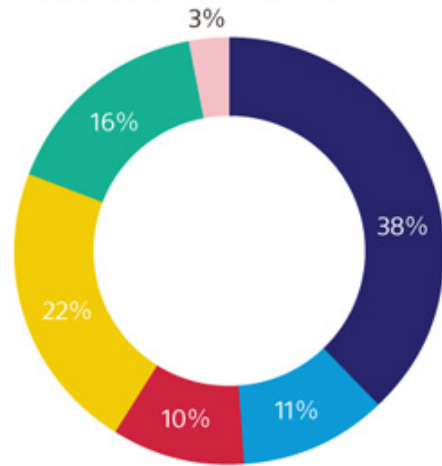
Personnel by Business Segment



- Electronics
- Pictures
- Music
- Financial Service
- Other
- Group Companies in Japan

Total (As of March 31 2015) 131,700

Personnel by Geographic Segment



- Japan
- United States
- Europe
- China<sup>\*1</sup>
- Asia-Pacific<sup>\*2</sup>
- Other Areas<sup>\*3</sup>

Total (As of March 31, 2015) 131,700

<sup>\*1</sup> Mainland China and Hong Kong  
<sup>\*2</sup> Southeast Asia, Oceania, India, South Korea and Taiwan  
<sup>\*3</sup> Middle East, Latin America, Africa and Canada

Composition of Sony Corporation's Directors and Corporate Executive Officers (As of June 23, 2015)

	Total	Female	Non-Japanese Nationals
Directors	12	1	2
Corporate Executive Officers	8 *4	0	0
Corporate Executives	18	1	0
Sony Group Directors	17	1	5

\*4 Of the eight Corporate Executive Officers, two serve concurrently as Directors.

## Human Resources

### Diversity

As a company with a broad business portfolio encompassing electronics, entertainment and financial services, Sony employs individuals of different nationalities, cultural backgrounds and genders. To promote diversity globally, Sony established the Diversity Committee, which reports directly to the CEO. Sony also formulated the Diversity Policy, a common diversity statement for the Sony Group, in 2013. In accordance with this policy, top managers from each country and region worldwide are taking the lead in promoting a wide range of global diversity programs. In Japan, Sony has assigned diversity officers to each of its Group companies. These officers meet regularly with the aim of sharing information.

#### [Global site](#)

#### **Sony Group Diversity Statement**

It is in Sony's DNA - and a source of our innovation - to value different perspectives and backgrounds as we conduct our business activities globally and rise to new challenges.

Sony promotes diversity across the Sony Group as a key management strategy by ensuring an inclusive work environment and by recruiting, hiring, training and promoting employees from diverse backgrounds.



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Human Rights and Equal Opportunities

Promoting Greater Opportunities for Women

Fostering an Environment Conducive for Global Career Development

Creating Accessible Working Environments and Promoting Greater Opportunities for Individuals with Disabilities

Systems That Support a Healthy Work-Life Balance

Support for Employees Undertaking Child Care or Nursing Care

Collaboration with External Organizations Promoting Diversity

## Human Resources

Updated on August 21, 2015

### Human Rights and Equal Opportunities

Sony is committed to creating a workplace where human rights are respected and to providing equal employment opportunities that allow all individuals to make the most of their capabilities. In light of the increasing diversity of human rights issues facing corporations, Sony believes it is crucial to address these issues appropriately by building a common awareness among employees.

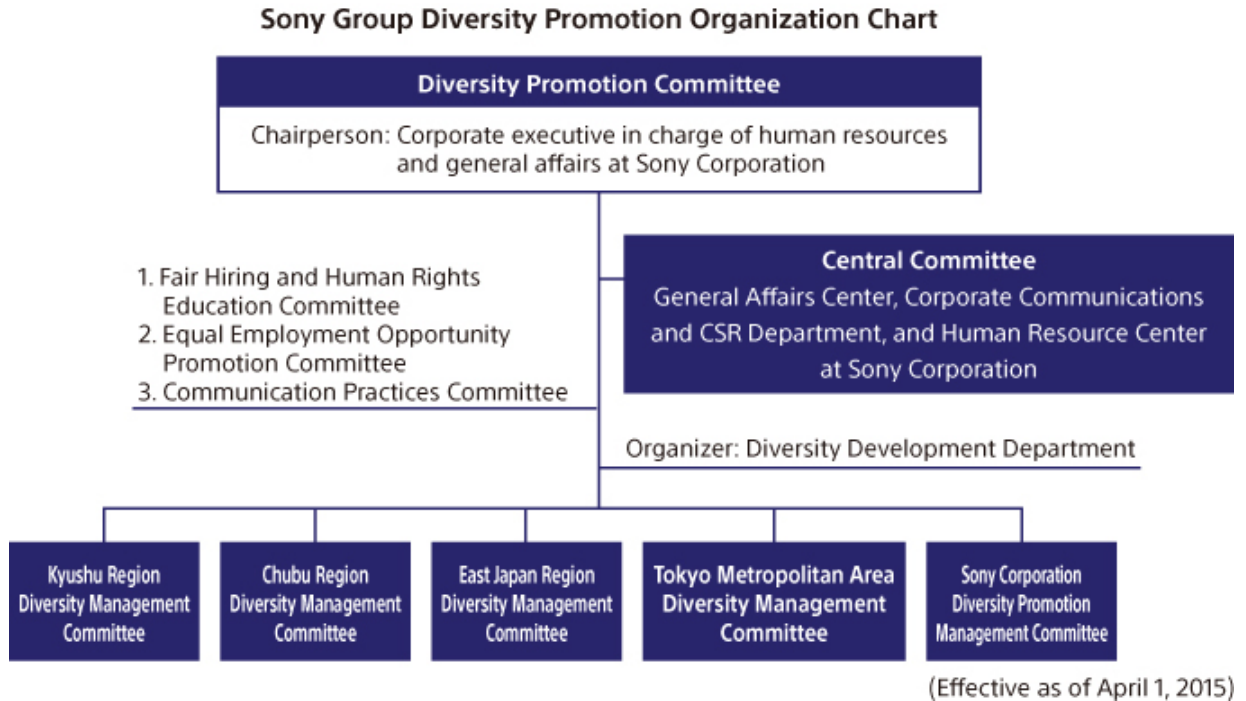
The Sony Group Code of Conduct, enacted in May 2003, contains articles related to respect for human rights and maps out policies that guide human rights-related rules and activities throughout the Sony Group. The article in the Code concerning equal opportunity in employment lays down the Group's policy for recruiting, hiring, training, promoting and otherwise treating applicants and employees without regard to non-business-related characteristics, including race, religion, skin color, nationality, age, gender or physical limitation. These provisions are based on existing international standards, including the United Nations Universal Declaration of Human Rights.

Sony's transactions with suppliers must comply with provisions in the Sony Group Code of Conduct concerning "Fair Procurement" and "Gifts and Entertainment." As an initiative for promoting responsible sourcing with suppliers, Sony has established the Sony Supplier Code of Conduct, which covers issues that could potentially arise at production facilities operated by suppliers and outsourcing partners concerning human rights, labor conditions, safety and health, and environmental protection. Items under the labor section of the Code call for respect for human rights, including items on ensuring the freedom of association and prohibiting discrimination, child labor, and excessive work hours.

[Responsible Sourcing and CSR in Supply Chain Management](#)

## Sony's organization chart for Ensuring Respect for Human Rights

All Sony Group companies in Japan appoint persons in charge of human rights education. Based on this management organization, Sony identifies regional issues and conduct regular workshops on human rights and diversity which are held about five times a year.



## Hotline service for Employees

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At each Sony Group company, an equal employment opportunity hotline has been established to provide employees advice and to enable an immediate action in cases of possible harassment issues including sexual harassment or human rights violations. Access to the services outside the Group has also been set up to handle inquiries from employees. In addition, Sony has created a counseling service specializing in work-life balance issues in order to handle the growing number of questions concerning childcare and nursing care. When contacted, these counseling services work to respond quickly and appropriately while giving full consideration to personal privacy. Sony strictly enforces confidentiality and ensures that employees are not subject to reprisals after reporting through the services. To ensure that counselors fully understand these matters, Sony provides manuals and holds seminars.

## Education and Training

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Every year, Sony Group companies in Japan collect from employees ideas for a slogan on diversity or human rights to raise awareness. In fiscal 2014, 23,292 slogans were submitted, demonstrating how the contest has become firmly established as a human rights awareness event involving a large number of employees. The selected slogans are displayed at each company as useful reminders of the importance of human rights.



As a part of employee training, Sony offers an e-learning course on compliance every year for all employees at Sony Group companies, including those outside Japan, and provides training on human rights and harassment. In Japan, an e-learning course focusing on human rights is held for all employees of Sony Corporation and 25 group companies. In addition, a basic e-learning course on human rights and diversity is offered to newly hired employees, various training sessions on human rights are regularly held for managers, and a human rights handbook is distributed.

Coinciding with Human Rights Week in December every year, Sony organizes its Diversity Forum for managers in charge of promoting diversity at all group companies as an event for raising awareness of human rights. During the forum, participants share information on best practices related to their activities, and a speech is given by the chair of the Sony Group Human Rights Education Committee.

In addition, committees have been established to discuss communication practices related to human rights. They are comprised of members of Sony Corporation's public relations and CSR department, and representatives of Sony Group companies involved in advertising, entertainment, and other businesses.

Sony proactively pursues group-wide initiatives for supporting its lesbian, gay, bisexual, and transgender (LGBT) employees. In the United States, five companies of the Sony Group have jointly participated in LGBT parades for the past five years. For the past two years in Japan, Sony Corporation has participated as a corporate partner with Work With Pride, a group that promotes the creation of workplace environments in which LGBT employees can feel comfortable being themselves. Through this collaboration, Sony conveyed a message of support for its LGBT employees who have difficulty being open about their sexual orientation.

## Human Resources

Updated on August 21, 2015

### Promoting Greater Opportunities for Women

In the electronics business, which accounts for a large proportion of engineers, the percentage of male employees is comparatively high, reflecting the generally low percentage of female students majoring in engineering and sciences in Japan. Hence, it is not easy to recruit a similar or greater number of women for engineering roles, and that is the case for Sony Corporation, as well.

For this reason, Sony believes that it is significant to be proactive in the recruitment and career development of female employees, and undertakes a variety of programs in line with this thinking.

In August 2013, Sony announced that it had set a goal of increasing the ratio of women in management to 15% by 2020. In addition, to bolster the population of women in engineering and science fields, Sony cooperates in the organization of science festivals at universities and promotes a range of programs to develop the talents of women in science and engineering, including the Sony Science Program for Girls, which is aimed at junior high and high school girls who are interested in science.

To promote the career development of women, the Diversity Development Department within the Human Resources Division takes the lead in collaborating with the DIVI@Sony\*1 diversity project (established in 2005), and undertakes measures to support female employee career development and personal networking, and to promote the development of an organizational culture that proactively recruits women.

Every year, Sony holds the DIVI Women's Forum, which seeks to communicate the views of top management regarding diversity directly to female employees.

Through training programs aimed at fostering female managers and the holding

of roundtable discussions and seminars related to the development of women's careers, Sony continues to motivate women and facilitates the expansion of interpersonal networks among employees. Project members also organize roundtable meetings aimed at helping male managers to gain better understanding in this topic .

Another increasingly well-established part of Sony's effort to provide career support for female employees is the DIVI@Sony mentoring system. Women find that the higher they rise in rank the fewer role models there are and the fewer people with whom they can consult. The mentoring system aims to encourage women to continue setting their sights higher and gain more confidence by discussing work- and career-related issues with experienced mentors.

\*1 DIVI is an acronym for Diversity Initiative for Value Innovation. The DIVI@Sony project is designed to promote employment diversity in the Sony Group in Japan.

### Ratio of Female Employees in Management Positions in the Sony Group (Japan)\*2\*3

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	20.9	19.5	20.0	20.0	18.6	18.6
Ratio of female employees in management positions (%)	3.6	3.6	3.9	4.2	5.7	4.8

## Ratio of Female Employees in Management Positions in the Sony Group (USA)

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	39.3	32.6	38.7	36.4	37.8	36.1
Ratio of female employees in management positions (%)	35.6	33.8	36.1	32.7	33.3	31.3

## Ratio of Female Employees in Management Positions in the Sony Group (China)\*4

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	68.2	64.8	63.9	59.2	55.5	44.6
Ratio of female employees in management positions (%)	33.5	25.2	29.1	22.5	26.2	32.7

## Ratio of Female Employees in Management Positions in the Sony Group (Asia Pacific)\*5

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	52.9	49.2	48.2	46.5	42.5	46.2
Ratio of female employees in management positions (%)	22.6	18.7	20.5	20.6	26.4	31.1



### Ratio of Female Employees in Management Positions in the Sony Group (Europe)

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	40.5	34.6	38.0	33.3	34.3	36.0
Ratio of female employees in management positions (%)	17.9	20.5	16.8	23.2	26.6	25.9

### Ratio of Female Employees in Management Positions in the Sony Group (Other Areas)\*6

	FY09	FY10	FY11	FY12	FY13	FY14
Ratio of female employees (%)	—	—	—	—	37.4	38.1
Ratio of female employees in management positions (%)	—	—	—	—	24.7	30.0

\*2 Totals are based on data provided by Sony Group companies as of the end of each fiscal year. The definition of "manager" varies in different countries, regions and companies.

\*3 Ratio of female employees in management positions at Sony Corporation: 5.7%

\*4 Coverage area: Mainland China and Hong Kong

\*5 Coverage area: Southeast Asia, Oceania, India, South Korea and Taiwan

\*6 Coverage area: Middle East, South and Central America, Africa and Canada

## Key Activities to Promote Women's Career Development at Sony Group

<p style="text-align: center;"><b>Electronics (Japan)</b></p>	<p>Sony runs a regular networking event for young female employees across several Sony Group companies. This event has the objective of broadening the career design perspective of female employees, with participants hearing the views of women who are currently working at management level, and taking part in follow-up discussions and the sharing of problems faced by employees. These activities are contributing to the expansion of women's career choices.</p>
<p style="text-align: center;"><b>Sony Group (United States)</b></p>	<p>Each Sony Group company in the United States is supporting programs and organizations involved in grooming female leaders, including Athena International and Women Unlimited, Inc. To support women leaders within their own management, the companies have set up networking organizations for female employees of the Group in the United States.</p>

## Human Resources

Updated on August 21, 2015

### Fostering an Environment Conducive for Global Career Development

As of March 31, 2015, Sony had approximately 1,500 employees working in countries other than their own. Of these, approximately 140 employees were transferred between Sony Group companies outside Japan. To enhance the global mobility of human resources, Sony gathered experts on global personnel policies and standards with the aim of enhancing the ease and efficiency of overseas assignments by formulating common Sony Group policies and standards and expanding rules for the treatment of employees assigned to overseas positions under various formats. In 2012, these policies, standards and rules were applied worldwide.



Employees participating in Buddy Program

With the rapid increase in opportunities for human resource mobility on a global basis, Sony Corporation has made existing internal websites, personnel & accounting-related systems and other applications bilingual to enable employees whose native language is not Japanese to work effectively within the company using English. Sony is also implementing other measures with the aim of establishing an environment that makes it possible for employees in Japan who do not speak Japanese to perform their jobs, including setting up a specialized unit within the Human Resources Division to provide career support and other assistance. In 2013, to facilitate the development of interpersonal networks, Sony initiated Buddy Program, in which employees from overseas and employees from Japan are grouped to teach each other their respective languages.

## Human Resources

Updated on August 21, 2015

### **Creating Accessible Working Environments and Promoting Greater Opportunities for Individuals with Disabilities**

Based on the philosophy of Sony co-founder Masaru Ibuka of creating workplaces that do not offer charity, but rather create an environment that makes it possible for individuals with disabilities to manufacture products that exceed those manufactured by individuals without disabilities, the Sony Group strives to realize an environment in which individuals do not feel held back by their disability and disabilities do not create barriers. To achieve this goal, Sony has initiated a wide range of programs.

In fiscal 2014, Sony established an action plan for promoting greater employment of people with disabilities through the year 2020. Accordingly, Sony is creating a workplace environment in which employees with disabilities can pursue rewarding careers in a corporate culture that is evolving as a model for the world.

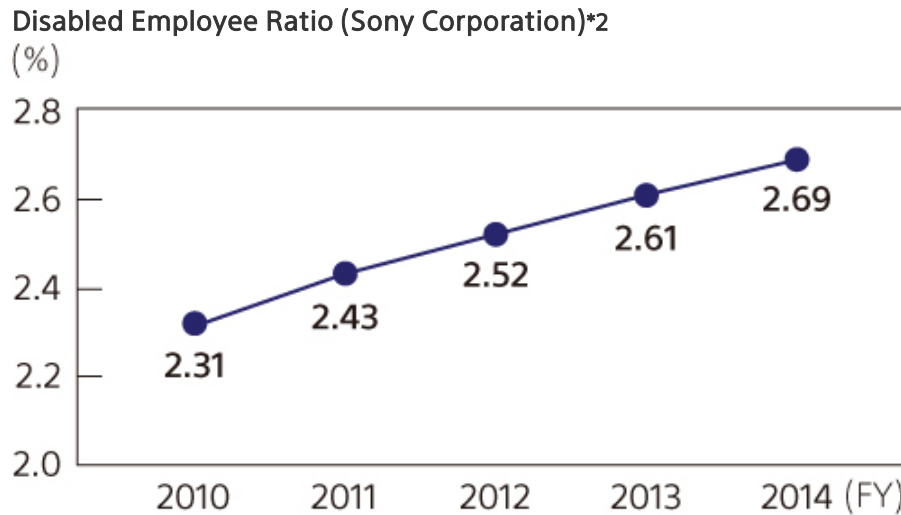
In recruitment and job assignment at Sony Corporation, Sony believes that employees should be able to exercise their full potential regardless of level of ability. Sony facilitates this by building consensus regarding necessary considerations from the selection stage, while opening up career fields in line with individual attributes and capabilities. There is no differentiation in either job assignment or treatment of employees.

At Sony Group companies in Japan, employment know-how and experience related to past cases are integrated in a dedicated department within the Human Resources Division. This particularly leverages knowledge gained through the special-purpose subsidiaries Sony Taiyo Corporation\*1, which has over 35 years of

experience in this field, and Sony Kibou/Hikari Corporation, which specializes in providing employment opportunities for individuals with intellectual disabilities. These programs support individuals with disabilities and undertake programs that leverage the advantages of the Sony Group. Specifically, at joint recruiting events (now in their seventh year) where about 20 Sony Group companies take part, guidance is given to workplaces that are striving to improve their work environments to accommodate new employees with disabilities. Training programs are also implemented by Sony Group companies to provide the perspective of employees with disabilities to their supervisors and colleagues and vice versa.

In addition, employees with disabilities participate in lectures and symposia mainly targeting university students, with the aim of communicating Sony's philosophy and programs relating to the employment of people with disabilities to students with disabilities and their supporters. These programs also aim to enhance social awareness of diversity and inclusion issues. For example, Sony Taiyo Corporation holds inclusion workshops aimed at providing opportunities for elementary and junior high school students to experience the fun of science firsthand.

Sony's commitment in this area extends beyond legal compliance, by making workplaces accessible and actively encouraging greater awareness of diversity and inclusion issues. In fiscal year 2014, employees with disabilities accounted for 2.69% of Sony Corporation's workforce, while the average for Sony Group companies in Japan (with over 201 employees) was 2.2% as of June 2014, both well above the 2.0% mandated by Japanese law for companies over a certain size.



\*1 Sony Taiyo, Sony's first special purpose subsidiary, has implemented concepts such as universal design and inclusive design - a comprehensive workplace design concept that emphasizes usability, environment and education to meet the needs of people regardless of age or ability - to create a work environment in which anyone can work irrespective of whether or not they have a physical limitation.

\*2 Average for each fiscal year (average of month-end ratios from April to March)

### Key Activities to Promote Career Development of Individuals with Disabilities at Sony Group

<p><b>Sony Group Companies (Japan)</b></p>	<p>For seven consecutive years, Sony Group companies operating in diverse industries have jointly held an annual job fair aimed at expanding employment opportunities for people with disabilities. Moreover, Sony has been implementing training courses for university students with disabilities every year since 2004. In 2015, the Group's production sites offered internship to students with disabilities for the first time, and helped encourage their career ambitions by providing the students with more practical work experience.</p>
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**Financial  
Services**

Since fiscal 1996, Sony has successively established 16 therapeutic massage facilities and employed visually impaired workers as massage therapists. Sony also set up a human resources system especially for these employees in fiscal year 2012.

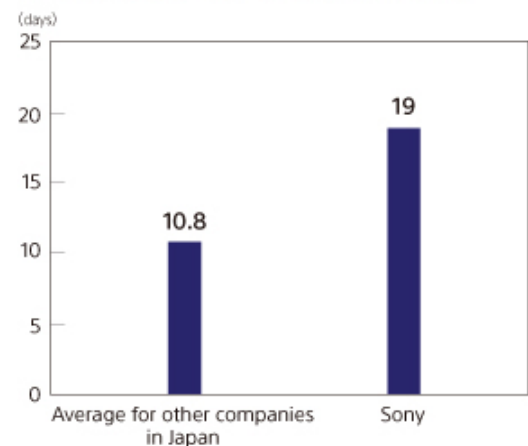
## Human Resources

Updated on August 21, 2015

### Systems That Support a Healthy Work-Life Balance

In Japan, Sony Corporation has introduced a flex-time system and a discretionary working system, which enables employees to work with versatile options. Sony employees regularly use their allotted annual paid days off with a high percentage, which in fiscal year 2014 averaged 19 days.

Average Annual Paid Holidays for Sony Corporation Employees in Japan



Source for average for other companies in Japan: Comprehensive Survey of Wage Conditions (Fiscal 2014), Ministry of Health, Labour and Welfare. Surveyed companies had a workforce of more than 1,000 employees.



## Main Sony Group Work-Life Balance Initiatives around the World

<p>Electronics (Latin America)</p>	<p>Since fiscal year 2008, Sony Latin America Inc. has held a number of events promoting work-life balance, including family picnics and company tours for employees' families.</p>
<p>Electronics (Asia Pacific)</p>	<p>To help their employees keep fit, Sony Group companies in Malaysia have set up fitness facilities and hold sports tournaments for employees, with teams competing in five-a-side soccer, badminton, and bowling. The companies also provide funds for employee social gatherings in order to promote greater interaction between coworkers in their places of work.</p>

## Human Resources

Updated on August 21, 2015

### Support for Employees Undertaking Child Care or Nursing Care

Under a work-life balance initiative, Sony Corporation provides paid leave programs which can be used along with Child Care Leave such as Special Child Care Leave (up to 20 days) and Accumulated Leave used for pregnancy, childbirth, child rearing, fertility treatment, and nursing care purpose. These programs are widely used by employees. Sony also supports employees undertaking child care or nursing care by systems which allow them to work at home or take paid annual leave on an hourly basis.

#### Number of Employees Taking Child Care Leave at Sony Corporation in 2014

Number of employees taking child care leave	195 (including 4 male)
Percentage of employees who took child care leave*1	97.7%
Percentage of employees who returned to work	95.8%

\*1 Calculated with employees who gave birth in fiscal year 2014.

### Number of Male Employees Taking Special Child Care Leave at Sony Corporation in 2014

Number of male employees who took special child care leave	380
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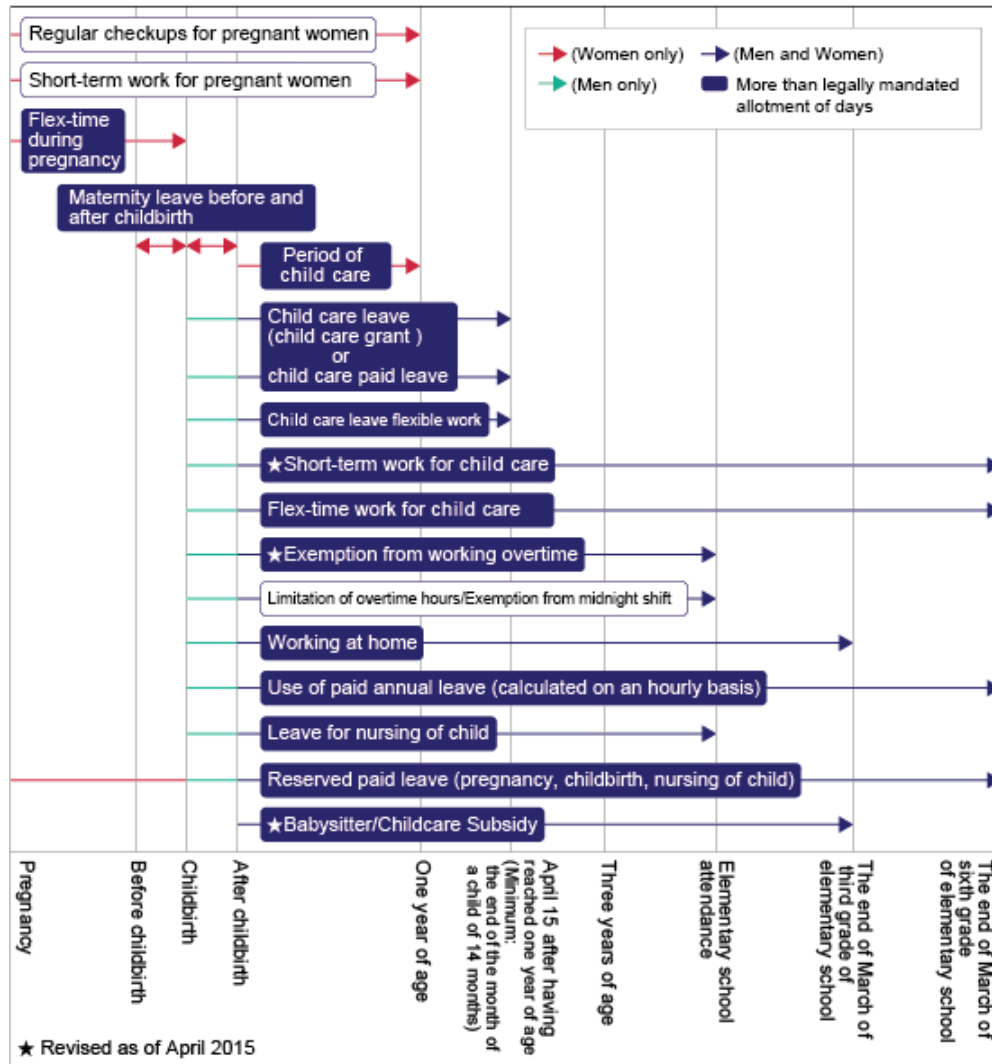
### Work-Life Balance Systems at Sony Corporation

System	Introduced (FY)	Description
Child Care Leave	1990	<ul style="list-style-type: none"> <li>● Up through April 15 of the year following the date on which the child reaches 1 year of age</li> <li>● Can be used in combination with Special Child Care Leave when child reaches 8 weeks of age (for men)</li> </ul>
Reduced Working Hours for Child Care	1995	<ul style="list-style-type: none"> <li>● Until the child is sixth grade of elementary school *2</li> <li>● Flex-time system can also be used during period of reduced working hours for child care</li> </ul>
Child Care Grant	2007	<ul style="list-style-type: none"> <li>● Grant of 50,000 yen/month during period of Child Care Leave</li> </ul>
Special Child Care Leave	2007	<ul style="list-style-type: none"> <li>● Provides for 20 days' paid leave</li> <li>● Can be used in combination with Child Care Leave when child reaches 8 weeks of age</li> </ul>

Working at Home	2008	<ul style="list-style-type: none"> <li>● Enables employees to work at home when involved in child rearing or providing nursing care for a family member</li> </ul>
Use of Paid Annual Leave	2008	<ul style="list-style-type: none"> <li>● Can be used on an hourly basis, for child rearing or providing nursing care for a family member *2</li> </ul>
Child Care Flex-Time	2013	<ul style="list-style-type: none"> <li>● Can be used until the child has graduated from elementary school</li> </ul>
Babysitter / Child Care Subsidy	2015	<ul style="list-style-type: none"> <li>● Until the child is third grade of elementary school *2</li> <li>● Babysitter / child care fee subsidy</li> </ul>

\*2 Systems expanded as of April 2015.

### Child Care Leave Systems at Sony Corporation



In addition to establishing systems that promote work-life balance, Sony promotes a variety of career support measures for employees trying to balance the demands of child care (or nursing care) and work. Of particular note, Sony holds forums and seminars for employees featuring messages of support for work-life balance initiatives from top management. In fiscal year 2012, Sony launched the Working Mothers' Meeting, an annual event that enables female employees who have returned, or are returning, to work after having taken child care leave. Employees from other Sony Group companies in Japan are also invited to



Working Mothers' Meeting

participate. Meetings feature lectures by guest speakers and provide a forum for the exchange of information among employees in this particular position. From fiscal 2014, men active in childcare and raising their children have also been invited to participate in the event, which was renamed the "Working Parents Forum," with a view to promoting shared parenting.

Sony has also established a hotline for male and female employees trying to balance the demands of work and child rearing. In addition, Sony provides information to employees regarding nursing care, which is likely to become a key work-life balance issue in the future.

In 2007, 2010 and again in 2013, Sony was certified by the Tokyo Labor Bureau as a company that actively supports parenting initiatives in line with the Law for Measures to Support the Development of the Next Generation. Sony received high marks for the ease with which employees can make use of its various parenting support systems, its support for employees' work-life balance, high rates of participation in its various systems and its support for male participation in child rearing.



Kurumin Mark, certifying companies with next-generation child care systems, from Japan's Ministry of Health, Labour and Welfare

### Systems That Support Efforts to Balance Work and Child Care at Sony Corporation around the World

<p>Services for employees raising children</p>	<p>Some group companies provide a private area for nursing mothers, emergency child care and other services for employees who are raising and/or expecting children. There are also child-raising support programs that aim to build communities of employees who are parents to facilitate the sharing of information on such topics as children's education.</p>
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## Human Resources

Updated on August 21, 2015

### Collaboration with External Organizations Promoting Diversity

Sony is a member of Japan Women's Innovative Network (J-Win), which was founded in 2005 and became a nonprofit organization in 2007. J-Win supports the development of a network for the advancement of women's careers and also promotes diversity management.

Sony is also a participant in the Support Forum for Women in Business, a project of the Japan Institute of Workers' Evolution. Likewise, Sony promotes diversity in collaboration with various organizations in the other countries and regions where it operates and participates in programs designed to develop women employees.

Since the fiscal year 2014, Sony has been participating in a special project, which promotes managers' awareness of subordinates' work-life balance, which is sponsored by the NGO Fathering Japan. In order to create better working environments, Sony continues to provide employees appropriate information and organize seminars related to work-life balance.

## Examples of Measures to Promote Diversity in the Sony Group around the World

<b>Electronics (USA)</b>	<p>In the United States, both Sony Pictures Entertainment Inc. and Sony Electronics Inc. received awards based on assessments of the maximum score of 100% in the Corporate Equality Index from the Human Rights Campaign Foundation as companies that create ideal working environments for lesbian, gay, bisexual and transgender (LGBT) employees. These scores reflect the level of fairness achieved within the organization toward LGBT employees, which is underpinned by rules designed to support these employees.</p>
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# Human Resources

## Recruitment

Having respect for diverse experiences and values, and accepting individuality, Sony has long sought to attract diverse talent from in and outside of Japan. To secure employees who can flourish across regions and business fields, Sony recruitment hires irrespective of nationality, culture, race, gender, or disabilities.

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[Recruitment of Diverse Employees in and outside of Japan](#)

[Recruiting Practices](#)

## Human Resources

Updated on August 21, 2015

### Recruitment of Diverse Employees in and outside of Japan

As a company with sales, manufacturing and R&D based in a number of different countries, Sony promotes the localization of these operations by securing local talent who can meet national, regional and locational needs. Sony also recruits university graduates overseas to work in Japan to secure talent to drive its global business.

Early in the 21st century, Sony expanded the range of countries from which it recruits students to work in Japan. In addition to undergraduate and graduate students from Europe and North America, Sony started hiring students from China and India. Recruitment in China began in earnest in 2000. As of April 2015, Sony had recruited a cumulative total of 310 undergraduate and graduate students from China.

Recruitment from universities and graduate schools in India began in earnest in 2007.

In both countries, Sony secured top-level human resources with the cooperation of local group companies. To encourage adaptation, Sony provided new recruits with a variety of training, including Japanese language lessons, both before and after they began working in Japan. Sony has also established a Global Internship Program, which welcomes university students worldwide. Sony conducts recruiting presentations at universities, graduate schools and research facilities around the world to attract top talent.



Presentation at the Indian Institute of Technology in Bombay

## Human Resources

Updated on August 21, 2015

### Recruiting Practices

Since fiscal year 2014, Sony has been providing various course-based job opportunities to enable university graduates to apply for jobs which match their intentions and areas of study.

For fiscal year 2016 new graduate recruitment, companies in Japan are subject to new guidelines shortening the period of recruitment. Regardless of this shorter timeframe, Sony will carry out recruiting activities designed to facilitate mutual understanding with graduates in order to minimize employment mismatch.

To recruit engineers and researchers, Sony has set up a job matching system in which students can meet employees in positions similar to their desired jobs. By taking opportunities to meet with a diverse range of university students including those who have school referrals, Sony strives to hire outstanding talent.

To recruit administrative staff, in addition to welcoming interns to its marketing and product planning departments, Sony has also set up the Business Master Program for positions that require specialized knowledge, including management, finance, and law. Through this program, university students learn about Sony's business by attending employee lectures, participating in workshops, and giving presentations.

#### Principal Recruiting Initiatives in Different Regions

<p><b>Electronics (USA)</b></p>	<p>Each year in May, the Equality Professionals Network (EPN) holds a career event in San Diego for LGBT individuals searching for career change opportunities or employment. Sony Electronics Inc. participates in this event, and is proactively working to recruit a diverse workforce.</p>
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# Human Resources

## Training & Talent Development

The development and vitality of its employees drive Sony's dynamic growth. Sony recognizes its people as its most important management asset and the growth of its people as a crucial aspect of its management foundation. Sony strives to further enhance motivation and encourage personal growth for its employees through on-the-job learning, as well as through access to a variety of programs designed to enhance individual abilities and skills and tailored to local needs.

As a company that does business in a variety of countries and regions, Sony recognizes the importance of cultivating future business leaders with a global perspective and diverse cultures. Accordingly, Sony is implementing initiatives aimed at fostering such employees and bringing their capabilities into full play.

The Sony Group is also undertaking a broad range of human resource development and recruitment programs on a Groupwide basis, thereby ensuring its ability to leverage Group strengths and generate innovation.

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### Training Activities

[Development and Recruitment of Core Human Resources Capable of Excelling Globally](#)

[Measures for Enabling Employees to Extend Their Experience and Career Globally](#)

[Nurturing and Leveraging Engineering Talent](#)

[Support for Career Building](#)

## Human Resources

Updated on August 21, 2015

### Training Activities

In Japan, Sony Corporation offers more than 300 employee training programs - including general training, e-learning, and on-site training - tailored to specific objectives. Mandatory multilevel job-specific training helps participants acquire crucial skills in a systematic effort to foster human resources with the skills to drive future business growth. Sony is also expanding its menu of elective training options, consisting of lectures, correspondence courses and courses provided by affiliated training agencies, which are aimed at enhancing job performance, as well as providing support for self-learning and personal development. For fiscal year 2014, we have been working on training program reviews as well as insourcing the instructors by employees, as to improve the efficiency and quality of each training. These efforts led to reduce the cost of human resource development, approximately 180,000 yen for each Sony employee.

## Participation in Companywide Training in Fiscal Year 2014 (Sony Corporation)

	Targeted	Mandatory	Elective (Technology- related)	Elective (Others)	Total
Number of programs	15	31	207	10	263
Number of times offered	24	278	438	47	787
Participants	319	6,409	5,285	1,681	13,694
Cumulative total training time (Hours)	9,912	60,545	80,939	9,669	161,065

## Human Resources

Updated on August 21, 2015

### Development and Recruitment of Core Human Resources Capable of Excelling Globally

Established in 2000 to promote cross-border and cross-business cultivation of global business leaders, Sony University, in Tokyo's Shinagawa district, offers short- and long-term development programs that address this task from the perspectives of the Sony spirit, business vision, management decision-making capabilities and networking. For instance, potential business leaders from around the world participated in a four-month program that promoted friendly competition. In Japan, Sony also strives to foster future business leaders, offering a seven-month module for prospective core leaders, as well as a program for more junior employees identified as possible future management, both promoting active interaction and mutual learning.



Participants in a Sony University program

Sony Group Global Leadership Programs around the World

<p><b>Electronics (Japan)</b></p>	<p><b>Global Challenge Program</b>                  Sony EMCS Corporation has established its Global Challenge Program to enable its employees who have worked abroad to apply what they have learned after returning to Japan, thereby contributing to the development of the corporation. Under the program, the corporation sends employees to work at offices in another country to allow them to experience a different culture and become directly familiar with the dynamics of a workplace outside Japan. Each year, four employees working for the company are selected for three months program at U.K.</p>
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Sony appoints global talent directors to identify promising individuals for worldwide job rotations aimed at grooming future business leaders, regardless of their business specialty or region of the world. To date, almost 100 Sony employees, primarily executive managers and mid-tier managers, have been rotated in various job assignments.

Recently, Sony has begun debating the idea of linking its job rotation program with other initiatives aimed at fostering employees to create a more integrated, comprehensive global program.

**Basic Philosophy behind Rotation Project**





## Examples of Activities for Appointing Global Business Leaders around the World

<p><b>Electronics (Latin America)</b></p>	<p>With the aim of reinforcing efforts to foster future regional business leaders, in fiscal year 2010 Sony in Latin America introduced the Positioning for Success program, a job rotation initiative that encompasses key positions in the region, as well as cross-border assignments arranged by global talent directors. Sony in Latin America also participated actively in the succession program.</p>
<p><b>Electronics (Asia Pacific)</b></p>	<p>This core human resource recruitment program operates in tandem with each Group company in the Asia-Pacific region to recruit and foster future regional business leaders. Multinational job rotation is implemented for business leaders and talented young people.</p>
<p><b>Electronics (USA)</b></p>	<p>Sony's software departments in Japan and the United States have set up an engineer exchange program to provide their members with opportunities to learn about the latest technologies and trends while working abroad for three months, as well as experience a different culture in terms of the diverse working styles and values of the program's participants. The program contributes to raising awareness among the participants of their key role in bridging national boundaries and realizing the concept of One Sony.</p>

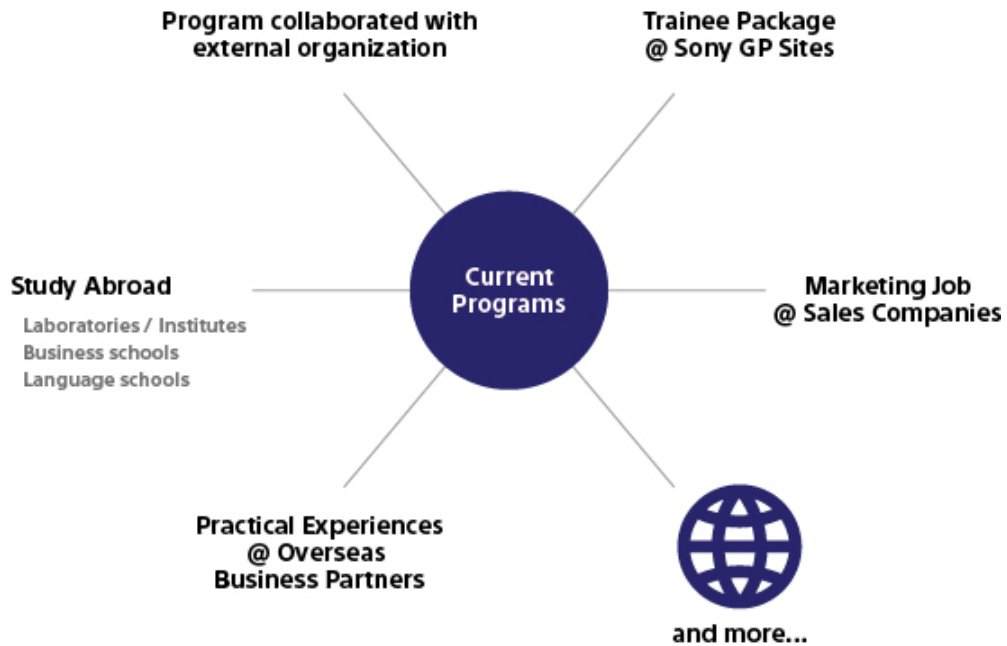
# Human Resources

Updated on August 21, 2015

## Measures for Enabling Employees to Extend Their Experience and Career Globally

Sony Corporation operates a wide variety of programs to enable employees to gain experience overseas in preparation for careers on the global stage. These include overseas study programs aimed at engineers wishing to expand their knowledge through research of cutting-edge technologies at overseas universities and research institutions, and the Global Job Postings program under which employees can apply for transfer to an overseas site for career development.

### Scheme for Young Employees to Acquire Overseas Experience (examples)



To bolster English-language communication skills, Sony offers English training programs especially for younger employees. Sony also provides diverse learning opportunities to enable employees to study languages based on their individual level and needs. Sony actively supports employees in their individual efforts toward personal growth and learning. In fiscal year 2014, approximately 1,000 employees utilized these programs to improve their English-language capabilities. Sony has a growing number of language training programs and is seeing more participants studying languages other than English, such as Chinese. Similarly, at Group companies in Japan, employees participate in a variety of programs such as "Self-Improvement," "School Attendance Support" and "In-House TOEIC®."

**Main Measures in the Sony Group in Each Country and Region**

<p><b>Electronics (Japan)</b></p>	<p><b>"MUSHA" program</b>                  Sony Global Solutions, Inc., runs the "MUSHA" program as a one-year transfer assignment for young employees in the information systems field. Participants work at sales subsidiaries in emerging economies which are positioned as particularly important within Sony's sales and marketing strategy. In fiscal year 2014, three employees took part, undertaking assignments in Thailand, UAE and Russia, respectively. The participants worked as local staff, receiving supervision from local managers while contributing to sales and marketing business operations. Through this program, Sony aims not only to nurture IT solutions capabilities but also to cultivate human resources capable of understanding the operations of sales subsidiaries, thereby supporting the realization of Sony's business strategy.</p>
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## Human Resources

Updated on August 21, 2015

### Nurturing and Leveraging Engineering Talent

For Sony to continue moving forward with originality, it must constantly generate innovations and apply them to attract new customers. To achieve that, Sony's engineers must envision products that appeal to today's sensibilities, and continue creating Sony technologies that enable customers to directly experience new value. Approximately 200 Sony engineers with frontline expertise in key technological fields develop curricula and textbooks for use in Key Technology training courses, aiming to enhance the expertise of engineers. The courses also offer opportunities to learn a leading-edge technology from a specialist outside the company. More than 5,000 employees take part in these training courses every year.



A lecture at a Key Technology training course

Sony enhances the skills of its new recruits by offering them general technological training designed by leading Group engineering experts, as well as specialized training developed by each of Sony's business units designed to familiarize the trainees with technologies specific to each business. Furthermore, under the guidance of their supervisors and tutors, the recruits participate in theme-based training, which addresses issues that arise in real everyday work. This gives them a better understanding of the importance of communication and how business is conducted, thereby preparing them for future challenges early in their careers.

Meanwhile, in an effort to raise the level of its in-house technologies, Sony has put systems in place for recognizing engineering excellence.

In fiscal 2003, Sony established the Sony Most Valuable Professional (MVP) Award to recognize Sony Group employees who have developed innovations that create new value for customers, and have worked hard to solve advanced technical problems by applying specialized expertise and knowledge. Intended to increase the motivation of engineers, the award has encouraged employees to be proactive in addressing challenges and has also promoted a corporate culture that emphasizes value creation. Between fiscal 2003 and fiscal 2014, a total of 254 employees were honored with the MVP Award.

Sony has designated its outstanding engineers with the title "Distinguished Engineer" since fiscal 2006. With the adoption of a new human resources system in fiscal 2015, however, Sony terminated this system and launched a new Distinguished Engineer system in July 2015. The new Distinguished Engineer system recognizes employees who have played a significant role in enabling the Sony Group to realize its key management strategies by applying world-class cutting-edge technological expertise to overcome important and extremely challenging technological problems. With the new system, Sony intends to designate technical fields that are essential for creating new value in its electronics business, as well as to identify the best Sony engineers in these fields so that its young engineers have clear role models, and to better align human resources development for engineers with their career paths.

Since fiscal 2014, Sony has been setting up human resources development committees to oversee the specialized fields it has designated. Given the dramatic changes in the business environment today, Sony needs human resources that can capitalize on those changes to ensure its growth going forward. Therefore, recognizing the importance of human resources development for refining the specialized skills of each employee and for broadening those capabilities, Sony is not only developing human resources at the workplace level, but also considering medium- and long-term human resources initiatives and systems corresponding to fields of expertise. To facilitate this shift, Sony is establishing a human resources committee for each of the specialized fields it has designated, which cover a broad range of areas rather than corresponding to

its businesses and divisions, and is promoting dialogue among Sony experts in each of those fields. In this way, Sony is developing a framework extending over and beyond its organizational structure to create opportunities for employees to gain diverse experiences that could not otherwise be obtained in their specific workplaces.

### Unique Systems for Engineers in the Sony Group in Each Country and Region

<p><b>Equipment Engineer System</b></p>	<p>Established as part of an effort to fortify production technologies, this system recognizes equipment engineers at Sony Semiconductor Corporation. The aim is to encourage equipment engineers to refine their skills through continued participation in training programs and to acquire practical capabilities and specialized expertise on a par with equipment manufacturers.</p>
<p><b>Engineering Specialist System</b></p>	<p>By clarifying career paths for engineers, this system plays an important role in fostering and increasing the motivation of engineers, as well as facilitates the sharing of key talent among Sony EMCS Corporation sites in China, thus helping to maximize human resources. To put in place standardized, specialized positions, official designations and selection/dismissal procedures, Sony EMCS sites in China began gradually introducing the system in April 2013.</p>

## Human Resources

Updated on August 21, 2015

### Support for Career Building

Sony has always encouraged its employees to take on new challenges, aiming to develop in tandem with the career advancement of employees. For example, since 1966, Sony has operated an internal recruitment program. This is now a familiar part of the Sony organization. As well as encouraging the spirit of challenge among employees, it enables the Group to assign the right people to the most appropriate roles while simultaneously bolstering key parts of its business. To date, more than 6,000 employees have qualified for this program and received internal transfers.

Sony Corporation operates a self-review system on a six-monthly basis under which employees assess their own performance from two perspectives - output and approach - in relation to goals set at the start of each year. The system includes an interview between each employee and his or her supervisor. During these interviews, future tasks are agreed upon and ways of improving expertise and skills are discussed.

Since 2007, Sony Corporation has also designated a "Career Month," every autumn, a period during which it works to create opportunities for employee growth. Over the course of this month, employees can meet directly with their supervisors to discuss development plans regarding their careers and future growth. The results are fed back to management and applied to efforts to reinforce Sony's programs for fostering human resources, thereby facilitating



The "Search" web portal at Sony Corporation provides support for human resources development and career building.

Carefully tailored support for career building. As a program to promote such activities, Sony operates an internal portal site called "Search," through which employees can refer to a broad range of information helpful in thinking about their own career development. This includes information that will be helpful in discussions on career development and growth, information on training programs for personal growth, and internal career case studies. In addition, Sony assigns career advisors and internal mentors who possess specialist knowledge, as part of its efforts to make it easier for employees to discuss career development. Such career support efforts also play a key role in revitalizing work environments.

**Examples of Support for Career Building in Other Sony Group Companies**

<p><b>Electronics (Japan)</b></p>	<p>With the goal of developing human resources that can handle a broader range of marketing activities, Sony Marketing (Japan) Inc. has a program for recruiting staff involved in sales and marketing for Sony Computer Entertainment Inc., So-net Corporation, and companies in the Sony Music Group.</p>
<p><b>Electronics (USA)</b></p>	<p>Sony operates the "Develop U" portal site that offers employees content designed to facilitate personal career growth and skills development.</p>
<p><b>Electronics (Canada)</b></p>	<p>Sony offers online training programs encompassing job competency and related areas. During performance reviews, supervisors and subordinates discuss competencies that require development and training programs necessary to achieve these goals. These programs support employee career development.</p>

The "Search" web portal at Sony Corporation provides support for human resources development, and career building.



## Human Resources

### Employee Communication

Employee communication is very important at Sony. Communication forms the basis for a good corporate culture, allowing each party to build mutual trust and developing an environment that reduces the potential for harassment to occur. With the aim of maintaining a healthy work environment and facilitating the smooth execution of business operations, Sony works to encourage active communication.

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[Facilitating Dynamic Communication](#)

[Global Employee Survey](#)

## Human Resources

Updated on August 21, 2015

### Facilitating Dynamic Communication

#### Communication between Top Management and Employees

Sony sees communication between top management including CEO and employees as vitally important. Through the corporate intranet, information is provided on progress made in the Group's businesses, and communications are exchanged via e-mail and other media. Sony also works to create many other opportunities for direct dialogue between top management and employees. For example, Sony management holds regular informal gatherings and town hall meetings with employees, which cover a wide variety of themes, from technology to management. By sharing opinions from both perspectives, not only do employees gain a closer affinity with management but the views of employees can also be used to enhance the quality of management. In particular, CEO Kazuo Hirai places very strong focus on utilizing such opportunities, and frequently visits Sony Group operations worldwide to create the chance to participate in direct communication with employees.

#### Principal Venues for Communication between Top Management and Employees

<p>Electronics (USA)</p>	<p>Town hall meetings are held on a quarterly basis, and these are broadcast via the Web so that employees gain a better understanding of management policies. Management and general employees each have a blog through which opinions can be shared, facilitating reciprocal communication.</p>
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Financial Services	<p>The president, vice president and directors responsible for specific functions hold luncheon meetings, and when employees formally join the company the president holds separate interviews with each new employee. These programs reflect the importance of communication between management and general employees.</p>
Movie Business	<ul style="list-style-type: none"> <li>● Morning coffee sessions are held with the CEO and about 30 employees to give them a chance to speak directly with the CEO.</li> <li>● Sony has initiated a program to encourage discussions between its executives and members of the so-called millennial generation,*1, pairing them up so that the executives can learn about how young people consume media and use social media and technology, Unlike traditional mentor programs, this program gives the mentee role to the senior person, and is orientated toward mutually beneficial learning.</li> </ul>

\*1 Millennials is a term mainly used in the United States to refer to the generation of people in their late teens or twenties who were born between the 1980s and early 2000s.

## Communication between Supervisors and Subordinates

Communication between supervisors and employees is also active. Each employee has the opportunity to discuss goals and review performance with his or her supervisor several times a year through regular interviews. In particular, in the autumn each year, Sony runs a "Career Week" during which supervisors listen to employees' own aspirations for their future career direction, and the supervisor provides advice based on this dialogue.

## Communication among Employees

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Sony has created a specific space in which employees are able to exchange ideas freely, dubbed the "idea secret base." This space enables employees to organize discussions and group study sessions as well as test out ideas hands-on. This idea space provides opportunities for employees to freely exchange opinions outside of their own organizational units and particular specialized fields. The contact made in this space generates diverse communication, including informal discussions with colleagues that result in mutual inspiration and broaden personal networks and knowledge. There are also internal programs to harness employee ideas for the generation of new businesses.



Sony also promotes communication among Group companies through a variety of programs. Since 2007, the annual Sony Futsal Cup provides the opportunity to deepen relationships across Group companies through the medium of futsal - a popular five-a-side version of soccer played on an indoor or outdoor court. The tournament aims to create business chances beyond the confines of Group organizational units, and in an average year some 1,500 employees gather to take part in this large event. Several of the teams hold many practice sessions prior to the competition, and this also contributes to employee health.



## Communication between Employees' Families and Workplaces

Held since 2007, Sony Family Day provides an opportunity for employees to invite their family members to their office. The special day allows the family members to better understand Sony's business and the work done by the employees by seeing the actual workplace and talking with staff. It also gives the children who visit a look at a real business in action, inspiring them for the future. In 2013 and 2014, concerts featuring new artists from Sony Music were also held.



## Human Resources

Updated on August 21, 2015

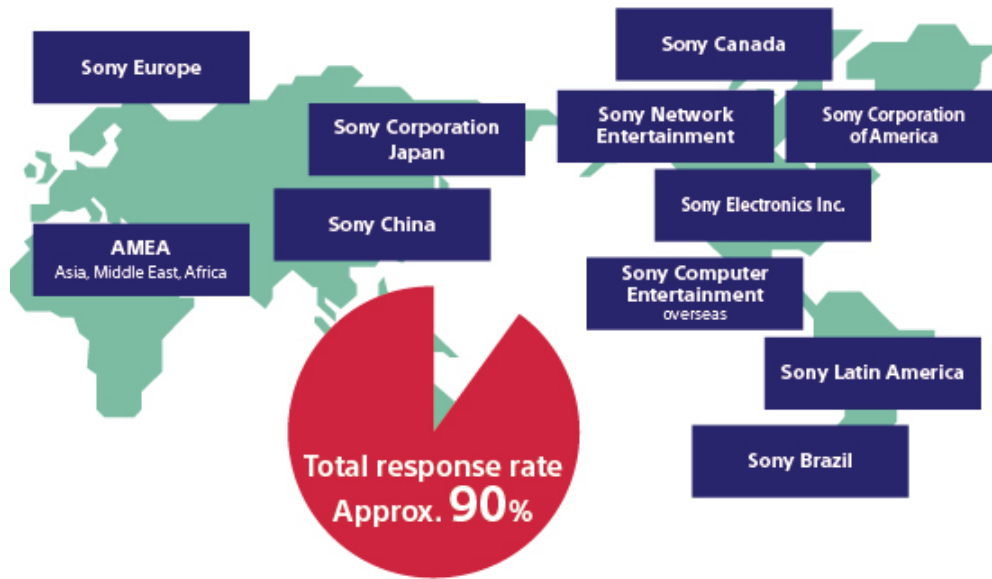
### Global Employee Survey

Since fiscal year 2010, Sony has integrated various formerly independent Group surveys into a global employee survey. The survey is divided into such categories as Innovation, Customer Focus, Corporate Culture, and Human Resource Development. The survey enables Sony to access and analyze the views of employees across the Sony Group in a consistent manner. The response rate for this annual survey has remained around 90%, reflecting employees' high level of interest in participation. Of particular note, around 80% of employees routinely respond that they understand and identify with Sony's Values and Objectives, indicating a strong awareness that is a key Sony strength. Survey findings are used as feedback to top management. At Sony Corporation, for example, they are also used in internal workshops held. Such programs address issues identified through the survey and assist in the drafting of personnel strategies, while helping to maintain organizational vitality.

The internal website used for the survey enables global best practices to be shared and promotes direct communication beyond national and regional boundaries for the improvement of the organization based on the survey's results.

Furthermore, Sony Corporation implements a parallel survey to provide feedback from subordinates to all supervising managers regarding their leadership activities. This survey aims to facilitate a check-up of organizational management style and is part of efforts to strengthen management.

## Global Employee Survey Implementation



\* The response rate is the percentage of responses received from employees who completed the survey.



The Global Employee Survey Website

## Human Resources

### Occupational Health & Safety

Sony strives to adopt sound labor and employment practices and to maintain a healthy, safe and productive work environment.

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[Basic Policy and Management System](#)

[Establishing an OH&S Management System](#)

[Global OH&S Initiatives](#)

[Global Workplace Injury Statistics](#)

[Helping Employees Stay Healthy](#)



# Human Resources

Updated on August 21, 2015

## Basic Policy and Management System

In 1998, Sony enacted a Global Policy on Occupational Health and Safety (OH&S), which serves as a Group standard and reflects Sony's commitment to the health and safety of its employees. The policy not only requires compliance with countries' and regions' laws concerning OH&S, but also sets out additional activities to be undertaken through its health and safety management structure.

### Sony Group Global Policy on Occupational Health & Safety

This policy applies to all Sony Group companies and organizations throughout the world.

#### [Philosophy]

Sony recognizes that occupational health and safety (OH&S) is an integral part of all business operations. Sony therefore secures a safe and healthy working environment for its employees.

#### [Policy]

1. To observe all local OH&S-related laws, regulations and agreements, and to establish independent standards to improve management ability of OH&S to practice OH&S activities more than just what the laws require.
2. To establish and maintain an appropriate organizational structure that clearly defines responsibility for promoting OH&S activities in all Sony Group companies and organizations.
3. To perform an OH&S risk assessment to evaluate potential dangers and hazards with a proactive science based analysis in all areas of operation.
4. To respect the voice of employees with the recognition that their health and safety is ensured by good communication between employer and employee.
5. To conduct effective OH&S training to all Sony employees, and to exchange information with outside companies performing services on Sony locations in order to secure OH&S.
6. To undertake internal promotion and information activities to enhance safety awareness.
7. To undertake periodic OH&S audits and endeavor to improve the OH&S management system.
8. To participate in public OH&S activities of both government and the local community.
9. To develop and introduce new methods and technologies for protecting the OH&S of employees.
10. To invest relevant capital in enforcing this policy, and to undertake continuous improvement of the OH&S management system.

Kazuo Hirai  
 President and CEO  
 Representative Corporate Executive Officer  
 Sony Corporation



## Human Resources

Updated on August 21, 2015

### Establishing an OH&S Management System

Based on the OHSAS 18001 occupational health and safety standards, and guided by its own Global Policy on OH&S, Sony is working to establish a proprietary OH&S management system for each of its sites around the world. Sony is also continuing to work to ensure compliance with national and regional laws concerning OH&S, as well as to achieve its own voluntary targets. To date, OHSAS 18001 certification has been acquired at seven plants in China and six in Pan-Asia.

# Human Resources

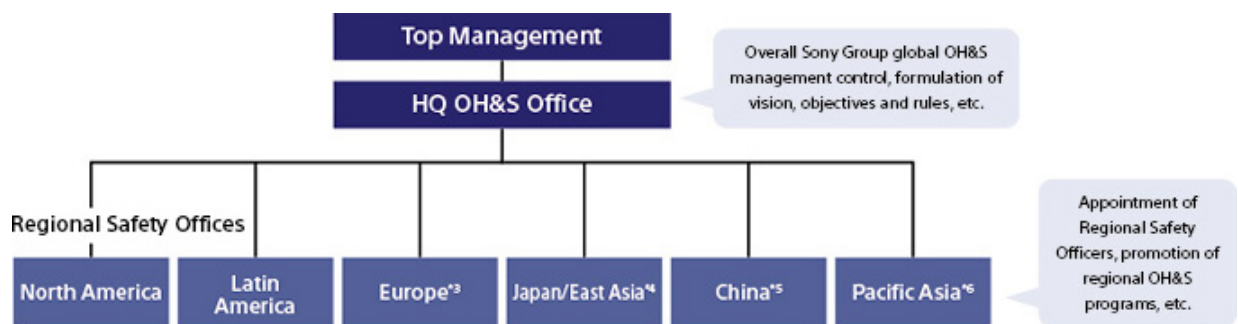
Updated on August 21, 2015

## Global OH&S Initiatives

### Common Global Programs

#### Global Management Structure

The Sony Group recognizes the health and safety of employees as a top management priority, and all Group companies manage relevant programs under a single structure. Furthermore, to promote global OH&S programs, Sony has established regional safety offices and appointed regional safety officers, and carries out programs across regions. Management reviews are also conducted for managers each year based on reports covering relevant information in each region, including the OH&S programs, related audits, and occupational accidents.



\*3 Europe, Turkey, Israel, Russia and former Soviet Union countries  
 \*4 Japan, Taiwan and South Korea  
 \*5 Mainland China and Hong Kong  
 \*6 Asia excluding the above (including Mongolia), Middle East, Oceania and Africa

## Sony Group OH&S Vision

Under a philosophy of "placing the highest priority on employee health and safety," Sony has formulated the Sony Group OH&S Vision and mid-range activity plan as steps toward realizing this vision. Sony's ultimate objective is to realize "Vision Zero" - its goal of zero occupational accidents. To realize Vision Zero by 2020, Sony is carrying out programs with the mid-range target of "zero serious accidents."

## Key Initiatives to Realize the Mid-range Target

### (1) Hazard identification

Across regions and product categories, the range of base chemical materials and production machinery and equipment used by Sony is becoming more diverse.

It is extremely important to identify all of the "accident seeds" lurking within workplaces without exception, and for this reason Sony carries out hazard visualization training programs. With many employees exchanging opinions, this process of identifying hidden hazards in the workplace enables each individual to increase his or her sensitivity to risks.

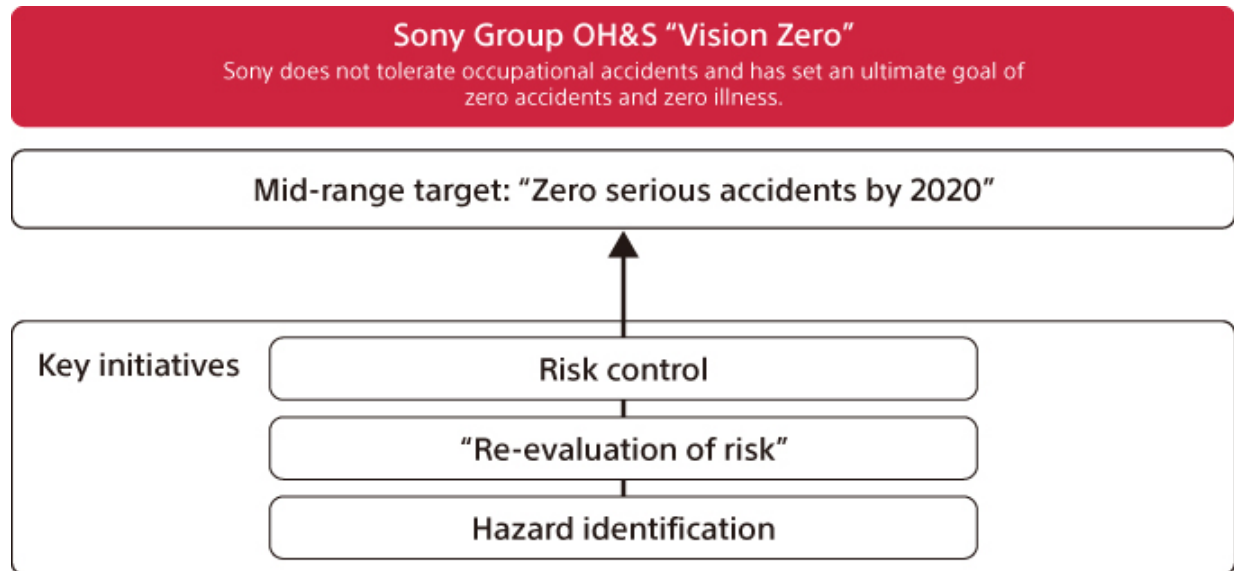
In fiscal 2014, all Sony production plants in China took steps to raise safety awareness among employees by providing training and asking workers to draw up hazard maps of their workplaces. Sony intends to expand these activities across the Pan-Asian region in the future.

### (2) Re-evaluation of risks

Confirming that reliable risk assessments have been implemented has become a priority issue for Sony's workplaces after an accident occurred in fiscal 2014, caused by the failure to conduct a fully proper risk assessment (the possibility of this particular incident causing harm was not foreseen and no risk assessment for it was implemented). Accordingly, Sony is conducting investigations at all of its worksites worldwide in order to determine whether they are able to exhaustively assess operations directly associated with risks of serious accidents, aiming to achieve its mid-range target of zero serious accidents.

## (3) Risk control

Through the initiatives outlined in points (1) and (2) above, Sony aims to formulate and carry out plans to reduce the risks identified that could lead to serious accidents. Based on this process, Sony aims to achieve appropriate risk control.



## Japan

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Guided by its Global Policy on OH&S, Sony is working to establish a proprietary OH&S management system with standards that are based on the OHSAS 18001 occupational health and safety standards, and is promoting a variety of OH&S initiatives. A particularly distinctive feature of this system is that it addresses OH&S from a comprehensive perspective, focusing not only on the risk of occupational accidents at Sony sites but also on risks to sites associated with earthquake damage, fire and site security. Sony has also established an internal audit system for OH&S-related initiatives conducted at sites and conducts corporate audits separately on a regular basis. This enables it to assess the level of initiatives at principal domestic locations, as well as make improvements on a continuous basis.

## Common Objectives in Japan

Based on the global objectives, in Japan Sony is carrying out programs for risk assessment and health improvement as common objectives for the Japan region.

## Initiatives for Improving Employees' Health

As part of the OH&S management system used at its workplaces in Japan, Sony is implementing measures designed to improve the health of employees. These include giving employees access to professional support provided by occupational health staff stationed at workplaces and local health insurance associations. At the same time, by keeping management aware of relevant concerns via the Company's Health and Safety Committee and other organizations, Sony ensures that workplaces cooperate to promote good health among employees. Focusing on support for quitting smoking, Sony creates opportunities for employees to give up the habit by holding events for raising awareness, such as a no-smoking day and a variety of other support activities.

## Monitoring Legal and Regulatory Trends

To keep abreast of legal and regulatory trends in Japan in the area of OH&S, in-house specialist staff members have developed and regularly update a database of related information and are charged with determining whether changes to laws and regulations apply to Sony sites. Sony has also created a framework for providing support to sites affected by such changes through the dissemination of up-to-date information, and enforces strict compliance standards at all work sites. Sony also includes information on legal and regulatory matters in the OH&S newsletter it publishes for Group companies in Japan, with the aim of enhancing employees' level of compliance awareness.

## North America

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### Wellness

In North America, Sony has continued the wellness program that covers employees and their spouses/domestic partners who are eligible for the Sony Healthcare Program. The objective of this program is to help employees and their spouses/domestic partners live healthy, active lives. Participants have access to health risk assessments, biometric screening, telephone counseling with a healthcare advisor, and other online or telephone-based programs and resources. Among these are programs on quitting smoking, weight loss, stress management, blood pressure, diabetes, nutrition and physical activity (including programs using exercise/activity trackers). Employees can receive incentives for participation in such health-promoting programs.

Many sites continue to expand their wellness activities. Sony of Canada installed a salad bar to encourage good eating and good health for Sony employees and has local farmers' markets set up outside the cafeteria to sell Sony employees fruits and vegetables during the summer. Sony Nuevo Laredo has added a 5-minute employee exercise program that is done twice daily and includes several different types of exercises. The program is conducted using trained leaders and a video that was made with the assistance of the government safety and health organization.

With regard to influenza vaccinations, employees may receive vaccinations at either site-based clinics or a national pharmacy chain using a vaccination voucher. These are provided over a six-month period, beginning in October.

At manufacturing sites, based on job requirements, employees receive regular medical exams and, where appropriate, industrial hygiene surveys are conducted.

## Risk Control Audits and Recommendations

Corporate Environmental, Safety & Health (ESH) and Fire & Life Safety audits are conducted on an ongoing basis at nearly all Sony sites in North America. Internal inspections are conducted as well as audits by insurance companies and brokers. The objective of the internal inspections is to assess facility areas overall from an ESH and housekeeping standpoint. This ensures that potential risks are identified and any other items needing attention are addressed in a timely fashion. The inspections are conducted by trained employees serving on on-site safety committees or work teams. The frequency of internal audits varies among sites, from monthly to semi-annually. The audits performed by the insurance companies or brokers are generally classified into one of the following three categories:

- (1) Identifying and addressing fire safety risks within a location;
- (2) Thermographic analysis of a site's electrical systems; and
- (3) Ergonomic assessment of workstations in both production and office areas.

For each category, recommendations for improving the current status of the site are provided, as needed.

In addition, in compliance with Sony Corporate guidelines, job risk assessments are under review to insure that they are all up-to-date and still reflect the job being performed. Both routine and non-routine jobs are included in this review.

## Chemical Safety Information

Each Sony site in the U.S. has a revised written Hazard Communication Program for chemicals in place, including information on Safety Data Sheets (SDS), labelling and training. The revisions are based on the changes to the U.S. Hazard Communication OSHA Standard to bring it closely in line with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Employees in the U.S. with exposure to potentially hazardous materials received additional training. New chemical labels and SDS required by the revisions are being introduced into the workplace as they are received. Operations in Canada will undergo similar changes to the national Workplace Hazardous Materials Information System (WHMIS) standard as well, starting this year. In addition, all



applicable sites are following procedures for controlling and eliminating specified chemical substances from the product supply chain, as defined by Sony's environmental rules.

### **AED Program**

Many Sony sites in North America have installed automated external defibrillators (AEDs) that can be used in the event of ventricular fibrillation and ventricular tachycardia. Sony Corporation of America implemented a program to place at least one AED Unit at every site that comes under the SCA umbrella. Employees at each site are trained and certified in first aid and cardiopulmonary resuscitation (CPR), in addition to their training in the operation of the AED. Monthly inspections of AEDs are conducted to ensure that they will be ready for use in case of emergencies.

## **Latin America**

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At Sony sites in Latin America, a high emphasis is placed on legal compliance and the prevention of OH&S accidents and efforts focus on maintaining and improving workplace environments. At the Sony Brasil Ltda. Manaus Plant, a manufacturing site, an annual in-house event is held with the aim of enhancing safety awareness as part of efforts to reduce OH&S accidents.

## **Europe**

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### **OH&S Risk Reduction Program**

Sony sites across Europe have identified OH&S management as a top priority and have implemented an OH&S risk reduction program since 2004 that aims to lower OH&S risk by reducing occupational accidents and advancing the health and well-being of employees. This program is based on three main pillars: (1) risk assessment; (2) mandatory OH&S training for all employees; and (3) accident/incident investigation and follow-up. The program also sets annual

numerical targets for decreasing the number of workplace injuries and related lost working days. Based on the results of risk management initiatives and a systematic analysis of regional occupational accident data, each site formulates measures aimed at improving its performance. These efforts are assessed through performance reviews, which are conducted quarterly. Program implementation and performance is reviewed by top management at annual European management review meetings. Sony Europe is committed to ensuring the safety of Sony workplaces in Europe through a variety of OH&S programs.

### **AED Program**

Sony Europe is promoting the installation of AEDs at all sites. A sufficient number of AED units have been placed at each site to achieve the specified maximum response time. Sony Europe's AED Program also requires AED training as part of regular first aid training.

In 2014, the AED Program underwent some revisions with the aim of increasing the effectiveness of the program. Recognizing that reduced response time means increased survival rates, the company set a new maximum response time target of two minutes. Sony Europe has also expanded the scope of mandatory AED training to include more employees such as security staff and reception staff.

### **Pan-Asia**

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Sony's Pan-Asian sites employ individuals with a wide range of nationalities and cultural backgrounds. A key objective of OH&S activities in the region is to raise awareness of safety issues through training and education. For example, events intended to enhance and raise safety awareness are held several times per year by Sony India Software Center. In fiscal 2014, the center organized a safety awareness program for female employees, and gave cleaning staff training on the management of chemical substances in detergents. Meanwhile, Sony's workplaces in Singapore acquired health and safety management-related bizSAFE Level 3 certification from the government. In addition, Kuala Lumpur Tec of Sony EMCS (Malaysia) Sdn. Bhd. received a national Occupational Safety &

Health Award from the Malaysian Society for Occupational Safety & Health.



Raising awareness of safety among employees in India



Sony receives bizSAFE Level 3 certification in Singapore



Representatives from a Sony factory in Malaysia receive the Occupational Safety & Health Award

## China

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Sony's manufacturing sites in China have significant annual output and a widely varied product mix. To secure and maintain the safety of production lines at these sites, Sony took initiatives that capitalize on know-how and technologies accumulated at its manufacturing sites in Japan. Subsequently, Sony expanded the scope of these efforts, retaining the OH&S management systems developed to date at each manufacturing site, while also creating a unified OH&S management system for China encompassing the China Regional Safety Office and sites. As a result, Sony in China earned integrated OHSAS 18001 certification in fiscal year 2013.

By jointly pursuing the creation of safe working environments through the OH&S management systems, Sony's manufacturing sites in China have made significant progress in reducing incidents of occupational accidents at their plants. As a means of raising safety awareness among workers, all of these plants reviewed hazard maps of production processes in fiscal 2014, and took related precautions as necessary. As a new initiative starting in June 2014, they set up a system for immediately reporting on any accidents occurring at their sites, enabling real-time monitoring of occupational accidents if and when they happen. By sharing information on such accidents between them, each production plant can take more effective precautions against a similar accident from occurring at their respective sites.

Meanwhile, the frequency of traffic accidents in China has been on the rise in line with the rapidly increasing number of automobiles in recent years. Recognizing the growing trend of workers commuting by car or motorcycle, Sony initiated an automobile and motorcycle safety training program in fiscal 2014.

In fiscal 2015, all production plants in China newly began activities for eliminating dangerous situations in the workplace as a jointly led initiative intended to ensure that precautionary measures against accidents are fully implemented. Every day these plants are making progress in assessing risks and creating more sophisticated OH&S management systems.

# Human Resources

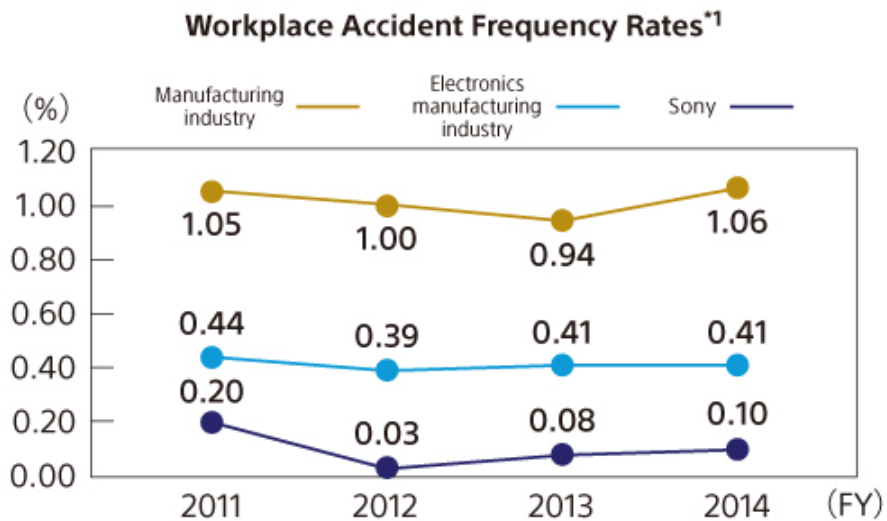
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## Global Workplace Injury Statistics

Since fiscal 2001, Sony has employed a data collection system to gather annual occupational health and safety data in the countries and regions in which it has operations. Sony analyzes these statistics to gain an understanding of circumstances and trends in terms of country/region, accident, injury/illness, cause, and the related practices of Sony Group companies, in order to help prevent recurrences.

### Main Causes of Accidents

- In Japan: 1. Caught in/between, 2. Fall on same level/Fall from height  
 Outside Japan: 1. Caught in/between, 2. Collided against, 3. Fall on same level/Fall from height



\*1 Figures for Sony refer to the frequency rate of accidents causing one or more days of absence from work at the Sony Group's manufacturing and logistics sites in Japan. Figures for the manufacturing industry and the electronics manufacturing industry are based on Fiscal 2014 Survey on Industrial Accidents published by the Ministry of Health, Labour and Welfare of Japan.

### Workplace Accident Statistics in Japan

	2011	2012	2013	2014
Number of accidents	22	28	32	23
Number of accidents causing absence from work	8	1	5	3
Number of lost workdays	158	3	96	122
Frequency rate of accidents causing absence from work	0.204	0.032	0.088	0.103
Accident severity rate	0.004	0.000	0.001	0.004
Number of deaths	0	0	0	0

Scope of data: 24 sites (excluding non-manufacturing sites)

Reference;

Comparative Statistics for Fiscal 2014

Average frequency rate in Japan: 1.66 for all industries, 1.06 for all manufacturing industries, 0.41 for the electronics manufacturing industry

Average severity rate in Japan: 0.09 for all industries, 0.09 for all manufacturing industries, 0.01 for the electronics manufacturing industry.

Source: *Fiscal 2014 survey on workplace accident trends* (Ministry of Health, Labour and Welfare of Japan)

## Workplace Accident Statistics outside Japan

	2011	2012	2013	2014
Number of accidents	306	380	378	377
Number of accidents causing absence from work	203	122	156	120
Number of lost workdays	3,165	2,654	2,671	1,518
Frequency rate of accidents causing absence from work	1.420	0.826	1.153	1.109
Workplace accident severity rate	0.022	0.017	0.019	0.014
Number of deaths	0	0	0	0

Scope of data: 32 sites (excluding non-manufacturing sites)

Formulas:

Frequency rate of accidents causing absence from work = Number of accidents causing one or more days of absence from work ÷ total number of man-hours worked × 1,000,000

Accident severity rate: Number of lost workdays ÷ total number of man-hours worked × 1,000

## Human Resources

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### Helping Employees Stay Healthy

#### Sony's Health Management System

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Sony aims to create a workplace environment that is enjoyable and dynamic for all employees, recognizing that this is vital for both the business and the people who drive it. To promote such an environment, it is vital to maintain conditions that enable each employee to work with a sound body and mind far into the future.

Sony Corporation's Occupational Health Center serves as its health management department. In cooperation with Sony Group companies, the center carries out a wide range of activities aimed at promoting the health of employees worldwide. These including offering regular health counseling sessions, posting health information on the Internet, encouraging daily exercise, and holding seminars led by outside experts.

Measures to prevent lifestyle diseases, limit excessive overtime, and promote mental health have become more important than ever in recent years, as work becomes more complex, evolves with organizational changes, and features an increasingly diverse array of tasks. To address these challenges, Sony offers occupational health counseling to employees who work long hours, depending on their individual circumstances, and provides key workplace managers with training designed to prevent mental illness and quickly identify signs of mental health problems. Sony has also established in-house and outsourced physical and mental health counseling services for employees so that they can discuss any type of concern or problem, include work-related issues, with professionals in a relevant field.



## Promoting Mental Health

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Along with its activities to promote employees' health and manage related risks, Sony implements comprehensive mental health support measures with the aim of helping employees demonstrate their full potential. Sony makes its health counselling services known to employees via email and its internal website, offering them access to counseling in face-to-face sessions or by telephone or email. Employees can receive health counselling from Sony's staff of professionals, seek guidance from managers and human resources personnel, as well as obtain referrals to medical specialists and related information when needed.

Sony provides a mental health training program for various levels of employees and management, including new employees, newly promoted section chiefs, and general managers. In addition, all employees receive training on personal healthcare. Sony's human resources department and health management department work together to provide stress management support when necessary, utilizing results of surveys on stress in the workplace and various other methods.

In addition, Sony has put a program in place to help employees return to work after taking a leave of absence. In cooperation with an outsourced employee assistance program, Sony offers such employees assistance with readapting to the workplace according to their individual circumstances. Sony also has a mental health program for helping employees cope with unforeseen accidents or disasters, such as a major earthquake. Implemented whenever necessary, the program provides such employees and their families with the assistance they need.

## Preventing Overwork

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As part of its efforts to ensure that overtime work does not negatively affect the health of employees, Sony has been implementing a health consultation program for employees who work long hours since April 2004. This initiative followed a

report issued in 2001 by Japan's Ministry of Health, Labour and Welfare on criteria for determining cerebrovascular disease and ischemic heart disease, which indicated a relationship between overtime work and health problems. The ministry then issued comprehensive guidelines for preventing health problems caused by excessive work in February 2002, and the guidelines were incorporated into law in April 2006. Accordingly, companies in Japan have taken measures to comply with the law. Against this backdrop, Sony has been providing counseling to employees who regularly work overtime and conducting surveys to determine their stress levels.

## **Preventing Lifestyle Diseases and Promoting Good Health**

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Preventing lifestyle diseases caused by irregular eating habits, lack of exercise, and other factors is a major challenge for employees working at companies. Sony makes sure that employees undergo various types of medical checkups in accordance with relevant laws in Japan, and then receive personal health advice based on the checkup results, as well as support for visiting specialists at medical institutions if needed. Sony also focuses on counseling and advice on dealing with metabolic syndrome, per Japan's mandated health guidance system.

## **Helping Employees Quit Smoking**

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Sony actively promotes campaigns for encouraging employees group-wide to give up smoking. Sony limits smoking at worksites to designated areas, and has been gradually reducing the number of smoking rooms, removing cigarette vending machines, and prohibiting the sale of cigarettes on its premises. Meanwhile, Sony encourages its health management staff to speak specifically with employees about quitting when giving health guidance. These initiatives have led to a steady decline in the employee smoking rate, which has fallen below 15% at Sony Corporation.

## Responding to Infectious Diseases

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With today's increasing globalization, it is becoming easier than ever for infectious diseases to spread. In recognition of these circumstances, Sony asks its employees to receive vaccinations when necessary if they work in or travel on business to countries at risk. Sony provides safety bulletins and information on infectious diseases on its website for employees taking business trips to keep them aware of risks, and limits business travel as a safety precaution depending on the circumstances. In Japan, if there is an outbreak of a new strain of influenza, tuberculosis, or other illness, Sony cooperates with the government and sets up emergency response teams at each of its divisions in order to respond flexibly while staying ready to implement business continuity plans.

## Health Management for Employees Transferred Overseas

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At present, Sony employees and their family members from Japan are stationed in 38 countries worldwide. This is why Sony has established a health management system that ensures that staff transferred abroad or travelling on business can work in safety and good health when they change workplaces. Under the system, these employees and their family members receive medical checkups before leaving Japan, after returning to Japan, and when visiting Japan each year. Sony has set specific items for health checkups for staff transferred abroad, which are more thorough and comprehensive than legally mandated standards. Like employees in Japan, employees transferred abroad receive follow-up support after medical examinations as a means for helping maintain their health on a regular basis. They also take healthcare training before travelling abroad, receive vaccinations, and are provided with information on medical facilities in the areas where they will work if they require ongoing medical treatment. Sony has put measures in place for raising awareness of personal health management, including preventative medicine and risk assessments.

## Human Resources

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### External Evaluation

The Randstad Award\* identifies the most attractive employers worldwide based on the world's largest survey into employer branding. It is conducted by major Dutch human resources (HR) service provider Randstad Holding NV along with its local operations in each country, including Randstad Japan. In the 2015 Global Randstad Award, Sony placed second overall for the second consecutive year, and like the previous year, Sony was the only Japanese corporation to place in the global top 10. The 2015 survey and award covered 22 countries and regions, and used 10 criteria to measure and evaluate the attractiveness of companies. These criteria included interesting job content, opportunities for career advancement, good training opportunities, a pleasant and stimulating working environment, good work-life balance, and progressive policies concerning the environment and society (CSR).

Sony is committed to providing users with thrilling experiences and remaining a company that stimulates people's curiosity. To realize this goal, Sony will continue to provide attractive work that expands employees' experience and ensure that its workplaces are open and lively.

\* Since the launch of the Randstad Award in Belgium in 1999, Randstad has teamed up with independent research company ICMA International to expand the award to many countries worldwide as an annual survey based on common international criteria. In each country, male and female survey respondents aged 18 to 65 years answer survey questionnaires focusing on whether respondents feel attracted to working for a company. The Global Randstad Award was launched in 2014 to identify the global companies with the most attractive employer brand, and sets no regional or national limitations within the globalized marketplace.

## External Evaluation of the Sony Group in Each Country and Region

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[Main Sony Group Programs to Promote Career Development of Individuals with Disabilities around the World](#)

[Examples of Measures to Promote Diversity in the Sony Group around the World](#)



## Responsible Sourcing



In recent years, stakeholders have grown increasingly aware of the importance of companies fulfilling their overall responsibilities to society as corporate citizens, including managing their supply chains in a responsible manner. In response to stakeholder concerns, Sony is working with its suppliers to address issues related to human rights, labor conditions, health and safety, and environmental protection at the production sites of outsourcing partners and parts suppliers, as well as in its procurement of minerals and other raw materials.

### Responsible Sourcing and CSR in Supply Chain Management

### Responsible Sourcing of Raw Materials

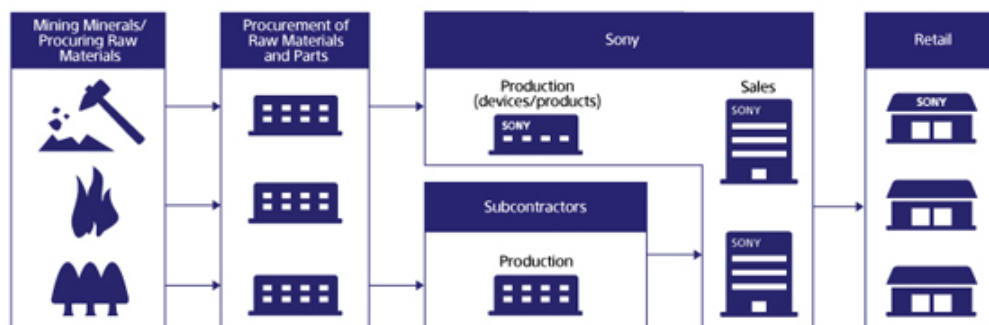
## Responsible Sourcing

Updated on August 21, 2015

### Responsible Sourcing and CSR in Supply Chain Management

Sony is committed to conducting its operations in a socially and environmentally responsible manner and to sourcing from suppliers that share its values. Accordingly, in order to enable positive change in its supply chain, Sony works closely with its suppliers and subcontractors to address human rights, labor, health and safety, and environmental protection issues related to the procurement of raw materials and components.

Basic Structure of the Supply Chain



### Policy for CSR in the Supply Chain

#### Compliance with "Sony Group Code of Conduct" in Business

In May 2003, Sony adopted the Sony Group Code of Conduct, which stipulates the basic standards to be maintained by all directors, officers and employees of the Sony Group in order to emphasize and further strengthen corporate

governance, business ethics and compliance systems throughout the Sony Group. The code includes basic policies concerning dealings with suppliers, categorized under such headings as "Fair Procurement" and "Gifts and Entertainment," with which all personnel in the Sony Group are required to comply.

### **Managing Chemical Substances in Procurement**

Given the global nature of its suppliers, Sony has led the industry by introducing its own global standards for management of certain chemical substances contained in products or parts, called Management Regulations for Environment-related Substances to be Controlled which are Included in Parts and Materials (SS-00259). To implement this standard, Sony has established the Green Partner Environmental Quality Approval Program for supplier qualification. Only suppliers that comply with Sony's standards for management of chemical substances qualify for certification as "Green Partners." By procuring parts and products only from certified suppliers, Sony realizes consistent chemical substance management globally.

<< Please refer to the following page for information on other procurement activities:<http://www.sony.net/SonyInfo/procurementinfo/> >>

### **Participation in the Electronic Industry Citizenship Coalition (EICC)**

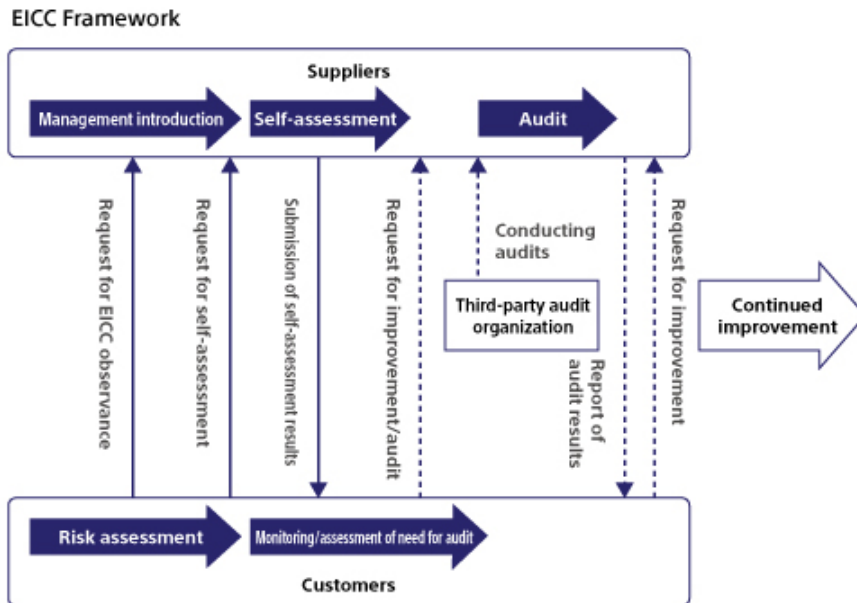
Supply chains overlap considerably in the electronics industry, with multiple manufacturers of finished products sharing the same subcontractors and parts suppliers. Accordingly, there are fears that the introduction of independent, company-specific standards for socially responsible management will cause confusion and constitute a significant burden on companies in the supply chain. With the aim of improving processes in the electronics industry supply chain, Sony, as one of the member companies, participated in the establishment of the Electronic Industry Citizenship Coalition (EICC) in 2004. The EICC formulated a basic code of conduct based on industry best practices and is working to develop the tools, Web-based systems, and skills development programs for suppliers,



needed to create a framework for ensuring the code is upheld. As of March 2015, the EICC consisted of over 100 participating companies from Europe, the Americas and Asia, and members include manufacturers and OEM companies. In cooperation with the Global e-Sustainability Initiative (GeSI) Supply Chain Working Group, consisting mainly of the European telecoms sector and other electronics industry organizations, the EICC is currently promoting social responsibility across the global supply chain.



- Formulation and revision of the EICC Code of Conduct
- Development of common implementation tools
- Risk assessment tool (a tool designed to help companies identify areas of risk and prioritize activities)
- Supplier self-assessment questionnaire (a self-administered survey for suppliers to provide information on their CSR efforts and management systems)
- Audits
- Standardization of audit procedures
- Identification of qualified third-party firms to conduct audits
- Development and administration of a Web-based system
- A Web-based information system for collecting, managing and analyzing CSR data provided by individual suppliers
- Education and training
- Stakeholder engagement
- Working groups related to particular subjects
- Environmental sustainability working group
- Extractive working group
- Asia Program



## Adoption of and Compliance with the Sony Supplier Code of Conduct

In recent years, stakeholders have become increasingly concerned about manufacturers' general responsibilities in relation to products, including issues related to human rights, labor conditions, health and safety, and environmental protection at the production sites of outsourcing partners and parts suppliers. Recognizing that partner firms are involved in the production of Sony products, and seeing the importance of addressing various issues in conformance with a framework that would meet Sony's own standards, in 2005 Sony established the Sony Supplier Code of Conduct, based on industry best practices as highlighted in the EICC Code of Conduct. In line with subsequent changes to the EICC Code of Conduct, Sony made an amendment to its own code, including adding a reference to the conflict minerals reporting requirements set forth in Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which was passed by the U.S. government in 2010. The updated second edition of the Sony Supplier Code of Conduct was published in 2012.

Sony's basic procurement contract with material suppliers lays down observing related laws and regulations and the Sony Supplier Code of Conduct. Sony

requests all potential new suppliers to comply with the Code, as well as to conduct assessments as a part of requirements of a preliminary examination.

It is Sony's basic policy to reconsider its business relationship with the supplier in the event that an existing supplier is confirmed to have committed a major violation of the Sony Supplier Code of Conduct or is not exhibiting an appropriate level of cooperation with studies and audits. In the event that a violation of the Sony Supplier Code of Conduct is reported by a third party and a violation is confirmed, Sony will ask the supplier to take corrective actions and report back on the progress. If the violation has been committed by a secondary supplier, Sony will work in cooperation with the relevant primary supplier to urge corrective action.

Sony Corporation has also installed a hotline for suppliers to report compliance violations on the part of Sony Group company employees or executives. Appropriate actions are taken in response to such reports once veracity has been confirmed.

 [Sony Supplier Code of Conduct](#)

## **Sony's Structure for Promoting Supply Chain Management**

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Sony's head office divisions - centering on CSR procurement and manufacturing groups - take the lead in promoting responsible sourcing activities in cooperation with other related head office divisions, business groups and relevant functions at manufacturing sites. The CSR group keeps abreast of external trends and communicates with stakeholders, drawing on both to formulate company-wide basic supply chain management policies. The procurement group is responsible for overall implementation of responsible sourcing policies by ensuring that suppliers comply with the Sony Supplier Code of Conduct and conducting necessary studies and audits of suppliers, analyzing the results thereof and implementing necessary measures.

## Monitoring Activities and Follow-up Measures to Ensure Compliance with the Sony Supplier Code of Conduct

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### Supplier Assessments

Sony established the Sony Supplier Code of Conduct to ensure that suppliers understand Sony's expectations in more detail. Suppliers of products and materials to Sony around the world are required to observe this code.

As part of its effort to ascertain supplier compliance with the Sony Supplier Code of Conduct, Sony conducts assessments worldwide. To this end, Sony uses the concept of risk appraisal to determine risks associated with the country and region in which each supplier is based, as well as risks associated with the scale, status and nature of the supplier's business, and tailors its assessment to the supplier's risk level.

Based on the results of these assessments, Sony evaluates the degree to which suppliers are complying with the Sony Supplier Code of Conduct and whether violations have occurred at each of the suppliers' factories. As part of its risk appraisals, Sony conducts onsite inspections of suppliers it deems to be subject to risks in order to confirm how their factories are being managed.

For example, if suppliers employ students, Sony directly visits their factories to check whether any workers are younger than the legal age limit in that country, and to confirm whether the health and safety of younger workers are being affected by their jobs due to long working hours, working night shifts, and other factors. Likewise, if suppliers employ foreign workers, Sony confirms whether such workers are subject to forced labor, whether dormitory facilities provided to those workers meet international standards, and whether the working environment is clean and safe. By inspecting factories and providing direction in this way, Sony ensures that suppliers are making every effort to fulfill their social responsibilities.

In fiscal 2014, Sony conducted assessments of all of its new suppliers. Overall, the assessments showed that management systems covering labor, ethics, and other key issues had been established and were making progress toward completion. Sony intends to provide support to these suppliers so that they can continue making improvements.

## Ongoing Communication with Primary Suppliers of Products and Materials

Acting through the department responsible for administration of the Sony Supplier Code of Conduct, Sony engages in ongoing communication with its primary suppliers of products and materials. This facilitates the exchange of information concerning the progress of suppliers' CSR initiatives and their efforts to ensure that secondary suppliers comply with such initiatives, and also enables Sony to provide support for efforts to improve CSR across the entire supply chain.

Additionally, Sony requires its primary suppliers of products and materials to conduct regular self-assessments. For suppliers shown by such self-assessments to have a high risk of violation, Sony conducts EICC audits in several areas : labor practices, ethics, safety and health, environment and management system. Sony also follows up on recommendations for remedial actions implemented as a result of these audits.

## Third-Party EICC Audits

The EICC has also established a framework for third-party supplier audits based on the EICC Code of Conduct. This framework encompasses the certification of third-party auditors, as well as the provision of necessary auditing tools, including manuals and audit checklists. These audits focused on suppliers in regions where member companies consider the risk of violation to be high. Sony's suppliers have also undergone audits based on EICC standards through the EICC's shared audit program. The results of these audits identified

non-conformance issues in the categories of labor and ethical management systems, health and safety, and labor.

In cases where violations of the Sony Supplier Code of Conduct are reported via external sources, such as NGOs or media reports, Sony cooperates with the supplier in question to confirm the facts of the case expeditiously and objectively. Specifically, Sony may request that the supplier's manufacturing site undergo a third-party EICC audit. If the originally reported facts are confirmed, Sony ensures remedial action is taken and, if necessary, provides additional support for the supplier's efforts to improve its performance in the form of follow-up audits to confirm the progress of initiatives. In cases where violations are reported at a secondary supplier, Sony works with the primary supplier to ensure that remedial action is carried out.

## Stakeholder Engagement

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With the aim of developing a basic framework for promoting effective supply chain management, the EICC holds discussions periodically with NGOs, socially responsible investors and other stakeholders. Sony participates in these discussions and takes into account the views of a diverse range of stakeholders. Such discussions are held regularly in Asia, the United States and Europe.

## Responsible Sourcing

Updated on August 21, 2015

### Responsible Sourcing of Raw Materials

Our stakeholders care about sustainability issues, including biodiversity, ethics and respect for human rights related to the sourcing of raw materials. Sony is working with its suppliers to address issues related to human rights, labor conditions, health and safety, and environmental protection at the production sites, as well as in its procurement of minerals and other raw materials.

#### Sony's Conflict Minerals Policy

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The Democratic Republic of the Congo (DRC) and its adjacent countries have been mired in conflict with armed groups perpetuating human rights abuses in that region. These armed groups have been trading in certain minerals commonly found in that region to finance their activities. These four minerals - columbite-tantalite, also known as coltan (tantalum), cassiterite (tin), gold and wolframite (tungsten) - are commonly found in many products, ranging from jewelry to electronics to airplane components. To the extent these minerals are found to be financing armed activities, these four minerals are commonly referred to as "conflict minerals."

In order to ensure transparency and reporting, the United States enacted the Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which first became effective in January 2013. This law requires companies that issue shares on a US stock exchange, such as Sony, to conduct an inquiry into the origin of tin, tantalum, tungsten and gold in their supply chains. If these minerals come from the DRC or its adjacent countries, or if their country of origin is uncertain, then the company must conduct a more thorough review of its supply

chain in an attempt to determine whether the supplies supported armed groups in the DRC. On May 29, 2015, Sony submitted its second report to the U.S. Securities and Exchange Commission (SEC) based on its review of its supply chain activities for calendar year 2014.

#### [Sony's report to the SEC \(Form SD & Conflict Minerals Report\)](#)

It is Sony's policy to refrain from knowingly purchasing any products, components or materials that contain conflict minerals so that we can avoid contributing to conflict through our sourcing practices (Our policy is available on our CSR web site, link below). To help ensure compliance with our Conflict Minerals Policy, we have designed an internal due diligence framework to determine the country of origin and chain of custody for any conflict minerals in our supply chain. Our due diligence framework is designed to conform, in all material respects, with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. We endeavor to ensure that our products do not contain tin, tantalum, tungsten or gold from sources that benefit armed rebel groups in the DRC or the adjoining region, while at the same time making sure that we are still able to source responsibly from that region and avoid a de facto embargo, by requiring our suppliers to source materials from smelters determined to be compliant with the Conflict-Free Smelter (CFS) Program\* of the Conflict-Free Sourcing Initiative (CFSI), which was established by the Electronic Industry Citizenship Coalition (EICC)/Global e-Sustainability Initiative (GeSI), or other smelters that have been determined to be conflict-free smelters or determined to be conflict-free under other trusted traceability projects.

#### [Sony Group Conflict Minerals Policy](#)

- \* CFS Program: A voluntary program in which an independent third party evaluates a smelter's procurement activities and determines if the smelter has demonstrated that all the materials it processed originated from conflict-free sources



## Sony's Activities to Support Supply Chain Transparency and Reporting

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Tungsten, tantalum, tin and gold enter global supply chains from the DRC as well as numerous other supplying countries. Determining the mine of origin for these minerals requires the cooperation of many levels of suppliers and intermediaries in the supply chain. Sony's conflict minerals program is aimed at continuous improvement of our understanding of our supply chain and risk reduction over time. Our expectation is to make progress in the early years of this program, and achieve increased transparency over time based on our efforts to obtain increased supplier cooperation.

Sony began exercising due diligence regarding our use of tin, tantalum, tungsten and gold in selected product categories in August 2011. We expanded our inquiry to the entire Group in 2013. In 2014 we exercised due diligence on our supply chain by investigating whether tin, tantalum, tungsten or gold were present in any Sony products manufactured or contracted to be manufactured during 2014. If any of these minerals were determined to be necessary to the functionality or production of any products manufactured by Sony or a subcontracted manufacturer, during this period, we assessed the country of origin and the smelters at the product level through a supplier survey sent to all relevant suppliers, utilizing the Conflict Minerals Reporting Template of the CFSI. The smelters identified by our direct suppliers were then compared against the conflict-free smelter list prepared by the CFSI, to further enhance the accuracy of Sony's findings.

Sony identified a total of 214 smelters and refiners as potential sources of four minerals and, of those 214 smelters and refiners, 171 smelters and refiners were validated as Conflict-Free Smelters (CFS) or are now under the CFSI audit process. Thirteen of these CFS in our supply chain were reported to procure materials from the DRC and its adjacent countries. While the results of Sony's due diligence did not reveal that any of the tin, tantalum, tungsten or gold in our electronics products were sourced from the DRC or any of its adjacent countries nor that they financed or benefited armed groups in these countries, we concluded that we

lack sufficient information at this time to definitively determine the country of origin of all such minerals in our electronics products.

Please refer to the smelter list in the aforementioned Sony report to the SEC, which includes smelters confirmed as conflict-free through Sony's traceability program.

 ["EICC® and GeSI Launch Conflict-Free Sourcing Initiative" \(press release\)](#)

[CFSI conflict-free smelter program and conflict-free smelter list \(CFSI website\)](#)

## Participation in Industry Groups and the Public-Private Alliance

Sony recognizes that effective change requires a joint effort. We have joined in multi-stakeholder dialogue about conflict minerals with nongovernment organizations (NGOs) and peer companies. Sony actively participates in and supports industry groups and alliances that seek to identify and prevent or mitigate the adverse impact associated with mineral extraction in high-risk areas, including the EICC, and has funded a range of programs addressing this issue. The EICC was founded with the objective of addressing social and environmental issues in the electronics supply chain.


In 2011, the EICC launched the CFS Program to provide leadership to the industry in this area. With the aim of promoting collaboration with other industries and multiple stakeholders, in August 2013 the EICC/GeSI launched the CFSI. Sony utilizes the frameworks developed by the EICC and other alliances as part of its efforts to ensure responsible sourcing of tin tantalum, tungsten and gold.

Sony also supports and contributes to such industry initiatives as the traceability project for tin launched in 2010 by ITRI, a tin industry organization, to validate that the metals used in its products are not contributing to conflict and come from sustainable sources. In addition, Sony participates in the Public-Private Alliance for Responsible Minerals Trade (PPA), a joint effort of government, industry and civil society organizations led by the U.S. government to support responsible mineral trade from the Great Lakes region of Central Africa. Since its

establishment, the PPA has supported the creation of a pilot supply chain management system that includes certifying conflict-free mines, that is, mines that engage in responsible trade practices. The PPA also provides a platform for coordination among government, industry and civil society actors seeking to support conflict-free sourcing and self-sustaining trade from the DRC and the Great Lakes Region, and serves as a resource for companies seeking information regarding how to source responsibly.

Moreover, as part of our overall effort to achieve conflict-free supply chains, Sony promotes active, ongoing dialogue with civil society organizations, industry groups and other external stakeholders for further improvement of conflict-free sourcing practices. For example, CFSI holds workshops for discussions periodically with NGOs, socially responsible investors, local government representatives and other stakeholders, in which Sony participates. Such workshops have been held on more than 10 occasions in various countries and regions, including Europe and North America. Sony also works to support the industry initiatives of the Japan Electronics and Information Technology Industries Association (JEITA).

#### **Sony Participates in Public-Private Alliance for Responsible Minerals Trade (PPA), a Joint Effort Led by the U.S. Government**

 **[JEITA Responds to Conflict Minerals Provision of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act \(JEITA release\)](#)**



## Expectations for Sony Suppliers of Tin, Tantalum Tungsten and Gold

We require our direct suppliers to comply with the Sony Group Conflict Minerals Policy and to fully cooperate with our due diligence efforts regarding sourcing tantalum, tungsten, tin or gold in accordance with the terms of this Policy. In addition, to ensure that products, components or materials delivered to Sony do not contain any conflict minerals, we expect our suppliers to have in place pertinent policies, a due diligence framework and a management system consistent with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

### Risk mitigation plan

In the event that Sony confirms that any of its products, components or materials may contain conflict minerals, Sony, in collaboration with relevant suppliers, shall take actions reasonably necessary to eliminate such minerals from such products, components or materials and shall request that the suppliers makes necessary improvement to its sourcing practices. This includes adoption of a conflict-free sourcing policy, increased responsiveness and accuracy of the supplier survey, and increased use of the four minerals sourced from smelters or refiners participating in the CFS program. Further, in the event that Sony confirms that a supplier has failed to cooperate sufficiently with a due-diligence investigation, fails to follow Sony requests for remediation or has otherwise violated this policy, Sony shall take necessary actions, including without limitation, termination of business with such supplier by stopping new orders.

Sony has also established a hotline to allow any interested party to voice concerns regarding the circumstances of mineral extraction, trade, handling and/or export in conflict-affected and other high-risk areas. In addition to our internal risk assessments, the hotline will help to allow us to be alerted to risks in our supply chain.

[> Conflict Minerals Policy Hotline](#)

## Initiatives Related to Paper Procurement

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Sony recognizes that paper resources are limited and strives to reduce the amount of office paper used at sites and limit the number of pages in its product manuals.

Sony also recognizes the impact of illegal logging on biodiversity and considers it important to ensure responsible procurement of lumber and paper products. Sony takes environmental conservation into consideration when purchasing paper materials by adhering to the Sony Group Paper/Printed Material Purchasing Policy.

Sony sources paper from forests certified as responsibly managed and works not only to ensure that the paper it purchases has been produced from forests that are managed in accordance with legal requirements but also to promote the use of paper products certified by the Forest Stewardship Council (FSC), which audits forests based on a range of criteria, including sustainability and uses FSC-certified paper in its corporate printed materials, calendars and business cards.



## Quality and Services



Sony has various businesses globally to provide products and services that meet customer requirements in terms of satisfaction, reliability and trust.

### Philosophy and Policy for Product Quality and Services

### Product Quality and Quality Management

### Responsiveness and Customer Service

### Accessibility and Usability

## Quality and Services

Updated on August 21, 2015

### Philosophy and Policy for Product Quality and Services

Sony is wholeheartedly committed to improving product and service quality from the customer's viewpoint with the aim of maintaining and enhancing customers' satisfaction, reliability and trust. This reflects Sony's belief that our most important goal is to remain a highly trusted partner for our customers.

#### Philosophy and Policy

Since the start of its operations, Sony has given top priority to providing customer-oriented, high-quality products and services as an operating foundation. This philosophy is set forth in the Founding Prospectus drafted in 1946 by Sony's co-founder, Masaru Ibuka.



The Sony Group Code of Conduct, established in May 2003, compels Sony to continuously seek technologies that enable it to comply with or exceed legally mandated standards in all standards of its business activities to ensure the safety of its products and services.

To reflect changes in its operating environment, in April 2012 Sony revamped the Sony Pledge of Quality, which lays out its basic policy on product and customer service quality in the Electronics business. This move was aimed at reinforcing awareness of Sony's commitment to ensuring that the quality of its products and customer services exceeds the expectations of its customers around the world.

## Quality and Services

Updated on August 21, 2015

### Product Quality and Quality Management

The Sony Pledge of Quality declares our commitment: "Sony employees will always respect our customers' viewpoints in striving to deliver product quality and customer service that exceed their expectations." To this end, Sony promotes continuous, decisive efforts to enhance product quality and to reinforce its quality management system.

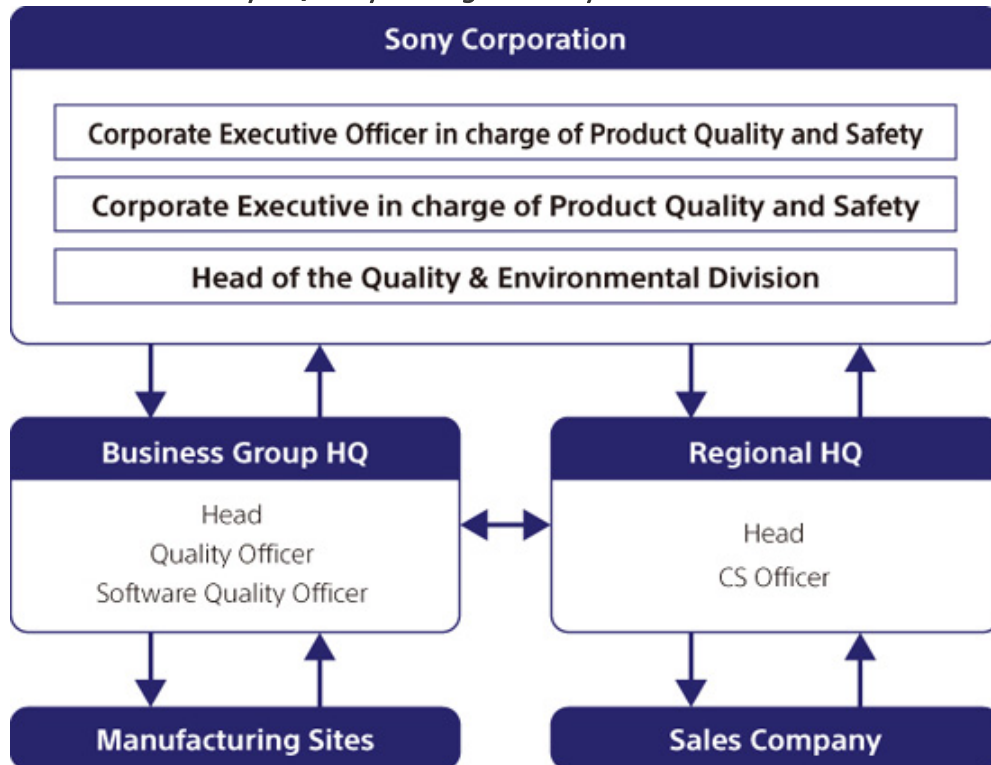
#### Sony's Quality Management System Framework

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Sony configured its quality management system by defining quality management mechanisms across all processes, from product development, planning, design and manufacturing through sales and customer service. This has included defining the roles, responsibilities and authority of those responsible for product and customer service quality and establishing guidelines.



Framework of Sony's Quality Management System



Based on this quality management system, Sony is implementing measures on an ongoing basis to improve the quality of its products and services. Examples of such measures are shown below.

- Has appointed the Corporate Executive in charge of Product Quality and Safety and has tasked this person with coordinating efforts to improve product and customer service quality and ensure timely responses to problems;
- Has appointed Quality Officers within each business unit and has tasked them with spearheading product- and business-specific initiatives under the supervision of the Corporate Executive in charge of Product Quality and Safety and the senior executive of the relevant business unit;
- Has appointed a Software Quality Officer in each business unit to promote the maintenance and improvement of overall software quality under the direction and supervision of the Quality Officer. This includes ensuring connectivity between the products supported;

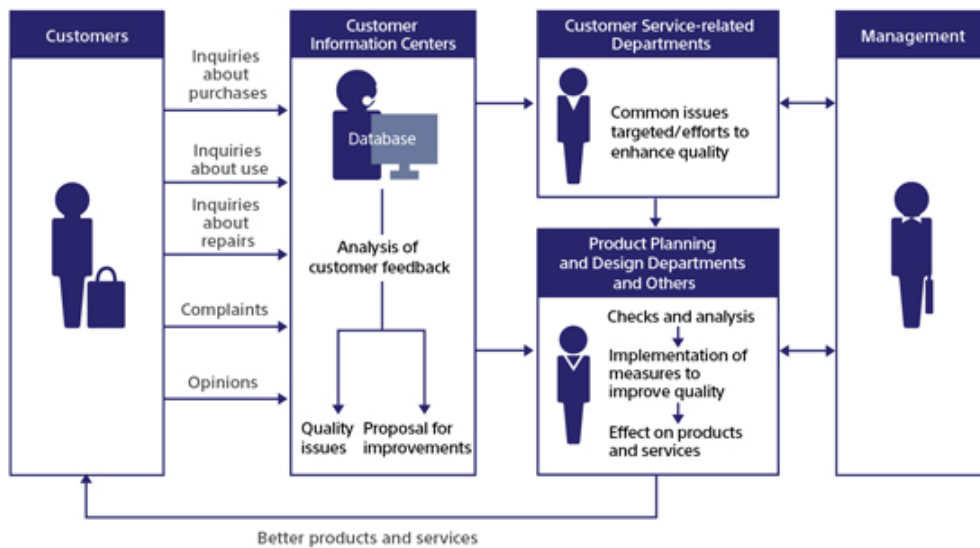
- Has appointed CS Officers to coordinate customer service departments in markets around the world where Sony products are sold and has tasked them with spearheading a network of global-level initiatives under the supervision of the Corporate Executive in charge of Product Quality and Safety and the individual in charge of the relevant regional headquarters;
- Has created a framework for promoting business unit- and region-specific initiatives to ensure Sony's products comply with pertinent laws and regulations;
- Has obtained certification under ISO 9001 for all sites manufacturing electronics products;
- Has formulated mid-term and fiscal year targets for the quality of and customer service related to Sony products, as well as key quality-related indicators for business plans, with the aim of fulfilling the Sony Pledge of Quality. Business units and regional headquarters subsequently devised their own fiscal year quality and customer service targets and business plans, in line with which they continue to promote quality improvement initiatives;
- Has held Quality and Customer Service Strategy Meetings, attended by top management, which function as the ultimate decision-making authority for quality and customer services in the Electronics business, to deliberate and decide on policy, strategies and targets related to product quality and customer service, as well as key measures;
- Has held regular Quality Officer Meetings and Software Quality Officer Meetings, attended by, respectively, business unit Quality Officers and business unit Software Quality Officers, to evaluate the progress of quality-oriented business plans, promote initiatives aimed at achieving targets, and debate specific activities and responses to quality-related issues and common challenges.

- Has held Quality CS Officer Meetings, attended by business unit Quality Officers and regional CS Officers, to evaluate the progress of quality and customer service-oriented business plans and promote initiatives aimed at achieving targets, and to share information on customer service and product quality activities and common challenges, thereby contributing to global efforts to improve product quality and customer service;
  
- Has formulated and administers Sony Group quality standards applicable to Sony's electronics products and related customer services, which focus on such criteria as product safety and performance, labeling and customer services. These standards are updated continuously to reflect technological advances, changes in applicable legal and regulatory requirements, and social changes, aiming to ensure Sony's ability to deliver quality and services that exceed the expectations of customers;
  
- Has strengthened rules worldwide since 2006 to ensure prompt reporting to the Corporate Executive in charge of Product Quality and Safety, when Sony receives information about an incident involving a Sony product that affects customer safety or has the potential to do so. Based on these reports, the Corporate Executive in charge of Product Quality and Safety provides the necessary follow-up and instructs the relevant divisions to investigate the incidents and respond appropriately to the customer. In 2007, Sony applied the same system to possible software vulnerabilities in products, and ensures full implementation of the system.

## Responding to the Customer

Sony makes active use of customer feedback to improve its products and customer services. Opinions, reports of malfunctions after purchase, questions regarding use and other feedback received through Customer Information Centers are evaluated promptly and accurately and disseminated to the planning and design groups so that improvements in product quality can be made in a timely fashion, thus contributing to efforts to enhance product power.

For example, in various regions of the world, Sony has created a series of customer support websites designed for mobile phone screens in response to requests for access to customer service from mobile phones, the popularity of which has grown markedly in recent years. In the U.S. market, Sony has released a dedicated customer support app for smart phones, and made it easier for customers to quickly access the information they need on a customer service website, including user manuals for products they own and answers to frequently asked questions.



## Quality Hotline

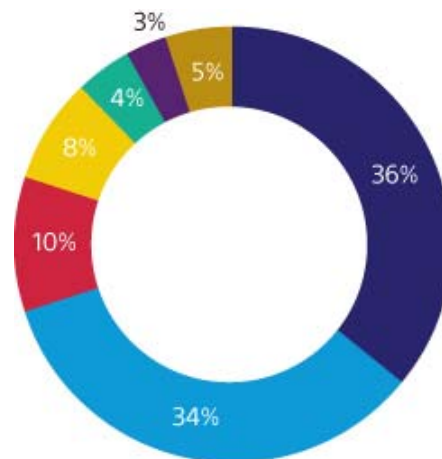
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It is vital to detect product quality-related problems as early as possible. To that end, Sony established the Quality Hotline in 2003 to gather product quality-related information, including reports of problems, as well as opinions from Sony Group employees. Employees can send messages regarding such matters as issues that are too difficult to handle at their workplace and problems concerning the quality of Sony products and/or customer services from the customer's perspective, to the Quality Hotline's in-house website. Upon investigating a problem to ascertain the veracity of the information received, the Quality Hotline proposes and introduces measures to prevent previous problems from recurring and precluding potential new problems.

The Quality Hotline is closely linked to the Sony Pledge of Quality, which states that "Sony employees will always respect our customers' viewpoints in striving to deliver product quality and customer service that exceed their expectations." As of March 2015, Sony had received more than 1,680 reports since the establishment of the Quality Hotline. The diverse range of information received has included proposals to make products and manuals more user-friendly, and has led to more than 1,072 improvements.

As these initiatives indicate, Sony is wholeheartedly committed to improving product and service quality from the customer's perspective with the aim of maintaining and enhancing customers' satisfaction, reliability and trust.

Breakdown of Quality Improvements to Date



- Website and catalog improvements
  - Design reviews
  - Services reviews
  - Manual improvements
  - Verification system reviews
  - Manufacturing technology improvements
  - Other reviews and improvements
- (As of March 31, 2015)

## Market Quality Improvements

Sony has established dedicated quality management organizations in each of its business areas that are responsible for improving quality for pertinent products in each market.

At Sony's head office, information related to quality issues arising in the marketplace is gathered in a timely manner from a broad range of sources in Japan and overseas and reported weekly to head office quality management and technical specialists under an information-sharing system. Based on the reported information, Sony ascertains whether or not issues in the marketplace have been

addressed appropriately. As well as ensuring that such issues are thoroughly addressed, by promoting measures to prevent recurrence and proactive measures in relation to quality issues, Sony is accelerating its quality improvement performance.

## **Improving the Quality, Safety and Long-Term Reliability of Products**

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### **Improving the Quality of Products**

Sony pursues design-, manufacturing- and parts-related initiatives aimed at improving product quality.

#### **Design-related quality initiatives**

In the initial stages of the design process, the individual in charge of a particular business group verifies new technologies and new parts and, from a user's perspective, determines how a product is to be used. At the conclusion of the design process, the individual in charge confirms the degree to which the intended level of product quality, reliability and usability has been realized.

In addition, to ensure our ability to provide customers with products of a quality worthy of the Sony brand, we required OEM/ODM companies and parts suppliers to comply with Group-wide quality standards. Compliance with these standards is also tested at the end of the design process.

Such approaches prevent the occurrence of problems pertaining to new technologies and new product parts, as well as ensure product designs that incorporate consideration for user convenience.

#### **Manufacturing-related quality initiatives**

In its effort not to receive, manufacture or ship anything with quality-related problems, Sony adheres to a policy of workmanship at all of its manufacturing sites that ensures customers can use Sony products with confidence. Initiatives include setting important targets at each site and implementing Plan-Do-Check-Act (PDCA) processes, thereby facilitating the achievement of such targets

and the continuous improvement of product quality. Sony has also established standard product quality rules to ensure Sony products manufactured by OEM/ODM companies are of the same high quality as those manufactured at Sony production sites.

### **Parts-related quality initiatives**

Recognizing the importance of parts and determined to manufacture products built for long-term use, Sony carefully selects key parts independently for each of its major product categories and is pursuing focused efforts aimed at increasing the reliability of the parts it uses through cooperation with relevant departments and Sony's headquarters.

### **Improving Product Safety**

Ensuring the safety of the customers who use Sony products is one of the highest priorities for the Sony Group. Accordingly, at every stage of its business activities, including product development, planning, design, production, marketing, and after-sales service, Sony takes steps to comply with safety standards based on laws and regulations while constantly striving to surpass those standards in order to maintain the safety of its products. As part of these efforts, Sony appoints managers in charge of product safety assessment from a medical perspective. When developing products employing new technologies, Sony also seeks advice on product safety from a medical perspective from outside experts, which it then incorporates into product development, design and engineering. When deemed necessary, Sony also conducts evaluation tests to assess safety with the assistance of a specialized organization.

In addition, Sony strives to ensure that the safety-related explanations and information it provides to customers are accurate, easy to understand, and clearly presented. If a safety-related problem involving a Sony product is reported, the Sony Group immediately collects information and examines the facts, and then takes the steps necessary to rectify the problem.



### Improving the Long-Term Reliability of Products

The Quality Reliability Lab continues to enhance Sony's product reliability, thereby ensuring Sony's ability to deliver safe, durable and reliable products to customers.

Sony has assigned specialists to work full time on improving technologies essential to product reliability and continues working to ensure the long-term reliability of its products by developing elemental technologies for preventing the deterioration, wear and corrosion of materials and parts, as well as technologies necessary to ensure the reliability of new technologies and products and to evaluate such technologies and products.

The reliability and evaluation techniques, and the information obtained through these activities, are openly accessible and available to all Sony employees via training sessions, seminars, and websites, and are utilized to improve design and parts selection processes. Sony also presents some of its own knowledge on evaluation techniques at academic meetings and industry conferences and gatherings, in its efforts to contribute to the industry.

### Efforts to Eliminate Software Vulnerability

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Increases in the digitization and networkability of electronics products have heightened the danger of, among others, personal information leaks and the destruction of data. As a consequence, eliminating the vulnerability of software in Sony products has become a critical issue.

Sony has a function for collecting security risk-related information from outside experts, researchers and other individuals. Sony has created an internal software vulnerability team comprising individuals assigned to each business group who are responsible for software vulnerability issues and a contact point for receiving information from outside the company. Based on the information received, the team - led by these individuals - assesses the impact of risk on customers from a software vulnerability perspective and implements appropriate measures.

To ensure its ability to deliver products that customers can use with confidence, Sony has also established internal guidelines pertaining to software vulnerability and continues to implement employee training programs. Additionally, in 2009 Sony introduced a mechanism that detects software vulnerability during security inspections conducted prior to product shipment. Sony is also working to further fortify its efforts to eliminate software vulnerability by developing a system that will ensure the security of products over their entire life cycle from planning to after-sales services.

## Responses to Quality Issues

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Sony recognizes that ensuring its customers' satisfaction, reliability and trust is one of its most important management tasks and strives to prevent quality-related problems through the systems and efforts described above.

Sony responds swiftly in the event of a quality-related issue, with local operations, the business unit in charge and Sony's headquarters in Japan working together to investigate facts and take appropriate action on a global scale. When such an issue arises, Sony also seeks to address the concerns of customers, following a process common to all Sony products: conducting various inspections, determining the content and timing of public announcements, and responding to market concerns. This process starts with the gathering of information from Customer Service Centers worldwide and collaboration with concerned local parties to ensure an accurate grasp of the issue. Based on information collected, Sony then works to determine the correct response by identifying the cause of the issue, implementing countermeasures and promptly verifying the effectiveness thereof, and reviewing the issue from the customer's perspective. Sony also cooperates with CS Officers at sites in each region to ensure the same level of service is provided to customers the world over.

With regard to methods and media for issuing public announcements of product quality-related issues, Sony examines the effectiveness of the various means at its disposal, including the Internet, e-mail or other electronic media, as well as direct mail, newspaper advertisements or other conventional media.

## Quality and Services

Updated on August 21, 2015

### Responsiveness and Customer Service

In addition to continuously improving product quality, Sony is taking various steps to improve its responsiveness and its customer service capabilities, in line with its commitment - set forth in the Sony Pledge of Quality - "Sony employees will always respect our customers' viewpoints in striving to deliver product quality and customer service that exceed their expectations." In customer service, this includes responding to changing customer needs, and in repair services, building a structure for providing the best possible repair service quality.

#### System

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Sony has assigned CS Officers to coordinate customer service operations in markets around the world where its products are sold. Under the guidance and supervision of the Corporate Executive in charge of Product Quality and Safety, and of regional headquarters, Sony has also introduced a set of key performance indicators - including improvement in rate of repair completion within a predetermined period of time. With the aim of enhancing customer service quality on a global level, Sony has also established a network of bases through which it provides services tailored to the needs of local customers.

## Training for Customer Support Staff

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Committed to providing high-quality services to customers around the world, Sony provides ongoing training for employees and the staff of service partners. In addition to focusing on the acquisition of new service technologies and the sharing of solutions to ensure issues are swiftly and effectively addressed, staff are trained to help customers get the greatest enjoyment possible from their Sony products.

## Customer Information Centers and Customer Service Improvements

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Sony established its first Customer Information Center in 1963 in Japan to respond to customer inquiries. Today, Sony has Customer Information Centers worldwide, enabling it to provide prompt responses to customer needs that reflect customers' perspectives, thereby helping Sony to enhance the quality of its customer service.

Sony utilizes the Internet extensively to communicate with its customers. As well as websites that provide downloads of instruction manuals and software updates along with customer service information, Sony offers websites featuring frequently asked questions (FAQs) and detailed product troubleshooting guides. These websites give customers access to timely and easy-to-understand product and customer service-related information.

In certain regions, Sony also provides customer support via such means as live Internet chat sessions, support using social networking service (SNS) platforms and online forums through which customers can share information to find solutions to issues. In these ways, Sony tailors its support to meet the increasingly diverse needs of its customers in every region of the world. In addition, Sony conducts surveys to determine customer satisfaction at various touchpoints, and makes improvements based on the survey results in its efforts to continually improve customer satisfaction.

## Number of Inquiries Received from Customers (Fiscal Year 2014)

(Thousands)

Region	Number of Inquiries Received (Telephone, E-mail, Chat)
Japan	1,059
United States	1,789
Europe	1,419
China*1	1,317
Asia-Pacific*2	3,294
Others*3	1,419

\*1 Coverage area: China (mainland) and Hong Kong

\*2 Coverage area: Southeast Asia, Oceania, India, South Korea and Taiwan

\*3 Coverage area: Middle East, Latin America, Africa and Canada

## Maximizing Customers' Enjoyment of Sony Products

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Sony provides information on its websites aimed at maximizing customers' enjoyment of Sony products. The following website is one that offers such insight.

[Experience WALKMAN® like never before](#)

This website features a variety of content designed to reinforce customers' fondness for their WALKMAN®, including what inspired the engineers behind the WALKMAN® to create such a product. The website also gives visitors access to information that enables them to experience first-hand the innovative value provided by the WALKMAN®, as well as to download songs and audio samples.

## Repair and Service Network

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Currently, there are more than 4,400 Sony customer service locations worldwide, including Sony customer service stations and authorized repair agents.

To enhance customer satisfaction, Sony is working to meet customer needs through such measures as reducing the number of days required for repairs, overhauling its repair pricing system and providing collection services for repair items. In new product categories, such as mobile devices, Sony is reinforcing its customer services and building systems that will enable its service network to respond to customer needs in line with the "One Sony" concept. By strengthening the feedback mechanism for product quality based on repair information, Sony also aims to further enhance quality.

## Sony Service Locations (Fiscal Year 2014)

Region	Service Network (Number of Service Locations)
Japan	446
United States	534
Europe	971
China*1	645
Asia-Pacific*2	990
Others*3	818

\*1 Coverage area: China (mainland) and Hong Kong

\*2 Coverage area: Southeast Asia, Oceania, India, South Korea and Taiwan

\*3 Coverage area: Middle East, Latin America, Africa and Canada

## Quality and Services

Updated on August 21, 2015

### Accessibility and Usability

"Accessibility and Usability" is an essential aspect of quality at Sony. Sony aims to create products and services that people can use with ease - independent of age and disabilities.

#### Enhancing Accessibility and Usability

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Through technological advances, consumer electronic products are becoming increasingly multifunctional and their user interfaces are becoming more complex. Against this backdrop, Sony strives to provide products that can be comfortably operated and are as easy to use as possible. Sony's products and services are used not only in Japan, Europe, and North America, but also in many other parts of the world, including emerging countries. Usability must be suited to the cultures and lifestyles of each country of the world. Sony is continuously carrying user tests - not only in Japan, but also in countries in North America and Europe, and in countries like India and China - to assess usability factors such as viewability, understandability, and responsiveness. This user testing is done at the product development stage as well as after products have been sold.

To enhance product accessibility, Sony takes a leading role in the effort toward standardization in the industry.\*1 Sony also makes sure that its products sold in the United States fully comply with the Twenty-First Century Communications and Video Accessibility Act of 2010. Furthermore, in order to make its websites available to as many people as possible, Sony is taking steps to ensure and



improve the accessibility of information on the sites in accordance with the website accessibility guidelines it has established.



[Accessibility and Usability site](#)

\*1 Sony was the project leader in an initiative of the International Electrotechnical Commission (IEC) to develop general requirements for the international standard for text-to-speech for television IEC 62731 (2013). Sony also leads the project to standardize accessibility and user interfaces in the IEC Technical Committee TC 100 (audio, video and multimedia systems and equipment) and serves as the technical secretary for technical area 16, which also includes active assisted living projects.

Recently Sony became the chairman of the newly established IEC System Committee Active Assisted Living (AAL). The objective is to foster standardization of active assisted living systems and services to enhance the quality of life and enable independent living through the use of Information and Communications Technology (ICT) for all users.

## Age-based Rating Systems for Game Software

Sony Computer Entertainment Inc. (SCE) aims to make games as popular as music, movies and broadcasting and has been developing the PlayStation® business for users in all age groups.

Console game industry organizations have responded to the proliferation of new game genres by introducing rating systems for



PlayStation®4

customers in Japan, the United States and Europe (CERO, ESRB and PEGI, respectively), based on games' target age groups. The U.S. system has operated for more than 20 years and won top marks from the public not only for indicating age categories but also for being the first to add descriptions that detail the contents of a game. PEGI is endorsed by the European Commission as a paradigm of self-regulation in the entertainment industry. In Japan, measures are being promoted to make the system more effective, including, with the cooperation of retailers, the voluntary refusal to sell software rated by CERO for ages 18 and above to underage customers.

To regulate access by underage users, SCE has included a Parental Control function in PlayStation®4, PlayStation®3 and PlayStation®Vita. This function enables customers to adjust access levels and limit children's access only to appropriate software across the PlayStation® platform.

With the average age of Web users declining, concern is growing about sites on the Internet containing content that is inappropriate for or harmful to children. So-net Corporation, which provides an Internet-related service in Japan, has introduced "Site Select," a filtering system that blocks access to such sites, as well as to sites targeted by phishing scams, thereby aiming to create an environment in which the whole family can enjoy the Internet, worry free.

 Environment

Sony recognizes the importance of preserving the natural environment that sustains all life on the earth for future generations and thereby ensuring that all humanity can attain a healthy and enriched life. To this end, Sony strives to achieve a zero environmental footprint throughout the lifecycle of its products and business activities. By capitalizing on its superior technologies and ability to innovate, Sony strives not only to reduce the environmental impact of its business activities, but also to deliver environmentally conscious products and services that enrich customers' lives.

**Sony's Environmental Plan** 

Sony has established and continues to improve a unified global environmental management system, aiming to ensure full awareness of its principles and its mid- and long-term targets as well as compliance with the internal rules of the Sony Group.

[For more information](#)

[Sony Group Environmental Vision](#)

[Road to Zero: Sony's Global Environmental Plan](#)

[Environmental Mid-Term Targets](#)

[Environmental Management Structure](#)

[Environmental Performance](#)



## Sony's four environmental perspectives

### Climate Change



While climate change poses a significant threat both to corporate activities and to society in general, it also affords Sony an opportunity to become part of the solution.

[For more information](#)

[Policy on Climate Change](#)

[Reducing Greenhouse Gas Emissions at Sites](#)

[Reducing Greenhouse Gas Emissions Related to Products and Services](#)

[Collaboration with NGOs](#)

[Grasping the Extent of Greenhouse Gas Emissions over the Entire Value Chain](#)

### Management of Chemical Substances



Sony manages the chemicals it uses in products and at sites in a reliable manner, based on a precautionary approach.

[For more information](#)

[Policy on Management of Chemical Substances](#)

[Management of Chemical Substances at Sites](#)

[Management of Chemical Substances in Products](#)

### Resource Conservation



Sony promotes product designs that conserve materials by measures such as resources recycling and use of recycled materials, seeking to make the most of the earth's limited resources.

[For more information](#)

[Policy on Resource Conservation](#)

[Resource Conservation at Sites](#)

[Conservation of Resources Used in Products and Services](#)

[Product Recycling](#)

### Biodiversity Conservation



Sony is taking steps to protect biodiversity at its sites through site greening activities and initiatives aimed at helping to restore areas outside of its sites to their natural state.

[For more information](#)

[Basic Policy on Biodiversity Conservation](#)

[Biodiversity Conservation at Sony's Workplaces](#)

[Products and Business Activities that Support Biodiversity Conservation](#)

## Six stages of product life cycle

### Environmental Technologies



Sony technologies pursue opportunities to minimize environmental impact.

[For more information](#)

### Products and Services



Sony works to create environmentally responsible products to help reduce the use of energy, resources and chemical substances.

[For more information](#)

### Procurement



Sony collaborates with its suppliers in the management of chemical substances and energy efficiency in order to reduce environmental impact throughout the product life cycle.

[For more information](#)

### Sites



Sony conducts environmental protection activities at all of its manufacturing and nonmanufacturing sites worldwide in accordance with a unified policy.

[For more information](#)

### Logistics



Sony proactively reduces greenhouse gas emissions related to the transport of products and parts.

[For more information](#)

### Product Recycling



Sony supports the principle of Individual Producer's Responsibility and promotes collection and recycling of end-of-life products and easy-to-recycle designs.

[For more information](#)

[Sony's Policy on Recycling Products](#)

[Improving Product Recyclability](#)

[Recycling Activities in Each Country and Region](#)

[Links for Product Recycling in Each Country and Region](#)

## Environmental Communication



Sony strongly believes in the importance of informing stakeholders, including customers, about its environmental philosophy and initiatives. Furthermore, employees of each Sony Group company receive environmental training and have access to other self-development programs to help raise environmental awareness.

[For more information](#)

## Environment

### Sony's Global Environmental Plan: Table of Contents

Sony has formulated a global environmental plan "Road to Zero", which is long-term vision of achieving a zero environmental footprint. In order to realize this vision, Sony has set forth a number of mid-term targets and established a global environmental management structure.

[Sony Group Environmental Vision](#)

[Road to Zero: Sony's Global Environmental Plan](#)

[Environmental Mid-Term Targets](#)

[Environmental Management Structure](#)

[Environmental Performance](#)



# Environment

Updated on August 21, 2015

## Sony Group Environmental Vision

The Sony Group Environmental Vision presents a philosophy and principles for environmental management activities throughout the global Sony Group with the aim of contributing to the realization of a sustainable society. Since enacting the Sony Global Environmental Policy which is a predecessor of the Sony Group Environmental Vision and the Environmental Action Program, in 1993, Sony has pursued a broad range of environmental initiatives. Concurrent with the formulation of its Road to Zero global environmental plan, in 2010, Sony revised the Sony Group Environmental Vision.

### Philosophy

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Sony recognizes the importance of preserving the natural environment that sustains all life on the earth for future generations and thereby ensuring that all humanity can attain a healthy and enriched life. In order to realize such sustainable society, **Sony strives to achieve a zero environmental footprint throughout the lifecycle of our products and business activities.**

## Principles

Sony reduces our environmental footprint and prevents environmental pollution throughout the lifecycle of our products and business activities by complying with all applicable environmental regulations and also by continually improving our global environmental management systems. Sony formulates the following goals in four key environmental perspectives and takes proactive actions to achieve those goals.



Sony focuses on four environmental perspectives

### Climate Change

Sony reduces energy consumption and strives to achieve zero emissions of greenhouse gases\* generated throughout the lifecycle of our products, service and business activities.

### Management of Chemical Substances

Sony minimizes the risk of chemical substances that we use causing serious harm to human health and the environment. Sony maintains strict control over the chemical substances we use, while, in line with the precautionary approach, taking steps whenever possible to reduce, substitute and eliminate the use of substances that have potentially significant impacts on the environment even in the cases where scientific evidence is not fully proven.

### Resources Conservation

In order to minimize resource inputs for our business activities, Sony identifies "Key Resources" and strives to achieve zero usage of those virgin materials. Sony also uses water efficiently, minimizes wastes from sites and maximizes our effort for take back and recycling products from markets.

### Biodiversity Conservation

Sony protects and utilizes ecosystem services in a sustainable manner, while actively promoting maintenance and recovery of biodiversity through our business and local contribution activities.

- \* Gases that raise the temperature of the earth's surface by absorbing infrared radiation from reflected sunlight. Six typical examples are carbon dioxide (CO<sub>2</sub>), methane, nitrous oxides, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF<sub>6</sub>).

In order to realize the Environmental Vision, Sony formulates targets and concrete plans and initiates actions to implement, while contributing to a better society through partnerships and communications with internal and external stakeholders.

[Click here for more details in our vision's web site \(Sony and the Environment\)](#)

## Environment

Updated on August 21, 2015

### Road to Zero: Sony's Global Environmental Plan

Since the early 1990s, Sony has pursued environmental initiatives in accordance with its environmental principles and targets. In April 2010, Sony announced the "Road to Zero," a new global environmental plan. This plan consists of the Sony Group Environmental Vision and several sets of mid-term environmental targets, which form key milestones on the road to achieving the Vision.

#### Striving to Achieve a Zero Environmental Footprint

As stated in the Sony Group Environmental Vision, Sony strives to realize a sustainable society by achieving a zero environmental footprint throughout the life cycle of its products and business activities. It is this long-term goal that prompted Sony to name its new global environmental plan "Road to Zero." Under this plan, Sony aims to bring its environmental footprint to zero by 2050 and is setting incremental mid-term environmental targets toward this end. To achieve these targets, Sony is formulating specific goals for each stage of the product life cycle per priority aspects and following through with related activities. Those aspects are climate change, resource conservation, management of chemical substances, and biodiversity.



# Environment

## Environmental Mid-Term Targets

Since the 1990s, the Sony Group has focused on a variety of environmental activities. These include developing environmentally conscious products, reducing the environmental impact of its sites and promoting product recycling. Since 1998, Sony has formulated uniform environmental mid-term targets that encompass its operations around the world, in line with which it has promoted a broad range of environmental initiatives. In 2010, Sony devised a new Sony Group Environmental Vision, the goal of which is a zero environmental footprint, and Green Management 2015, a set of new mid-term targets designed to facilitate the achievement of that goal by serving as a yardstick for the environmental activities of Sony Group companies and divisions worldwide until fiscal year 2015.

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[Basic Stance of Green Management 2015](#)

[Basic Policies for Achieving Green Management 2015](#)

[Targets of Green Management 2015](#)

[Setting Environmental Mid-Term Targets for FY2020 in the Green Management 2020](#)

# Environment

Updated on August 21, 2015

## Basic Stance of Green Management 2015

Sony has continuously provided people with a vast array of products, services and entertainment. Such corporate activities are only possible if the global environment, which sustains all life on earth, is healthy. We must address such environmental issues as climate change, resource exhaustion and the need for effective management of chemical substances both as risks to business continuity and as business opportunities. In doing so, it is important that we act strategically and with a medium- to long-term perspective.



Recognizing this, we aim to be a leader in the environmental arena by ensuring that we conduct our business in a sustainable manner. To this end, we will also collaborate with others wherever possible to ensure our ability to provide innovative environmentally conscious products and services that enrich our customers' lives.

Taking these sentiments into account, we have set forth the Sony Group Environmental Vision, the goal of which is a "zero environmental footprint," that is, reduction of the environmental footprint of our corporate activities and of every Sony product throughout its life cycle to zero, and we continue to pursue a wide range of related initiatives. We will strive to achieve this by 2050; our goals for the first phase, which continues through 2015, are outlined in Green Management 2015.

## Focusing on four environmental perspectives

Green Management 2015 focuses on four key environmental perspectives-climate change, resources, chemical substances and biodiversity-to formulate appropriate goals for 2015, we estimated our current status vis-à-vis our ultimate goal of "zero environmental footprint" for each of these perspectives, after which we employed backcasting to determine desirable levels for 2015 and analyze the differences between these figures and our actual forecasts. In setting these goals, we exchanged opinions and ideas with relevant nongovernmental organizations (NGOs) and experts.



Sony focuses on four environmental perspectives

## Managing the product life cycle

At present, every Sony product negatively affects the environment to some degree throughout its life cycle or at different stages thereof. To ensure our ability not only to conduct our business in a responsible manner, but also to take responsibility for the environmental impact of every Sony product at each stage of its lifecycle, we have divided the product lifecycle into six stages: Research and development, product planning and design, procurement, operations, logistics, and take back and recycling. We have also set specific goals for each stage.



Six stages of product life cycle

# Environment

Updated on August 21, 2015

## Basic Policies for Achieving Green Management 2015

Our efforts to achieve the targets of Green Management 2015 will be guided by three basic policies.

### 1. Achieve targets through unrelenting efforts to increase efficiency

We will strive to minimize our impact on the environment by improving the efficiency of production processes, logistics and office activities, among others.

### 2. Place a high priority on creativity and innovation and implement environmentally conscious actions that are approved and supported by our customers

To date, the Sony spirit of creativity and innovation has enabled us to amuse and delight a wide range of customers. The same spirit guides our environmental activities. By ensuring our corporate activities are environmentally conscious, we will continue to provide life-enriching products that are not only superior in terms of functionality, performance and quality, but also exert very little impact on the environment.

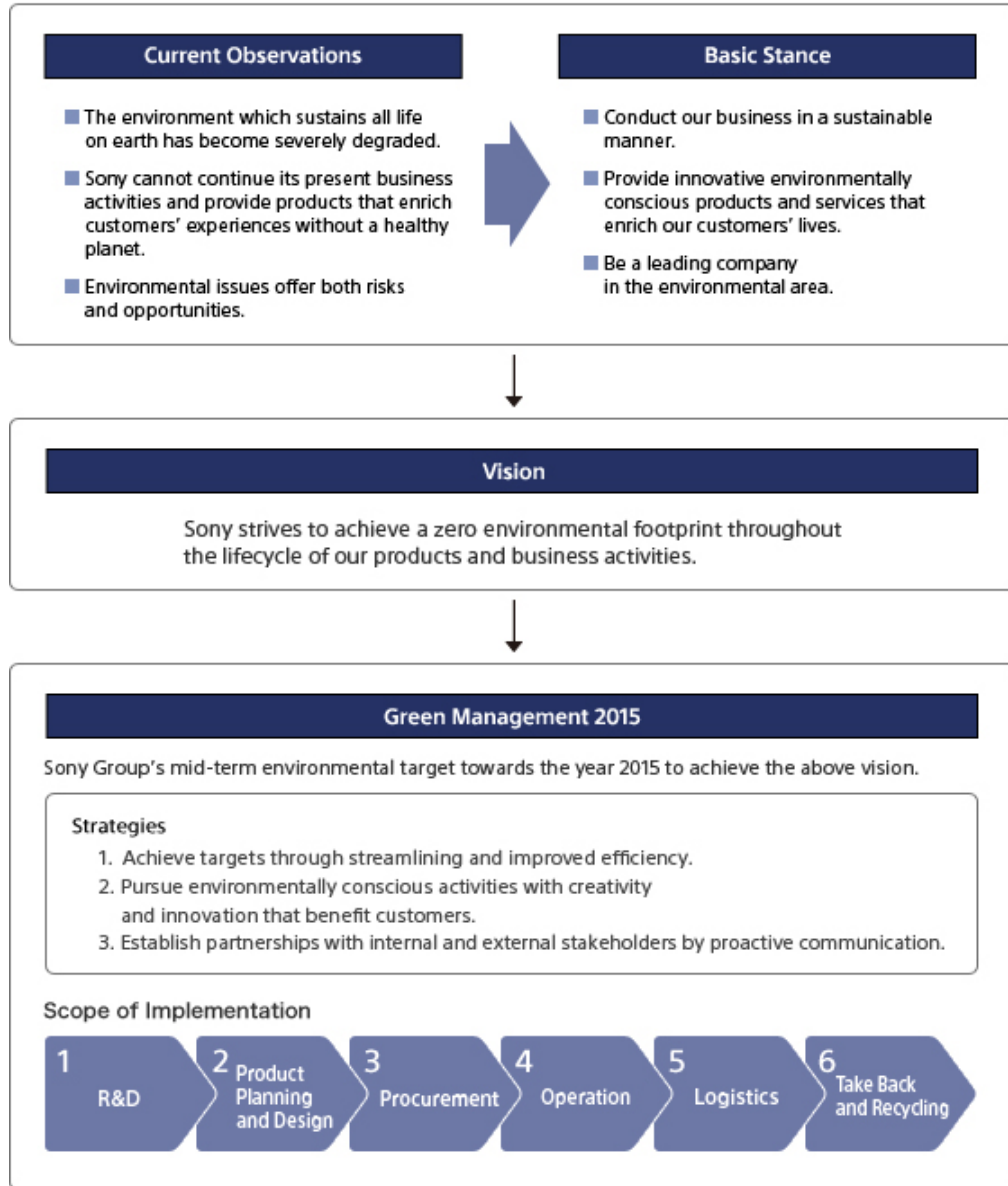
### 3. Communicate and establish partnerships with stakeholders within and outside the Company

In addition to Sony innovation, cultivating renewable energy and other such new elements of social infrastructure, developing technologies and creating mechanisms for reducing environmental impact require collaboration with other companies, NGOs and nonprofit organizations (NPOs), universities and research



organizations. It is also crucial that everyone at Sony, from front-line production personnel to top management, is actively involved in this endeavor, and that we encourage such efforts by promoting environmental education and training.

**Philosophy behind Target Setting**



## Environment

Updated on August 21, 2015

### Targets of Green Management 2015

Under Green Management 2015, Sony has divided the product life cycle into six stages: research and development, product planning and design, procurement, operations, logistics, and take-back and recycling. Sony has also set specific goals for each stage, which are outlined in the chart below. These targets went into effect in 2011 and are to be achieved by fiscal year 2015.

## 1. Targets in Research and Development

To date, Sony has developed technologies that have enabled it to build environmentally conscious products that are small, light and energy efficient. Looking ahead, Sony will continue to develop innovative, industry-leading technologies that contribute to environmentally conscious lifestyles.

	Targets	Fiscal Year 2014 Performance
Climate Change	<ol style="list-style-type: none"> <li>1. Develop technologies that improve self-sufficiency ratio in the energy supply at the individual level by further implementation of energy-saving measures in products and expansion of renewable energy.</li> <li>2. Develop information and communication technologies to support lifestyles indispensable to realizing a low-carbon society.</li> </ol>	Continued a verification test on automatic power interchange between residential buildings equipped with photovoltaic panels and energy storage systems on the campus of the Okinawa Institute of Science and Technology Graduate University.
Resources	<ol style="list-style-type: none"> <li>3. Develop and refine 3R*1 technologies in product life cycle to achieve reductions in the use of exhaustible resources and water, and to reduce waste.</li> </ol>	Increased the number of products made with SORPLAS™ ( <u>S</u> ustainable <u>O</u> riented <u>R</u> ecycled <u>P</u> lastic), Sony's proprietary flame-resistant recycled plastic, developed three distinctly different varieties of SORPLAS™, and began selling them to other companies.

<p><b>Chemical Substances</b></p>	<p>4. Develop technologies to reduce the use of substances of high concern and alternative materials.</p>	<p>By using a proprietary flame retardant in SORPLAS™ recycled plastic, eliminated the use of bromine- and phosphorus-based flame retardants in those products.</p>
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\*1 Reduce, Reuse and Recycle

## 2. Targets in Product Planning and Design

Since Sony's establishment, the Sony spirit of creativity and innovation has enabled it to amuse and delight a wide range of customers. The same spirit guides Sony's environmental activities. By ensuring its corporate activities are environmentally conscious, Sony will continue to provide life-enriching products that are not only superior in terms of functionality, performance and quality, but also exert very little impact on the environment.

	Targets	Fiscal Year 2014 Performance
<b>General</b>	1. Launch environmental flagship models and services in each category continuously.	Launched environmentally conscious models in its main product categories.
<b>Climate Change</b>	2. Reduce annual energy consumption of products by 30% (compared with FY2008)	Down 30%
<b>Resources</b>	3. Reduce utilization ratio of virgin oil-based plastics in products by 5% (compared with FY2008)	Down 4.3%
	4. Reduce mass of products by 10% (compared with FY2008)	Down 26%

<p style="text-align: center;"><b>Chemical Substances</b></p>	<p>5. Eliminate Environment-related Substances to be Controlled*2 which are of very high concern and BFRs*3/PVC*4 within specified use.</p>	<p><b>PVC:</b></p> <ul style="list-style-type: none"> <li>● Switched to alternatives for all product packaging materials; electronic equipment casings and decorative coverings for such casings; sheets and laminate finishes for speaker housings; contactless IC cards; bags and carrying cases for products (excluding those for professional use); flexible flat cables (FFCs); insulating plates; and heat shrink tubes.</li> </ul> <p><a href="#">Click here for more details in " Replacement of PVC"</a></p> <p><b>BFR:</b></p> <ul style="list-style-type: none"> <li>● Designated product categories and eliminated the use of BFRs in new products in these categories.</li> </ul> <p><a href="#">Click here for more details in "Replacement of BFRs"</a></p> <p><b>Environment-related Substances to be Controlled which are of very high concern:</b></p> <ul style="list-style-type: none"> <li>● Continued to monitor the use of phthalates and four other designated substances in products.</li> </ul>
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- \*2 Among the substances contained in parts and devices, "Environment-related Substances to Be Controlled" are those which, in Sony's judgment, have significant environmental impact on both humans and the global environment.
- \*3 Brominated flame retardants
- \*4 Polyvinyl Chloride

### 3. Targets in Procurement

To reduce environmental impact throughout the product life cycle, it is necessary to adopt a broad perspective that also takes into account the procurement of materials and parts. Sony has always worked with suppliers to ensure the proper management of chemical substances. Moving forward, Sony will also actively seek the cooperation of suppliers on other fronts, including the reduction of energy and resource use.

	Targets	Fiscal Year 2014 Performance
<b>Climate Change</b>	1. Establish mechanisms to determine greenhouse gas emissions from suppliers. 2. Contribute to the development of an industry-wide common reporting format.	Established a mechanism for collecting data from principal OEM/ODM*5 suppliers and commenced operation of this mechanism.
<b>Resources</b>	3. Conduct procurement in ways that enable Sony to achieve the "Product Planning and Design" and "Logistics" targets.	Strengthened collaboration with relevant internal divisions to enable rapid identification of recycled plastic usage trends. Based on identified needs, developed relationships with suppliers and promoted materials development.



<p><b>Chemical Substances</b></p>	<p>4. Conduct procurement in ways that enable Sony to achieve the "Product Planning and Design" targets.</p>	<p>Ensured the strict observation of Sony's standards for the management of chemical substances and promoted efforts to address the challenge of reducing Environment-related Substances to Be Controlled*6 which are of very high concern, PVC and BFRs from the procurement stage.</p>
<p><b>Biodiversity</b></p>	<p>5. Assess impact on biodiversity at mining and collection sites.</p>	<p>Assessed the impact of mining of the principal mineral resources Sony uses.</p>

\*5 OEM suppliers are companies that manufacture products on behalf of Sony. ODM suppliers are companies that design and manufacture products on behalf of Sony.

\*6 Among the substances contained in parts and devices, Environment-related Substances to Be Controlled are those which, according to Sony's judgment, have significant environmental impact on both humans and the global environment.

## 4. Targets in Operations

Reducing Sony's impact on the environment demands an approach that targets absolute reductions. Having formulated consistent global targets for the absolute reduction of greenhouse gas emissions and waste generation, among others, Sony will take steps to minimize the impact of operations at factories, offices and other sites. Sony will also promote local environmental contribution initiatives worldwide.

	Targets	Fiscal Year 2014 Performance
General	1. Conduct environmental assessments (including biodiversity impact assessment).	Conducted at all Sony sites worldwide.
Climate Change	2. Reduce absolute greenhouse gas emissions by 30% (compared with FY2000)	Down 46%
Resources	3. Reduce absolute waste generation by 50% (compared with FY2000)	Down 72%
	4. Improve waste recycling rate Groupwide: 99% or more	96%
	5. Reduce absolute water consumption by 30% (compared with FY2000)	Down 61%

<p style="text-align: center;">Chemical Substances</p>	<p>6. Take actions for class 1-4. Detailed groups of chemical substances are described separately.</p> <p><b>Class 1 substances:</b> Prohibit use.</p> <p><b>Class 2 substances:</b> Eliminate use by a specified date.</p> <p><b>Class 3 substances:</b> Reduce the amounts released and transferred. &gt;Reduce the amounts released to water, and the amounts transferred to sewer / as waste (including VOC*7) by 14% (compared with FY2008). &gt;Reduce the amounts of VOC released to the atmosphere by 50% (compared with FY2000)</p> <p><b>Class 4 substances:</b> Comply with the relevant laws and regulations and use under appropriate control.</p>	<p><b>Class 1 substances:</b> No current use of prohibited substances.</p> <p><b>Class 2 substances:</b> Continued working toward goal of total elimination of use by 2015.</p> <p><b>Class 3 substances:</b> &gt;Amounts released to water, transferred to sewer, or transferred as waste (including VOC*7): Down 21% &gt;Amount of VOC released to the atmosphere: Down 59%</p> <p><b>Class 4 substances:</b> Complied with relevant laws and regulations and used under appropriate control.</p>
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<p><b>Biodiversity, Contribution to Local Communities, Others</b></p>	<p>7. Promote environmental activities respecting the needs of the local community.</p>	<p>Undertook locally based activities to help protect biodiversity and the environment in places around the world, including measures for recharging groundwater in Kumamoto, Japan, protecting loggerhead turtles in Oita, Japan, and protecting the harpy eagle in Panama.</p>
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\*7 Volatile organic compounds

## 5. Targets in Logistics

Considerable resources and energy are used in the transport of parts and finished products. Accordingly, Sony will promote the use of compact packaging, increase loading efficiency and shift to rail, sea and other modes of transport that have only minimal environmental impact. By doing so, Sony will reduce the use of such resources as well as CO2 emissions.

	Targets	Fiscal Year 2014 Performance
Climate Change	1. Reduce total CO2 emissions by 14% (compared with FY2008).	Down 62%
Resources	2. Reduce incoming parts packaging waste by 16% (compared with FY2008).	Down 64%

## 6. Targets in Take-back and Recycling

In order to take responsibility for its products including even after their use, Sony will continue to design products that are easy to recycle. Sony will also continue to develop recycling systems suited to local needs and promote the collection and recycling of end-of-life products.

Targets	Fiscal Year 2014 Performance
<p>Based on the idea of Extended Producer Responsibility (EPR), Sony strives to achieve an environmentally conscious recycling system and effective operation for take-back and recycling of end-of-life products. In addition, Sony continues to increase the use of recycled resources and to design products that are easy to recycle. This is based on the idea of Individual Producer Responsibility (IPR) to help in promoting the establishment of appropriate laws and the building of infrastructure to recycle Sony products.</p>	<p>In Japan, North America, Europe and other areas where collection and recycling laws have been enacted, Sony implemented collection and recycling efforts that satisfy legal requirements. In areas where such laws have not yet been introduced, Sony promoted voluntary collection and recycling initiatives in certain areas. Sony also strengthened the internal system for promoting the design of easily recyclable products.</p>

## Environment

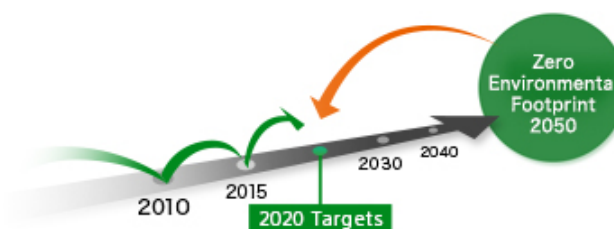
Updated on August 21, 2015

### Setting Environmental Mid-Term Targets for FY2020 in the Green Management 2020

#### Sony Takes Environmental Initiatives to the Next Stage

Sony began its quest for a zero environmental footprint with the establishment of its Road to Zero environmental plan in 2010, and has set a series of medium-term targets designed to achieve the goal of reducing its

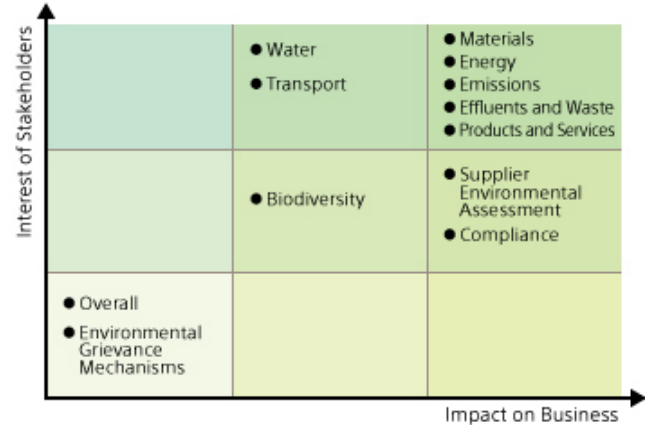
environmental footprint to zero by 2050. With the progress of its Green Management 2015 plan, spanning from April 2011 to March 2016, Sony is on course to launch Green Management 2020 in April 2016 as a new mid-term environmental plan extending through fiscal 2020. With this transition, Sony will take its environmental activities to the second stage toward its goal of a zero environmental footprint.



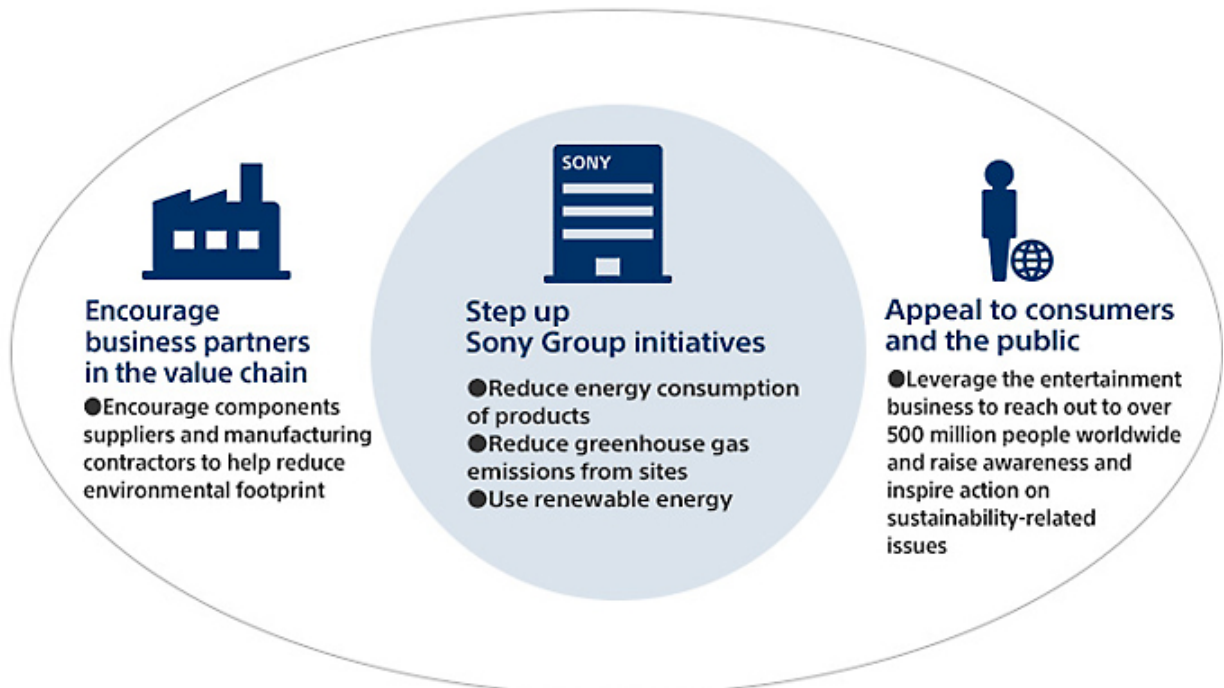
## The Process of Formulating Green Management 2020

When formulating the Green Management 2020, Sony examined its past environmental activities and conducted a materiality analysis\*1 in order to incorporate the viewpoints of its stakeholders outside the Sony Group. Based on these results, Sony specified raw materials, energy, atmospheric emissions, effluents and waste, and products and services as priority areas to tackle by 2020. It then designated water, biodiversity, and environmental assessments of suppliers as important issues to deal with. Sony has been involved in all of these issues in the past, and will continue to move forward with related initiatives through fiscal 2020. Furthermore, Sony's entertainment businesses will also work on initiatives based on their unique characteristics to enhance group-wide performance, adding new approaches to those taken by the electronics business.

Sony Environmental Materiality Analysis\*2



### Expanding Sony's Environmental Activities under Green Management 2020





- \*1 A materiality analysis is a method for identifying and specifying important issues for a company and its stakeholders.
- \*2 The headings on the axes of the graph are environmental categories defined in GRI Sustainability Reporting Guidelines (Version 4).

## **Green Management 2020: Target Matrix (abridged version)**

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Continuing from the previous environmental plan, Sony organized activities under Green Management 2020 according to six stages of the product lifecycle: product/service planning and design, operation, raw materials and components procurement, logistics, take-back and recycling, and innovation. In each of these stages, specific targets are set under the four categories of climate change, resources, chemical substances and biodiversity.

[View larger image \(PDF\)](#)

Green Management 2020: Target Matrix (abridged version)

		Climate Change	Resources	Chemical Substances	Biodiversity
Product/Service Planning and Design (vs.FY2013)		1. Employ environmental features in products 2. Promote environmentally conscious design throughout the life cycle 3. Raise awareness and inspire action on sustainability from over 500 million people through entertainment			
		1. AC powered devices: reduce energy consumption by 30% 2. Power consumption at no load condition and in battery maintenance mode: No more than 0.03 W 3. DC powered devices other than those in 2: Improve energy efficiency and charging efficiency	1. Reduce virgin plastic per product by 10% 2. Reduce and substitute key resources 3. Minimize resource inputs 4. Promote design for recycling	Eliminate and substitute "Controlled Substances"* in high-risk applications	Use recycled and certified paper
Operation (vs.FY2015)	Sony sites	1. Reduce absolute GHG emissions by 5% (equivalent to 42% reduction vs. FY2000) 2. Use renewable energy equivalent to 300,000 CO <sub>2</sub> -tons	<Waste> 1. Reduce absolute waste generated by 5% (equivalent to 17% reduction vs. FY2000) 2. Landfilled waste rate under 1% <Water> Reduce absolute water usage by 5% (equivalent to 45% reduction vs. FY2000)	Class 1: Prohibit use Class 2: Prohibit use (exceptions granted for certain applications) Class 3: Reduce the amounts released and transformed; maintain absolute VOC emissions Class 4: Use under appropriate control	Implement environmental contribution activities respecting the needs of local communities
	Outsourcing contractors	1. Request main manuf. contractors to monitor GHG emissions and reduce GHG intensity by 1% per year 2. Request main manuf. contractors to use renewable energy 3. Prioritize the use of energy efficient data center	1. Request main manuf. contractors to monitor volume of water use and reduce water use intensity by 1% per year 2. Request main manuf. contractors to monitor and reduce volume of waste generation	1. Request manuf. outsourcing contractors to respond to Sony's unified standard that takes into account laws around the world restricting and banning chemical substances used for products and partially finished products supplied to Sony 2. Request manuf. contractors to ban from manufacturing processes the use of substances restricted at an international framework that Sony has specified	Encourage manuf. contractors the environmental contribution activities respecting the needs of local communities
Raw Materials and Components Procurement		Request suppliers dealing in component categories that create high environmental impact and/or suppliers involved in large business transactions to monitor GHG emissions, establish their own targets and implement reduction measures	Request suppliers dealing in component categories that create high environmental impact and/or suppliers involved in large business transactions to monitor water consumption, establish their own targets and implement reduction measures	1. Request to respond to Sony's unified standard that takes into account different laws around the world restricting and banning chemical substances used for raw materials, components and products supplied to Sony 2. Request suppliers to ban from manufacturing processes the use of substances restricted at an international framework that Sony has specified	Request that consideration be given to biodiversity
Logistics (vs.FY2013)		Reduce absolute CO <sub>2</sub> emissions related to logistics between nations and within regions by 10%	—	—	—
Take Back and Recycling		—	1. Establish recycling schemes which meet the needs of local communities, and move ahead with efficient operations 2. Aim at the high-level return of waste to a form in which it can be used as a resource by acquiring a clear grasp of recycling key resources	—	—
Innovation		1. Promote the development of environmental technologies, and contribute to the establishment of technologies that result in reducing the environmental impact 2. Promote the development of business models that contribute to reducing the environmental impact of the products and services provided in all fields			

\*Sony Mobile Communications Inc. (SOMC) restricted substances are applied for SOMC products  
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[Click here for more details in Sony's Green Management 2020 website.](#)



# Environment

## Environmental Management Structure

Sony is implementing and continually improving its globally integrated environmental management system with the aim of realizing the Sony Group Environmental Vision, achieving its mid-term environmental target and complying fully with legal requirements, regulatory demands and internal policies established for the Group.

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[Global Environmental Management System](#)

[Linked to Business Activities](#)

[Environmental Audits](#)

# Environment

Updated on August 21, 2015

## Global Environmental Management System

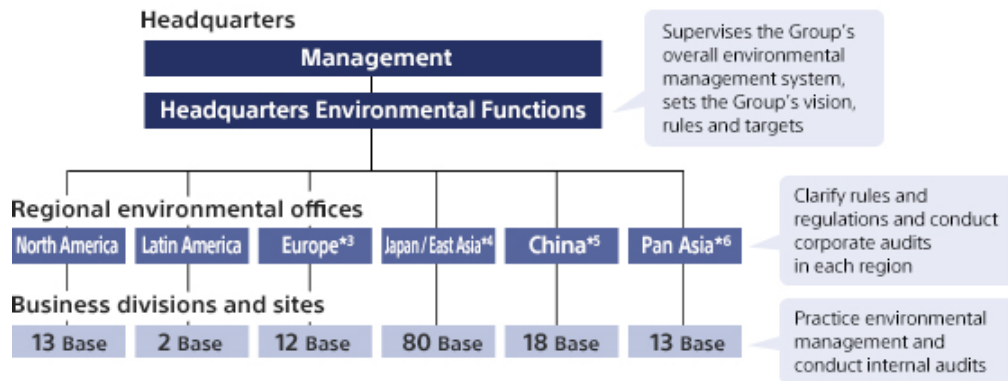
### Integrated ISO 14001 Certification for the Entire Sony Group

Since the 1990s, Sony sites\*1 throughout the world have sought certification under ISO 14001, the international standard for environmental management systems. Acquisition of ISO 14001 certification at all sites was completed in fiscal year 2000. Since then, Sony has expanded this effort, establishing an environmental management system that integrates Group headquarters with overseas environmental departments, business units and sites, while taking advantage of the management systems already operational at each business site, and acquiring integrated ISO 14001 certification\*2 for the entire Sony Group in fiscal year 2005.

\*1 "Sites" refers to manufacturing and non-manufacturing sites.

\*2 The scope of integrated ISO 14001 certification is all manufacturing, distribution centers with 100 or more employees and non-manufacturing sites with 1,000 or more employees.

The Sony Group Global Environmental Management System (As of March 31, 2015)



**Integrated ISO 14001 certification for 138 Sony Group sites worldwide**

\*3 Coverage area: Europe including Turkey, Russia and former Soviet Union  
 \*4 Coverage area: Japan, Taiwan Region and South Korea  
 \*5 Coverage area: Mainland China and Hong Kong  
 \*6 Coverage area: Mongolia and other parts of Asia (excluding the aforementioned countries in Asia), Middle East, Oceania and Africa

## An Effective Global Environmental Management System

To deal with increasingly diverse and complex environmental issues that may affect Sony's operations, such as manufacturing and sales of environmentally conscious products, recycling and environmental management at sites, Sony has established specialized functions at the Sony Group's environmental headquarters, specifically in the areas of environmental management related to energy consumed at sites and by products; resource conservation, including recycling; chemical substance management; biodiversity conservation; procurement; logistics; technological development; and communications, which the Corporate Executive Officer is in charge of overseeing.

Each of these specialized functions works together with regional offices and departments that specialize in such areas as product quality, customer satisfaction, occupational health and safety, and disaster prevention, to achieve a uniform and effective management system. Each specialized function issues targets to the operating units, divisions and sites and reviews their progress. To promote integrated environmental management globally, Sony has established regional environmental offices to facilitate region-wide environmental

management activities, such as a better understanding of local, legal and regulatory trends, effective communication of standards and instructions set forth by headquarters to the regional divisions and sites, and effective performance of audits at all regional business divisions and sites.

[Click here for more details in Corporate Governance.](#)

# Environment

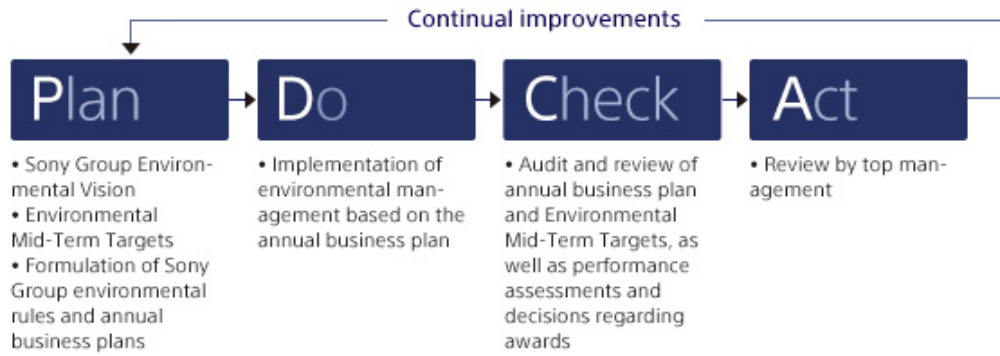
Updated on August 21, 2015

## Linked to Business Activities

In compliance with ISO 14001, the global standard for environmental management systems that is based on the rationale of the Plan-Do-Check-Act (PDCA) cycle, Sony's corporate headquarters conducts annual assessments of the environmental impact of the entire Sony Group and, after identifying risks and opportunities, incorporates its findings into mid-range environmental targets and annual plans. In line with these plans, individual business units and sites establish and implement their own annual plans, incorporating essential elements of guiding principles established by the headquarters. Progress on the implementation of these business plans is reviewed regularly by a committee that is headed by the officer in charge of environmental affairs, contributing to ongoing improvement efforts. Awards are given annually at the global levels to recognize outstanding activities in core businesses. These activities are counted as part of overall annual performance evaluations for main business units and sites and the results of these assessments are reflected in the bonuses awarded to management-level employees. To gauge the progress of these environmental activities, Sony has developed an online data system for periodically collecting performance for, among others, power consumption by products, energy used by sites and volume of waste generated. To ensure the effective functioning of the PDCA cycle, Sony has created an environmental document structure in line with requirements of ISO 14001. The structure covers overall elements of environmental management such as management procedures on site and in the business groups, internal environmental communications and efforts to make products more environmentally conscious.

Another means by which the Sony Group facilitates environmental action is to provide a broad environmental education for employees that is tailored to specific objectives or the type of work they perform.

**The Sony Group Environmental Management System PDCA Cycle**





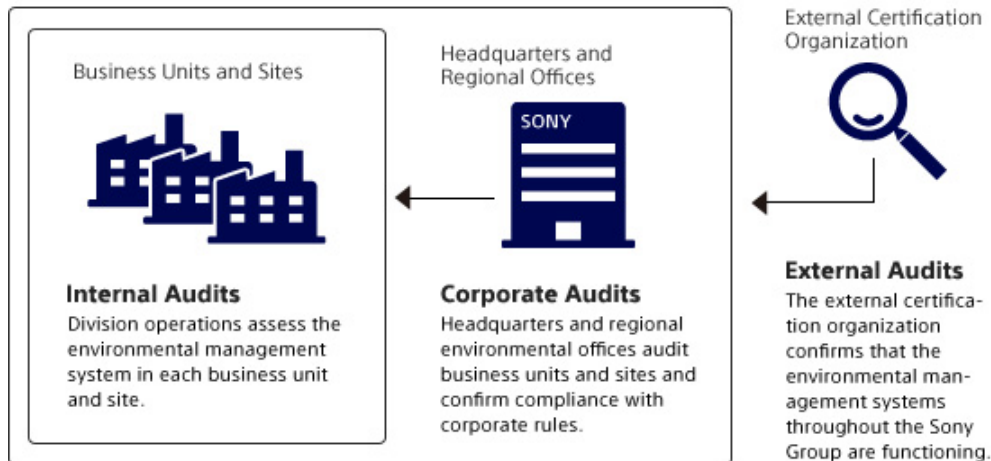
# Environment

Updated on August 21, 2015

## Environmental Audits

Sony has established an integrated environmental audit system that combines three kinds of audits -- internal, corporate and external -- and aims to facilitate continual improvements to the Sony Group's environmental management system, prevent environmental accidents at sites, and ensure the reliability of environmental data.

### Sony Group Environmental Audit System



# Environment

## Environmental Performance

Sony's business activities may affect the environment in various ways. This overview looks at Sony's environmental footprint from the perspective of product life cycles.

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[Overview of Environmental Impact](#)

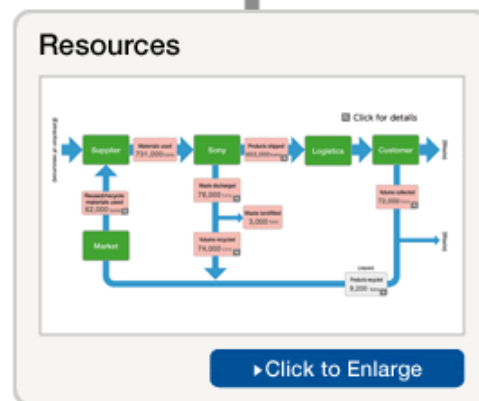
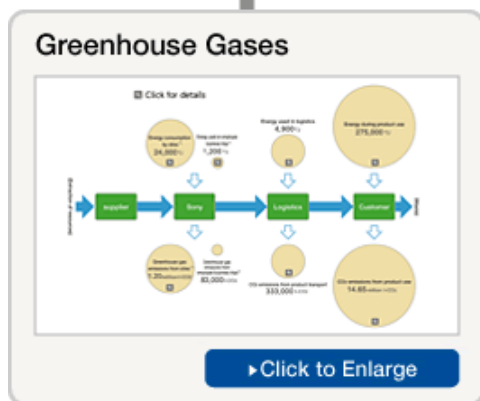
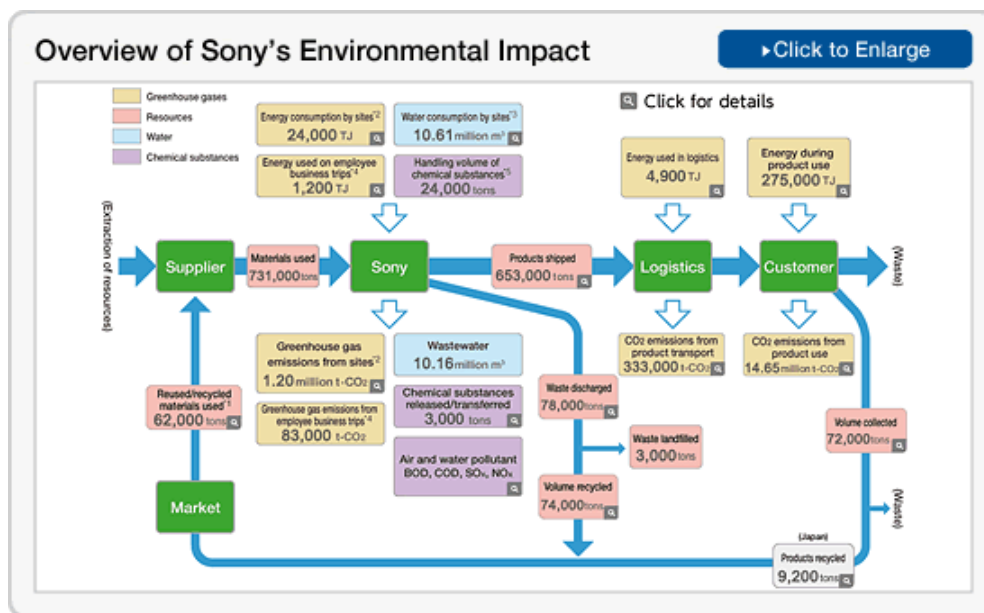
[Environmental Indicators and Eco-Efficiency](#)

# Environment

Updated on August 21, 2015

## Overview of Environmental Impact

The chart below shows Sony's impact on the environment over the entire life cycle of its business activities, including energy and resources used in business activities, energy consumed by Sony products when used by their customers, and the recycling and disposal of products after use. The chart shows the principal environmental impact during fiscal year 2014 for items that Sony can recognize and manage directly.



**Links to Related Items:**

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[Environmental Data > Environmental Data Collection Methods and Rationale](#)

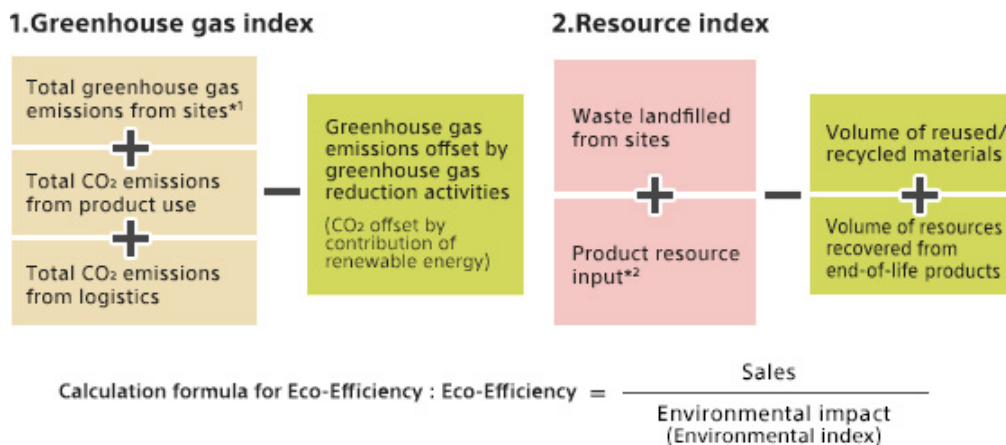
# Environment

Updated on August 21, 2015

## Environmental Indicators and Eco-Efficiency

### Establishing a Unique Set of Environmental Indicators and Eco-Efficiency

Based on careful consideration of the life cycles of the Sony Group's business activities, Sony has established its own unique set of environmental indicators. These indicators-greenhouse gas emissions and resource use-are used to determine the environmental impact of the total life cycles of the Sony Group's business activities, products and services, to the maximum possible extent. The indicators are also used to monitor Sony's performance in relation to measures to reduce environmental impact throughout life cycles. To determine whether the values of these two indicators are effective against the Sony Group's business size, the Group uses the eco-efficiency equation below.



\*1 Total greenhouse gas emissions, calculated in terms of CO<sub>2</sub> emissions (the total of CO<sub>2</sub> emissions from energy use and perfluorocarbon [PFC] emissions), from sites.

\*2 Total resources used in products, accessories, instruction manuals and packaging materials. This total does not include resources produced from recycled Sony Group product waste.

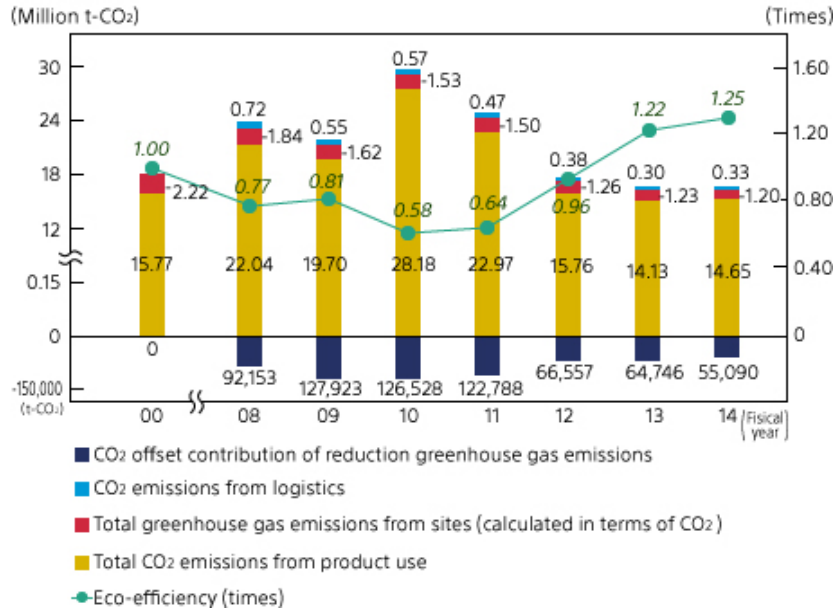
## Environmental Indicators and Eco-Efficiency in Fiscal Year 2014

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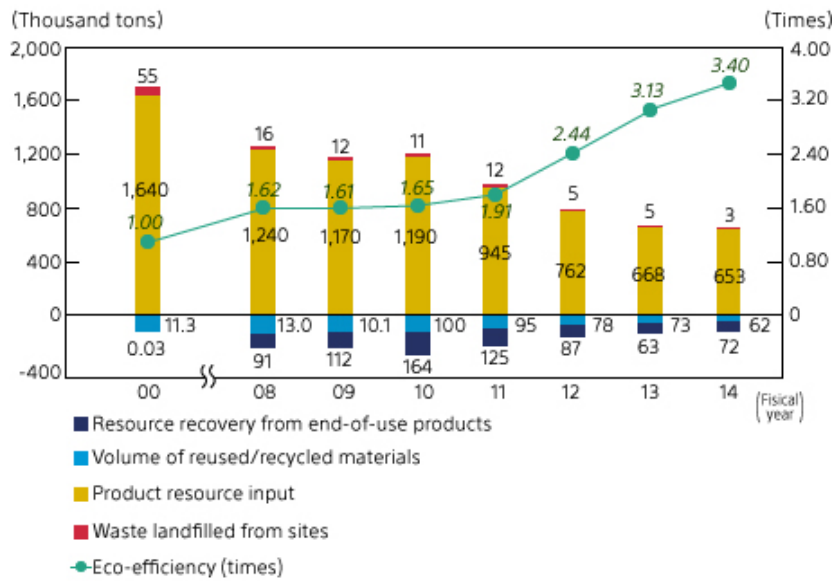
In fiscal year 2014, Sony's greenhouse gas emissions totaled approximately 16.18 million tons, down 3% from fiscal year 2013. This rise was attributable to the increase of CO<sub>2</sub> emissions from product use, and increase of sales. Sony's eco-efficiency index for greenhouse gas emissions in fiscal year 2014 was 0.51, compared with 1.25 times in fiscal year 2000, an improvement of approximately 2% from fiscal year 2013.

A look at Sony's resource index for fiscal year 2014 shows that resources used during the period totaled approximately 0.523 million tons, down 2% from fiscal year 2013. This decrease occurred despite declines in the volume of reused/recycled materials and was due primarily to a significant decline in product resource input and increase of resources recovered from end-of-life products. Sony's eco-efficiency index for resources in fiscal year 2014 was 15.71, compared with 3.4 times in fiscal year 2000, an improvement of approximately 8% from fiscal year 2013.

**Greenhouse Gas Efficiency**



**Resource Efficiency**



# Environment

## Strategy on Climate Change: Table of contents

Sony considers that while climate change poses a significant risk both to our corporate activities and to society in general, it also provides Sony business opportunities. Sony proactively pursues to tackle the climate change issue.

[Policy on Climate Change](#)

[Reducing Greenhouse Gas Emissions at Sites](#)

[Reducing Greenhouse Gas Emissions Related to Products and Services](#)

[Collaboration with NGOs](#)

[Grasping the Extent of Greenhouse Gas Emissions over the Entire Value Chain](#)

### Links to Related Items:

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[Logistics > Reducing the Environmental Impact of Logistics](#)



## Environment

Updated on August 21, 2015

### Policy on Climate Change

#### **Target: Achieving Zero Emissions of Greenhouse Gases**

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In its Road to Zero global environmental plan, Sony has set forth a long-term goal of achieving a zero environmental footprint throughout the life cycle of its business activities and its products and services. As the first step toward achieving this goal, Sony has established Green Management 2015, a set of mid-term environmental targets, which includes the target for greenhouse gas emissions indicated in the table below. Currently, Sony is implementing measures aimed at directly and indirectly minimizing its greenhouse gas emissions. These include taking decisive steps to lower energy consumption at its sites and promoting the development and provision of energy-efficient, environmentally conscious products and services. In seeking to lower energy consumption at sites, Sony is prioritizing efforts to improve energy efficiency and cut emissions of greenhouse gases used and is thus focusing on the use of renewable energy.

Sony positions the use of the Green Power Certification system and emissions credits as ways to supplement efforts to reduce emissions attributable to its operations. A participant since 2006 in the Climate Savers Programme, advanced by World Wide Fund for Nature (WWF), Sony has set ambitious targets, outlined below, in consultation with the WWF. Sony's progress toward these targets is audited by external organizations. In addition, Sony is working to ensure it has a solid grasp of greenhouse gas emissions in its value chain, as well as to implement effective management measures for such emissions.

## Targets of "Green Management 2015" for Greenhouse Gas Emissions

Technology Development	<ul style="list-style-type: none"> <li>● Develop technologies that improve self-sufficiency ratio in the energy supply at the individual level by further implementation of energy-saving measures in products and expansion of renewable energy.</li> <li>● Develop information and communication technologies to support life styles indispensable to realize a low-carbon society.</li> </ul>
Product Planning and Design	Reduce annual energy consumption of products by 30% (compared with FY2008)
Procurement	<ul style="list-style-type: none"> <li>● Establish mechanisms to determine GHG emissions from suppliers.</li> <li>● Contribute to the development of an industry-wide common reporting format.</li> </ul>
Operations	Reduce total GHG emissions by 30% (compared with FY2000)
Logistics	Reduce total CO <sub>2</sub> emissions by 14% (compared with FY2008)

## Understanding and Responding to Business Risks

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As a company that strives to contribute to the achievement of a sustainable society, Sony believes that addressing environmental issues, including climate change, is crucial to achieving this goal. Sony also recognizes the importance of such efforts from the perspective of business continuity. The failure to take appropriate steps to respond to such issues involves various underlying risks that could negatively impact Sony's operations. These include risks involving new or amended laws or regulations that could elicit higher carbon taxes, broaden the geographic applicability of emissions trading schemes or impose tougher energy-saving standards on products. Another example is physical risks, such as the risk of rising sea levels and abnormal weather patterns caused by climate change. There is also the market change brought about by evolving consumer perceptions. Sony realizes that flawed responses to such risks and changes could have major social and financial ramifications. Accordingly, Sony works constantly to assess underlying risks, as well as to ensure it is prepared to respond effectively to those risks that it judges likely to have an impact on its operations. Sony has, for example, established and continues to maintain a system for collecting information on laws and regulations in force in countries and territories around the world and to ensure that its business activities and products comply.

## Creating and Expanding Business Opportunities

Efforts to address the issue of climate change also present promising business opportunities. With general awareness of climate change growing, energy efficiency will become an increasingly important aspect of consumer needs. Having long worked to build energy-saving features into its products through a variety of distinctive innovations, Sony sees this trend as a positive development that has further enhanced the competitive advantages of its products.

In recent years, Sony has begun marketing an energy storage module, as well as a lithium-ion storage battery unit that includes a controller, an inverter and a converter, for commercial use. In June 2014, Sony and Hydro-Québec, Canada's largest electric power utility, established a joint venture to conduct R&D in the area of large-scale energy storage systems for power grids. Sony will explore ways to capitalize on the development achievements of the joint venture to enhance the stability of solar, wind and other renewable energy sources and meeting excess demand at peak times, thereby responding to key social imperatives.



IJ1001M energy storage module, which went into mass production in 2011



ESSP-3005/18P commercial energy storage battery: In combination with a solar power generation system\*, this lithium-ion, high-capacity unit delivers a maximum energy storage capacity of 6.0kWh, thus functioning as an "autonomous energy storage system."

\* Solar power charging unit sold separately

# Environment

## Reducing Greenhouse Gas Emissions at Sites

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Greenhouse Gas Emissions

Promoting Efficient Energy Use

Use of Renewable Energy

# Environment

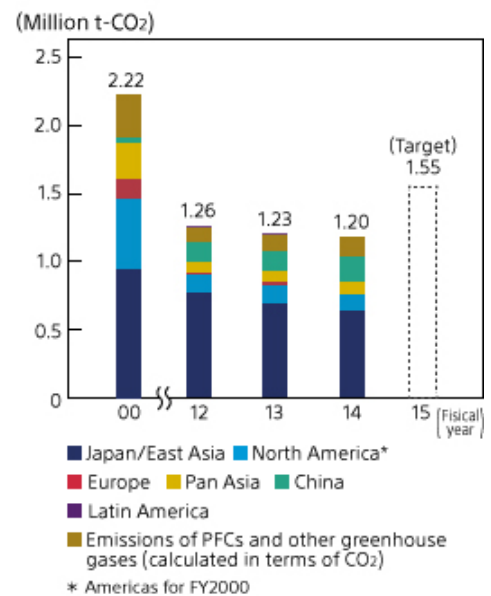
Updated on August 21, 2015

## Greenhouse Gas Emissions

### Reducing Greenhouse Gas Emissions by 46% from the Fiscal Year 2000 Level

Sony has set a target to achieve an absolute reduction in greenhouse gas emissions (calculated in terms of CO<sub>2</sub>) of 30% or more from the fiscal year 2000 level by fiscal year 2015. To this end, Sony strives to reduce greenhouse gases such as CO<sub>2</sub> related to energy consumption and emissions of perfluorocarbons (PFCs) and other gases. In fiscal year 2014, Sony's emissions of greenhouse gases\* (calculated in terms of CO<sub>2</sub>) totaled approximately 1.2 million tons. This represents an approximately 46% decrease from the fiscal year 2000 level, and a 2.5% decrease from the fiscal year 2013 level. Greenhouse gas emissions per unit of consolidated net sales, or emissions intensity (tons of CO<sub>2</sub>/million yen), was 0.09 in Japan and 0.05 overseas.

**Greenhouse Gas Emissions from Sites (Calculated in Terms of CO<sub>2</sub>)**



\* Greenhouse gas emissions figures in this section represent total emissions after the subtraction of emissions offset by the use of renewable energy.

## CO<sub>2</sub> Emissions from Energy Use at Sites

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In fiscal year 2014, emissions of CO<sub>2</sub> from energy use at sites\*1 accounted for approximately 1.05 million of the approximately 1.2 million tons of greenhouse gases emitted at Sony sites, down about 40,000 tons from fiscal year 2013. The decline was attributable largely to measures implemented by sites to reduce energy consumption as well as to production adjustments. CO<sub>2</sub> emissions resulting from the use of energy at sites in Japan amounted to approximately 622,000 tons\*2, a decrease of approximately 24,000 tons from fiscal year 2014. CO<sub>2</sub> emissions resulting from energy use at Sony sites include emissions from fuel used by Sony-owned business vehicles. In fiscal year 2014, CO<sub>2</sub> emissions resulting from fuel used in vehicles amounted to approximately 19,000 tons.

Going forward, Sony will take efforts to restrict greenhouse gas emissions through infrastructure-related measures, including the installation of high-efficiency equipment and the promotion of energy recycling, and to enhance nonstructural measures, notably the introduction of training programs designed to foster energy-saving leaders.

\*1 This includes CO<sub>2</sub> emissions from fuel use of business vehicles owned by Sony.

\*2 Taking into account changes in the CO<sub>2</sub> conversion rate for the energy purchased in Japan, the amount of CO<sub>2</sub> emitted as a result of energy use in fiscal year 2014 was approximately 925,000 tons.

## Emissions of PFCs and Other Greenhouse Gases

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PFCs and other greenhouse gases with high global warming potential are used in cleaning and etching processes in the manufacture of semiconductors and LCD panels. Emissions of PFCs and other greenhouse gases in fiscal year 2014 (calculated in terms of CO<sub>2</sub>) totaled approximately 146,000 tons, up about 6,000 tons from fiscal year 2013. The main increase was attributable to emissions due to periodical maintenance of certain facilities that are carried out every few years. Sony continues for ongoing efforts to reduce emissions of PFCs and other greenhouse gases by, among others, installing gas abatement equipment.

## Environment

Updated on August 21, 2015

### Promoting Efficient Energy Use

#### Effectively Using Waste Heat from the Production Process at Semiconductor Production Plants in Japan

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Sony Semiconductor Corporation's Kumamoto Technology Center is working to save energy by effectively using the waste heat generated in its production processes. The center uses heated pure water in the semiconductor cleaning process, it had been burning municipal gas and fuel in a boiler to generate steam for heating the water. To save energy, the center switched to a hot water heating method by efficiently recovering the waste heat from manufacturing machinery and using it as the heat source. This resulted in a considerable reduction in energy consumption, equivalent to a decrease of about 617 tons of CO<sub>2</sub>. With semiconductor production capacity expected to increase in the future, the Kumamoto Technology Center plans to collaborate with other Sony Group semiconductor production plants and share know-how on saving energy in the production process. Accordingly, Sony is aiming to simultaneously enhance its production system and reduce its environmental impact.



A highly efficient heat recovery system was installed in the pure water room



## The Eco Challenge Project: An Employee-Driven Initiative

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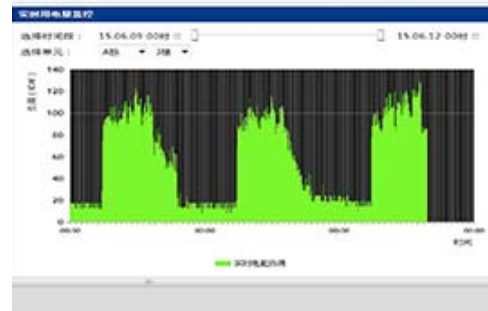
Sony promotes a broad range of energy-saving efforts at its sites around the world. In addition to increasing the energy efficiency of buildings and equipment, in recent years Sony has actively promoted the Eco Challenge Project, a program for reducing energy consumption that centers on manufacturing site employees. This project focuses on the formulation and implementation of energy-saving solutions for manufacturing sites, which consume more electricity than any other part of Sony's manufacturing operations. Employees set ambitious project targets and take steps to shed light on energy consumed in different manufacturing processes. This enables employees to identify unnecessary uses of energy in such processes, as well as to develop and test solutions and, having confirmed the effectiveness thereof, to effect ongoing improvements. Particularly outstanding solutions are subsequently expanded to other sites.

The Eco Challenge Project was launched in 2009 at Sony Corporation's Sendai Technology Center and Sony Storage Media and Devices Corporation's Tagajo site, which led to both sites undertaking a number of distinctive initiatives. These initiatives were then widely adopted by other sites after their effectiveness was demonstrated, and they are currently being carried out by production plants in Japan, Malaysia, Singapore, Australia, Thailand, India, and China. In the Pan-Asia region, offices and logistics operations are also joining the Eco Challenge Project in addition to the production plants.

As the project expanded in scope, Sony EMCS (Malaysia) Sdn. Bhd. KL Tec initiated its Sustainable Energy Management Program. In recognition of the program, the company was selected as 2nd runner up in the 2014 ASEAN Energy Awards in the Large Industry category under Energy Management in Building and Industry.



Sony Technology (Thailand) Co., Ltd. optimized the number of computers used on its production line automatic mounting process, enabling it to reduce their number by one-third.



In collaboration with general affairs and technical development departments, Shanghai Suoguang Electronics Co., Ltd. is deploying its independently developed energy management system to manage electricity consumption in real time and control equipment overnight to save energy.

## Environment

Updated on August 21, 2015

### Use of Renewable Energy

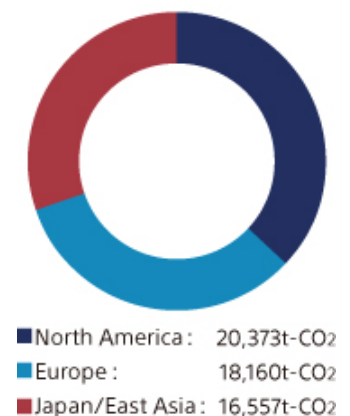
#### Sony Reduces Emissions of CO<sub>2</sub> in Fiscal Year 2014 by Approximately 55,000 Tons through the Use of Renewable Energy

The use of renewable energy\* is a key part of Sony's effort to reduce greenhouse gas emissions. In fiscal year 2014, the use of the Green Power Certification System and the introduction of solar power generation systems helped reduce Sony's CO<sub>2</sub> emissions by approximately 55,000 tons. Renewable energy accounts for approximately 6% of the total amount of electricity that Sony uses worldwide

Sony and electric power companies in Japan jointly developed the Green Power Certification System in 2001. Prior to that, to utilize renewable energy, a company needed to possess its own electricity generation facilities or be located close to a renewable energy power station. Under the Green Power Certification System, by conducting trade in renewable power and heat certificates issued by power stations throughout Japan, use of the renewable energy generated is recognized even when the energy source is located a long distance from the user.

\* Energy obtained from resources that are essentially inexhaustible, including solar power, wind power and energy produced from biomass products

Quantity of Renewable Energy Use by Region (Fiscal Year 2014)



## Japan: Largest Amount of Green Power and Green Heat Contracted under Green Power Certification System

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### Sony Continues to Be One of Japan's Largest Users of Green Power

In Japan, Sony uses the Green Power Certification System to promote the introduction of renewable energy. As of March 2015, the Sony Group finalized a Green Power Certification System purchase contract for 36.5 million kWh annually, equivalent to around 2.6% of the Group's total power use in Japan. Since 2008, approximately 90% of electricity used by the Sony Building has been derived from green power.

### Sony Has Been Japan's Largest Purchaser of Green Heat Certificates Since 2012

In addition to making extensive use of green power, in April 2012 Sony signed a biomass heat production contract with Japan Natural Energy Company Limited and began purchasing Green Heat Certificates for heat generated by wood biomass combustors. Green Heat Certificates signify recognition that the user is purchasing green heat produced through the combustion of biomass, solar power or other renewable energy technology that does not increase the volume of CO<sub>2</sub>, thereby contributing to the reduction of CO<sub>2</sub> emissions. With this contract, Sony agreed to purchase 133,333 GJ of green heat annually in 2014, making it the largest purchaser of Green Heat Certificates in Japan. This is expected to facilitate an annual reduction in greenhouse gas emissions of approximately 8,000 tons.



Green Heat Certificate

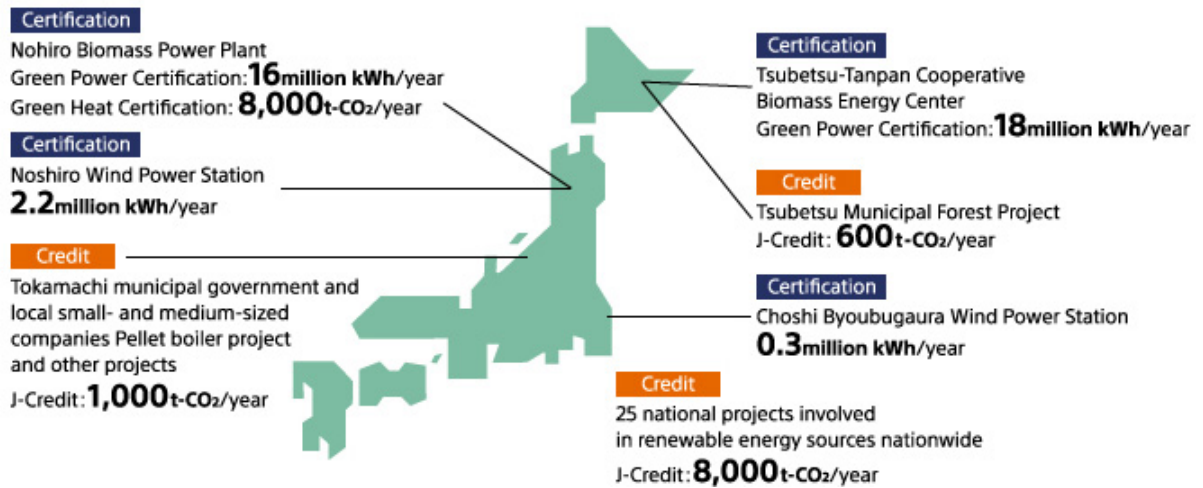
Sony was an investor in the Japan Greenhouse Gas Reduction Fund (JGRF) until 2014 (the fund dissolved in May 2014 in accordance with its fixed term). JGRF was a carbon fund established in December 2004 to acquire certified emissions reductions from greenhouse gas reduction projects in developing countries in the form of credits for distribution to investor companies. Sony had purchased credits equivalent to approximately 156,000 tons of CO<sub>2</sub> reduction as of March 31, 2015.

Sony utilizes the J-Credit Scheme.\* It has entered into three such J-Credit agreements and has purchased credits equivalent to a total of approximately 14,800 tons of CO<sub>2</sub> as of March 31, 2015. Sony also purchased credits from 25 national projects involved in renewable energy, particularly woody biomass. As of March 31, 2015, these credits were equivalent to approximately 8,000 tons of CO<sub>2</sub>. Furthermore, Sony purchased credits equivalent to a CO<sub>2</sub> reduction of 689 tons from a forest carbon absorption project in Tsubetsu, Hokkaido, Japan and used them as carbon offset credits for Sony Bank Inc. and Sony Assurance Inc. In Tokamachi, Niigata Prefecture, Sony continues to support a carbon offset project together with the municipal government and local small- and medium-sized businesses.

In addition to its efforts in Japan, Sony will actively utilize green power certification and carbon credit schemes around the world, aiming to further reduce greenhouse gas and expand renewable energy.

\* J-Credit Scheme: A scheme for awarding credits for certified greenhouse gas reductions/removal by means of sequestration, created through the integration of the Domestic Credit Scheme and the J-VER Scheme. The Domestic Credit Scheme allowed for greenhouse gas emissions reduction projects to be executed by small- and medium-sized companies in Japan in order to generate carbon credits that could be purchased by larger companies. The J-VER Scheme verified offset credits generated through the reduction/removal by sequestration of greenhouse gases through projects implemented in Japan.

**Renewable Energy Certification and Emissions Credits in Japan** (As of March 31, 2015)



Note: The figures in the above chart differ from those in the main text, as they were calculated on a contract basis, while the figures in the main text were calculated on an actual purchase basis.

**Europe: Using 100% Renewable Electricity**

In Europe, Sony has been using renewable electricity since 2002. From fiscal year 2008 onward, 100% renewable electricity usage had been achieved by Sony sites\* in Europe through the direct purchase of electricity generated from renewable sources and through the purchase of Renewable Electricity Certificates if direct purchase of renewable electricity was not possible. In fiscal year 2014, Sony used a total of approximately 71,200 MWh of renewable electricity in Europe.



Sony DADC's site in Anif, Austria, one of several Sony sites in Europe that uses 100% renewable electricity

\* Sony sites in Europe that have obtained ISO 14001 certification

## North America: Promoting the Use of Renewable Energy by Various Regional Group Companies

Beginning April 2008, four of Sony's sites in the United States—Sony DADC U.S. Inc.'s Pitman (at the time) and Terre Haute plants, the New York office of Sony Corporation of America (SCA) and the San Diego office of Sony Electronics Inc. (SEL)—signed Renewable Energy Certification contracts.

Subsequently, the scope of purchases were expanded to cover additional sites, and in fiscal year 2014 Green Power Certification purchased by the Sony Group covered more than 34,700MWh of electricity in the United States at the following sites: Sony DADC's Terre Haute plant; Sony DADC's Bolingbrook distribution center; the New York office of SCA; and all major facilities of SEL. This is enough green power to meet an estimated 20% of these entities' electricity use in the United States. The Green Power Certificates purchased by SEL are equivalent to 26% of the electricity consumption of the main SEL sites in the United States and Mexico that have received unified ISO certification. At the SPE headquarters, approximately 223MWh of electricity was provided by the company's own solar power generation system in FY2014.



Solar power generation facility installed on the roof of SPE's headquarters

## Environment

### Reducing Greenhouse Gas Emissions Related to Products and Services

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[Greenhouse Gas Emissions from Product Use](#)

[Reducing Product Power Consumption](#)

[Developing Additional Olivine-Type Lithium-Ion Iron Phosphate Storage Battery Products](#)

[Systems Solutions that Help Reduce CO2 Emissions](#)

[Helping Provide Solutions to Environmental Problems](#)



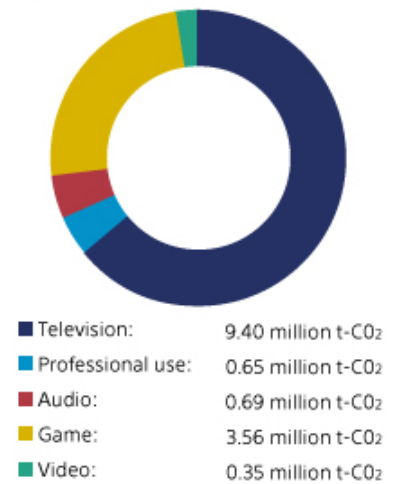
# Environment

Updated on August 21, 2015

## Greenhouse Gas Emissions from Product Use

Sony products consume electrical power while used in the hands of their owners, resulting in indirect emissions of CO<sub>2</sub>. Having set a target for reducing annual energy consumption per product from product use of 30% from the fiscal year 2008 level by fiscal year 2015, Sony is promoting the incorporation of energy-saving features in a wide range of product categories. In fiscal year 2014, annual energy consumption per product was 30% lower than in fiscal year 2008. Particularly notable reductions were achieved for LCD televisions. Sony's total CO<sub>2</sub> emissions over the entire life cycle of all products sold in fiscal year 2014 were approximately 14.65 million tons, 4% higher than for products sold in fiscal year 2013 due to the sales increase of the game consoles.

**Greenhouse Gas Emissions from Product Use**



Note: In theory, emissions during product use in the current fiscal year should be calculated from the total quantity of electrical power consumed by previously sold Sony products that are still in use by consumers in the current fiscal year. However, given the difficulty of determining how many previously sold Sony products are still in use by consumers of the total number of Sony products sold to date, Sony uses the total quantity of electrical power consumed while in use over the lifetime of Sony products sold in the current fiscal year as an indicator for CO<sub>2</sub> emissions during use.

# Environment

Updated on August 21, 2015

## Reducing Product Power Consumption

Sony reduces the power consumption of individual products by setting specific annual targets for each product category and developing technology related to energy conservation. Regulations governing energy efficiency of products, such as the Energy-related Products Directive (ErP) enacted in the European Union in 2010, are enforced in countries around the world, and Sony products are ready for compliance in every country before these regulations go into effect.

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

[Reducing the Power Consumption of BRAVIA™ LCD TVs](#)

[Reducing the Power Consumption of Data Projectors](#)

[Reducing the Power Consumption of Speakers with the Use of Magnetic Fluid](#)

# Environment

Updated on August 21, 2015

## Developing Additional Olivine-Type Lithium-Ion Iron Phosphate Storage Battery Products

### Development of olivine-type lithium-ion iron phosphate secondary batteries

Since commercializing the world's first lithium-ion battery in 1991, Sony has continued to focus efforts on the development and commercialization of technologies for lithium-ion batteries, which boast excellent energy efficiency and high energy/power density, among other superior properties. In 2009 Sony commercialized an olivine-type lithium-ion secondary battery, marking its first step toward full-scale entry into the storage battery market.



Olivine-type lithium-ion iron phosphate secondary battery

The crystalline structure of olivine-type lithium-ion iron phosphate is very stable, and even at high temperatures the material exhibits excellent thermal stability. By applying its proprietary powder-design and cell structure technologies, Sony realized high power output as well as a long battery life of over 10 years.\* Since iron is a plentiful resource, this technology is more able to contribute to decreased environmental impact compared with storage batteries that use rare metals, which have extremely limited reserves and are in short supply.

#### Characteristics of Sony's Olivine-type Lithium-ion Iron Phosphate Secondary Batteries

<p><b>Long Life</b></p> <p>Can be used for more than 10 years*, and reduces environmental burden through long, repeated use</p>	<p><b>Rapid Charging</b></p> <p>Can be charged to 99% capacity within 30 minutes</p>	<p><b>High Output</b></p> <p>Realizes 1,800W/kg output density</p>
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\* Based on fully charging and discharging daily at room temperature (23°C)

## Expansion of Storage Battery Lineup

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In recent years, society's needs have been increasing in such areas as the stable use of renewable energy, efficient electricity usage and the securing of power supply during times of disaster. Consequently, lithium-ion storage batteries, which boast excellent energy efficiency and density, have garnered attention. Anticipating society's needs, in 2011 Sony began mass production and shipment of a 1.2kWh-class storage battery module, which uses olivine-type lithium-ion iron phosphate secondary batteries. Sony also commercialized compact storage battery units for use in the home and commercial settings. This was followed by the development of a 2.1 kWh-class storage battery module, which first went on sale in 2014. In addition to its long operating life, high level of safety and rapid charging performance—all features of Sony's olivine-type iron phosphate technology—the new module comes with software developed in-house and integrated circuits for new types of controllers, enabling connections to multiple modules either in series or in parallel. Thanks to this outstanding scalability, the module can be used to assemble a large-scale power storage system with a capacity up to 8 MWh per 1,000V.

Meanwhile, in a joint venture with Hydro Quebec, Canada's largest electric power utility, Sony is developing large electric battery storage systems for power companies, as well as lithium-ion battery materials suitable for high-capacity storage batteries. Similarly, Sony Energy Devices Corporation installed a large-scale storage battery system using a 40-foot container on its site in June 2015 and plans to commence operations from October after confirming that the system has been debugged. With a capacity of more than 500 kWh, the system is undergoing testing to demonstrate its ability to cover electricity demand during daytime peak hours and supply emergency backup power. Through these initiatives, Sony aims to develop applications for small- to large-scale storage batteries in order to respond to the diverse needs of customers.



IJ1001M energy storage module, which went into mass production in 2011



Large-scale storage battery system installed in Sony Energy Devices

## Environment

Updated on August 21, 2015

### Systems Solutions that Help Reduce CO<sub>2</sub> Emissions

In addition to taking steps to lower greenhouse gas emissions from its operations, Sony is developing energy-saving products and IT technologies that help reduce CO<sub>2</sub> emissions from Sony products during use by customers.

#### Digital Cinema Systems

In 2000, Sony developed HDW-F900, the world's first video camera for motion picture production, and in 2006 launched sales of 4K digital cinema projection systems, thereby promoting energy- and resource-saving cinema projection.

In 2013, Sony launched the PMW-F55 CineAlta 4K camera, which combines 4K image resolution with a compact size and a significant reduction in power consumption.

#### Reducing the Environmental Impact of Movie Production

Digital movie cameras record images to digital tape instead of traditional film stock.

Additionally, where a single reel of film stock allows only about 10 minutes of continuous shooting, digital cameras can shoot for 50 minutes. These features greatly reduce the consumption of resources. Digital cameras also



PMW-F55 CineAlta 4K camera

make it possible to review footage on the spot, thereby simplifying and increasing the efficiency of editing and other post-production work.

Sony is taking steps to reduce the size and energy consumption of digital movie cameras. In February 2013, Sony released the PMW-F55 CineAlta 4K camera, which achieves a reduction in maximum energy consumption of approximately 75% compared with previous models (F65 and SR-R4), from 100W to just 25W. Moreover, one camera facilitates multiple recording formats, reducing the number of cameras required. With a standard ISO setting of 1250, the PMW-F55 CineAlta 4K camera also boasts outstanding sensitivity, thus helping to lower lighting costs during filming.

### Reducing the Environmental Impact of Movie Theater Operations

Sony also offers a digital cinema projection system that reduces the environmental impact of movie theater operations.

With this system, digital data is delivered to digital cinema-compatible movie theaters on a hard disc drive (HDD), so there is no need to develop film. This significantly lessens the need for water and chemicals used during the developing process, thus substantially reducing associated CO<sub>2</sub> emissions. Further, whereas a single two-hour movie on film requires six reels of positive film, the same movie made with digital cinema needs only one HDD, thus increasing the efficiency of shipping and contributing to the reduction of associated CO<sub>2</sub> emissions.

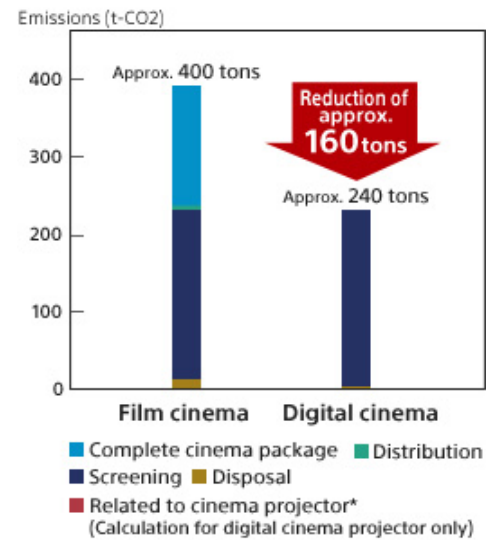


Sony Digital Cinema 4K™ cinema projection system SRX-R320 (left) and SRX-R515P (right)

Estimated total CO<sub>2</sub> emissions over the life cycle of a movie made using digital cinema are estimated to be approximately 160 tons less than those over the life cycle of a movie made using film.\*

The Sony Digital Cinema 4K™ cinema projection system, which received the 58th Okochi Memorial Production Prize (fiscal year 2011), is estimated to achieve a reduction of approximately 40% in CO<sub>2</sub> emissions compared with conventional film-based systems, and is rapidly being adopted around the world.

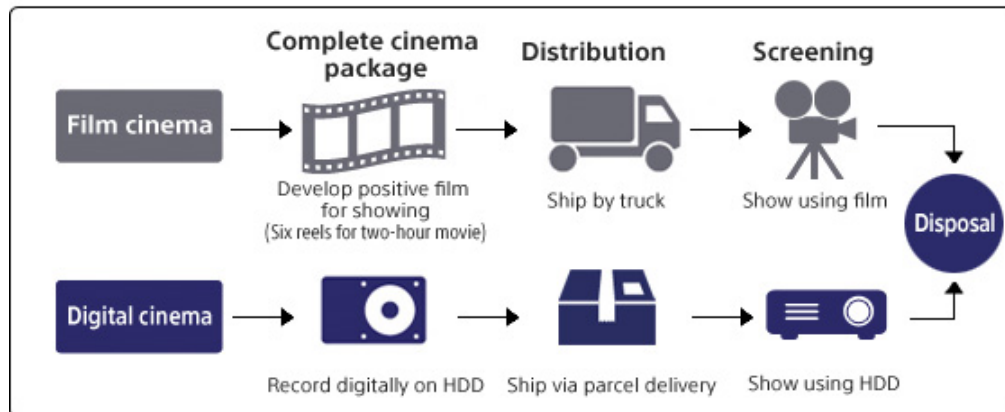
**Comparison of CO<sub>2</sub> Emissions at Each Lifecycle Stage\***



\* From creating a complete cinema package for a 2-hour movie, to distributing, screening, and disposing at 300 theaters around Japan

\* Based on Sony data; premise for calculation is as follows:

**Comparison of life cycle of movie made using digital cinema and movie made using film**





## Premise for Calculation of CO<sub>2</sub> Emissions

### Movie made using film

CO<sub>2</sub> emissions from the following processes associated with a two-hour movie made using film, assuming six rolls of film per movie theater:

- CO<sub>2</sub> emissions during manufacture and developing of film
- CO<sub>2</sub> emissions during transport of film  
Calculated in ton-kilometers assuming round-trip between Tokyo and each movie theater in a two-ton truck: Weight x distance traveled x fuel used per ton-kilometer x coefficient of CO<sub>2</sub> emissions per unit of fuel used
- CO<sub>2</sub> emissions from projectors during showing of movie  
Power consumption by projectors during showing of two-hour film x coefficient of CO<sub>2</sub> emissions per unit of power consumed
- CO<sub>2</sub> emissions from disposal of film  
Calculated assuming incineration of all positive film used

### Movie made using digital cinema

CO<sub>2</sub> emissions from the following processes associated with a two-hour movie made using digital cinema, assuming one HDD per movie theater:

- CO<sub>2</sub> emissions during manufacture of HDDs  
Distributed proportionally assuming one HDD can be used for a total of 120 movies
- CO<sub>2</sub> emissions during transport of HDDs  
Calculated in ton-kilometers assuming round-trip between Tokyo and each movie theater in a two-ton truck: Weight x distance traveled x fuel used per ton-kilometer x coefficient of CO<sub>2</sub> emissions per unit of fuel used
- CO<sub>2</sub> emissions from projectors during showing of movie  
Power consumption by projectors during showing of two-hour film x coefficient of CO<sub>2</sub> emissions per unit of power consumed
- CO<sub>2</sub> emissions from disposal of HDDs  
Calculated assuming landfilling of HDDs
- CO<sub>2</sub> emissions over the life cycle of digital cinema projectors (except during showing of movie)

## Video Conferencing Systems

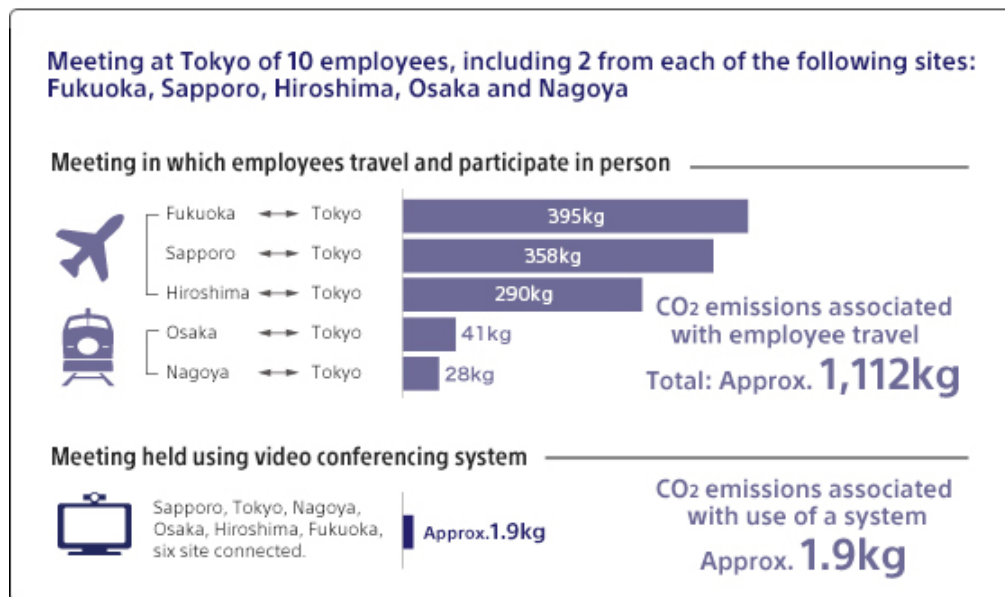
Meetings involving individuals from different locations generate significant CO<sub>2</sub> emissions, the principal component of which is emissions from travel. The use of Sony's video conferencing systems can greatly reduce CO<sub>2</sub> emissions associated with employee business trips and other travel. For example, CO<sub>2</sub> emissions associated with a single meeting involving two employees each from five cities across Japan and held using Sony's PCS-XG80 HD video conferencing system are estimated to be approximately 1.1 tons\* lower than would be the case if the same two employees from each of the five cities were to travel to Tokyo to participate in the meeting in person. For a meeting held 24 times a year, therefore, the total annual reduction would amount to approximately 26 tons.



PCS-XG80 HD video conferencing system

\* Based on Sony data; premise for calculation is as follows:

### Comparison of CO<sub>2</sub> emissions associated with meeting that involves employee business travel to meeting held using video conferencing system



## Premise for Calculation of CO<sub>2</sub> Emissions

### CO<sub>2</sub> emissions from meeting involving employee business travel to Tokyo:

- Return travel by air between Fukuoka and Tokyo: 1,812 km (906 km one way); Sapporo and Tokyo: 1,664 km (822 km one way); Hiroshima and Tokyo: 1,332 km (666 km one way)
- Return travel by shinkansen between Osaka and Tokyo: 1,090 km (545 km one way); Nagoya and Tokyo: 732 km (366 km one way)

(Coefficient used to calculate emissions: Data from "CO<sub>2</sub> Emissions per Unit of Transport [Passengers]," Ministry of Land, Infrastructure, Transport and Tourism)

### CO<sub>2</sub> emissions from meeting using Sony videoconferencing system:

- Two-hour meeting using the PCS-XG80 videoconferencing system to link six locations and six FWD-S42H1 displays plus CO<sub>2</sub> emissions associated with manufacturing relevant equipment distributed proportionally over the number of times the equipment is used (assumes 24 times/year for 10 years)

## Environment

Updated on August 21, 2015

### Helping Provide Solutions to Environmental Problems

Sony is striving to help resolve environmental problems occurring in every part of the world by using its products and technologies to devise solutions. Examples of these initiatives are presented below.

#### **FeliCa™ Contactless IC Card Technology Contributes to Alleviating Traffic Congestion in Bangladesh**

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In Bangladesh, where air pollution due to traffic congestion has become a serious problem, a national bus company has adopted an IC card passenger ticketing system using Sony's FeliCa™ contactless IC card technology, which is widely used by transportation services in Japan. In addition to making buses more convenient to use, the system is helping alleviate traffic by attracting more bus passengers, which, in turn, reduces air pollution because of the reduction of vehicles on the road.

[For more information, please refer to "Solving Social Issues in Urban Bangladesh by Utilizing IC Card Technology" in the CSR Reporting section](#)

# Environment

Updated on August 21, 2015

## Collaboration with NGOs

### Participation in the WWF's Climate Savers Programme

In July 2006, Sony joined the Climate Savers Programme, established by the World Wide Fund for Nature (WWF), a leading international environmental NGO. Under the Climate Savers Programme, the WWF partners with leading corporations to establish targets for reducing absolute emissions of greenhouse gases that are meaningful, rather than simply expedient for corporations. Progress toward the achievement of these goals is monitored by the WWF, as well as by an independent body. Participation in the program has enabled Sony to set more ambitious targets, while monitoring by the WWF and an independent body has enhanced the transparency of Sony's various environmental initiatives.



Sony will continue to participate in the Climate Savers Programme to meet the climate change targets included in its Green Management 2020 group environmental mid-term targets.

[Click here for more details in Partnership and Participation in frameworks.](#)

## Environment

Updated on August 21, 2015

### Grasping the Extent of Greenhouse Gas Emissions over the Entire Value Chain

Recent escalation of climate change issues has prompted corporations to broaden the scope of efforts to grasp the greenhouse gas emissions not just of their own operations but also those over their entire value chain\*1. Starting in fiscal year 2009, Sony has conducted trials to determine emissions from its main OEM/ODM\*2 suppliers. Furthermore, based on the level of emissions identified, in fiscal year 2012, Sony first estimated greenhouse gas emissions over its entire value chain\*3. The amount of greenhouse gas emissions from Sony's overall value chain in fiscal year 2014 is estimated to be approximately 22.06 million tons. The largest volume of emissions was from "energy consumed during product use." The next-largest category was "purchased goods and services" relating to materials and components. Sony plans to build its own system for identifying greenhouse gas emissions over the entire value chain, and will work to enhance the accuracy of the system and strengthen management of emissions.

\*1 Refers to the entire product life cycle process, from procurement of materials through to manufacturing, use and disposal. It includes manufacturing upstream and downstream processes.

\*2 OEM suppliers are companies that manufacture products on behalf of Sony. ODM suppliers are companies that design and manufacture products on behalf of Sony.

\*3 Calculated in accordance with the Greenhouse Gas Protocol's Scope 3 accounting and reporting standard and guidelines published by Japan's Ministry of the Environment.

Greenhouse Gas Emissions from the Value Chain



■ Use of sold products [category 11]	14,646,000 tons
■ Purchased goods and services [category 1]	5,832,000 tons
■ Capital goods [category 2]	547,000 tons
■ Downstream transportation and distribution [category 4]	365,000 tons
■ Other	672,000 tons

Status of Scope 3 Emissions per Category

Scopes and categories	Status
Category 1 : Purchased goods and services	○
Category 2 : Capital goods	○
Category 3 : Fuel- and energy-related activities (not included in scope 1 or scope 2)	○
Category 4 : Upstream transportation and distribution	○*
Category 5 : Waste generated in operations	○
Category 6 : Business travel	○*
Category 7 : Employee commuting	○
Category 8 : Upstream leased assets	-
Category 9 : Downstream transportation and distribution	○
Category 10 : Processing of sold products	○
Category 11 : Use of sold products	○
Category 12 : End-of-life treatment of sold products	○
Category 13 : Downstream leased assets	-
Category 14 : Franchises	-
Category 15 : Investments	○

○ : calculated

- : not relevant

\* : The emissions are assured by a third-party data verification. (In category 4, only product transport emissions are verified.)

For details on scope 3 emissions, please refer to "Greenhouse Gas Emissions > Scope 3".

# Environment

## Resource Conservation: Table of contents

To ensure the efficient use of limited resources, Sony is working to minimize waste generation and to make use of recycled resources.

[Policy on Resource Conservation](#)

[Resource Conservation at Sites](#)

[Conservation of Resources Used  
in Products and Services](#)

### Links to Related Items:

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[Product Recycling](#)



## Environment

Updated on August 21, 2015

### Policy on Resource Conservation

One of the long-term targets of Sony's Road to Zero global environmental plan is to strive to achieve zero usage of virgin materials that Sony identifies as key resources such as oil and certain metals. As the first step toward achieving this target, Sony has set the following targets for conserving resources\*1 by minimizing the volume of resources used and maximizing the use of recycled plastics and other recyclable materials as part of its Green Management 2015 mid-term environmental targets. To these ends, Sony is striving to develop products that are smaller and lighter and use fewer virgin plastics. At its sites, Sony is working to minimize waste generated and further the use of recycled materials. Sony is also actively advancing the recycling of resources by focusing on recycling-conscious design and the development of recycling technologies.

\*1 Reused or recycled materials and vegetable-based materials

#### Targets of "Green Management 2015" for Resource Conservation

<b>Research and Development</b>	Develop and refine 3R*2 technologies across the product life cycle to achieve reductions in the use of exhaustible resources and water, and to reduce waste.
<b>Product Planning and Design</b>	<ul style="list-style-type: none"> <li>● Reduce utilization ratio of virgin oil-based plastics in products by 5% (compared with FY2008)</li> <li>● Reduce mass of products by 10% (compared with FY2008)</li> </ul>

Procurement	Conduct procurement in ways that enable Sony to achieve the "Product Planning and Design" and "logistics" targets.
Operations	<ul style="list-style-type: none"> <li>● Reduce absolute waste generation by 50% (compared with FY2000)</li> <li>● Improve waste recycling rate Group-wide: 99% or more</li> <li>● Reduce absolute water consumption by 30% (compared with FY2000)</li> </ul>
Logistics	Reduce incoming parts packaging waste by 16% (compared with FY2008)
Take-Back and Recycling	Based on the idea of Extended Producer Responsibility (EPR), Sony strives to achieve an environmentally conscious recycling system and to ensure effective take-back and recycling of end-of-life products. In addition, Sony continues to increase the use of recycled resources and to design products that are easy to recycle. This is based on the idea of Individual Producer Responsibility (IPR) to help in promoting the establishment of appropriate laws and the building of infrastructure to recycle Sony products.

\*2 Reduce, Reuse and Recycle

# Environment

## Resource Conservation at Sites

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[Waste at Sites](#)

[Waste Reduction](#)

[Policy on Water Use and Water Consumption at Sites](#)

[Reduction of Water at Plants](#)

# Environment

Updated on August 21, 2015

## Waste at Sites

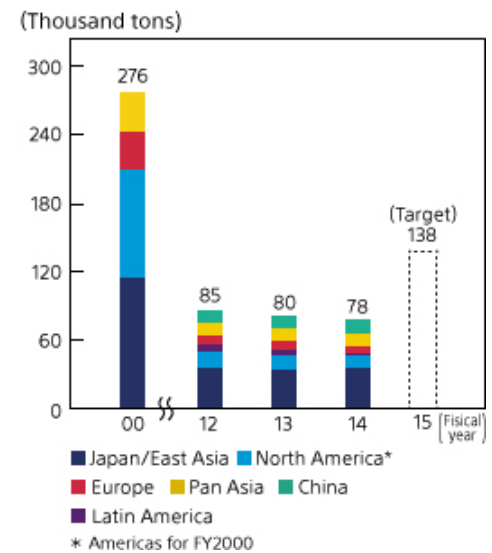
### Achieving an absolute reduction in waste at sites of 72% from the fiscal year 2000 level

Sony is implementing a variety of measures to reduce waste and use materials more effectively in line with its targets to achieve an absolute reduction in waste at Sony sites of 50% or more from the fiscal year 2000 level and achieve a recycle rate of 99% or higher for global sites by fiscal year 2015.

In fiscal year 2014, waste at Sony sites totaled approximately 78,000 tons. This represents approximately 72% decline from the fiscal year 2000 level and is approximately 8% lower than in fiscal year 2013. This decline was largely attributable to a reuse of packaging materials used when shipping parts-a major component of waste generated by production sites-and the promotion of reuse and recycling within the Sony Group.

Waste at Sony sites per unit of consolidated net sales (tons/million yen) was 0.004 in Japan and 0.0054 overseas.

**Waste at Sites**



## Recycling rate for Sony sites

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In fiscal year 2014, the recycling rate for all Sony Group sites was 96%. From fiscal year 2012, this rate takes in to account the impact of incineration in Japan and other factors that reflect the reality of waste treatment. In Japan, the recycling rate for everyday waste at Sony sites also continued to rise, which surpasses 99%. The recycling rate for Sony sites overseas-calculated excluding waste that Sony is required by law or ordinance to dispose of in landfills-was 98%. Sony continues to promote the recycling of waste from sites and the reuse thereof within the Group. Looking ahead, Sony strives to further increase the volume and nature of recycled waste with the aim of promoting the recycling and reuse of resources.

## Management of industrial waste

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Sony takes precautions to ensure waste from its sites is not inappropriately disposed of. For example, in Japan Sony has set consistent internal standards for selecting waste disposal contractors and inspecting disposal sites on an ongoing basis. It has also established an internal system of accreditation for disposal site inspectors, and is stepping up efforts to minimize risks associated with contracting out waste disposal. To reinforce this system, Sony implements periodic on-site inspections in the waste disposal contractors, thereby ensuring rigorous management procedures.

## Environment

Updated on August 21, 2015

### Waste Reduction

All sites of Sony Group are making efforts to cut down on waste. At the same time, the Group is focusing on reducing its final disposal of waste to landfills or to incinerators that do not use the thermal recycling\* method, with the goal of achieving a recycling rate of 99%.

\* Thermal recycling is an incineration method for recovering and using the heat energy generated during incineration.

### Recycling Scrap Wood from the Manufacture of Speaker Cabinets

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Speaker manufacturer Sony EMCS Penang Tec has taken the initiative to recycle scrap wood left over from the manufacture of speaker cabinets. In the past, wooden planks were disposed as landfilled waste because plastic sheets attached to the wood made them difficult to recycle. After trying various measures in collaboration with the local government and waste treatment firms, the company found a way to separate the plastics sheets from the wooden planks and able to recycle both the scrap woods and the plastic sheets. This led to a reduction in the final disposal of waste and improved the production plant's overall recycling rate.



Sony EMCS Penang Tec made it possible to recycle scrap wood from speaker cabinets

## Reducing Waste by Improving Component Packaging

At all its sites, Sony works to reduce the amount of waste through overall reviews of the packaging used in components and the optimization of this packaging.

For example, a range of measures are employed to reduce the amount of materials used in component packaging materials and hence curb the amount of waste. These include the complete elimination of protective bags for components, modifications to increase the capacity of containers used to store components, and the switch from disposable containers to multi-use returnable boxes. In particular, Sony is working to standardize the sizes of, and materials used in, returnable containers while aiming to expand the range of items for which such containers are used.



Returnable containers used to transport components at Sony EMCS (Malaysia) Sdn. Bhd.'s Kuala Lumpur TEC

[For details on measures relating to the overall logistics system, please refer to "Reducing the Environmental Impact of Logistics."](#)

# Environment

Updated on August 21, 2015

## Policy on Water Use and Water Consumption at Sites

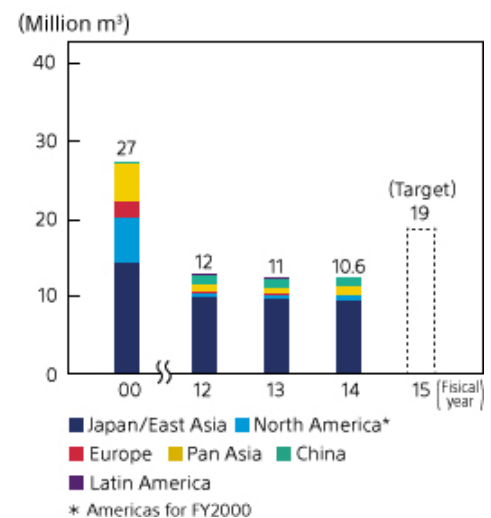
### Policy on Water Use

Although water circulates around the earth continuously through the water cycle, the amount of water available for use by the planet's inhabitants is limited. With population growth and other issues putting further pressure on water supplies, the importance of conserving this resource will take on new importance in the years ahead. Taking into account the locations of its sites, as well as regional differences, Sony will continue taking steps to minimize its withdrawal of water and to ensure the water it returns to water sources is of a quality that does not negatively impact the environment.

### Water Consumption at Sites

Sony is taking steps to reduce the consumption of water at its sites in line with its target of achieving an absolute reduction of 30%, compared with the fiscal year 2000 level, by fiscal year 2015. In fiscal year 2014, Sony sites used approximately 10.61 million m<sup>3</sup> of water, a decrease of approximately 61% compared with the fiscal year 2000 level and approximately 4% decline from the fiscal year 2013 level.

**Water Consumption at Sites**





Factors behind the decrease from the fiscal year 2000 level include efforts to promote the reduction of water used and the recycling of wastewater within sites. Water used at Sony sites per unit of consolidated net sales (m<sup>3</sup>/million yen) was 0.96 m<sup>3</sup> in Japan and 0.32 m<sup>3</sup> overseas.

Sony also takes steps to ensure the quality of wastewater at its sites. In addition to observing related laws and regulations in each of the countries and territories in which it operates, Sony manages wastewater quality using stricter criteria than it is required to. For example, the introduction of sophisticated water treatment facilities has enabled it to reduce BOD and COD levels\* in wastewater.

\* Biochemical oxygen demand (BOD) and chemical oxygen demand (COD) levels are common measures of water pollution.

[For more information on BOD and COD levels, see "Emissions of Air and Water Pollutants \(Worldwide\)"](#)

## Environment

Updated on August 21, 2015

### Reduction of Water at Plants

For most consumer electronic products, vast amounts of water are needed not only in the manufacturing process but also in the recycling process. At its plants all over the world, Sony is taking a variety of measures to preserve local water resources, including wastewater and rainwater recycling and initiatives for reducing water consumption. Examples of these initiatives are described below.

#### Controlling Water Consumption by Improving the Production System at the Nagasaki Technology Center

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Sony Semiconductor Corporation completed an initiative for controlling water consumption at Nagasaki Technology Center, a semiconductor production plant, when it installed a new production line intended to boost production capacity. As one part of this initiative, the center began reusing wastewater for gas detoxification equipment, which renders the gases used in the semiconductor production process harmless. A large quantity of industrial water is needed to eliminate the toxins in such gases, and with the installation of the new production line and additional gas detoxification equipment, the amount of industrial water consumption was set for an increase. In response, the center installed a wastewater recovery system to reuse the wastewater from the gas detoxification equipment, enabling it to recover and reuse about 80% of the water. Moreover, the center began using the system to recover and reuse wastewater from other production equipment, allowing it to significantly limit the increase in industrial water consumption related to increased production.



A wastewater recovery system for gas detoxification equipment

## Collecting and Using Rainwater at Green Cycle Corporation

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As a member of the Sony Group, Green Cycle Corporation specializes in the recycling of used consumer electronic goods and other products. Aiming to reduce the amount of water it consumes, the company carried out an initiative to use rainwater. Before using the rainwater, it analyzed its quality and confirmed that it could be used as industrial water without affecting the production process, and then refurbished the 1,620 m<sup>2</sup> roof of the warehouse on its site to serve as a collection area. Over the year since the initiative began in May 2014 through April 2015, Green Cycle Corporation was able to significantly reduce its water consumption, using rainwater for 21% of its total industrial water, in the recycling process for crushers, sorters and other equipment, and for everyday use as toilet flushing water.



A rainwater storage tank next to the warehouse building

## Environment

### Conservation of Resources Used in Products and Services

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[Using Resources in Products](#)

[Reducing the Use of Resources in Products](#)

[Using Recycled Plastics in Products](#)

[Creating Environmentally Conscious Packaging](#)

[Reduction of Packaging Materials in Logistics](#)

[Conserving Resources Used in Paper](#)

# Environment

Updated on August 21, 2015

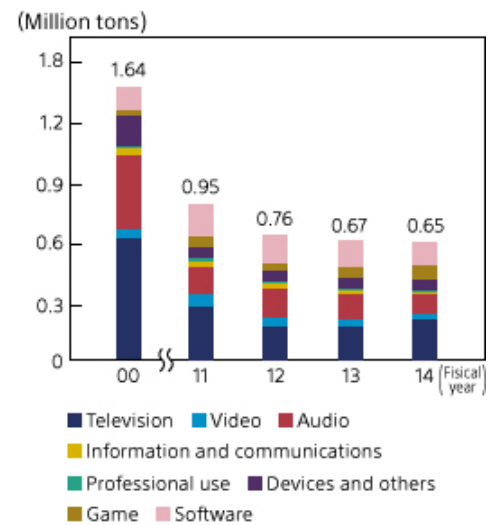
## Using Resources in Products

Having set targets for reducing the percentage of virgin plastics used in products and the mass of products of 5% and 10%, respectively, from the fiscal year 2008 level by fiscal year 2015, Sony is stepping up efforts to use reused/recycled materials in products and to reduce product weight.

For products sold in fiscal year 2014, Sony used approximately 650,000 tons of resources, down around 2% from fiscal year 2013.\*1 This result reflected declines in product weights and sales volumes.

The average mass of product sold in fiscal year 2014 was approximately 26% less than in fiscal year 2008. This reflected efforts to reduce the size and weight of products and packages, particularly televisions and game consoles. Sony's utilization rate\*2 for virgin plastic in fiscal year 2014 was 4.3% lower than in fiscal year 2008, owing to the progress of efforts to expand the use of recycled plastics, particularly in televisions and cameras and recording media.

**Total Volume of Resources Used in Products**



\*1 Total volume of resources used: Total weight of resources used in products, accessories, instruction manuals and packaging materials. The weight of total products shipped is substituted for this value.

\*2 Virgin plastic utilization rate: Percentage of plastics used accounted for by petrochemical-derived plastics

## Environment

Updated on August 21, 2015

### Reducing the Use of Resources in Products

In all product categories, Sony is working to reduce the use of resources in its products. Sony promotes the development of more lightweight and compact products and is expanding the use of recycled materials with the aim of minimizing the use of new resources. In the area of recycled materials, Sony has developed SORPLAS™ (Sustainable Oriented Recycled Plastic) and is expanding its use across a wide range of product categories. Furthermore, to make it easier to recycle products after disposal, ease of disassembly is included in Sony's product design criteria.

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

[Reducing the use of resources in Interchangeable-lens digital camera α7](#)

[Reducing the use of resources in Blu-ray Disc™ player](#)

[Reducing the use of resources in Digital 4K camcorder Handycam®](#)

## Environment

Updated on August 21, 2015

### Using Recycled Plastics in Products

#### Using Over 19,000 Tons of Recycled Plastics Annually

With the aim of eliminating the use of virgin materials such as oil and copper that have been identified as key resources, Sony is actively expanding the use of recycled plastics in products. In the fiscal year 2014, the Sony Group currently uses more than 19,000 tons of recycled plastics annually in various products\*1, including televisions, audio products, PCs and digital still cameras and recording media. Approximately 63% of the total volume comes from scraps from the production processes at manufacturing sites inside and outside of the Sony Group, while the remaining approximately 37% is post-consumer recycled plastics, that is, plastics recycled from used products and packaging. To further increase the use of such plastics, Sony is advancing the development of technologies and the adoption of recycled plastics in Sony products. Sony is also implementing measures to be in line with its Green Management 2015 mid-term environmental targets, one of which is to reduce the utilization ratio of virgin oil-based plastics in products by 5% from the fiscal year 2008 level-which is the same as increasing the utilization ratio of recycled plastics in products by 5%\*2 over the fiscal year 2008 level. Sony will continue working to reduce the volume of virgin plastics it uses, including through the use of metal materials as alternatives to plastic.

\*1 Gross value including virgin plastics and additives that are mixed with recycled materials

\*2 Net value excluding virgin plastics and additives that are mixed with recycled materials

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

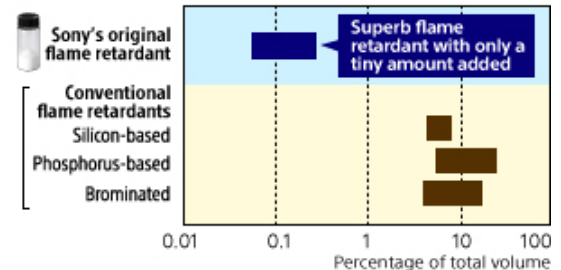
[Blu-ray Disc™ player manufactured with recycled plastics](#)

## SORPLAS™, Sony's Original Flame-Retardant Recycled Plastic

In 2011, Sony began practical use of Sustainable Oriented Recycled Plastic (SORPLAS™), a flame-retardant recycled plastic made possible by a proprietary compounding technology that combines an original, non-halogen and non-phosphorus, flame retardant –itself produced using a

Sony-developed process—and waste plastics (polycarbonate resin) from various sources in an optimal blend. Thanks to Sony's novel flame-retardant, which makes it possible to impart flame-retardancy by the addition of a very small amount of less than 1% or less of total content, SORPLAS™ not only surpasses conventional flame-retardant plastics in terms of durability, flame-retardancy and recyclability, but also achieves an outstanding utilization rate of up to 99% waste plastics. The effective utilization of SORPLAS™ has been shown to reduce CO<sub>2</sub> emissions in product manufacturing by up to 80%.<sup>\*1</sup> Moreover, Sony's versatile waste-plastic compounding technology makes it possible to tailor SORPLAS™ to the needs of a variety of products. In fiscal 2014, SORPLAS™ was used in Sony products like the 4K-compatible LCD TV Bravia™ KD-65X8500B and the 4K Handycam® FDR-AXP35. Additionally, in October 2014, sales of three different types of SORPLAS™ outside of Sony began.<sup>\*2</sup> Sony will continue to make SORPLAS™ widely available also outside the group, promote resource recycling, and contribute to a society with a reduced environmental impact.

Volume of additive required for material to meet flammability standard (V-0 rating at 1.5 mm)



\*1 In the case of SORPLAS™ in the BRAVIA™ LCD TVs KDL-40EX52H. Based on Sony calculations, assuming plastic manufacturing (including shipping)

\*2 [Press release regarding external sales of SORPLAS™ \(August 4, 2014\).](#)



Click here for Sony and the Environment, which features detailed information on environmental initiatives.

[Using SORPLAS™ in the 4K-compatible LCD TV Bravia™](#)

[Using SORPLAS™ in the Handycam® digital 4K camcorder](#)

[\[Spotlight\] SORPLAS™ – Sony's Recycled Plastic for a More Sustainable Future](#)

## Environment

Updated on August 21, 2015

### Creating Environmentally Conscious Packaging

Sony is promoting the conservation of resources through original initiatives that aim to reduce the environmental impact of product packaging disposed of by the consumer. Efforts include minimizing product packaging and expanding the use of recycled materials (recycled plastic, paper and other materials).

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

[Packaging Made with Post-Consumer Recycled PET Bottles](#)

[Minimizing Packaging for Digital Recording Binoculars](#)

[Minimizing Packaging for Home Theater Systems](#)

[Minimizing Packaging for the Digital 4K Video Camera Handycam®](#)

## Environment

Updated on August 21, 2015

### Reduction of Packaging Materials in Logistics

Sony strives to reduce the amount of resources such as packaging materials used in logistics through improvement of packaging technology.

[Click here for more details in "Reducing the Environmental Impact of Logistics through Improvement of Packaging"](#)

## Environment

Updated on August 21, 2015

### Conserving Resources Used in Paper

Sony recognizes that paper resources are limited and not only makes it a point to procure environmentally preferable paper, such as recycled paper and paper made from certified forest products, but also strives to reduce the amount of office paper used at sites and limit the number of pages in its product manuals.

#### Sony Group Paper / Printed Material Purchasing Policy

Sony formulated a paper and printed material purchasing policy covering the entire Sony Group to promote the environmentally preferable use of paper within the organization in order to ensure the efficient use of resources, including the conservation of forests and preservation of biodiversity.

<p><b>Objectives</b></p>	<p>Sony recognizes that paper resources are limited and therefore promotes the efficient use of paper resources, the conservation of forests and the preservation of biodiversity in order to reduce its environmental footprint.</p>
<p><b>Scope</b></p>	<p>Paper and printed material used by Sony worldwide, covering office paper, packaging materials for Sony products, instruction manuals, catalogues, and printed matter for both internal and external use.</p>

<p><b>Basic Policy</b></p>	<p>Sony shall purchase paper and printed material based on the following principles:</p> <ol style="list-style-type: none"> <li>1. Wood as raw material for paper shall be produced in compliance with the regulatory requirements of the country where the wood is logged.</li> <li>2. Priority for purchase shall be given to either paper made of recycled pulp or paper produced from wood under environmentally appropriate forest management, as certified by a third-party organization. In cases in which purchasing the above is difficult, environmentally preferable paper shall be selected from the paper available in each region.</li> <li>3. The bleaching of paper shall be chlorine free.</li> <li>4. Printed material shall be environmentally preferable, e.g., using VOC-free ink*1.</li> <li>5. Paper shall not be purchased if it is produced by companies that are accused of environmental destruction*2.</li> </ol>
<p><b>Implementation</b></p>	<ul style="list-style-type: none"> <li>- Sony will implement the above Basic Policy through a step-by-step approach, taking into account regional differences on availabilities and markets of paper and printed material.</li> <li>- Sony will cooperate with stakeholders, e.g., with regard to information exchange, to achieve better paper and printed material purchasing.</li> <li>- Each Sony Group company or region is allowed to establish more stringent implementation rules.</li> </ul>

\*1 VOC stands for Volatile Organic Compounds.

\*2 "[Policy for the Association of Organizations with FSC](#)" by the Forest Stewardship Council (FSC) is referred.

## Use of Environmentally Preferable Paper

Recognizing that paper resources are finite, Sony strives continuously to reduce paper consumption. Sony has also established a purchasing policy for paper and printed materials, which prioritizes environmentally preferable paper, including forest-certified paper and recycled paper. With regard to paper made from certified forest products, Sony promotes the use of FSC-certified paper whose legality, forest sustainability and other aspects have been evaluated. In fiscal year 2014, Sony used 279 tons of FSC-certified paper in its corporate publications, including annual reports, calendars, business cards and other printed materials.

In November 2013, Sony became a founding member of the Consortium for Sustainable Paper Use, the aim of which is to encourage environmentally preferable and socially responsible paper use by both companies and society at large. The consortium was established by a group of companies promoting progressive initiatives in the area of sustainable paper use in collaboration with World Wide Fund for Nature (WWF) Japan and Response Ability, Inc. Through participation in the consortium, Sony is advancing the practical application of measures to ensure sustainable paper use and to disseminate information and promote public awareness. Consortium members exchange information regularly and interview non-member companies with the goal of promoting the consortium-wide application of particularly outstanding initiatives.



Consortium for Sustainable Paper Use logo (center) and participating companies (as of June 2015)

## Digitization of Product Manuals

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The number of pages in user manuals and operating guides has increased as products become more multi-functional. Reducing page counts contributes to conservation of paper resources and also reduces CO<sub>2</sub> emissions from printing and transportation operations. Accordingly, Sony is advancing the digitization and Web-based publication of product manuals while ensuring that their content remains easy to understand. Manuals can now be viewed easily from PCs, tablets, smartphones and other digital devices, enhancing accessibility and at the same time facilitating a significant reduction in the volume of paper used for this purpose.

## Sony Life Paperless Initiatives

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By updating its insurance simulation system, based on its pioneering life planning concept, as well as other sales support systems, Sony Life Insurance Co., Ltd., transformed applying for insurance into a paperless procedure. In addition to significantly reducing the procedural burden on customers, this move facilitated a reduction in the volume of paper Sony Life Insurance uses.

## Evolution of Digital Paper

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In December 2013, Sony announced the Digital Paper with a 13.3-inch display, which is equivalent to the size of an A4 sheet of paper\*1. The device uses Sony's independently-developed technology to form a thin-film transistor (TFT) on a plastic substrate with high precision. By utilizing the latest 13.3-inch (1,200 x 1,600 dots) flexible electronic paper\*2 in the device's display, texts and graphics are as sharp and easy-to-read as they would be on conventional paper. Users can also use the dedicated stylus to write notes on the displayed text, thus further facilitating paper use reduction. Through the use of this Digital Paper, Sony



DPT-S1 Digital Paper

developed software solutions for paper-intensive environments, such as universities and offices. Sony also offers solutions for active learning and workplace productivity by replacing the manual process of distribution, collection and sharing of documents thru software services. Moving in this direction, Sony launched the Digital Paper Solution for Meetings in May 2014 followed by Digital Paper Solution for Education in October 2014, which were also available thru the cloud in May 2015 (solutions available only in Japan).

- \*1 The 13.3-inch display is equivalent to an A4-sized sheet of paper excluding the unprinted border area.
- \*2 Flexible electronic paper uses "E Ink Mobius," which was developed by E Ink Corporation.



## Environment

### Management of Chemical Substances: Table of contents

In line with its Road to Zero global environmental plan, Sony is taking decisive steps to maintain strict control over chemical substances. In products, Sony specifies applications for which alternatives to high-risk substances can be used and strives to eliminate such substances wherever possible, thereby reducing potential impact on the environment. Sony has also set the standards for managing high-risk substances at its sites and is working to reduce and eventually eliminate these substances.

[Policy on Management of Chemical Substances](#)

[Management of Chemical Substances at Sites](#)

[Management of Chemical Substances in Products](#)

# Environment

Updated on August 21, 2015

## Policy on Management of Chemical Substances

In conformance with its Green Management 2015 mid-term environmental targets, Sony maintains stringent control over the chemical substances it uses. This enables Sony to minimize the risk of chemical substances it uses causing serious harm to human health and the environment.

### Chemical Substances Used in Products

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Sony gathers information on restrictions in different countries and on environmental impact from Sony Group companies around the world, as well as from industry associations and specialized agencies in Japan, the United States and Europe, among others. Group technical committees then investigate relevance to Sony electric and electronics products, specific applications and instances of actual use.

Based on information thus obtained, as well as on risk assessment information from specialized programs such as the United States Environmental Protection Agency's Design for the Environment partnership program\*1, Sony classifies individual chemical substances as either to be eliminated or to be controlled. Sony also monitors information on controlled chemical substances used in parts and finished products, eliminating use in specific applications that assessments have identified as high-risk. Considering the interests of its various stakeholders, Sony adopts a precautionary approach and takes steps to identify and strive to eliminate substances considered to be high-risk, even in cases where scientific evidence is insufficient, thereby reducing potential impact on the environment.

\*1 [Click here for more details on the United States Environmental Protection Agency's Design for the Environment partnership program](#)

## Targets of "Green Management 2015" for the Management of Chemical Substances in Products

<b>Research and Development</b>	Develop technologies to reduce the use of substances of high concern and alternative materials.
<b>Product Planning and Design</b>	Eliminate Environment-related Substances to be Controlled*2 of very high concern and BFRs/PVC within specified use.
<b>Procurement</b>	Conduct procurement in ways that enable Sony to achieve its "Product Planning and Design" targets.

\*2 Among the substances contained in parts and devices, "Environment-related Substances to be Controlled" are those which, in Sony's judgment, have a significant impact on both humans and the global environment.

## Chemical Substances Used at Sites

Regarding chemical substances used at Sony manufacturing and non-manufacturing sites, Sony assesses the risk level of substances and applications as "high" or "low" and designates appropriate standards for their management.

### Targets of "Green Management 2015" for the Management of Chemical Substances at Sites

<b>Operations</b>	<p>Take actions for each class below.</p> <p><b>Class 1:</b> Prohibit use.</p> <p><b>Class 2:</b> Eliminate use by a specified date.</p> <p><b>Class 3:</b> Reduce the amounts released and transferred.</p> <ul style="list-style-type: none"> <li>&gt; Specified substances: amounts released and transferred by 14% (compared with FY2008)</li> <li>&gt; VOCs* : amount released into the atmosphere by 50% (compared with FY2000)</li> </ul> <p><b>Class 4:</b> Comply with the relevant laws and regulations and use under appropriate control.</p>
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\* Volatile Organic Compounds

## Environment

### Management of Chemical Substances at Sites

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[Chemical Substances Used by Sites](#)

[Environmental Risk Management at Sony Sites](#)

[Response to Soil and Groundwater Contamination](#)

# Environment

Updated on August 21, 2015

## Chemical Substances Used by Sites

The Sony Group has developed a group-wide approach to the management of chemicals used at sites where the use of these chemicals is controlled by legislation, designated as having a potentially harmful impact on the environment, or used in large quantities.

### Reinforcing Standards for Managing Chemical Substances

In line with Green Management 2015, which outlines Sony's targets for chemical substances requiring management, such substances are divided into four classes. Sony has implemented measures aimed at managing not only the amounts of these chemicals used, but also the amounts released into the air, water and soil or transferred as waste.

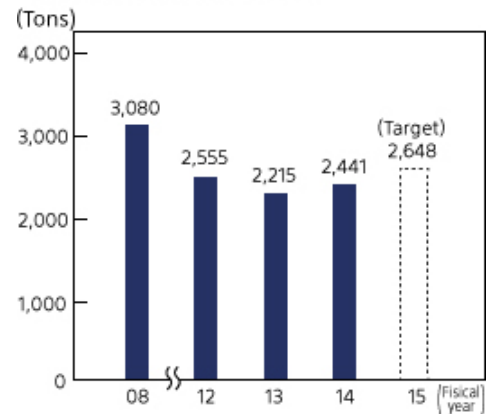
In countries where no legal reporting requirements exist for chemical management, Sony sites apply standards based on Japan's Pollutant Release and Transfer Register (PRTR) as internal rules.

Class 1 chemical substances are those whose use is prohibited. These substances are either banned under international treaties or specifically recognized by Sony as having a high risk of contaminating the environment.

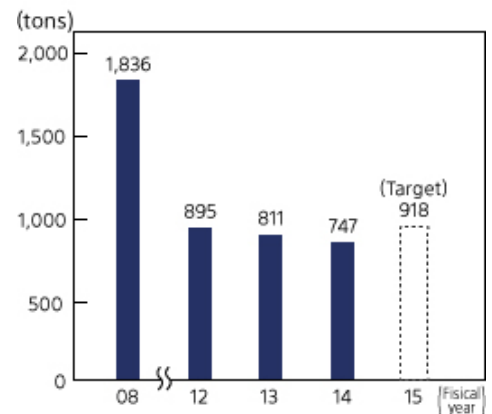
Class 2 chemical substances are those that are to be phased out. Sony previously used perfluorooctane sulfonate (PFOS) in semiconductor fabrication, but ceased using the substance in March 2010.

Class 3 chemical substances are those for which emissions are to be lowered. Having set targets for reducing the amounts released into water and transferred as waste or into sewers by 14% from the fiscal 2008 level and reducing the amounts of volatile organic compounds (VOCs) released into the air by 50% from the fiscal 2000 level, Sony is taking active steps to cut back its use of class 3 chemical substances. In fiscal 2014, a total of approximately 2,441 tons of such substances were released into public waterways, transferred into sewers or transferred off-site as waste, down approximately 21% from the fiscal 2008 level. In the same period, Sony Semiconductor Corporation started a new initiative to effectively utilize class 3 chemical substances as resources instead of disposing them as waste, working together with other group companies.

**Amounts of Chemical Substances Released into Water, Transferred into Sewers or as Waste**



**Release of VOCs into the Air**



The amount of VOCs emitted into the air in fiscal 2014 was about 747 tons, 8% below the fiscal 2013 level and 59% lower than fiscal 2000. This decrease was mainly the result of efforts to switch to alternative substances and steps taken to reduce the amount of VOCs used in production processes. Sony has also been developing compact VOC treatment systems, and it is gradually installing them at its semiconductor fabrication facilities, which are the main source of its VOC emissions. In fiscal 2014, emissions of VOCs per unit of consolidated net sales (tons/million yen) were 0.0033 tons in Japan and 0.002 tons outside Japan.

## Example of Reduction in Chemical Substance Usage

Sony Semiconductor Corporation (SCK), a semiconductor production plant, collaborated with an equipment manufacturer to develop a proprietary volatile organic compound (VOC) treatment system as part of efforts to reduce the amount of VOCs released. Conventional VOC treatment systems are installed near ventilation duct outlets. Since such equipment is designed to treat extremely rarefied organic substances, it is very large, making space and cost constraints an issue for semiconductor plants that want to install these types of systems. SCK responded by focusing on production equipment for highly concentrated organic substance and developed a small, fixed condensing-type VOC treatment system in conjunction with an equipment manufacturer. The newly developed system can be installed near production equipment and is able to treat VOCs efficiently.



Small, fixed, condensing-type VOC treatment system developed by SCK in conjunction with an equipment manufacturer



## Ozone-Depleting Substances

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Sony succeeded in completely eliminating first-generation chlorofluorocarbons (CFCs) from its manufacturing processes in 1993 and banned the use of second-generation hydrochlorofluorocarbons (HCFCs) at the end of fiscal year 2000. At present, Sony uses CFCs as a refrigerant in some air-conditioning units only. Strict care is taken to prevent leakage of CFCs from these units during maintenance.

### Links to Related Items:

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[Environmental Data > Emissions of Air and Water Pollutants \(Worldwide\)](#)

[Environmental Data > PRTR Data for Japan \(Japanese only\)](#)

## Environment

Updated on August 21, 2015

### Environmental Risk Management at Sony Sites

To carry out effective risk management of chemical substances and emergency responses, the Sony Group has enacted the Sony Group Standards for Site Environmental Risk Management, which set the management standard and examples of the improvement measures. Based on these standards, at each site Sony has implemented accident prevention measures, including prohibiting the burial of tanks and pipes, and various leak prevention measures. In addition, Sony rigorously works to prevent environmental accidents through ongoing improvements to its systems based on regular audits at each site, information sharing among sites and other initiatives. Sony has established a system whereby its sites are required to promptly report environmental accidents to the authorities and to take appropriate countermeasures. No such accidents were reported at any of Sony's sites in fiscal year 2014.

## Environment

Updated on August 21, 2015

### Response to Soil and Groundwater Contamination

In the event that an incident of soil or groundwater contamination is identified at a Sony site in a voluntary check or other assessment, remediation processes are implemented in compliance with pertinent local laws and ordinances. For example, Sony Group companies in Japan deal with the occurrence of contamination of soil and groundwater at Group sites by taking steps in line with the Sony Group Standard for Assessing Soil and Groundwater, an internal document that sets out procedures that comply with Japanese laws and ordinances. This manual stipulates that issues be addressed through the following three phases:

**Phase 1:** Investigate past and present chemical use and confirm the existence or otherwise of used or unused underground tanks, buried piping, other similar equipment, or previous incidents, at the site. Perform an inspection of the site to ascertain whether there is any residual soil or groundwater contamination.

**Phase 2:** Based on the investigations undertaken in Phase 1, carry out an assessment of the areas that are potentially contaminated. Undertake measurements at these locations in line with the Soil Contamination Countermeasures Act.

**Phase 3:** If any contamination is identified based on these results, carry out prevention and remediation procedures.

Incidents of soil and groundwater contamination resulting from operations have been confirmed at three Sony Group sites: Sony Haneda Corporation and Sony EMCS's Inazawa Site and former Mizunami Site. In response, Sony has been remediating the contamination and submitting regular reports to authorities.

### Progress of Soil and Groundwater Remediation

Site	Date Contamination Confirmed	Substance(s) Detected	Cause	Response/ Current Status
Sony Haneda Corporation (Japan)	September 2004 (Result of assessment conducted in line with Tokyo bylaws)	Fluorine, Boron, Trichloroethylene, Cis-1, 2-dichloroethylene, Lead, Mercury, Arsenic	Leak in area where substances had previously been used	Groundwater pumping has been under way since July 2005. Sony continues to monitor substances which were previously found in concentrations that exceeded legal standards, or which were within standards but detected in groundwater. Both are currently below legal standards for groundwater.

<p>Sony EMCS Corporation Inazawa Site (Japan)</p>	<p>June 2001 (Result of voluntary assessment)</p>	<p>Fluorine</p>	<p>Leak from crack in drainage pipe</p>	<p>Dual-layer piping equipped with leakage detection sensors has been installed in the water drainage system, and groundwater purification and monitoring work is currently in progress. The concentration of contamination improved from its highest level of 58mg/l to no more than 1.2mg/l in fiscal 2010. This level of improvement has been maintained, with a fiscal 2013 analysis showing 1.45mg/l.</p>
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<p>Sony EMCS Corporation's former Mizunami Site (Japan)</p>	<p>Survey conducted in accordance with Article 3 of the Soil Contamination Countermeasures Act of Japan</p>	<p>Lead and its compounds, Fluorine and its compounds, Boron and its compounds</p>	<p>Leakages in areas where the substances had been previously used</p>	<p>According to the results of a government report, the site was designated as the "area that poses no risk of damage to human health" because, despite the fact that soil contamination has been confirmed on the premises, there is no likelihood that the contamination has leaked into neighboring sites, as contamination has not been detected in the groundwater. Accordingly, measures to remove the contaminated soil are currently unnecessary.</p>
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# Environment

## Management of Chemical Substances in Products

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[Management of Chemical Substances in Products](#)

[Three Core Principles for Managing Chemical Substances in Products](#)

[Reduction and Replacement of Chemical Substances of Very High Concern](#)

[Management of Chemical Substances in Packaging Materials](#)

# Environment

Updated on August 21, 2015

## Management of Chemical Substances in Products

### Sony's Proprietary Global Standards for the Management of Chemical Substances

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Many of Sony's electronics products contain between a few hundred and a few thousand parts that are made of a variety of chemical substances, some of which may be classified as hazardous and may harm the environment if they are not properly controlled prior to product disposal.

To prevent such environmental harm, some countries and regions have introduced laws and directives, such as the European Union's Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive\*1 restricting certain chemical substances in products. In Japan, products that contain certain chemical substances are required to carry the J-Moss mark\*2, while in China it is required to disclose information on chemical substances contained in products in line with the Management Methods on the Pollution Control of Electronic Information Products, often referred to as China RoHS\*3.

In light of the global nature of its markets and supply chains, Sony has established its own global standards for the management of chemical substances, titled "Management Regulations for the Environment-related Substances to be Controlled which are Included in Parts and Materials" (SS-00259)\*4, taking into account the related laws and regulations around the world and simultaneously the opinions of various stakeholders. In line with these standards, Sony ensures globally consistent management of chemical substances in parts and materials.



- \*1 Directive on the restriction of the use of certain hazardous substances in electric and electronic products (RoHS) (Enforced in 2006 and revised in 2011)
- \*2 Japanese Industrial Standards (JIS) for marking the presence of certain chemical substances in electrical and electronic equipment
- \*3 Management Methods on the Pollution Control of Electronic Information Products is a regulation passed in 2007 in China, to regulate the use of six substances, including lead and mercury, in electronic products and components sold in the Chinese market. All electronics and information devices sold in China must bear the "Environmental pollution control mark," "Information on chemical substances content," and "Packaging materials recycling mark."
- \*4 Sony standards that are used to give direction to suppliers on chemical substances for items procured by Sony. These standards classify chemical substances as those that must be banned immediately, those for which a period for phaseout is individually set and those for which no deadline is set for ban of use but phasing out is planned. (For details, visit: [Management Regulations for the Environment-related Substances to be Controlled which are Included in Parts and Materials \(SS-00259\).](#))

## Complying with Regulations Governing Chemical Substances in Products

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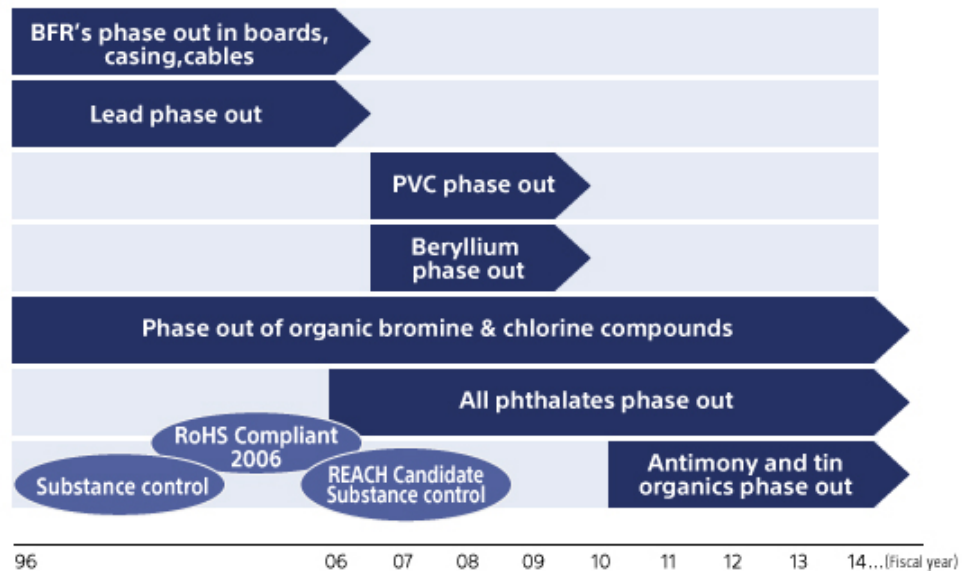
Sony has set up necessary procedures to ensure compliance with the EU's REACH\*1 regulation requirements and revised RoHS Directive. In response to its obligation under REACH to provide information to customers, as well as to the CE marking requirement of the RoHS directive, Sony currently uses the Green Procurement Survey Response Tools standard\*2 issued by the Japanese VT62474\*3 committee of the International Electrotechnical Commission (IEC). This enables Sony to collect data on specified chemical substances in parts and materials purchased from suppliers for management in an internal database.

- \*1 REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals): New regulations for managing chemical substances introduced in the EU effective June 1, 2008, whereby companies that meet certain conditions are required to, among others, register, apply for authorization, notify, restrict and communicate information on certain chemical substances. Information on REACH can also be found at <http://www.sony.co.uk/electronics/eco/environmental-management> (only available in English).
- \*2 Maintaining the electronic data format defined by the Japanese Green Procurement Survey Standardization Initiative (JGPSSI) for material declaration, the Japanese VT62474 committee issued a survey tool that covers additions to the list of declarable substances. The tool includes information on, among others, presence in parts, applications and sites where used.
- \*3 The Japanese VT62474 committee was established in April 2012 as a subcommittee of the IEC under IEC TC111 technical committee for environmental standardization for electrical and electronics products and systems. Functioning primarily as a screening body in Japan, the Japanese VT62474 committee is responsible for summarizing opinions and providing information for the IEC's VT62474 project team, which is charged with updating the list of declarable substances in the IEC62474 database.

## Managing Chemical Substances in Smartphones and Tablets

Sony is promoting efforts to manage chemical substances in its Xperia™ Smartphones and tablets. Sony Mobile Communications AB (SOMC) was the first to seek the phase out of brominated flame retardants (BFRs) from its mobile phones and in 2002 became one of the first companies in the industry to offer BFR-free mobile phones, meaning BFRs were not used in circuit boards, cables or casings. Consistent efforts since then have enabled SOMC to completely eliminate BFRs and polyvinyl chloride (PVC) from all of its products (excluding accessories). SOMC has also succeeded in eliminating phthalic esters, namely, Di(2-ethylhexyl) phthalate (DEHP), Dibutyl phthalate (DBP), Benzyl butyl phthalate (BBP), Di-isodecyl phthalate (DIDP), Di-n-octyl phthalate (DNOP) and Di-isononyl phthalate (DINP), from all Xperia™ Smartphones and Tablets. Going forward, SOMC will also continue phasing out organic bromine and chlorine compounds from Xperia™ Smartphones, Tablets and accessories.

**Phase out of critical substances in mobilephones**



Note: Since fiscal year 2013, Sony has also been promoting the phaseout of critical substances in smartphones and tablets in accordance with the timeline shown above.

## Information on "Color IQ™"\* Incorporated in Some Television Models

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BRAVIA™ LCD TV models:

X9200A, X9000A/X900A, W950A, W900A, W850A

Note: The series of LCD televisions above will be launched in various countries around the world, with some models incorporating "Color IQ™." For more details on these models, please visit the appropriate Sony website in each country.

"Color IQ™" is an advanced light-emitting semiconductor technology developed by QD Vision, Inc. By integrating QD Vision's "Color IQ™" optical component with Sony's unique display technologies, this television set achieves a significantly wider color gamut, which provides a far more natural and vivid viewing experience. The "Color IQ™" optical component produced by QD Vision contains a very small quantity of cadmium. This cadmium is fixed within a hardened resin which is sealed in glass inside the television. Customers can therefore enjoy using this television without being exposed to cadmium.

This television complies with all applicable environmental laws and regulations in countries and regions where Sony sells it. Sony's aim is to protect the environment throughout the life cycle of its products. As part of this effort, Sony provides its consumers, authorized repair workshops and recycling companies with information relating to the "Color IQ™" component in order to enable proper collection, handling, recycling and disposal of the component upon repair or disposal of the television, in accordance with applicable local environmental laws and regulations.

\* "Color IQ™" and the "Color IQ™" logo are trademarks of QD Vision, Inc.

[Frequently Asked Questions \(FAQs\)](#)

## Environment

Updated on August 21, 2015

### FAQs - Frequently Asked Questions

#### Q1. What kind of technology is "Color IQ™"?

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"Color IQ™" is an advanced light emitting semiconductor incorporating quantum dot technology, developed by QD Vision, Inc. An optical component using Color IQ™ technology that was manufactured by QD Vision is used in this TV. This component contains very small semiconductor particles which are fixed within hardened resin and then sealed in glass. When lights of specific wavelengths hit this tube, they are changed into high purity blues, greens and reds that are mixed to produce white light. This TV is therefore able to achieve a color gamut width that far exceeds conventional LCD television sets using edge-lit single color LED backlight systems.

#### Q2. Why does the technology use cadmium?

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The wavelength of light emitted by quantum dot technology is reliant upon chemical elements. In order to be able to achieve such a wide color gamut, a very small amount of cadmium\*1 must be included as semiconductor particles, fixed within the hardened resin that is sealed in glass. Sony is exploring cadmium-free technology as an alternative solution. However, from the perspective of color, light emission efficiency, reliability and suitability for mass production, there are currently no practical alternatives at the level required for commercialization.

- \*1 The quantity of cadmium contained in QD Vision's optical component used in this TV is less than 0.01 grams per television unit, which is approximately 1/500 of the cadmium contained in a standard single AA nickel cadmium battery.

### **Q3. Is this technology compliant with the EU's RoHS Directive, and with laws and regulations in the regions and countries in which it will be sold?**

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Yes, it is compliant. Cadmium is one of six substances,\*1 the use of which is restricted in electrical and electronic equipment by the EU RoHS Directive. However, the EU RoHS Directive includes a range of exemptions\*2 that permit the use of these substances subject to quantitative limits for specific applications, based on the current lack of reliable alternatives amongst other considerations. The application of cadmium in QD Vision's Color IQ™ optical component is exempted under the EU RoHS Directive. Furthermore, Sony's televisions which incorporate the Color IQ™ optical component comply with all applicable environmental laws and regulations in the countries and regions where Sony sells them.

- \*1 Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE).

- \*2 For example, cold cathode fluorescent lamps (CCFL) used in some LCD televisions contain a small amount of mercury, while glass used in CRT televisions contains lead. Another example of this is the small amount of cadmium that is necessary for increasing the reliability of plating used in points of electrical contact. These usages also qualify for exemption under the EU RoHS Directive.

#### **Q4. Will the operation of this product have any impact on users?**

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No. The Color IQ™ optical component is located inside the backlight unit of the TV's LCD panel, the cadmium is fixed within hardened resin and then sealed in glass. This means that customers are able to enjoy using this TV without being exposed to cadmium.

#### **Q5. How should customers dispose of this product? What is its impact on the environment post-disposal?**

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Sony provides its consumers, authorized repair workshops and recycling companies, with information relating to the "Color IQ™" component to enable proper collection, handling, recycling and disposal of the component upon repair or disposal of the television, in accordance with local environmental laws and regulations. The quantity of cadmium is very small and so if this item is disposed of in accordance with applicable local environmental laws and regulations, it will not present any risk to health and the environment. The glass component has been tested for potential elution by an independent third-party testing facility according to the US Environmental Protection Agency's (EPA) TCLP standards, and found no leaching of cadmium from the component even when damaged.

#### **Q6. What is Sony doing to improve the environmental performance of its range of TVs?**

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Sony wants to play our part in creating a sustainable society and wants to achieve a zero environmental footprint throughout the lifecycle of our products and business activities, as outlined in our medium to long-term environmental plan, "[Road to Zero](#)". We have set targets based on climate change, resource conservation, management of chemical substances and biodiversity conservation and are working towards achieving these goals throughout our business activities and our product lifecycles.

In the case of TVs, Sony has introduced products that can reduce power consumption by automatically adjusting brightness, and that use "SORPLAS™", a Sony-developed recycled plastic that contains more than 99% recycled material, for the edge of the screen. In relation to the management of chemical substances in products, Sony plans to abolish the use of cold cathode fluorescent lamps (CCFL), which contain mercury, in new televisions (post-2013) and eliminate the use of Arsenic Trioxide and Arsenic Pentoxide in anti-foaming agents used in the glass of LCD panels in 2014.

For more information on Sony's environmental products and initiatives please access the links below:

[http://www.sony.net/SonyInfo/csr\\_report/environment/](http://www.sony.net/SonyInfo/csr_report/environment/)

<http://www.sony.net/SonyInfo/csr/SonyEnvironment/products/>

\* "Color IQ™" and the "Color IQ™" logo are trademarks of QD Vision, Inc.



## Environment

Updated on August 21, 2015

### Three Core Principles for Managing Chemical Substances in Products

To guide its efforts to manage chemical substances in products in compliance with Sony's own global standards for management of chemical substances, titled "Management Regulations for Environment-related Substances to be Controlled which are included in Parts and Materials" (SS-00259)\*, Sony has established three core principles:

- \* Sony standards that are used to give direction to suppliers on chemical substances for items procured by Sony. These standards classify chemical substances as those that must be banned immediately, those for which a period for phase-out is individually set and those for which no deadline is set for ban of use but phasing out is planned. (For details, visit: [Management Regulations for the Environment-related Substances to be Controlled which are included in Parts and Materials \(SS-00259\)](#))

### Upstream management

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In 2002, Sony established the Green Partner Environmental Quality Approval Program, which outlines Sony's Green Partner Standards for chemical substance management. Sony audits suppliers based on these standards. Sony purchases electronic parts only from suppliers who have passed this audit and have been certified as Green Partners. Sony also applies the Green Partner Environmental Quality Approval Program to manufacturing partners. To further enhance the efficiency of the system to manage chemical substances, in autumn 2003 Sony introduced the Green Book, a raw materials database, which was made available to Sony's direct suppliers via its electronic supplier portal. In the Green Book, Sony has registered only those materials that it has measured and confirmed

compliance with the SS-00259 standards for Sony's designated raw materials such as recycled plastics and wires, and also for molding resins, paints, inks, printed wiring boards, steel sheets, adhesives and other basic materials that are commonly used by multiple first tier suppliers. To assist REACH compliance, Sony started by October 2008 to collect for raw materials listed in Green Book data on the content of certain chemical substances and makes these data available to its suppliers and manufacturing partners.

## Management in Quality Control/Quality Assurance processes

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New parts and materials are tested to ensure conformity with SS-00259 standards in addition to compliance with conventional quality control standards. Data collected from suppliers based on JGPSSI format\* are thoroughly evaluated for this purpose. By implementing these strict management procedures worldwide, incompliant products are prevented from entering the market.

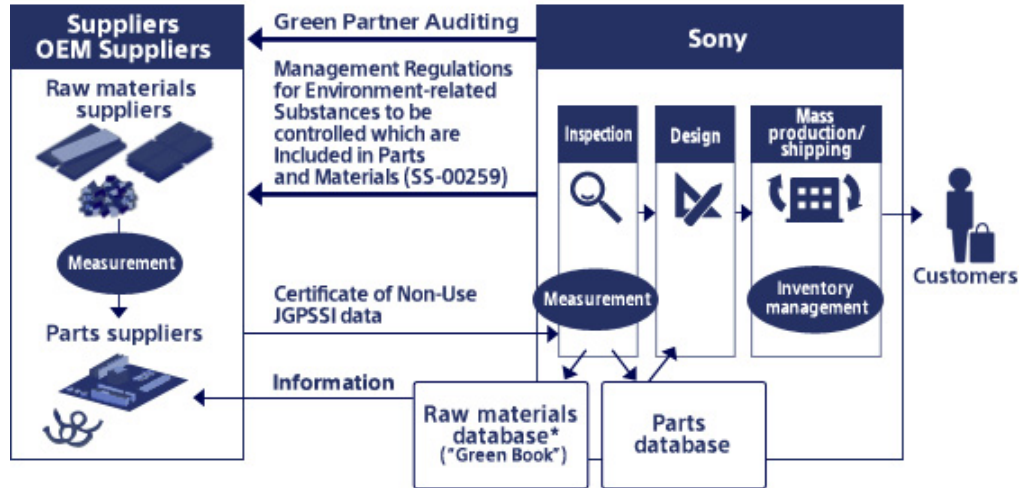
\* Electronic data format defined by JGPSSI (Japanese Green Procurement Survey Standardization Initiative) for material declaration that includes information on mass contained in parts, purpose of use, sites where used, etc., of declarable substances. Sony is currently promoting the use of the Green Procurement Survey Response Tools standard (formerly JGPSSI) issued by the Japanese VT62474 committee of the International Electrotechnical Commission (IEC).

## Utilization of chemical analysis

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To prevent prohibited substances from accidentally entering products, suppliers are required to submit certificates of non-use attesting that the parts and materials they supply do not contain prohibited chemical substances as well as the JGPSSI data. For some high-risk substances Sony has also implemented internal control systems that involve using, for example, X-ray fluorescence (XRF) and other measurement devices, to Sony sites worldwide, to help confirm that prohibited substances are kept out of products.

**System for Managing Chemical Substances in Products**



\* For direct suppliers, the Green Book was made available via its electric procurement system in autumn 2003

## Environment

Updated on August 21, 2015

### Reduction and Replacement of Chemical Substances of Very High Concern

Sony defines "Environment-related Substances to be Controlled" (hereafter "Controlled Substances") as certain chemicals that it has determined to have significant impact on both humans and the global environment, including substances that may not be controlled by laws. (Please refer to the list "'Controlled Substances' Defined by Sony.") Sony either prohibits the use of these substances in parts or phases them out wherever a viable alternative that meets all product quality and technical requirements is available. In its Green Management 2015 mid-term management targets, Sony specifies high-risk applications from collected application- and content-related information, considering the hazardous nature and extent of exposure (volume) as risk factors, and plans to prohibit the "Controlled Substances" in the specified use.

"Controlled Substances" Defined by Sony	
Cadmium and cadmium compounds	Lead and lead compounds
Mercury and mercury compounds	Hexavalent chromium compounds
Polybrominated biphenyls (PBB)	Polybrominated diphenylethers (PBDE) (including decabromodiphenyl ether [DecaBDE])
Hexabromocyclododecane (HBCDD)	Other brominated organic compounds
Polychlorinated biphenyls (PCB)	Polychlorinated naphthalenes (PCN)

Polychlorinated terphenyls (PCT)	Short-chain chlorinated paraffins (SCCP)
Tris(2-chloroethyl) phosphate (TCEP), Tris(2-chloro-1-methylethyl) phosphate (TCPP), Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	Perchlorates
Polyvinyl chloride (PVC) and PVC blends	Other chlorinated organic compounds
Hydrofluorocarbon (HFC), Perfluorocarbon (PFC), Sulfur hexafluoride (SF6)	Ozone depleting substances (ODS)
Hydrochlorofluorocarbons (HCFC)	Perfluorooctane sulfonates (PFOS)
Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA	Trisubstituted organotin compounds (including tributyltin (TBT) compounds and triphenyltin (TPT) compounds)
Dibutyltin (DBT) compounds	Dioctyltin (DOT) compounds
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)
Beryllium oxide	Beryllium copper
Cobalt dichloride	Diarsenic trioxide, Diarsenic pentaoxide
Bis (2-ethylhexyl)phthalate, Dibutyl phthalate, Benzyl butyl phthalate, Diisobutyl phthalate	

Di-isononyl phthalate, Di-isodecyl phthalate, Di-n-octyl phthalate, Di-n-hexyl phthalate, "1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich", "1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters", Bis(2-methoxyethyl) phthalate, Diisopentylphthalate, "1,2-Benzenedicarboxylic acid, dipentylester, branched and linear", N-pentyl-isopentylphthalate, Dipentyl phthalate, "1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear "	
Asbestos	Specific azo compounds
Formaldehyde	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
Dimethyl fumarate (DMF)	Polycyclic aromatic hydrocarbons (PAHs)
Boric acid, specific sodium borates	4-(1,1,3,3-tetramethylbutyl) phenol
Bis(2-methoxyethyl) ether	N,N-dimethylacetamide (DMAC)
Ethylene glycol dimethyl ether (EGDME)	Trixylyl phosphate (TXP)

Note: Control level varies depending on application.

## Polyvinyl Chloride (PVC)

Although PVC is not currently regulated by any laws that apply to chemical substances used in electronic products, Sony continues to promote the use of alternatives. As a result, Sony does not use PVC in product packaging materials (with the exception of some packing materials for devices, semiconductors, batteries, and similar items), sheets/laminates of speaker housings, contactless IC cards and carrying bags/cases for products (excluding those for professional

use). Sony has also been successful in replacing PVC by a developed alternative in several internal components such as flexible flat cables, insulation plates and electrical heat shrink tubes (excluding those for batteries), all of which are difficult to remove prior to recycling. Sony is concerned with the possibility that, in particular, its small electronics products could be collected for obtaining valuable materials, and then the unwanted parts could be improperly incinerated and disposed of in landfills. Considering the impact of these activities on the environment, Sony is promoting the replacement of PVC with alternative substances (for products where quality, technological and supply problems have been resolved).

As of the end of July 2014, for the following products Sony replaced PVC with alternative substances in new products and new models. In addition to information on product categories provided below, follow the link for "[Examples of PVC-free Products and BFR-free Products.](#)"

PVC-Free and BFR-Free Product Categories*
Xperia™ Smartphone
Xperia™ Tablet
MP3 players WALKMAN®
IC recorder/Memory Card Recorder/Portable Radio Recorder/Linear PCM Recorder
Video Camera Handycam®
Video Camera Action Cam
Digital Still Camera Cyber-shot™
Interchangeable lens digital camera α™
PSP®(PlayStation®Portable)
PlayStation®Vita
Digital Book Reader Reader™
Portable DVD Player
Portable Blu-ray Disc™/DVD Player

- \* Parts in which PVC is eliminated are as below:  
 Xperia™ Smartphones and Tablets: in all plastic components  
 Products other than Xperia™ Smartphones and Tablets: in casings and internal wiring  
 (excluding accessories)

## Brominated Flame Retardants (BFRs)

Some BFRs are harmful to human health and tend to remain in the environment and accumulate in living organisms.

As is the case with PVC, improper incineration of BFRs carries a risk of releasing harmful substances into the environment. Sony replaced BFRs with alternative substances in new products and new models (for products where quality, technological and supply problems have been resolved). As of July 2014, Sony had replaced BFRs with alternative substances in all new products and new models of the products listed below. For more information, refer to the table titled "[Examples of PVC-Free and BFR-Free Products.](#)"



BFR alternatives have been used in the main PWB of Xperia™ Z3

PVC-Free and BFR-Free Product Categories*
Xperia™ Smartphone
Xperia™ Tablet
MP3 players WALKMAN®
IC recorder/Memory Card Recorder/Portable Radio Recorder/Linear PCM Recorder
Video Camera Handycam®
Video Camera Action Cam
Digital Still Camera Cyber-shot™
Interchangeable lens digital camera α™



PSP®(PlayStation®Portable)
PlayStation®Vita
Digital Book Reader Reader™
Portable DVD Player
Portable Blu-ray Disc™/DVD Player

In accordance with the 13th edition of the SS-00259, released in 2014, Sony has banned the use of components and materials containing hexabromocyclododecane in its products. This is in addition to a ban on components and materials containing polybrominated diphenyl ethers and polybrominated biphenyls. Sony has also banned the use of tris (2-chloroethyl) phosphate, a chlorinated flame retardant identified as carrying risks similar to those associated with brominated flame retardants, as well as phosphoric acid tris (2-chloro-1-methylethyl) ester (TCPP) and tris (1,3-dichloro-2-propyl) phosphate (TDCPP).

Sony has also developed an environmentally conscious flame retardant that contains no bromine, to be used for polycarbonate plastic with high flame-retardant and thermal-resistant properties. This flame retardant is used, for example, in casings and components for interchangeable lens digital cameras, including  $\alpha$ ™58, and in internal parts of digital still cameras Cyber-shot™.

\* Parts in which BFRs are eliminated are as below:

Xperia™ Smartphones and Tablets: in all applications.

Products other than Xperia™ Smartphones and Tablets: in casings and main PWBs (excluding accessories)

## Mercury

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Conventionally, button batteries require a minute amount of mercury to suppress the generation of hydrogen gas inside the battery. Eliminating the use of mercury in button batteries had proven very difficult from a technical standpoint.

However, Sony was strongly determined to remove the environmental burden

presented even by such a tiny amount of mercury. Sony began shipping mercury-free batteries in 2005 and in 2009 succeeded in developing a mercury-free alkaline button battery. One result of these and other efforts to reduce its use of mercury was the termination of the in-house production, mercury-containing silver oxide batteries in fiscal year 2013.



Mercury-free alkaline button battery

## Phthalates

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Sony is working to eliminate specific phthalates (phthalic esters), which are used as plasticizers in PVC, among other substances. Among these specific phthalates, for example, Sony has succeeded in eliminating phthalates (DEHP, DBP, BBP, DIDP, DNOP and DINP)\* from Xperia™ Smartphones. Sony has also eliminated the use of phthalates in the bodies of PSP®(PlayStation®Portable) units and in the AC adapters packaged with those units shipped to Europe.

\* DEHP: Bis (2-ethylhexyl) phthalate, Di (2-ethylhexyl) phthalate; DBP: Dibutyl phthalate, Di-n-butyl phthalate; BBP: Benzyl butyl phthalate, Butyl benzyl phthalate; DIDP: Di-isodecyl phthalate; DNOP: Di-n-octyl phthalate; DINP: Di-isononyl phthalate.

## Beryllium Compounds

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Sony has designated beryllium oxide and beryllium copper as "Controlled Substances" since 2007 and is working to eliminate these substances. No beryllium oxide is used in any of its products. Sony has also succeeded in eliminating beryllium compounds from Xperia™ Smartphones.

## Arsenic Compounds

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In accordance with the 13th edition of the SS-00259, released in 2014, Sony has banned the use of LCD panels containing diarsenic trioxide and diarsenic pentoxide.

## Environment

Updated on August 21, 2015

### Management of Chemical Substances in Packaging Materials

Sony also takes precautions to increase the safety of its packaging materials and ensure that hazardous substances, including heavy metals, are not mixed into packaging materials by managing materials in line with its proprietary "Management Regulations for Environment-related Substances to be Controlled which are included in Parts and Materials" (SS-00259). The packaging section of SS-00259 is based on, among others, EU directives on packaging and packaging waste. Sony is also actively making use of inks that comply with "Voluntary Regulation Concerning Printing Inks (Negative List Regulations)" put forward by the Japan Printing Ink Makers Association, as well as inks that do not contain Volatile Organic Compounds (less than 1% use of VOCs).

## Environment

### Biodiversity Conservation: Table of Contents

As part of its efforts to help maintain balance among all life forms on the planet, Sony is taking steps to conserve biodiversity, which is the base of all ecosystem services, at its sites through site greening activities and initiatives aimed at helping to restore areas outside its sites to their natural state.

[Basic Policy on Biodiversity Conservation](#)

[Biodiversity Conservation at Sony's Workplaces](#)

[Products and Business Activities that Support Biodiversity Conservation](#)

## Environment

Updated on August 21, 2015

### Basic Policy on Biodiversity Conservation

Sony recognizes the importance of natural capital and the ecosystem services supplied by natural capital. Through both its business activities and programs to contribute to local communities, Sony promotes the maintenance and recovery of biodiversity—the foundation of natural capital and ecosystem services. Natural capital means elements of the natural environment such as forests, rivers, the atmosphere and soil as well as the natural worth including living organisms. Natural capital is the source of ecosystem services, fossil fuels and minerals. Ecosystem services mean such services produced by natural capital as groundwater, lumber and climate regulation, which are received by humans from nature. Biodiversity means the state of existence of a diverse array of living organisms, and is essential to the supply of ecosystem services.

Sony conducts its business activities while using ecosystem services, and Sony's activities have an impact on ecosystems and other natural capital. To ensure the future maintenance of abundant natural capital—essential for business activities—the conservation of biodiversity is imperative. Sony promotes measures to reduce the environmental footprint of its business activities, including reductions in global warming gases, the use of fewer resources, and strict management of chemical substances. Sony also undertakes ongoing activities to contribute to the local communities in which it operates, such as programs to promote the greening of its business sites and the recovery of the natural environment in surrounding areas. By doing so, Sony is working to conserve natural capital and protect biodiversity.

Under Green Management 2015, Sony has set mid-term targets for the conservation of biodiversity, as indicated below. Sony has also formulated biodiversity guidelines for the implementation of related initiatives.

## Targets of "Green Management 2015" for for the Protection of Biodiversity at Sony Sites

Procurement	Conduct biodiversity assessments at resource extraction and harvesting sites
Operations	Promote environmental contribution activities that respond to the needs of local communities

### Links to Related Items:

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[Resource Conservation > Measures to Conserve Resources Used in Paper](#)

## Environment

### Biodiversity Conservation at Sony's Workplaces

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[Green Star Program to Guide Biodiversity Conservation Initiatives](#)

[Activities under the Green Star Program by Workplaces around the World](#)

[Feature 1: Protecting the Natural Environment at Sony Forest with the Local Community](#)

[Feature 2: Working on Groundwater Recharge Projects](#)



## Environment

Updated on August 21, 2015

### **Green Star Program to Guide Biodiversity Conservation Initiatives**

Business sites are closely linked to their surrounding natural environment and local ecosystems. In April 2011, Sony introduced the Green Star Program as a means of assessing and promoting the level of environmental consciousness at its sites. Sony will continue to use this program in its biodiversity-related activities and promote a range of initiatives.

[Click here for more details on "Implementation of Green Star Program"](#)

### **Upgrading Biodiversity Conservation Initiatives**

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To date, greening activities carried out at sites had a tendency to focus on the size of natural landscapes and greenbelts. These activities did not necessarily take into account biodiversity issues. However, to address biodiversity conservation properly, sites must not only increase the size of greenbelts but also enhance their quality. By indicating specific measures and the level of initiatives, Sony is building a system that will facilitate quality improvements.

### **Promoting Step-by-Step Biodiversity Conservation Initiatives**

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As shown in the table below, the biodiversity section of the Green Star Program classifies and let each site self-assess specific assessment measures necessary to the implementation of biodiversity-related activities, including biodiversity

conservation and land use, green space management and greening activities, at sites and in surrounding areas. Through this process, each site embarks on a step-by-step approach to conserve biodiversity at its sites in line with the local area's unique characteristics. The global introduction of the Green Star Program served to clarify the progress and challenges of initiatives aimed at conserving biodiversity. Challenges include determining how to implement measures tailored to the distinctive biodiversity issues that differ in each local community and how to promote biodiversity conservation in urban areas where the natural environment is poor. Through such efforts, Sony will continue working to improve the effectiveness of its ongoing biodiversity conservation initiatives.

**Consideration Points for Biodiversity in the Green Star Program**

Measures	
<b>Investigation</b>	<ul style="list-style-type: none"> <li>● Monitor living things</li> <li>● Give consideration to the ecological services related to site and business</li> <li>● Grasp status of land use</li> <li>● Give consideration to local biodiversity preservation plans</li> </ul>
<b>Improve ecosystem</b>	<ul style="list-style-type: none"> <li>● Improvement of environment for living things</li> <li>● Give consideration to ecological network</li> <li>● Give consideration to three-dimensional vegetation</li> <li>● Adoption of local species</li> </ul>
<b>Measures against bad effects</b>	<ul style="list-style-type: none"> <li>● Measures against alien species</li> <li>● Give consideration to bad effects on (disturbance of) ecosystems caused by emissions</li> </ul>

<p><b>Conservation</b></p>	<ul style="list-style-type: none"> <li>● Grasp and conserve endangered species</li> <li>● Conserve a wildlife sanctuary</li> </ul>
<p><b>Management</b></p>	<ul style="list-style-type: none"> <li>● Ensure the appropriate management and use of chemical substances</li> <li>● Ensure the effective use of organic resources</li> <li>● Promote procurement that leads to biodiversity</li> </ul>
<p><b>Assessment</b></p>	<ul style="list-style-type: none"> <li>● Restore, improve, or offset for the ecosystem.</li> <li>● Performing environmental assessments that include biodiversity assessments</li> </ul>
<p><b>Cooperation with stakeholders</b></p>	<ul style="list-style-type: none"> <li>● Cooperation with stakeholders</li> <li>● Support for organizations that engage in biodiversity conservation activities</li> </ul>

## Environment

Updated on August 21, 2015

### Activities under the Green Star Program by Workplaces around the World

The Green Star Program is Sony's own system for assessing environmental performance and covers items related to the protection of biodiversity. Under the program, the Sony Group's sites all over the world are carrying out environmental conservation activities tailored to the specific conditions of their respective regions.

#### Monitoring and Assessments

As part of their environmental conservation activities, various Sony sites survey and monitor the natural habitats located on their grounds and in the surrounding areas. They then reflect the results of these studies in conservation plans, allowing them to carry out activities in consideration of the local ecosystem.

#### Monitoring Ecosystems Surrounding Offices in Japan

In collaboration with the Nature Conservation Society of Japan, an environmental NGO, Sony is monitoring bird populations using a fixed-point observation method at the green spaces surrounding its headquarters in office buildings in Tokyo's Osaki district. Based on the results of these studies, the offices are pursuing environmental conservation activities aimed at achieving harmony with the local ecosystem.



A bird-monitoring study in process

## Observing the Neighboring Natural Habitat from Sony's Office Building in South Korea

In South Korea, Sony is conducting fixed-point observations of fish and wildlife inhabiting a river next to its office building. Using a video camera equipped with a telephoto lens, the set-up captures the river habitat 24 hours per day through an office window. These images are shown on various displays in the office, helping raise employees' awareness of local biodiversity.



The video camera is set up for fixed-point observations

## Maintaining the Natural Environment

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Sony works to maintain a natural environment that wildlife can easily inhabit. Accordingly, we actively plant local varieties of trees and carry out other activities intended to preserve the environment in consideration of local ecosystems.

## Participating in Local Nature Conservation Activities in the United Kingdom

In the United Kingdom, employees of Sony DADC Corporation have joined nature conservation activities organized by Horsham Green Gym, a local volunteer group. The activities have included tree-planting and clearing weeds in a country park near the company's site, as well as restoring local ponds.



Nature conservation activities

## Restoring Mangrove Forests and Coral Reefs in Thailand

In an effort to restore the diminishing mangrove forests in Thailand, Sony Technology (Thailand) Co., Ltd. and Sony Device Technology (Thailand) Co., Ltd. have jointly planted a total of 1,200 mangrove trees to date. Sony Device Technology has also begun a new initiative to restore coral reefs, and it planted 200 coral larvae colonies in 2014.



Mangrove planting by employees

## Measures for Preventing Harm to the Environment

The Sony Group has been taking measures to remove non-native species that negatively affect local ecosystems. Furthermore, the Group's sites work to limit any harmful effects on local ecosystems by using only appropriate amounts of agrichemicals and chemical fertilizers at their green spaces in order to prevent soil pollution and the buildup of excessive nutrients in the soil.

### Removing Invasive Species of Plants in China

Sony Precision Devices (Huizhou) Co., Ltd. has been carrying out an initiative for removing invasive species since 2012. In cooperation with the city of Huizhou's water and environmental hygiene department, the company's employees led efforts to remove water hyacinth (*eichhornia crassipes*), a non-native aquatic plant, from a local river in June 2014.



Employees removed water hyacinth, an invasive aquatic plant

## Protection of Wildlife and Flora

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Sony is actively working to protect wildlife and flora while making efforts to identify and protect endangered species.

### Activities to Protect the Harpy Eagle in Panama

Based in Panama, Sony Inter-American, S.A. has been carrying out activities for protecting the harpy eagle (*Harpia harpyja*), which, while recognized as the national bird of Panama, is also designated as an endangered species. Since 1998, the company has been sponsoring the Harpy Eagle Center, a facility that promotes protection activities. In 2008, it provided the center with several Sony BRAVIA™ LCD televisions that have been combined into a large wall-mounted screen to show high-definition videos in an effort to raise awareness among visitors of the importance of efforts to protect the harpy eagle.



The harpy eagle

### Firefly Protection Project in Japan

Sony EMCS Corporation's Kosai Site in Japan has been implementing a project to revitalize the firefly habitat in cooperation with the local government. Fireflies were previously abundant in the woodland area neighboring the Kosai Site, but their numbers have been dwindling in recent years. In response, the company has begun maintaining the woodlands and raising firefly larvae to restock the population.



A firefly raised by the project

## Helping Ensure That Endangered Loggerhead Turtles Can Spawn in Japan

For more than 20 years, Sony Semiconductor Corporation's Oita Technology Center has been actively involved in cleaning the Kurotsuzaki beach located nearby. Thanks to these efforts, loggerhead sea turtles, which have been designated as an endangered species, returned to the beach in 2009 to spawn for the first time in decades, and they have been observed spawning each year since then. Along with these beach-cleaning activities, the center helps to protect the turtle eggs during their incubation.



A recently hatched loggerhead turtle

## Environmentally Responsible Management

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Sony works to ensure that chemical substances are properly managed, organic resources are effectively utilized, and the items it procures have been produced with biodiversity in mind.

### Converting Food Waste into Biogas and Organic Fertilizer in Thailand

Sony Technology (Thailand) Co., Ltd. is located in Chon Buri and in 2010 became one of the first Sony sites worldwide to have installed a biogas facility. Instead of sending it to a landfill, this facility has helped to turn food waste into LP gas which can be used for cooking. In addition, the leftover food waste (compost) is used as organic fertilizer to grow plants and vegetables at the site, thus eliminating the use of chemical fertilizers. Some of the organic fertilizers produced by the facility are being donated for public use.



The biogas facility



## Environmentally Preferable Paper Purchasing

Recognizing that paper resources are finite, Sony strives to use paper in an environmentally responsible manner, and it has established a related purchasing policy for paper and printed materials. Accordingly, Sony makes a point of purchasing environmentally preferable paper, such as recycled paper and forest-certified paper.

[For more information about Sony's policies related to paper and printed materials, please refer to "Measures to Conserve Resources Used in Paper"](#)

## Collaboration with Environmental Organizations

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With a view to make its initiatives to protect biodiversity even more effective, the Sony Group seeks the opinions of related experts, NGOs, and other stakeholders while carrying out environmental conservation activities. For example, Sony works with research organizations when conducting studies and nature conservation groups when becoming involved in conservation activities. It also cooperates with governments and NGOs when maintaining the natural environment. In addition, Sony provides support and assistance to organizations involved in protecting biodiversity.

Sony Group companies in North America participate in a project that supports a wildlife refuge in New York City, led by the local NGO New York Cares.

[For more information, please refer to the "Initiatives" section of "Sony and the Environment"](#)

In Poland, Sony Poland Sp. Z.o.o. has planted 14,000 trees in the outskirts of Warsaw in cooperation with the Polish government.

[For more information, please refer to the "Initiatives" section of "Sony and the Environment"](#)

In Japan, employees of So-net Corporation have been working together with local residents of the city of Saku in Nagano Prefecture in activities for preserving the So-net Forest.

[For more information, please refer to the "Initiatives" section of "Sony and the Environment" \(Japanese only\)](#)

## Environment

Updated on August 21, 2015

### Feature 1: Protecting the Natural Environment at Sony Forest with the Local Community

#### Kohda Site conserves natural woodlands on the grounds to create "Sony Forest"

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Since its inception in 1972, the Kohda Site of Sony EMCS Corporation has had the goal of creating a park-like factory with lush greenery, and has conserved the natural forest on the site, naming it "Sony Forest." This conservation entails employees learning about trees on their own and continually maintaining the forest. It resulted in the Sony Forest being designated as a wildlife sanctuary with a rich ecosystem including rabbits, raccoon dogs, and other wild animals. The Kohda Site has also contributed to the local community by building a walking path and installing athletic equipment in the forest for locals to use. It is still used for outdoor educational purposes by many local elementary school students who have come to love the forest.



Employees engaged in forest maintenance



Athletic equipment in the Sony Forest

## Certified as top-level greening activities in Japan

The Sony Forest obtained a prestigious recognition when the Kohda Site received Superlative Stage certification under SEGES\* in 2011, making it the first site in Japan to earn this honor. The certification was maintained in 2015. The Kohda Site is also conducting a nature conservation project using Sony Forest, in cooperation with other local companies. Seedlings of native species in the area are essential in conservation of the local ecosystem, and Sony Forest has preserved many trees unique to the area, including the konara oak and the Japanese clethra. The Kohda Site's nature conservation project entails collecting seeds of trees within Sony Forest, raising them until they become seedlings, and then donating them to local administrations and NPOs for forestation projects. This project was certified as an exemplary project in 2015 by the Japan Committee for the United Nations Decade on Biodiversity (UNDB-J).

- \* The Social and Environmental Green Evaluation System (SEGES) is an accreditation system run by the Urban Green Space Development Foundation. SEGES evaluates the environmental conservation activities of businesses that aim to help improve society and the environment, and recognizes outstanding initiatives by businesses.



This local nature conservation project has been certified by the Japan Committee for the United Nations Decade on Biodiversity (UNDB-J).



Collecting seeds of native species during a nature observation program at Sony Forest.

## Environment

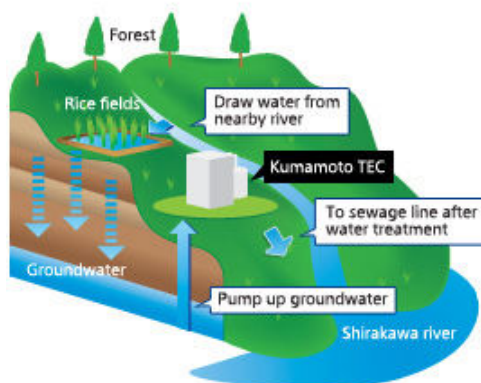
Updated on August 21, 2015

### Feature 2: Working on Groundwater Recharge Projects

#### Kumamoto TEC Continues Groundwater Recharging Initiatives

At Sony Semiconductor Corporation's Kumamoto Technology Center (Kumamoto TEC), a large volume of water (groundwater) is used in semiconductor production. Kumamoto, home to Kumamoto TEC, has always been blessed with abundant groundwater resources. However, the decline in groundwater has been a deep concern in recent years, and has been attributed to a decrease in the area of land used for rice paddy cultivation and an increase in the land used for residential purposes. Kumamoto TEC recognizes the importance of groundwater as natural capital, and is involved in continuous efforts to recharge\*1 groundwater using neighboring paddies in cooperation with local environmental NGOs as part of its responsibility as a local business. From May through October, Kumamoto TEC uses its water facilities to help fill unused rice paddies with river water, thus allowing the extra water to penetrate into the soil and ultimately replenish the aquifer.

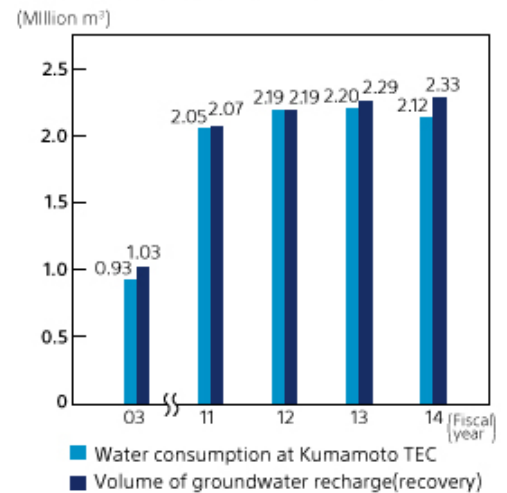
"Groundwater recharge" using rice fields



## Recharged Groundwater Lauded as an Advanced Example of Biodiversity Conservation

Groundwater recharge efforts at Kumamoto TEC began in fiscal 2003, and in fiscal 2014, 2.33 m3 more water than Kumamoto TEC's yearly water usage (including tap water and groundwater) was recharged. Activities such as these are called payment for ecosystem services (PES),\*2 and they are an important part of protecting natural capital and biodiversity. These efforts have also been noted as an advanced example in the Annual Report on the Environment, the Sound Material-Cycle Society and the Biodiversity in Japan 2014 published by the Ministry of the Environment in Japan.

**Comparison of Water Used and Water Replenished by Kumamoto TEC**



Kumamoto TEC is also involved in initiatives to encourage employees to purchase the rice produced in the groundwater recharge farming areas, thus helping to support local farmers and conserve groundwater resources.

- \*1 Groundwater recharge: Water on the surface of the ground (rainwater, river water, etc.) permeates the soil and replenishes the groundwater in the aquifer.
- \*2 PES: Compensating the ecosystem with something equivalent in value or working to conserve the ecosystem in a way that compensates for the services received.

## Environment

Updated on August 21, 2015

### Products and Business Activities that Support Biodiversity Conservation

In its product development, marketing programs and other business activities, Sony works to conserve biodiversity. For example, Sony's digital recording binoculars, digital still cameras and digital video cameras are useful for observing the natural environment and studying ecosystems. In marketing programs, companies within the Sony Group promote the use of timber from forest thinning to produce novelty goods.

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

[Digital Recording Binoculars for Observing and Recoding Ecosystems](#)

[Novelty Goods Made by So-net Corporation](#)

## Environment

### Environmental Technologies: Table of contents

Sony conducts research aimed at developing proprietary technologies that contribute to the reduction of environmental impact and can be applied to new products and services, as well as to manufacturing processes.

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[Mid-Term Targets for the Development of Environmental Technologies](#)

[Developing the Environmental Technologies of the Future](#)

## Environment

Updated on August 21, 2015

### Mid-Term Targets for the Development of Environmental Technologies

The table below outlines the mid-term targets for R&D set forth in Green Management 2015. To facilitate the achievement of these targets, Sony has established R&D themes that contribute to the reduction of environmental impact. Basic research is conducted at its headquarters' research centers, while the development of practical commercial applications is the responsibility of business units.

#### Targets of "Green Management 2015" for the Development of Environmental Technologies

<b>Climate Change</b>	<ul style="list-style-type: none"> <li>● Develop technologies that improve self-sufficiency ratio in the energy supply at the individual level by further implementation of energy saving measures in products and expansion of renewable energy.</li> <li>● Develop information and communication technologies to support life styles indispensable to realize a low-carbon society.</li> </ul>
<b>Resources</b>	Develop and refine "3R" (Reduce, Reuse, Recycle) technologies in product lifecycle to achieve reductions in the use of exhaustible resources and water, and to reduce waste.
<b>Chemical Substances</b>	Develop technologies to reduce the use of substances of high concern and alternative materials.



## Environment

Updated on August 21, 2015

### Developing the Environmental Technologies of the Future

#### Authentication Outlet

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There are recent signs that Home Energy Management Systems (HEMS) are beginning to gain traction globally. Against this background, Sony turned its attention to power outlets—an essential for electricity usage—and has developed an authentication outlet, which provides electricity users with the means to actively manage and control power usage. This system applies contactless IC card technology, which has a proven record in such fields as mass transit ticket systems and electronic money. Under this system, an electrical appliance or vehicle has an IC chip built into its plug, while the outlet has an embedded IC card reader. When a plug is inserted into an outlet, electricity is supplied after device and user authentication. Based on this system, it will be possible to charge for electricity on an individual-user basis and manage consumption for each device. This technology is expected to contribute not only to the development of HEMS but also to the establishment of new public power-supply services.

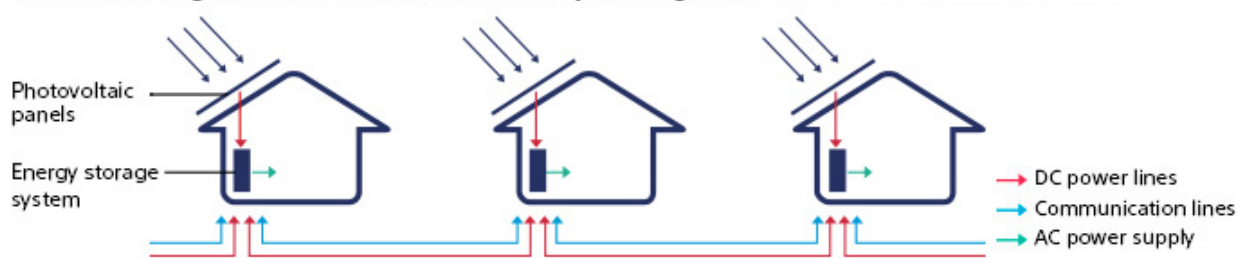


Authentication outlet prototype

## Open Energy System

Although renewable energy sources such as solar and wind power generation are attracting much attention, there are significant issues to overcome before thinly dispersed renewable energy can be utilized effectively. Sony Computer Science Laboratories, Inc. (Sony CSL) is conducting research on Open Energy Systems (OES), which make possible ultra-distributed, electricity transmission and distribution that can be built using a bottom-up approach. Sony CSL has teamed up with the Okinawa Institute of Science and Technology Graduate University (OIST) to pursue joint OES demonstration experiments using Sony's storage batteries. In 2013, this research was selected by the Okinawa Prefectural Government to be part of its subtropical and island energy infrastructure technology research subsidy program, with Sony CSL and OIST collaborating in "Research Related to Distributed DC Power Control for the Realization of OES." In fiscal 2014, Sony CSL installed systems in 19 residences in the university's faculty housing area, and built a DC-based OES (DCOES) to interconnect the residences with DC power lines. The researchers are conducting experiments to pilot automatic power interchange between residences, using photovoltaic panels and storage batteries installed at each residence.

### DCOES Powering 19 Residences in the OIST Faculty Housing Area



The electric power interchange system automatically compensates for imbalances between power generation and electricity consumption across residences, which are interconnected by DC power lines and communication lines.

## Environment

### Reducing the Environmental Impact of Products and Services: Table of Contents

Sony continues to promote technological innovations aimed at building products that are smaller, lighter and more energy efficient and thus exert less of an impact on the environment.

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[Progress Toward Achieving Mid-Term Environmental Targets for Products and Services](#)

[Developing Environmentally Conscious Products](#)

[Guiding Principles for Environmentally Conscious Products](#)

[Examples of Eco-Conscious Sony Products](#)

[Reducing Environmental Impact Through Product Life Cycle Assessment](#)

[Designing Recyclability into Products](#)

## Environment

Updated on August 21, 2015

### Progress Toward Achieving Mid-Term Environmental Targets for Products and Services

In its Green Management 2015 Mid-Term Environmental Targets, Sony has set the following targets for its products. Also, by setting specific targets and conducting environmental assessments for all products, Sony is stepping up efforts to develop environmentally conscious products.

#### Targets of "Green Management 2015" for Products (Product Planning and Design)

General	Launch Environmental Flagship models and services in each category continuously.
Climate Change	Reduce annual energy consumption of products by 30% (compared with FY2008)
Resources	<ul style="list-style-type: none"> <li>● Reduce utilization ratio of virgin oil-based plastics in products by 5% (compared with FY2008)</li> <li>● Reduce mass of products by 10% (compared with FY2008)</li> </ul>
Chemical Substances	Eliminate environment-related substances to be controlled* of very high concern and BFR/PVC within specified use.

\* Among the substances contained in parts and devices, "Environment-related Substances to be Controlled" are those which, in Sony's judgment, have a significant impact on both humans and the global environment.

## Environmental Performance of Products in Fiscal Year 2014

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CO<sub>2</sub> emissions over the lifetime of Sony products sold in fiscal year 2014 amounted to approximately 14.65 million tons, up about 4% from those for products sold in fiscal year 2013. Average annual energy consumption per product in fiscal year 2014 was approximately 30% less than in fiscal year 2008. For products sold in fiscal year 2014, Sony used approximately 650,000 tons of resources, down around 2% from fiscal year 2013.\*1 The average mass per product in fiscal year 2014 declined 26% from that of fiscal year 2008. Sony's virgin plastic utilization rate\*2 in fiscal year 2014 was 4.3% lower than in fiscal year 2008.

Sony also understands the importance of recovering and reusing the resources of end-of-life products. As a manufacturer, Sony acknowledges its responsibility for ensuring the appropriate disposal and treatment of end-of-life products, and promotes the collection and recycling of its products in compliance with the laws and regulations of countries and regions around the world. In fiscal year 2014, Sony recovered approximately 72,000 tons\*3 of resources from end-of-life products. This includes resources recycled from televisions and PCs collected in Japan, the reuse/recycling rate\*4 for which was approximately 30%.

\*1 Total volume of resources used: Total weight of resources used in products, accessories, instruction manuals and packaging materials. The weight of total products shipped is substituted for this value.

\*2 Virgin plastic utilization rate: Percentage of plastics used accounted for by petrochemical-derived plastics

\*3 Data for Europe excludes Belgium and the Netherlands.

\*4 This calculation assumes an average period of use from time of sale of 10 years for televisions and seven years for PCs. The resulting percentage is the total weight of Sony televisions and PCs recovered by Sony in fiscal year 2013 as a percentage of the total weight of all Sony televisions and PCs sold ten years and seven years ago, respectively.

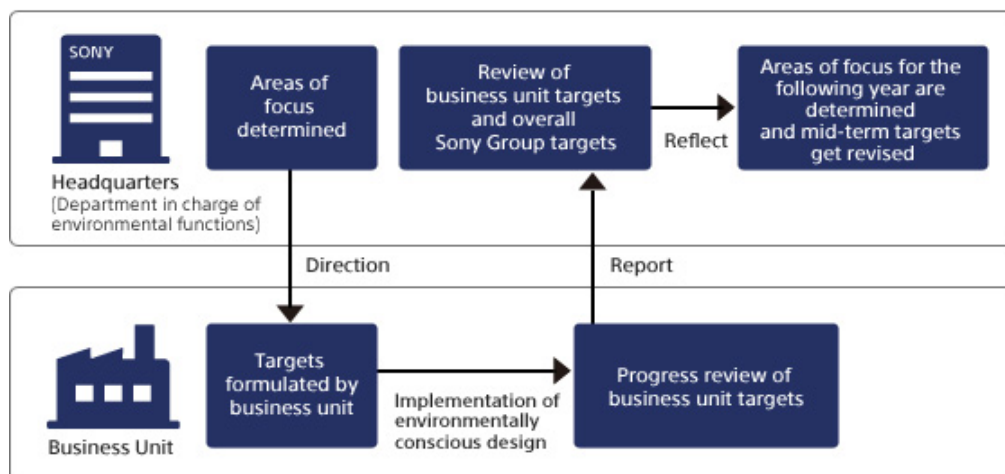
# Environment

Updated on August 21, 2015

## Developing Environmentally Conscious Products

The Sony Group's mid-term targets include targets for products, which involve the reduction of annual power consumption, the promotion of resource conservation and the management of chemical substances. Business units formulate annual targets that are consistent with environmental mid-term targets and reflect the unique characteristics of each product category, and regularly review progress toward achieving these targets, subsequently reporting their findings to the department in charge of environmental functions at Sony's headquarters. In turn, the environmental functions at the headquarters evaluate the targets and progress of each business unit, using these evaluations as the basis for its review of the Sony Group's progress toward achieving its environmental mid-term targets. Based on the results of this review, Sony determines areas of focus and revises targets for the subsequent fiscal year. By thus setting specific targets and conducting environmental assessments for all products, Sony is stepping up efforts to develop environmentally conscious products.

**Management Structure for Eco-Conscious Product Development**



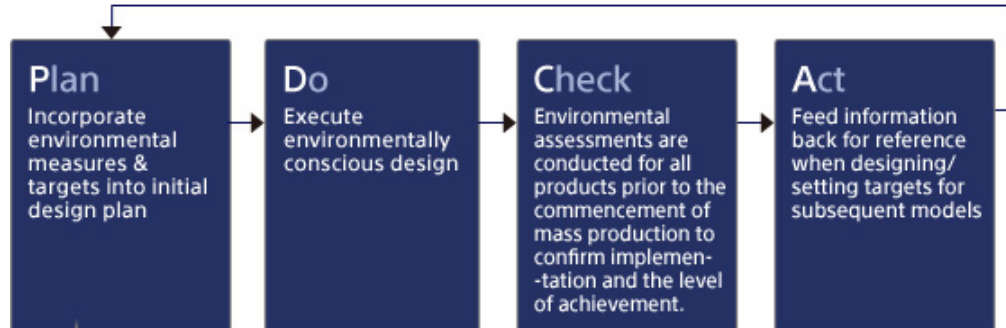
# Environment

Updated on August 21, 2015

## Guiding Principles for Environmentally Conscious Products

With the aim of developing life-enriching products that are not only superior in terms of functionality, performance and quality, but also help to reduce the impact on the environment compared to former conventional consumer electronics products, Sony has formulated its own guiding principles for environmentally conscious design, which it has designed for application with all products. In line with these principles, Sony is working to create industry-leading environmentally conscious products that incorporate world first features and technologies.

PDCA Cycle for Environmentally Conscious Products Design



Designing environmentally conscious products: Key considerations	
Observe relevant laws in individual countries	
Reduction of energy consumption	<ul style="list-style-type: none"> <li>• Aim for zero energy use by products when in standby mode</li> <li>• Reduce power use in all modes</li> <li>• Enhance the efficiency of AC adapters</li> <li>• Incorporate energy-saving features in products</li> </ul>
Resource conservation	<ul style="list-style-type: none"> <li>• Reduce materials and number of parts used</li> <li>• Use recyclable materials</li> <li>• Extend product life</li> </ul>
Management of chemical substances	<ul style="list-style-type: none"> <li>• Respond to technical standard for management of controlled substances</li> </ul>
Other	<ul style="list-style-type: none"> <li>• LCAs*1 assess products' environmental impact over their entire life cycle</li> <li>• Disclose pertinent information</li> </ul>

\*1 LCA is an acronym for life cycle assessment.

# Environment

Updated on August 21, 2015

## Examples of Eco-Conscious Sony Products

Environmentally conscious features are designed into all Sony products, which are created to provide users with new and exciting experiences. From energy savings and reduced resource use to the management of chemical substances in the materials used to make Sony products, Sony considers the optimal set of features from an environmentally conscious standpoint and incorporates these features into its finished products.

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

### Product Examples

#### Links to Related Items:

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[Reduction and Replacement of Chemical Substances of Very High Concern](#)



## Environment

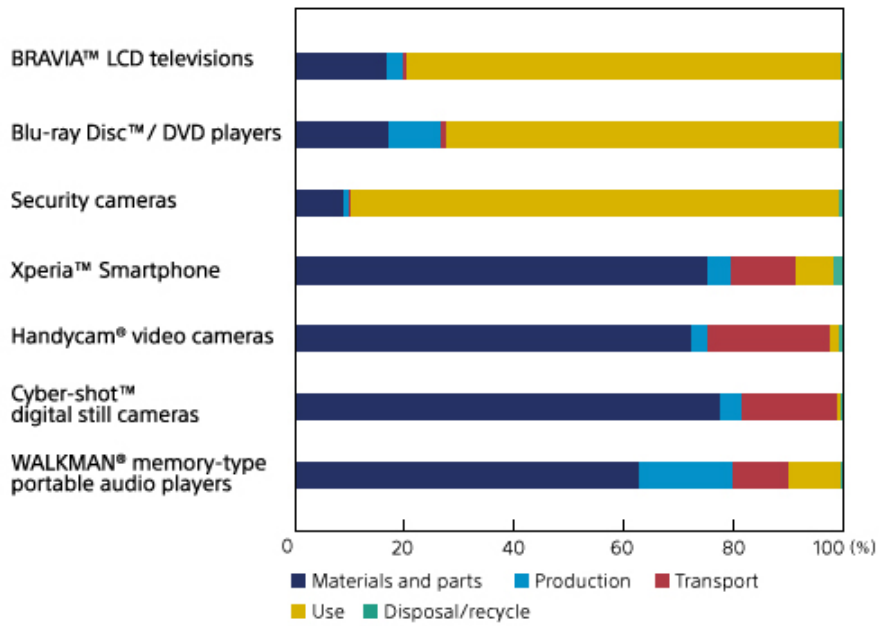
Updated on August 21, 2015

### Reducing Environmental Impact Through Product Life Cycle Assessment

Sony conducts product life cycle assessments (LCAs) on products for all major electronics categories, with the aim of identifying and quantifying the environmental impact of products at all stages of their life cycles that include materials and parts production, product assembly and transport, product use and standby mode, and end of life (i.e., disposal and recycling). LCAs help us to clarify priorities for product improvement and environmental impact reduction measures.

As shown in the chart titled "Breakdown of CO<sub>2</sub> Emissions Over the Life Cycle of Sony Products," we see that the life cycle stages responsible for generating a large portion of a product's CO<sub>2</sub> emissions differ depending on the product category. For example, for product categories in the upper part of the chart, emissions during product use account for a large proportion of total emissions. For this reason, reducing the power consumption of these products during use is particularly important. Conversely, among the product categories in the lower part of the chart, rather than during use, a large portion of CO<sub>2</sub> emissions occur at the manufacturing stage and in the production of materials and parts. For these products, such measures as reducing the parts count are crucial in lowering life cycle CO<sub>2</sub> emissions.

**Breakdown of CO<sub>2</sub> Emissions Over the Life Cycle of Sony Products**



**Sony calculated the emissions based on the following assumptions:**

- Place of sale: Japan
- Product transportation: 500 kilometers by truck in Japan; by ship or by air for international transport
- Years of use: Walkman® Memory Type portable audio player: 5 years; Cyber-shot™ compact digital camera: 2.7 years; Handycam® digital camcorder: 6.4 years; Xperia™ Smartphone: 4 years; security camera : 7 years; Blu-ray Disc™ / DVD players: 7 years; BRAVIA® LCD television: 10 years

- \* This chart shows the proportion of CO<sub>2</sub> emissions at each stage of the life cycle. It does not indicate the size of environmental impact of these products.
- \* The assumptions (usage assumptions, shipping distance, mode of shipping, manufacturing site assumptions, etc.) used for calculation of CO<sub>2</sub> emissions differ among products.

## Environment

Updated on August 21, 2015

### Designing Recyclability into Products

One initiative Sony is taking to ensure that its products are environmentally responsible involves designing them with recyclability in mind. This means, for example, reducing the number of screws, and labeling the material type of plastic used in parts to make it easier to extract resources from used products during recycling. For example, Sony has issued Environmental Design Standards and Guidelines for TVs, which are used when planning and designing new products. These design standards and guidelines reflect the trends in regulations in and outside of Japan as well as Sony's mid-term environmental targets. Additionally, Sony conducts an annual review and revision of these guidelines based on industry trends and the latest recycling information, which is gathered via regular exchanges of information and opinions with the Green Cycle Corporation, a Sony Group company engaged in the recycling business.



The 2013 Bravia™ W650A/W600A series snap-together structure required fewer screws.

## Environment

Updated on August 21, 2015

### Reducing the Environmental Impact of Procurement

Sony believes that reducing environmental impact throughout the life cycle of its products is a commitment that must extend to the procurement of materials and parts. To date, Sony and its suppliers have cooperated closely in the management of chemical substances. Efforts have now been expanded to include measures to save energy and resources. Sony will continue working closely with its suppliers as it strives to achieve its goal of a zero environmental footprint.

### Mid-Term Targets for Procurement

The table below outlines the targets for procurement set forth in Green Management 2015. Sony has also begun to investigate greenhouse gas emissions, water consumption, and volume of waste generation by suppliers to better grasp suppliers' efforts to achieve reductions in those areas.

#### Targets of "Green Management 2015" for Procurement

Climate Change	<ul style="list-style-type: none"> <li>● Establish a mechanism for determining suppliers' greenhouse gas emissions</li> <li>● Contribute to the development of a common industrywide reporting format</li> </ul>
Resources	<p>Promote procurement practices that help</p> <ul style="list-style-type: none"> <li>● Reduce utilization ratio of virgin oil-based plastics in products by 5% (compared with FY2008)</li> </ul>

<p style="text-align: center;"><b>Chemical Substances</b></p>	<p>Promote procurement practices that help</p> <ul style="list-style-type: none"> <li>● Reduce utilization ratio of virgin oil-based plastics in products by 5% (compared with FY2008)</li> <li>● Reduce mass of products by 10% (compared with FY2008)</li> <li>● Reduce incoming parts packaging waste by 16% (compared with FY2008)</li> </ul>
<p style="text-align: center;"><b>Biodiversity</b></p>	<p>Conduct biodiversity assessments at resource extraction and harvesting sites</p>

\* Among the substances contained in parts and devices, "Environment-related Substances to Be Controlled" are those which, in Sony's judgment, have significant environmental impact on both humans and the global environment.

#### Links to Related Items:

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[Climate Change > Grasping the Extent of Greenhouse Gas Emissions over the Entire Value Chain](#)

[Chemical Substances > Three Core Principles for Managing Chemical Substances in Products](#)

# Environment

## Environmental Activities at Sony Sites: Table of contents

Sony applies an integrated perspective to environmental activities that covers all sites worldwide, whether they are involved in manufacturing activities or not, based on Green Management 2015 mid-term targets and policies issued by the department in charge of environmental functions at the headquarters.

[Progress Toward Achieving Mid-Term Environmental Targets for Sites](#)

[Implementation of Green Star Program](#)

[Promoting Green Purchasing](#)

[Designing Environmentally Conscious Sites](#)

### Links to Related Items:

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[Climate Change >Reducing Greenhouse Gas Emissions at Sites](#)

[Resources Conservation >Resouces Conservation at Sites](#)

[Chemical Substances >Management of Chemical Substances at Sites](#)

[Biodiversity >Biodiversity Conservation](#)

[Environmental Communication](#)

## Environment

Updated on August 21, 2015

### Progress Toward Achieving Mid-Term Environmental Targets for Sites

In its Green Management 2015 Mid-Term Environmental Targets, Sony has set the following targets for its sites. With the aim of achieving these targets, Sony is promoting site greening activities and other efforts aimed at conserving biodiversity, as well as undertaking environmental communications initiatives, embracing environmentally conscious technologies in manufacturing processes, promoting green purchasing practices and incorporating environmental perspectives when constructing buildings.

#### Targets of "Green Management 2015" for Operations

General	Conduct environmental assessments (including biodiversity impact assessment).
Climate Change	Reduce absolute greenhouse gas emissions by 30% (compared with FY2000)
Resources	<ul style="list-style-type: none"> <li>● Reduce absolute waste generation by 50% (compared with FY2000)</li> <li>● Improve waste recycling rate group-wide: 99% or more</li> <li>● Reduce absolute water consumption by 30% (compared with FY2000)</li> </ul>

<p style="text-align: center;"><b>Chemical Substances</b></p>	<p>Take actions for class 1 - 4. Detailed groups of chemical substances are described separately.</p> <p><b>Class 1 substances:</b> Prohibit use.</p> <p><b>Class 2 substances:</b> Eliminate use by a specified date.</p> <p><b>Class 3 substances:</b> Reduce the amounts released and transferred.</p> <p>&gt; Reduce the amounts released to water, and the amounts transferred to sewer / as waste (including VOC*) by 14% (compared with FY2008).</p> <p>&gt; Reduce the amounts of VOC released to the air by 50% (compared with FY2000).</p> <p><b>Class 4 substances:</b> Comply with the relevant laws and regulations and use under appropriate control.</p>
<p style="text-align: center;"><b>Biodiversity, Contribution to Local Communities, Others</b></p>	<p>Promote environmental activities respecting the needs of the local community.</p>

\* Volatile Organic Compounds



## Environmental Performance of Sites

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Total CO<sub>2</sub>-equivalent greenhouse gas emissions at Sony sites were about 1.2 million tons in fiscal year 2014, down about 46% from fiscal year 2000. Waste generated at sites amounted to about 78,000 tons in fiscal year 2014, down about 72% from the fiscal year 2000 level. The Groupwide recycling rate was 96%. Sites used approximately 10.56 million m<sup>3</sup> of water, 61% less than the fiscal year 2000 level. Sony released approximately 747 tons of VOCs\* into the air in fiscal year 2014, a decrease of approximately 59% from the fiscal year 2000 level, while Class 3 substances released into water and transferred as waste into sewers totaled 2,411 tons, down 21% from the fiscal year 2008 level.

\* Volatile Organic Compounds

## Environment

Updated on August 21, 2015

### Implementation of Green Star Program

In fiscal year 2011, Sony launched the Green Star Program, an in-house system for assessing the environmental performance of Sony Group sites worldwide. Under the program—one of several initiatives designed to ensure achievement of the ultimate goal of Sony's "Road to Zero" global environmental plan—each site's activities are evaluated comprehensively through quantitative and qualitative assessments from four key perspectives: climate change, resource conservation, chemical substance management and biodiversity conservation.

Sony has developed numerical assessment criteria and countermeasures to measure progress toward achieving the Sony Group's Green Management 2015 mid-term environment targets, while managing attainment levels and promoting activities for reducing environmental impacts. Level of attainment is evaluated with four stars. All sites are thus striving to earn a four-star rating by 2015.

Thanks to the implementation of the Green Star Program at sites worldwide, progress was made in fiscal year 2014 toward the formulation of plans for measures that had not yet been implemented in fiscal year 2013. All sites are thus now pursuing a range of initiatives with the aim of earning a four-star rating by 2015. In particular, measures being taken to address climate change are progressing favorably, underscoring the effectiveness of efforts to deploy best practices across the global Sony Group. ([For details on such measures, see Promoting Efficient Energy Use.](#)) Moving forward, Sony Group sites worldwide will continue to work as one to further enhance measures to reduce energy consumption. Having recognized room for improvement in efforts to address issues related to water and waste, sites will conduct detailed analysis on those water- and waste-related measures, taking consideration on characteristics such as local infrastructure of each region, as a prelude to developing and implementing more effective measures. Looking ahead, Sony will continue to

maximize the Green Star Program as a common tool to help reduce the environmental impact by overall activities in Sony Group.

**Example of qualitative assessment criteria**

<b>Climate change</b>		Monitor and analyze energy use with an appropriate monitoring system; adopt highly efficient systems and equipment for effective operation; and promote activities to improve energy savings in the manufacturing process
<b>Resources</b>	<b>Waste</b>	Reduction of generated waste; promote resource recovery and recycling; and ensure proper processing by waste companies
	<b>Water</b>	Monitor and analyze water use; take steps to promote the efficient use of water and reduce water consumption, etc.
<b>Chemical substances</b>		Monitor and analyze handling amount and amount released and transferred; reduce volume used and replace with alternative substances
<b>Biodiversity</b>		Implement biodiversity conservation plans that give consideration to the characteristics of regional ecosystems; Promote land use and green space management that take the importance of biodiversity into account  <a href="#">Click here for more details on the Green Star Program to Guide Biodiversity Conservation Initiatives</a>

**Links to Related Items:**

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[Climate Change >Reducing Greenhouse Gas Emissions at Sites](#)

[Resources Conservation >Resouces Conservation at Sites](#)

[Chemical Substances >Management of Chemical Substances at Sites](#)

[Biodiversity >Biodiversity Conservation](#)

[Environmental Communication](#)

## Environment

Updated on August 21, 2015

### Promoting Green Purchasing

Having set internal standards for green purchasing, Sony makes a conscious effort to choose nonproduction materials when procuring printing paper, stationery and OA equipment, among others. Sony employs the same parameters when purchasing finished products, and is mindful when deciding purchasing volume to consider volumes used and inventory levels. In Japan, Sony chooses from among recommended products, giving consideration to environmental impact at all stages of a product's life, from resource extraction through to production, distribution, use and disposal. Information on recommended products is included in Sony's purchasing system of nonproduction goods, making it possible for individuals in charge of purchasing decisions to give priority to environmentally conscious products. In the United States, Sony Electronics Inc. has introduced a re-use program that promotes the sharing of surplus office supplies among the company's departments.

# Environment

Updated on August 21, 2015

## Designing Environmentally Conscious Sites

When designing new sites, Sony integrates a variety of measures that focus on environmental considerations such as reducing energy and resource consumption. Moreover, even after the site operation starts, Sony installs equipment when needed that reduces environmental impact, as well.

[Click here for Sony and the Environment, which features detailed information on environmental initiatives.](#)

[Japan: Environmentally Conscious Features at Sony City \(Sony Headquarters\)](#)

[United States: Environmentally Conscious Features at Sony Electronics \(SEL\) Head Office](#)

[United States: Supporting Employees Who Switch to Electric Vehicles](#)

### Links to Related Items:

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[Climate Change >Reducing Greenhouse Gas Emissions at Sites](#)

[Resource Conservation >Waste at Sites](#)

## Environment

### Reducing the Environmental Impact of Logistics: Table of Contents

Reducing the amount of energy consumed, the volume of greenhouse gases emitted, and the amount of cardboard and number of pallets used in the transportation of parts and finished goods is significant to reduction of the environmental footprint of products over their entire life cycle.

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[Progress Toward Achieving Mid-Term Targets for Logistics](#)

[Reducing the Environmental Impact of Logistics through Improvement of Packaging](#)

[Reducing of Packaging Materials for Transport](#)

[Promoting Modal Shift](#)

[Improvement of Transport Efficiency by Intra-Industry Collaboration and Milk Run](#)

## Environment

Updated on August 21, 2015

### Progress Toward Achieving Mid-Term Targets for Logistics

In its Green Management 2015 Mid-Term Environmental Targets, Sony has set the following targets for its sites. In its efforts to achieve the targets, Sony has been striving to reduce CO<sub>2</sub> emissions generated from transport and packaging materials by means of optimization of transport efficiency (i.e., downsizing of product packages, improving loading efficiency and optimizing parts packages) and switching to alternative transport modes which can reduce environmental impact (i.e. modal shift and joint shipping), as well as by reduction of gross transport weight through weight reduction of each product.

#### Targets of "Green Management 2015" for Logistics

Climate Change	Reduce CO <sub>2</sub> emissions from logistics by 14% from the fiscal year 2008 level
Resources	Reduce waste from packaging for incoming parts by 16% from the fiscal year 2008 level



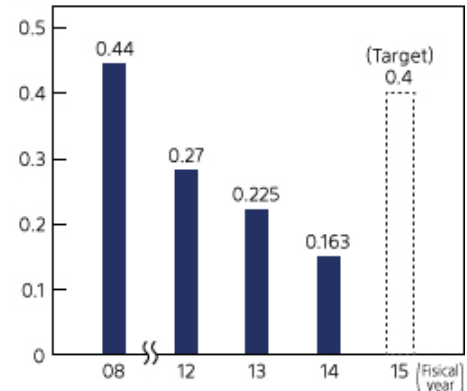
## CO<sub>2</sub> Emissions from Transport of Finished Products in Fiscal Year 2014

In fiscal year 2014, CO<sub>2</sub> emissions from logistics totaled approximately 163,000 tons, 62% lower than in fiscal year 2008 and approximately 26% lower than in fiscal year 2013. Sony keeps working towards further reduction of CO<sub>2</sub> emissions by measures such as downsizing and weight reduction of products and packages and also modal shift.

Since fiscal year 2008, the base year of our mid-term environmental targets, Sony has been taking steps to expand the calculation scope of CO<sub>2</sub> emissions from logistics, and Sony's current scope covers more than 40 countries and territories such as Japan, the United States, Europe and Asia. As for those countries/territories which came into scope after fiscal year 2008, we have been promoting CO<sub>2</sub> emissions reduction with targets set in line with the overall mid-term target, based on the year when the first data was captured. Owing to the addition of several countries and territories to the calculation scope, CO<sub>2</sub> emissions from logistics in fiscal year 2014 amounted to approximately 333,000 tons.

**CO<sub>2</sub> Emissions from Product Transportation**

(Million t-CO<sub>2</sub>)



## Environment

Updated on August 21, 2015

### Reducing the Environmental Impact of Logistics through Improvement of Packaging

Sony is striving to reduce environmental impacts such as CO<sub>2</sub> emissions and packaging materials as well as to optimize total cost of products and parts. Product design, procurement, manufacturing, logistics, and other divisions are working closely together to improve packaging.

#### Using Returnable Containers

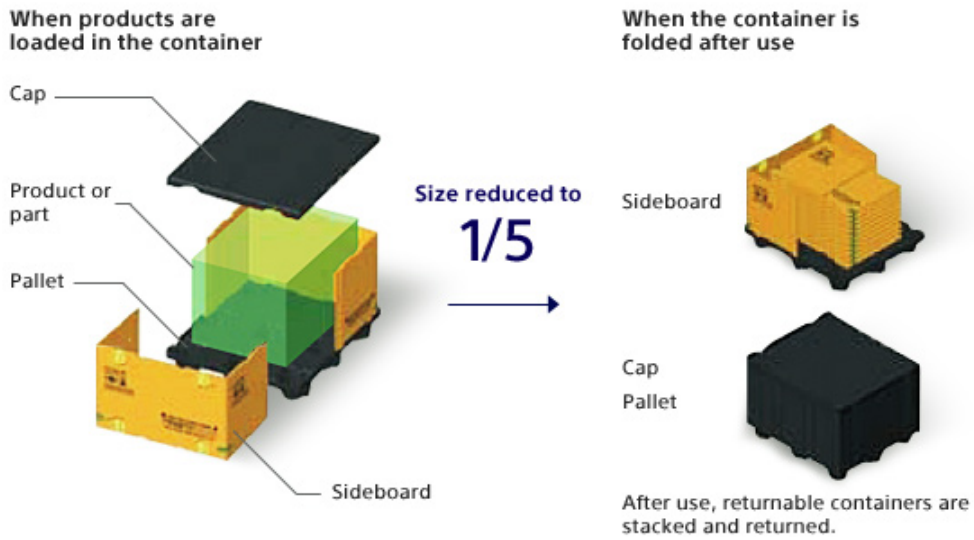
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Sony reuses packaging materials and reduces waste by using returnable containers which can be reused repeatedly for products and parts transport. Sony has been using returnable containers in Japan since 2005, and is using them in Asia, as well, in accordance with the shift of production to sites outside of Japan.



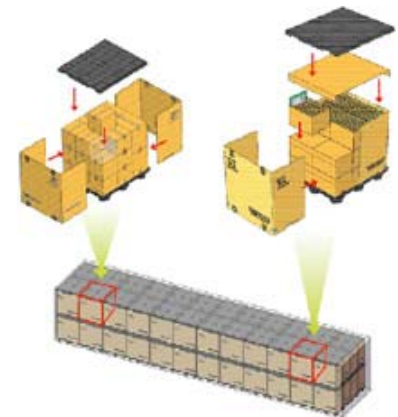
Returnable containers

Structural overview of a returnable container



Increasing Transport Efficiency by Returnable Containers

Sony's returnable containers are designed to enable efficient loading onto sea freight containers. Since 2009, Sony logistics has been using standardized modular cartons which fit efficiently into returnable containers. By using modular cartons that match the packing requirements for each part, Sony has enhanced parts storage efficiency and optimized the number of units shipped in each container.



Returnable containers packed with standardized modular cartons and a shipping container efficiently loaded with returnable containers

## Transport Efficiency by Improving Shipping Boxes

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Sony DADC US Inc., Warehousing, packaging, returns processing and distribution of optical media had previously used regulation size boxes. Space inside the boxes was often left unused depending on the shipment size and number of orders. Furthermore, cushioning material was also needed inside the empty spaces to protect the goods during transport, which resulted in additional expenditures for materials. In response to these circumstances, the Bolingbrook Distribution Center improved the boxes by redesigning them into a shape optimally suited for the size and amount of products for shipment. Ultimately, the Distribution Center eliminated the wasted space in the boxes, increased the rate of products shipped, and substantially improved transport efficiency. The initiative also contributed to reducing the amount of cushioning material used.



The shape of the shipping boxes was changed to optimally suit the products being shipped

## Environment

Updated on August 21, 2015

### Reducing of Packaging Materials for Transport

#### Promoting the Use of Reusable Bands for Products and Parts Transport in Manufacturing Sites and Warehouses

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For preventing collapse of stacked cartons during transport of products and parts in manufacturing sites and warehouses, Sony uses reusable bands as one of packaging materials. This has contributed to the reduction of use and disposal of packaging materials such as stretch films.



Example of reusable band usage

## Environment

Updated on August 21, 2015

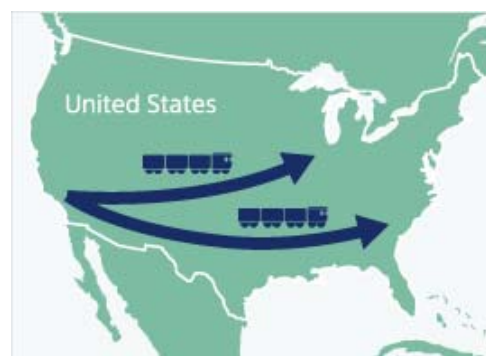
### Promoting Modal Shift

As a part of its efforts to reduce environmental impact from the transport of finished goods, Sony promotes modal shift, switching the modes of transport it uses from air to sea and from truck to railroad.

#### Modal Shift in International Transport

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Sony's efforts to advance modal shift also include transport in overseas markets. In North America, for example, for a portion of the products it ships from the west coast of the United States to other parts of the country Sony is promoting a switch from air and truck to rail transport. This switch will also enable Sony to reduce CO<sub>2</sub> emissions associated with the transport of these products.



#### Modal Shift in Japan

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In Japan, Sony has promoted modal shift from truck to rail transport. For large-sized products such as BRAVIA™ LCD TVs or Blu-ray Disc™/DVD recorders, in particular, Sony proactively uses railroad, which accounts for more than 15% of all long-distance (500km or more) domestic transport. These efforts have gained recognition. Sony has been certified by the Japanese Ministry of Land,

Infrastructure, Transport and Tourism as a certified company in the "Eco Rail Mark" system since 2011, while BRAVIA™ LCD TVs and Blu-ray Disc™/DVD recorders have earned product certification. Sony also promotes domestic sea transport. In fiscal year 2014, CO2 emissions attributable to the transport of products in Japan were approximately 967 tons lower than would have been the case if products had been transported by truck.



Logo indicating Eco Rail Mark certification for businesses

## Environment

Updated on August 21, 2015

### Improvement of Transport Efficiency by Intra-Industry Collaboration and Milk Run

Efficient transport by maximizing loading volume per truck reduces the environmental impact. Sony promotes improvement of transport efficiency through various modes of intra-industry collaboration such as cooperative transport and milk run\*.

Sony has been operating cooperative transport by truck in Hokkaido, Osaka, Fukuoka and Okinawa.

In China, Sony has been promoting improvement of transport efficiency which contributes to reduction of CO<sub>2</sub> emissions, through a combination of transport solutions such as milk run\* and round trip.

\* In a milk run, a truck follows a route to collect parts from several suppliers, thereby improving transport efficiency compared with the routing method of separate runs to each supplier.



Sony trucks run round trip as a means of contributing to increased transportation efficiency.



## Environment

### Recycling End-of-Life Products: Table of Contents

Sony supports the principle of individual producer responsibility (IPR). Accordingly, Sony promotes the collection and recycling of end-of-life products and incorporates consideration for recycling into product design.

[Sony's Policy on Recycling Products](#)

[Improving Product Recyclability](#)

[Recycling Activities in Each Country and Region](#)

[Links for Product Recycling in Each Country and Region](#)

# Environment

Updated on August 21, 2015

## Sony's Policy on Recycling Products

### Mid-Term Environmental Targets for Collection and Recycling

Under its Green Management 2015 mid-term environmental targets, Sony has set targets for the collection and recycling of end-of-life products. Sony also supports the concept of individual producer responsibility (IPR), that is, the idea that a producer bears responsibility for its products over their entire life cycle, even after use. Accordingly, Sony continues to promote the collection and recycling of end-of-life products, as well as to design products that are easily recyclable. Sony also continues to develop recycling systems for global markets that suit local needs.

### Mid-Term Environmental Target for Collection and Recycling

Based on the idea of extended producer responsibility (EPR), Sony strives to achieve an environmentally conscious recycling system which ensures effective collection and recycling of end-of-life products. In addition, Sony continues to increase the use of recycled resources and to design products that are easy to recycle. Based on the idea of individual producer responsibility (IPR), this effort aims to promote the establishment of appropriate laws and infrastructure to recycle Sony products.

[For policy, please refer to Policy on Resource Conservation.](#)

## Sony's Recycling Record

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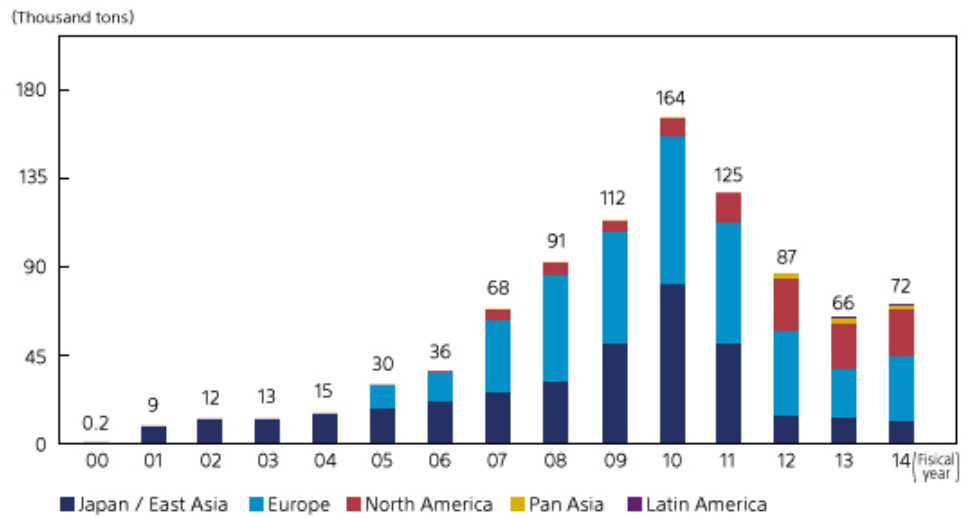
Sony is promoting the collection and recycling of end-of-life products in compliance with the legislative requirements of different countries and regions, including the Home Appliance Recycling Law in Japan, the EU Directive on Waste Electrical and Electronic Equipment (the WEEE Directive) in Europe and each state's Electronic Waste Recycling Act in the United States. As stated in its Green Management 2015 mid-term target for collection and recycling, Sony is actively advancing the collection and recycling of end-of-life products. To this end, Sony is developing recycling systems for global markets that suit local needs and is stepping up efforts to design products that are easy to recycle.

In fiscal year 2014, Sony recovered resources from 72,000 tons\*1 of collected end-of-life products, more than in fiscal year 2013. In Japan, the amount of waste collected represented a decline from fiscal year 2011, attributable to the end of the Japanese eco-points scheme for the recycling of home appliances. In contrast, the amount of waste collected in Latin America increased as Sony's joint project, the Green Service Program, gained greater recognition in the region. Sony's collection rate\*2 of end-of-life products—as a percentage of the estimated total weight of end-of-life televisions and PCs discarded in Japan—was approximately 30%. This was down from fiscal year 2013, owing to such factors as the start of digital terrestrial broadcasting in Japan, which resulted in a decline in the number of end-of-life televisions recovered.

\*1 The calculation for "Europe" excludes Belgium and the Netherlands.

\*2 The collection rate is expressed as a percentage of the estimated weight of televisions and PCs collected in fiscal year 2014 in Japan (determined based on the weight of televisions sold in fiscal year 2004 and PCs sold in fiscal year 2007 and assuming an average period of use of 10 years for televisions and seven years for PCs).

**Weight of End-of-Life Products Collected**



## Environment

Updated on August 21, 2015

### Improving Product Recyclability

#### Working Together with Green Cycle Corporation

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As one of its strategies for resource efficiency, Sony works to increase the recyclability of its products. When examining various related measures, Sony receives feedback from Green Cycle Corporation, a Sony Group company specializing in the recycling business. Green Cycle Corporation presents ideas and proposals for improvements to Sony headquarters departments with environmental responsibilities, including how to make it easier to disassemble products and separate materials, based on the expertise it has gained through recycling used electronic products and personal computers. Practical measures incorporating those ideas are then drawn up and submitted to design departments for each product category. Meanwhile, Sony supports the efforts of Green Cycle Corporation to improve its recycling technologies while sharing the latest information on product manufacturing.



Recycling at Green Cycle Corporation's facilities in Nagoya, Aichi Prefecture

## Holding Workshops on Recyclability

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Sony has been regularly holding workshops on recyclability since 2006 at Green Cycle Corporation. Its product designers, mechanical designers and other employees in various positions participate. The workshops aim to reaffirm the importance of and need for considering recyclability in product designs, and to ensure those ideas are later applied when creating products. During the workshops, the participants first observe a television disassembly line onsite, and then try to take apart an LCD television themselves. Afterwards, line managers at Green Cycle Corporation explain current challenges and needs, and then exchange ideas with the participants in a discussion. Participants then apply what they have learned when designing products that will be sold worldwide, with a first-hand understanding of the difficult work of disassembling products and ways to make it easier, as well as an appreciation of the importance of reusing materials that have been separated from used products.



Employees disassemble an LCD television

# Environment

## Recycling Activities in Each Country and Region

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[Recycling Activities in Japan](#)

[Recycling Activities in Europe](#)

[Recycling Activities in North America](#)

[Recycling Activities in Pan Asia](#)

[Recycling Activities in Latin America](#)

[Recycling Activities in China](#)

## Environment

Updated on June 23, 2015

### Recycling Activities in Japan

Sony recycles televisions and personal computers in line with applicable recycling-related laws in Japan. Sony also bears the cost of recycling lithium-ion batteries and other small rechargeable batteries, as well as packaging materials, as required by law.

#### Recycling of Television Sets

Japan's Home Appliance Recycling Law, which came into effect in April 2001, initially covered four major home appliances: televisions, refrigerators, washing machines and air conditioners. In April 2009, the law was revised to also cover LCD and plasma televisions and clothes dryers. Among applicable products, Sony manufactures televisions (CRT, LCD and plasma models, including products bearing the Aiwa brand). The Home Appliance Recycling Law requires consumers to pay collection, transport and recycling fees when disposing of applicable home appliances, retailers to take back such appliances and return them to manufacturers, and manufacturers to recycle these appliances.



TV being dismantled at Green Cycle Corporation

Sony has established a nationwide cooperative recycling network with four other manufacturers. As a consequence, Sony-manufactured televisions are now



recycled at 15 recycling plants across Japan. One of these plants is operated by Green Cycle Corporation, which manages a recycling business as a Sony Group company.

In fiscal year 2014, approximately 319,000 CRT televisions and 147,000 flat-screen televisions manufactured by Sony were recycled. The Home Appliance Recycling Law obliges manufacturers to maintain recycling rates of at least 55% for CRT televisions and at least 50% for flat-screen televisions. Sony has consistently exceeded these rates since fiscal year 2001. In fiscal year 2014, the recycling rate for Sony-manufactured CRT televisions was 77%, while for Sony-manufactured flat-screen televisions it was 89%.

#### Television Recycling in Japan (Fiscal 2014)

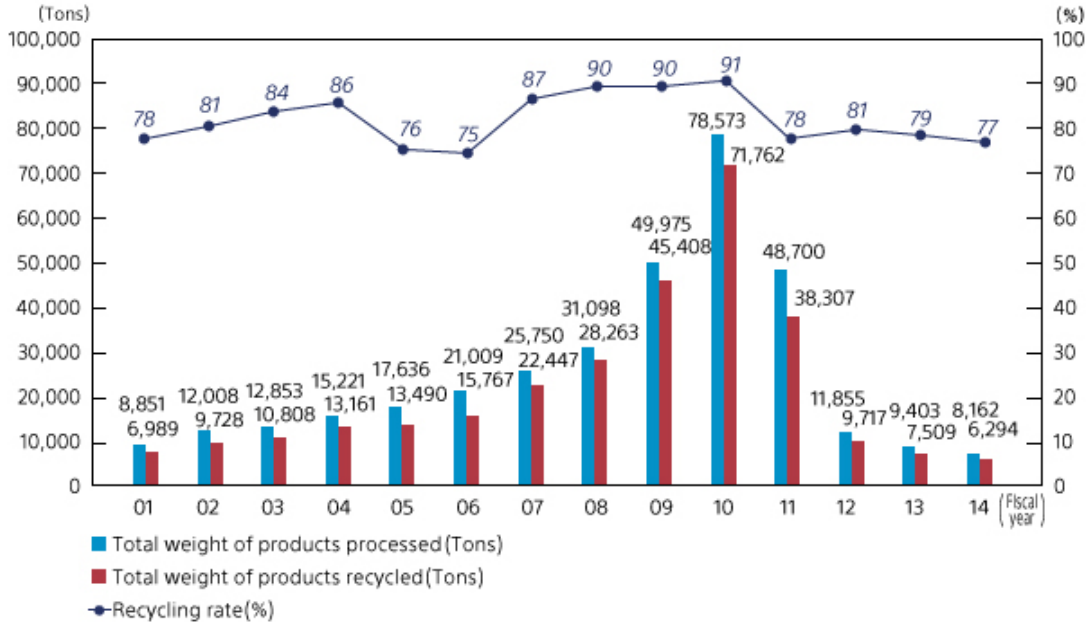
	Units	CRT televisions	LCD and plasma televisions
Number of products brought into plants	Thousand	325	149
Number of products recycled	Thousand	319	147
Total weight of products processed	Tons	8,162	2,883
Total weight of recycled products and materials	Tons	6,294	2,580
Recycling rate	%	77	89

#### Notes:

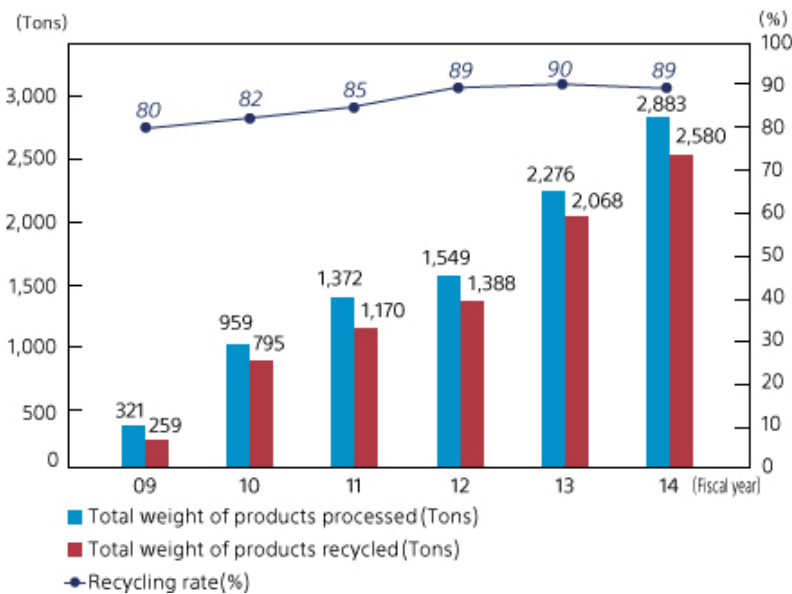
1. Figures have been truncated.
2. The number of products recycled and total weight of products processed refer to the number and weight of products for which recycling processes were implemented in fiscal year 2014.

- The number of products brought into plants and number of products recycled do not include products for which responsibility for recycling is undecided owing to, for example, the entry of incorrect information in tracking sheets.

**CRT television Recycling Performance**



**LCD and plasma Television Recycling Performance**



### Parts and Resources Recycled from Televisions

Total weight of parts and resources which were processed to become possible to be transferred for profit or free of charge for use as parts or materials in other products

**Resources Recycled from CRT Televisions (Fiscal year 2014)**



■ Iron:	930 Tons
■ Copper:	322 Tons
■ Aluminum:	4 Tons
■ Nonferrous and ferrous compounds:	25 Tons
■ CRT glass:	2,982 Tons
■ Other Valuable resources:	2,027 Tons

**Resources Recycled from LCD and Plasma Televisions (Fiscal year 2014)**



■ Iron:	1,124 Tons
■ Copper:	29 Tons
■ Aluminum:	109 Tons
■ Nonferrous and ferrous compounds:	24 Tons
■ Other Valuable resources:	1,293 Tons

**Notes:**

1. Figures have been truncated.
2. Other valuable resources include plastics, among others.

### Recycling of Personal Computers

Although Sony sold off its personal computer business in July 2014, it is collecting and recycling its PC products in Japan that are no longer used by households and businesses, including long-time corporate users, in accordance with Japan's Act on the Promotion of Effective Utilization of Resources. Items being recycled are desktop PC units, notebook PCs, CRT displays, and LCDs.



Hard drive being physically destroyed.

The many used computers made by Sony are being recycled with close attention to information security, with hard drives being physically destroyed in a dedicated work space at Green Cycle Corporation. In fiscal 2014, the amount of Sony-made computers and displays that were collected and recycled numbered over 60,000 units, for a total weight of approximately 394 tons. From these items, about 286 tons of materials were reused, including metal, plastic, and glass parts.

#### Personal Computer Recycling in Japan (Fiscal 2014)

	Unit	Desktop PC units	Notebook PCs	CRT displays	LCDs
Number of products brought into plants	Thousands	11.9	23.0	3.5	21.8
Total weight of products processed	Tons	127.3	45.9	64.8	156.4
Total weight of recycled products and materials	Tons	95.3	28.3	40.3	121.9
Recycling rate	%	74.9	61.6	62.2	77.9

## Environment

Updated on August 21, 2015

### Recycling Activities in Europe

Take-back legislation in Europe - in particular, the European Union (EU) directives on Waste Electrical and Electronic Equipment (WEEE), batteries and packaging - requires manufacturers to organize and finance the collection and recycling of end-of-life products and packaging.

Sony takes full responsibility for its take-back obligations in all those European countries where it has sales bases.\*

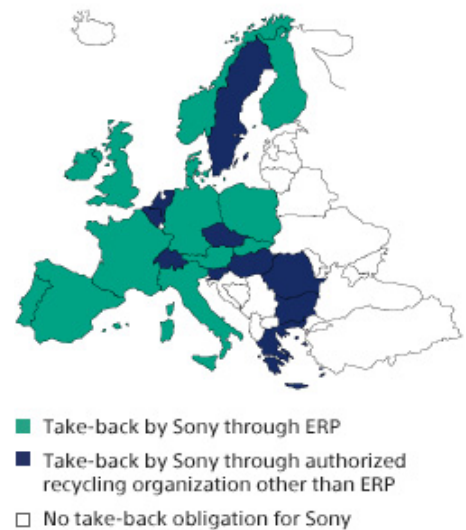
In December 2002, Sony joined forces with Braun GmbH, AB Electrolux and Hewlett Packard Europe S.A., to form the European Recycling Platform (ERP). The aim of ERP was to establish efficient and cost-effective systems for the collection and recycling of end-of-life electrical and electronic products to enable member companies to fulfill their obligations as manufacturers.

\* Sony has sales bases in the following European countries: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Sony's WEEE Directive Compliance System

Sony utilizes ERP's services for WEEE collection and recycling in Austria, Denmark, Finland, France, Germany, Ireland, Italy, Norway, Poland, Portugal, Slovakia, Spain, and the United Kingdom. ERP conducts regular on-site audits of all contracted recyclers to ensure compliance with the WEEE directive as well as to prevent illegal shipments of WEEE outside the EU. In European countries where it is not using ERP's services, Sony cooperates with authorized recycling organizations that undertake recycling in lieu of manufacturers to ensure its products are recycled in a manner that complies with the WEEE directive or related legislation and regulations in each country. In 2014, Sony financed the costs of recycling around 33,872 tons\* of waste electrical and electronics products in Europe. Sony discloses for all its products placed on the market in Europe information on substances and components that require special treatment to facilitate safe recycling.

Sony's WEEE Directive Compliance System



\* Excluding Belgium and the Netherlands.

## Sony's Battery Compliance System

The EU battery directive enacted in September 2008 replaced existing national legislation and expanded mandatory producer take-back and recycling of batteries for the entire EU. The directive encompasses all types of batteries. Sony complies with this directive by making use of the ERP and other battery recycling services.

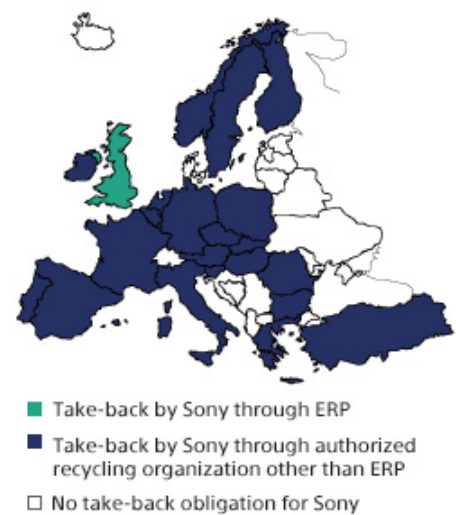
Sony's Battery Compliance



## Sony's Packaging Compliance System

In numerous European countries, producers are legally obliged to collect and recycle waste packaging. Sony fulfills this obligation through participation in authorized collection and recycling organizations wherever applicable.

Sony's Packaging Compliance



## Environment

Updated on August 21, 2015

### Recycling Activities in North America

Sony Electronics Inc. (SEL) in the United States and Sony of Canada Ltd. continue to contribute to the development of the recycling infrastructure in North America. All recycling and support activities are committed to a responsible recycling process that complies with a growing mandate of state and provincial legislation.

#### North America

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##### Promoting the Sony Take Back Recycling Program

In the United States, Sony Electronics Inc. (SEL) continues to expand its voluntary recycling sponsorship program and operates compliant programs in states with take back regulations. On September 15, 2007, the company introduced the Sony Take Back Recycling Program, which aims to further encourage consumers to recycle and dispose of electronics equipment in an environmentally sound manner. Developed in collaboration with waste administration and recycling companies in the United States, the program allows consumers to drop off Sony products at designated collection centers free of charge. In fiscal year 2014, these collection centers and through compliance channels collected approximately 23,853 tons (52,477,000 pounds) of used consumer electronics. SEL aims eventually to provide a collection center within 32km (20 miles) of the



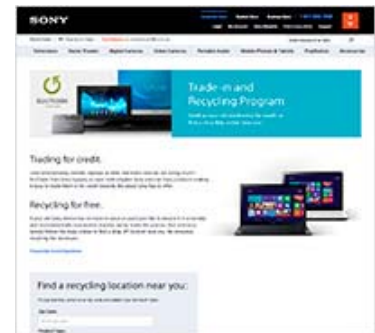
Sony Take Back Recycling Program collection activity (United States)



homes of 95% of the country's population. SEL in 2014 recycled 0.4Kg (0.9 pounds) for every 0.45Kg (1 pound) sold which is an improvement towards the goal of recycling the equivalent weight of recovered consumer electronics for every new product sold.

## Recycling Program Website

SEL provides a website through which consumers may search for the optimal method of returning and recycling used electronics products (including non-Sony products). The site enables consumers to learn about state specific recycling programs. It also includes various ways of bolstering the recycling rate, including a search function for the nearest take-back recycling center. For consumers whose closest center is more than 40km (25 miles) away, Sony products up to 11kg (25 pounds) are taken back by free-post and recycled free of charge.



Take back Recycling Program Website

As of March 2015, SEL has cumulatively collected approximately 158,128 tons (347 million pounds) of electronics equipment scrap, thereby contributing to reduced use of natural resources. In the future, through the site, SEL plans to promote higher rates of used electronics collection and conduct educational campaigns on appropriate recycling methods of used products.

## Sony Green Glove Program

SEL also conducts the Sony Green Glove program, whereby consumers purchasing a new 37" or larger LCD television from a direct retailer are eligible to have their old televisions removed and hauled away for recycling free of charge. This program was launched nationwide in November 2008. Used televisions thus collected are recycled in a cooperative effort involving SEL's logistics- and

environment-related departments and Sony Store, facilitating a low-cost sustainable service for customers. To date, a total of approximately 64 tons (140,800 pounds) of used electronics have been collected through this project.



A used television collected under this program

Consumers can drop off mobile phones, and rechargeable batteries can be dropped off for collection at direct retailers and participating kiosks. As a member of the Call2Recycle program\*, SEL recycles rechargeable batteries free of charge in line with Call2Recycle's recycling scheme.

\* Call2Recycle is a nonprofit public service organization that conducts and manages rechargeable battery recycling programs and provides related consulting services in the United States and Canada.

## Recycling Responsibly

In addition to conducting its own independent audits of recyclers and the downstream processing firms to which they subcontract, SEL has set forth a recycling policy whereby all recyclers it does business with must obtain Responsible Recycling (R2) or e-Stewards certification. R2 and e-Stewards are certification systems for recyclers organized in part by the U.S. Environmental Protection Agency (EPA) that evaluate such factors as environmental management performance and workplace environment. SEL participates in the EPA Sustainable Material Management program Electronics Challenge since its program inception.

## Canada

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### Working with Provincial Governments to Set Up Electronics Equipment Recycling Programs

Since first provincial program was launched in 2004, Sony of Canada Ltd. (Sony Canada) has worked with provincial governments\* to set up recycling programs for end-of-life electronics equipment.

In April 2008, Sony Canada expanded its recycling program for small electronics equipment across Canada, enabling consumers to take such products to any of its 14 direct retailers across the country for collection and recycling at no charge. Like its counterpart in the United States, Sony Canada also conducts the Sony Green Glove program. In 2014, Sony Canada increased its network of nonretail locations where it collects televisions and other large Sony electronics products for recycling free of charge 58. Since fiscal year 2008, Sony Canada has collected and recycled approximately 832 tons (1,831,000 pounds) of consumer electronics.



Recycling Activities  
(Canada)

In accordance with electronics recycling standards set forth by Electronics Product Stewardship Canada (EPSC), which prohibits the export of waste to countries not in the Organisation for Economic Co-operation and Development, Sony Canada conducts its own independent audits of recyclers and the downstream processing firms which they subcontract.

\* All provinces except New Brunswick, which is expected to begin within the year.

[Click here for more details on Sony Canada's website.](#)

## Environment

Updated on August 21, 2015

### Recycling Activities in Pan Asia

The operations of Sony in Pan Asia region stretch from Africa to New Zealand. Throughout the region, our offices and manufacturing locations continually work to ensure that the recycling needs of the local community are met. In terms of national electronic waste recycling legislation, India and Australia are two key countries where Sony actively works with local partners to ensure the local requirements are met.

#### India: Working with Local Partner to Collect and Recycle E-Waste

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In order to ensure compliance with local legislation, Sony India has partnered with a leading third party recycling company to provide recycling services for e-waste. In fiscal year 2014, Sony India has collected approximately 280 tons of e-waste, including generated service waste, through the recycling partner. Additionally, Sony India has focused on creating a broad network of e-waste collection points, thereby making it easier for customers to turn in their e-waste. As of the end of March 2015, 20 collection points across the country had been established. Sony India plans to review the results of this initiative at the end of its financial year and formulate future plans accordingly.

## Australia: First Manufacturer to Join DHL Supply Chain Recycling Scheme

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In March 2012, the DHL Supply Chain (Australia) Pty Limited recycling scheme was approved by the Australian Federal Government as the first scheme to recycle television and computer products in the country under the new e-waste legislation. As an advocate of recycling and the legislation, Sony Australia became the first manufacturer on board to use the DHL scheme for Sony's recycling. As part of the program, Sony had collected 1,095 tons between April 2014 and March 2015.

## Environment

Updated on August 21, 2015

### Recycling Activities in Latin America

Sony has offices in a number of Central and South American countries, including Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama and Peru. These offices operate recycling programs designed to meet the needs of their particular areas. Here we introduce a joint project operated throughout Latin America as well as representative examples of Sony commitment to recycling initiatives.

#### **Sony Joint Project in Central and South America: Green Service Program**

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Since 2010, Sony sales companies in Latin America—including Sony Mexico, Sony Panama, Sony Costa Rica, Sony Colombia, Sony Peru, Sony Chile and Sony Argentina—gradually launched the Green Service Program. During 2012 this program was expanded to Sony sales companies in Ecuador, Bolivia and Puerto Rico as well. Under this initiative, using participating companies' service networks, products and components that are under warranty but discarded during repair are appropriately treated. This program marks a shift in focus from simple disposal to the proper management and repair of products, helping Sony fulfill its responsibility to reduce the environmental impact of its products after they are sold and respond to the expectations of customers. In 2014, approximately 1,220 tons of scrap were collected and processed appropriately. Going forward, the companies will continue to implement the Green Service Program.

## Supporting the Electronic Waste Recycling Program "Live the Change (Vive el Cambio)"

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"Live the Change" (Vive el Cambio) is an environmental campaign operated by Sony Group companies in Latin America. This campaign is designed based on the Sony Stores retail platform, aiming for direct contact with customers, in an effort to educate them about the benefits of product recycling to ensure efficient use of precious natural resources, while at the same time actively collaborating with Sony on the new paradigm of "Circular Economy" for a sustainable future.



Logo of "Live the Change"  
(Spanish)

Launched on Earth Day in 2014, with a presence in 10 countries in Latin America and with a total of 109 collection points, the initiative is encouraging Sony customers to bring in their Sony Mobile phones and small Sony products for recycling. A total of about 3.2 tons of product have been collected, including approximately 18,000 small electronic products and nearly 4,000 cellular phones, as well as TVs and product accessories. This has allowed Sony to partner with local governments and NGOs to amplify our eco message by joining public campaigns and capturing the interest of local media and digital opinion leaders. More and more participants are being reached via Facebook, Twitter and Instagram, where the number of followers has topped 20,000 and the number of tweets and other contacts has hit 4 million.

## Recycling Used Mobile Phones

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Sony Mobile Communications AB (SOMC) has promoted the recycling of used mobile phones worldwide since the autumn of 2008. To this end, SOMC distributes detailed information on the collection and recycling of used mobile phones in 48 countries. In 25 of these countries, SOMC has set up its own voluntary collection system.

One SOMC best practice is a used mobile phone collection program in Latin America that has placed collection boxes in 109 service centers or stores in eight countries in the region. Going forward, SOMC intends to increase the number of participating countries. Similar programs are in place in other areas, including Russia, which uses collection boxes at service centers, and India, which asks customers to return used mobile phones in person. In the United States, France, Germany, Sweden, Spain, Poland and the UK, SOMC offers postage-paid collection for used mobile phones under the Xperia™ Care program.

[For more information visit SOMC's website, which features detailed information on recycling initiatives taken worldwide.](#)



## Environment

Updated on August 21, 2015

### Recycling Activities in China

#### **Compliance with Regulations on Recovery Processing of Waste Electrical and Electronic Products (China WEEE)**

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In January 2011, China enacted the Regulations on Recovery Processing Waste Electrical and Electronic Products. Popularly known as "China WEEE," the regulations that mandate the recycling of five types of products: televisions, refrigerators, washing machines, air conditioners and PCs. As a manufacturer of two of the products-televisions and PCs-Sony is affected by these regulations, which oblige manufacturers and importers to contribute to a fund that is used to cover the cost of processing of waste electrical and electronic products. In compliance with the regulations, Sony (China) Limited makes regular contributions to the fund.

#### **Sony (China) Spearheads Project to Recover and Recycle End-of-Life Broadcasting Equipment**

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Since August 2009, Sony (China) has promoted a project aimed at recovering and recycling end-of-life broadcasting equipment. Since the 1990s, Sony has sold broadcasting equipment in China, including U-matic video recording systems. Sony (China) collects end-of-life equipment directly from broadcasters free-of-charge and delivers them to a recycling company that specializes in commercial equipment, ensures they are dismantled and recycled appropriately. Sony (China) also submits a report on the recycling of these products to broadcasters. In addition, Sony (China) gives broadcasters free pass to attend lectures on HD

technology at Sony HD Academy according to the number of end-of-life broadcasting equipment it collects from them.

Through this project, Sony (China) aims to build a cooperative industry-wide circle of cooperation by getting individuals from across the broadcasting industry involved in environmental activities.

# Environment

Updated on August 21, 2015

## Links for Product Recycling in Each Country and Region

Please refer to the following websites for information on the recycling of Sony products in each region. This list includes links to third parties' websites.

### Japan

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[PC and Display Recycling in Japan \(Japanese only\)](#)

[TV Recycling in Japan \(Japanese only\)](#)

### Europe

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Austria, Denmark, Finland, France, Germany, Ireland, Italy, Norway, Poland, Portugal, Slovakia, Spain, United Kingdom

[ERP](#)

Belgium

[Recupel](#)

Bulgaria

[Eltechresource](#)

Czech Republic

[Asekol](#)

Greece

[Appliances Recycling SA](#)

Hungary

[Országos Hulladékgazdálkodási Ügynökség](#)

Netherlands

[ICT Milieu \(IT\)](#)

[Wecycle](#)

Romania

[Environ](#)

Slovenia

[Interseroh](#)

Sweden

[El Kretsen](#)

Switzerland

[SWICO](#)

## North America

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United States

[Trade-in and Recycling Program](#)

[Call2Recycle](#)

Canada

[Take Back and Recycling](#)

## Latin America

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Argentina, Colombia, Ecuador, Mexico, Peru

[Vive el Cambio](#)

Brazil

[Sony Brazil Batteries recycling plan](#)

Colombia

**EcoComputo**

Costa Rica

**ASEGIRE**

## **Pan Asia**

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India

**E-Waste Management**

# Environment

Updated on August 21, 2015

## Environmental Communication

Sony provides a wide variety of stakeholders with environmental information in an accurate, timely and continuous manner. Sony also holds events and participates in exhibitions with environmental themes and actively promotes environmental education with the aim of encouraging greater general awareness of environmental issues.

## Management of Risks Related to Chemical Substances

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As a company that uses chemical substances, Sony discloses information on emissions of such substances and exchanges views on safety and environmental issues with residents in the vicinity of its sites, as well as with local authorities, with the aim of reinforcing mutual understanding. For instance, Sony Semiconductor Corporation actively participates in local community events and organizes its own interactive events at all of its in-plant. The company also holds tours of its manufacturing plants, during which it explains to visitors how wastewater is processed by environmental-related equipment.

## Raising the Environmental Awareness of Employees

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Sony shares information on environmental issues with employees of the global Sony Group via a dedicated environmental website. Environmental education via e-learning is mandatory for all Group employees in Japan and has also been introduced at overseas sites. In addition, Sony presents its environmental

initiatives to employees at exhibitions and events held at sites across Japan. In addition, the president and other executives share information on environmental issues of importance to the Sony Group in regularly held executive meetings.

## Center Stage: Living Green, An Engagement Initiative That Unites Employees and Artists in a Green Ethos

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Center Stage: Living Green is an employee communication campaign that celebrates members of the Sony Music family who take steps to live a greener lifestyle. Topics have included participating in meatless Mondays,\* growing vegetables and raising backyard chickens, and reducing water consumption. In March 2015, the campaign recognized Global Citizen Earth Day 2015, highlighting the participation of Sony Music Entertainment artists Usher and Train, and challenged employees to join Sony Global Volunteer Day. Living Green will continue to encourage eco-conscious colleagues and artists alike to share their stories, promote achievable lifestyle choices, and foster a community of Green Living.



Logo of Center Stage: Living Green

\* Meatless Monday is an environmental initiative that encourages people to refrain from eating meat once per week. It arose in response to increased consumption of meat around the world in recent years, which has led to a number of problems including environmental destruction resulting from the cultivation of livestock feed and the release of the greenhouse gas methane from cattle, sheep, and other livestock.

## Taking Advantage of Sony Events to Raise Environmental Awareness

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In January 2015 at the Sony Open in Hawaii, a PGA Tour golf tournament held on the island of Oahu, Sony carried out an environmental initiative together with golf fans in the gallery and local residents. At the course where the tournament was held, Sony worked with a local NGO and student volunteers to set up 272 recycling boxes to collect used consumer electronic products. Sony also installed its own booth at the course, where it showcased its environmental initiatives and demonstrated an energy storage system using solar panels and a Sony electricity storage module.



Professional golfers participating in the tournament did their part to help recycling.

Meanwhile, all Sony Group companies in Latin America have been carrying out a program for recycling consumer electronic products called "Live the Change." As part of the program, they collaborated with municipal governments, NGOs, and expert associations to stage events aimed at raising awareness of the importance of recycling. Famous musicians from the region who are signed with Sony Music Entertainment helped to support the recycling program, helping to raise its profile and more quickly spread Sony's environmental message.

[For more information, please refer to "Diversified Sustainability at the Sony Open in Hawaii" \(Sony and the Environment\)](#)



# Environment

## Environmental Data

Introduction to the Environmental data of the entire Sony Group

[Environmental Data Collection Methods and Rationale](#)

[ISO14001 Certified Sites](#)

[Sony's Environmental Performance](#)

[Greenhouse Gas Emissions](#)

[Environmental Data for Sites](#)

[Emissions of Air and Water Pollutant \(Worldwide\)](#)

[Handling Volume of Chemical Substances](#)

[Environmental Data for Products](#)

[Product Recycling Data](#)

[Examples of Polyvinyl chloride \(PVC\) -free Products and Brominated Flame Retardant \(BFR\) -free Products](#)

[Environmental Cost](#)

[Independent Verification Report](#)

[History of Environmental Activities at Sony](#)

[Response to CDP\(Carbon Disclosure Project\) Investor by Sony Corporation](#)

# Environment

## Environmental Data Collection Methods and Rationale

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[Worldwide Data Collection System](#)

[Scope, Collection Period, and Accuracy of Compiled Data](#)

[Greenhouse Gas Index Data Collection Methods and Rationale](#)

[Resource Index Data Collection Methods and Rationale](#)

[Other Data Collection Methods and Rationale](#)

## Environment

Updated on August 21, 2015

### Worldwide Data Collection System

Sony uses a cloud-based data collection system to monitor and manage the progress of the environmental impact of all sites in the Sony Group. This system permits headquarters to collect data monthly from sites around the world.

Persons in charge at each site use the data collection system to input data concerning energy, water, waste, chemical substances and environmental costs, which is then checked and approved by supervisors. Regional data administrators for Japan/East Asia, North America, Latin America, Europe, Pan Asia and China regions also check the data. To ensure efficient collection and tabulation, in addition to checks at several points during the process, data checks are executed by the system at data input, thereby reducing the possibility of errors.

## Environment

Updated on August 21, 2015

### Scope, Collection Period, and Accuracy of Compiled Data

#### Collection period: April 1, 2014-March 31, 2015

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In principle, data for results was compiled in the period stated above. Estimates have been used, however, at some sites where the impact on overall results is deemed to be extremely minor.

#### Scope of data collection

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Site data: All ISO 14001-certified sites as of March 31, 2015

Among Sony Group consolidated sites, all manufacturing sites, distribution sites with 100 or more employees, and non-manufacturing sites with 1,000 or more employees are, in principle, expected to obtain ISO 14001 certification.

Product data: Data covers all products manufactured by the Sony Group and sold outside the Group. Accessories, semi-manufactured products and components are included. Weight data includes the weight of packaging materials.

## Data accuracy

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Site data: Chemical substance data and environmental cost data collected from certain sites may be slightly less accurate than other data.

Product data: Data for some semi-manufactured products, components, and some products produced and sold overseas may be slightly less accurate than other data.

## Environment

Updated on August 21, 2015

### Greenhouse Gas Index Data Collection Methods and Rationale

The greenhouse gas index is calculated as follows.

Greenhouse gas index

(1) Total greenhouse gas emissions from sites (calculated in terms of CO<sub>2</sub>) + (2) Total CO<sub>2</sub> emissions from product use + (3) Total CO<sub>2</sub> emissions from logistics - (4) Greenhouse gas emissions offset by greenhouse gas reduction activities

#### **(1) Total greenhouse gas emissions from sites**

---

Quantity of power, heat, and fuel usage and quantity of green house gases used for manufacturing process, within facility and others are collected.

##### **CO<sub>2</sub> emissions from energy consumption**

CO<sub>2</sub> emissions from energy consumption are calculated by multiplying the quantity of electrical power, heat and fuel (including fuel for motor vehicles, etc.) used at sites by the CO<sub>2</sub> conversion rate.

##### **Emissions of PFCs and other greenhouse gases**

Emissions of PFCs and other greenhouse gases are converted to CO<sub>2</sub> by multiplying greenhouse gas emissions from each site by global warming potentials.

Global warming potentials are based on the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

## CO2 Conversion Rates

### - Electricity

CO2 conversion rates of each country in fiscal year 2000 are used.

Japan: Rates provided by the Federation of Electric Power Companies in Japan

Countries other than Japan: Rates provided by the GHG Protocol\*

### - Fuel and Heat

Worldwide: Rates based on Japan's Law concerning the Promotion of the Measures to cope with Global Warming

\* Internationally accepted accounting and reporting standards for companies and other entities to report their greenhouse gas emissions, operated under the umbrella of the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI)

## Systems for Calculation, Reporting and Public Disclosure of Greenhouse Gas Emissions(Japanese only)

### GHG Protocol

## (2) Total CO2 emissions from product use

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CO2 emissions from product use are calculated by multiplying the quantity of electrical power consumed throughout the lifetime of products sold in the current fiscal year by the CO2 conversion rates. (In other words, it is not the actual quantity of CO2 emitted in the current fiscal year.) CO2 emissions from product use are calculated by the following equation.

$$\text{Sales} \times (\text{Operating power consumption} \times \text{Hours of operation per year} + \text{Power consumption during standby time} \times \text{Standby time per year}) \times \text{Years of product use} \times \text{CO2 conversion rate}$$

In theory, emissions during product use in the current fiscal year should be calculated from the total quantity of electrical power consumed by previously sold Sony products that are still in use by consumers in the current fiscal year. However, given the difficulty of determining how many previously sold Sony

products are still in use by consumers of the total number of Sony products sold to date, Sony uses the total quantity of electrical power consumed while in use over the lifetime of Sony products sold in the current fiscal year as an indicator for CO<sub>2</sub> emissions during use.

The hours of operation per year, standby time per year, and years of product use are calculated based on data obtained by various surveys. The same conversion rates as CO<sub>2</sub> emissions from sites for each country in fiscal year 2000 are used. However, as for the data up to fiscal year 2003 outside of Japan, the factors of the following countries are used according to the destination of the products. North America: United States Europe: Germany Other regions: Singapore

### **(3) Total CO<sub>2</sub> emissions from logistics**

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Total CO<sub>2</sub> emissions from logistics include emissions arising from international logistics and logistics within over 40 countries and regions such as Japan, the United States, Europe, and Asia associated with Sony Group's electronics products. For logistics within Japan, CO<sub>2</sub> emissions from parts logistics are partially included.

CO<sub>2</sub> emissions from logistics are primarily calculated by multiplying ton-kilometers transported (weight of goods transported x distance traveled) by the CO<sub>2</sub> conversion rate. In certain instances, CO<sub>2</sub> emissions arising from transport by truck are calculated by multiplying the amount of fuel used (fuel consumption per kilometer x number of kilometers traveled) by the CO<sub>2</sub> conversion rate.

For Japanese domestic transport by truck, CO<sub>2</sub> emissions calculations multiply the weight of freight transported by two factors: the amount of fuel used per unit of freight transported, as defined in the Law concerning the Rational Use of Energy, and the emissions factor of fuel type used, as defined by the Law concerning the Promotion of Measures to Cope with Global Warming. In the United States, calculations incorporate factors set forth by the U.S. Environmental Protection Agency (EPA) in the SmartWay Transport Partnership, while in Europe calculations incorporate factors set forth by the U.K. Department for Environment, Food and Rural Affairs (DEFRA).



For international logistics, CO<sub>2</sub> emissions are calculated by multiplying ton-kilometers transported (weight of goods transported x distance traveled) by CO<sub>2</sub> emissions per unit of production as proposed by the Greenhouse Gas Protocol (GHG Protocol). For international logistics involving transport by ship, the calculation uses the weight of goods transported including the weight of shipping containers.

## **CO<sub>2</sub> Emissions from Employee Business Trips**

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Emissions are calculated for business trips undertaken by employees in central departments, which account for the largest share of business trips taken by employees of Sony Corporation and Sony Group Electronics Business companies in Japan, Europe and North America and for business trips taken by employees from electronics-related companies in China. (In the case of Japan and North America, some music-related companies are included. Trips taken by employees from Sony Mobile Communications Inc. are excluded.)

CO<sub>2</sub> emissions are calculated by multiplying the distance traveled by the number of employees traveling using the basic unit of output proposed by the GHG Protocol.

## **(4) Greenhouse gas emissions offset by greenhouse gas reduction activities**

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Greenhouse gas emissions offset by greenhouse gas reduction activities primarily include electrical power produced from renewable energy sources, purchases of electrical power produced from renewable energy sources and CO<sub>2</sub> emission reductions realized through the purchase of power under the Green Power Certification System.

## Environment

Updated on August 21, 2015

### Resource Index Data Collection Methods and Rationale

The resource index is calculated as follows:

(1) Volume of waste landfilled from sites + (2) Product resource input – (3) Volume of reused/recycled materials – (4) Volume of resource recovery from end-of-life products

#### **(1) Volume of waste landfilled from sites**

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Of the waste generated at sites, the weight sent to landfill.

#### **(2) Product resource input**

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Total volume of resources used in products, accessories, manuals and packaging materials. Total weight of products shipped is used as a substitute.

#### **(3) Volume of reused/recycled materials**

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Total volume of reused/recycled materials and vegetable-based plastics used for products, accessories, manuals and packaging

#### **(4) Volume of resource recovery from end-of-life products**

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Volume of products collected from recycling multiplied by the reused/recycled ratio.

Volume of products collected from recycling is the weight of recycled products in Japan/East Asia, Europe, North America, Pan Asia, and Latin America.

Some amounts calculated based on the recycling expenses are included.

The reused/recycled ratio is the volume reused/recycled compared with the total volume collected. The amount of collected end-of-life products is substituted under the current situation.

# Environment

Updated on August 21, 2015

## Other Data Collection Methods and Rationale

### **(1) Volume of waste generated at sites**

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Total volume of industrial waste, non-industrial waste, valuables and materials sent for outsourced purification treatments at sites

### **(2) Substances to be treated by outsourcing purification**

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Materials generated as site waste and sent to an off-site contractor for elimination of contaminants for the purpose of reuse.

### **(3) Volume of chemical substances handled/emitted**

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Class 3 and Class 4 chemical substances for which the amount handled annually is 100kg(Class3)/1,000kg(Class4) or more are subject to reporting.

The volume of chemical substances handled represents the volume of chemical substances used at sites; purchase volume is substituted when exact volume of usage cannot be determined.

Volume of chemical substances released from sites in relation to their operation; calculations are based on purchase volume x distribution coefficient.

### **(4) Volume of water consumption/discharged**

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The volume of water consumption represents the total volume of water used at sites (public water, industrial water, groundwater); for public water and industrial water, purchase volume is substituted for the purpose of calculation.

The volume of water discharged represents the sum of discharges of water to waterways and to sewers. For Sony sites where it is not possible to accurately grasp actual discharge volume, a calculation based on the volume of water used x average per-site rate for volume of water discharged is substituted.

### **(5) Emissions of water pollutants (BOD, COD)**

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Concentrations in water emitted x volume of water emitted. Sites that are requested by law and/or by other demands such as contracts are subjected to this data collection.

### **(6) Emissions of air pollutants (NOx, SOx)**

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Volume calculated by multiplying emission volume by emission concentration, or by multiplying volume of fuel use by a coefficient. Sites that are requested by law and/or by other demands such as contracts are subjected to this data collection.

# Environment

## ISO14001 Certified Sites

Since the early 1990s, Sony sites throughout the world have sought certification under ISO14001 and this was achieved in early fiscal year 2002. In fiscal year 2003, Sony further developed this activity by implementing a Group-wide, globally integrated environmental management system. In fiscal year 2005, all Sony Group sites, including the Sony Group's headquarters, which represents the core of this management system, acquired integrated ISO14001\* certification in accordance with the fundamental requirements of this integrated management system.

\* ISO certification covers all Sony Group manufacturing sites, distribution sites with 100 or more employees and non-manufacturing sites with 1,000 or more employees.

## ISO14001 Certification Status

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### [List of ISO14001 Certification - Japan/East Asia Region](#)

(As of March 31, 2015)

### [List of ISO14001 Certification - Europe Region](#)

(As of March 31, 2015)

### [List of ISO14001 Certification - North America Region](#)

(As of March 31, 2015)

### [List of ISO14001 Certification - Latin America Region](#)

(As of March 31, 2015)

### [List of ISO14001 Certification - Pan Asia Region](#)

(As of March 31, 2015)

### [List of ISO14001 Certification - China Region](#)

(As of March 31, 2015)

## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - Japan/East Asia Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

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##### Headquarters/Business Unit

Name of Organization	Acquired (Global EMS)
Sony Corporation HQ Environmental Office	2004/06
Sony Corporation Video & Sound Business Group / Sony Visual Products Inc.	2004/09
Sony Corporation Imaging Products and Solutions Sector Professional Solutions Group	2004/09
Sony Corporation Devices Solutions Business Group	2004/10
Sony Corporation Imaging Products and Solutions Sector Digital Imaging Group	2005/01
Sony Computer Entertainment Inc.	2004/06
Sony Mobile Communications, Inc.	2005/01

### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony EMCS Corporation	2004/07	4
Sony Storage Media And Devices Corporation	2004/08	4
Sony Semiconductor Corporation	2004/10	7
Sony DADC Japan Inc.	2004/10	3
Sony Energy Devices Corporation	2004/10	3
Sony/Taiyo Corporation	2005/01	1
Sony Electronics of Korea Corporation	2005/04	2
Green Cycle Corporation	2013/02	1

### Non-Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Corporation Technology Center	2004/07	10
Sony PCL Inc.	2004/07	3
Sony LSI Design Inc.	2004/11	2
Sony Assurance Inc.	2004/12	1
Sony Music Group	2004/12	3
Sony Customer Service (Japan) Inc. Togane Technology Site	2004/12	1
Sony Supply Chain Solutions, Inc. Gotanda Office	2005/01	1
Sony Business Solutions Corporation	2005/02	8
Sony Life Insurance Co., Ltd	2005/05	4
Jared Inc.	2005/07	7
Sony Taiwan Ltd	2005/09	8
Sony Korea Corporation	2006/01	1
Frontage Inc.	2006/02	2
Sony Bank Inc.	2008/03	2
Sony Mobile Communications, Inc.	2015/01	2

### ISO14001 Certified Sites



## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - Europe Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

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##### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony DADC Austria AG	2004/10	2
Sony UK Technology Center	2005/06	1
Sony DADC UK Ltd, Southwater	2009/01	1

##### Non-Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony DADC Germany GmbH (Distribution Centre)	2011/05	1
Columbia Pictures Corporation Limited	2011/09	1
Sony DADC Entertainment Network Scandinavia AB	2011/10	1
Sony DADC France	2011/11	1
Sony DADC IBERIA S.L. (Distribution Centre)	2012/01	1
Sony Music Entertainment UK Limited	2012/03	1

Sony DADC Czech Republic, s.r.o.	2013/06	1
Sony DADC UK Ltd, Enfield Distribution Centre	2014/06	1

### ISO14001 Certified Sites

## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - North America Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

##### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Digital Audio Disc Corporation - Mexico S.A. de C.V.	2004/08	1
Sony Digital Audio Disc Corporation - Terre Haute	2005/03	1
Sony Service and Operations of America	2005/04	1
Sony Digital Audio Disc Corporation Brasil	2005/12	1

##### Non-Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Service and Operations of America (Distribution)	2005/04	1
Sony Digital Audio Disc Corporation Brasil (Distribution)	2005/12	1
Sony American Zone	2006/01	7

#### ISO14001 Certified Sites

## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - Latin America Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

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##### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Brasil Ltda.	2004/09	2

##### [ISO14001 Certified Sites](#)

## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - Pan Asia Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

##### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Technology (Thailand) Co., Ltd.	2004/10	1
Sony Electronics (Singapore) Pte. Ltd., Energy Technology Singapore (fka SDS)	2004/11	1
Sony DADC Australia Pty Limited	2004/12	1
Sony Device Technology (Thailand) Co., Ltd	2005/06	1
Sony EMCS (Malaysia) Sdn. Bhd. (KL Tec, PG Tec)	2005/09	3
Sony DADC (India) Pvt. Ltd.	2006/01	1

##### Non-Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
PT Sony Indonesia	2006/01	2
Sony India Pvt. Ltd.	2006/01	1
Sony India Software Centre Private Limited	2012/03	1
Sony Global Business Services, Inc	2014/11	1

#### ISO14001 Certified Sites

## Environment

Updated on August 21, 2015

### List of ISO14001 Certification - China Region

(As of March 31, 2015)

#### ISO14001 Global Environmental Management System (GEMS) Certification

##### Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony Digital Products (Wuxi) Co., LTD.	2004/09	1
Shanghai Suoguang Visual Products Co., Ltd.	2005/02	1
Sony Precision Devices (Huizhou) Co., Ltd.	2005/02	1
Sony Electronics (Wuxi) Co., Pte. Ltd.	2005/03	1
Shanghai Suoguang Electronics Co., Ltd.	2005/04	1
Sony DADC Hong Kong Limited	2006/01	1
Sony Electronics Huanan Co., Pte. Ltd.	2009/11	1
Shanghai Epic Music Entertainment Co., Ltd. Sony DADC China Co., Ltd.	2010/04	1
Beijing SE Potevio Mobile Communications Co., Ltd(*)	-	1

\* Stand alone certificate

## Non-Manufacturing Sites

Name of Organization	Acquired (Global EMS)	Number of sites
Sony (China) Limited. Sony Supply Chain Solutions (China) Ltd. Sony Global Information System (Dalian) Co., Ltd.	2005/03	9

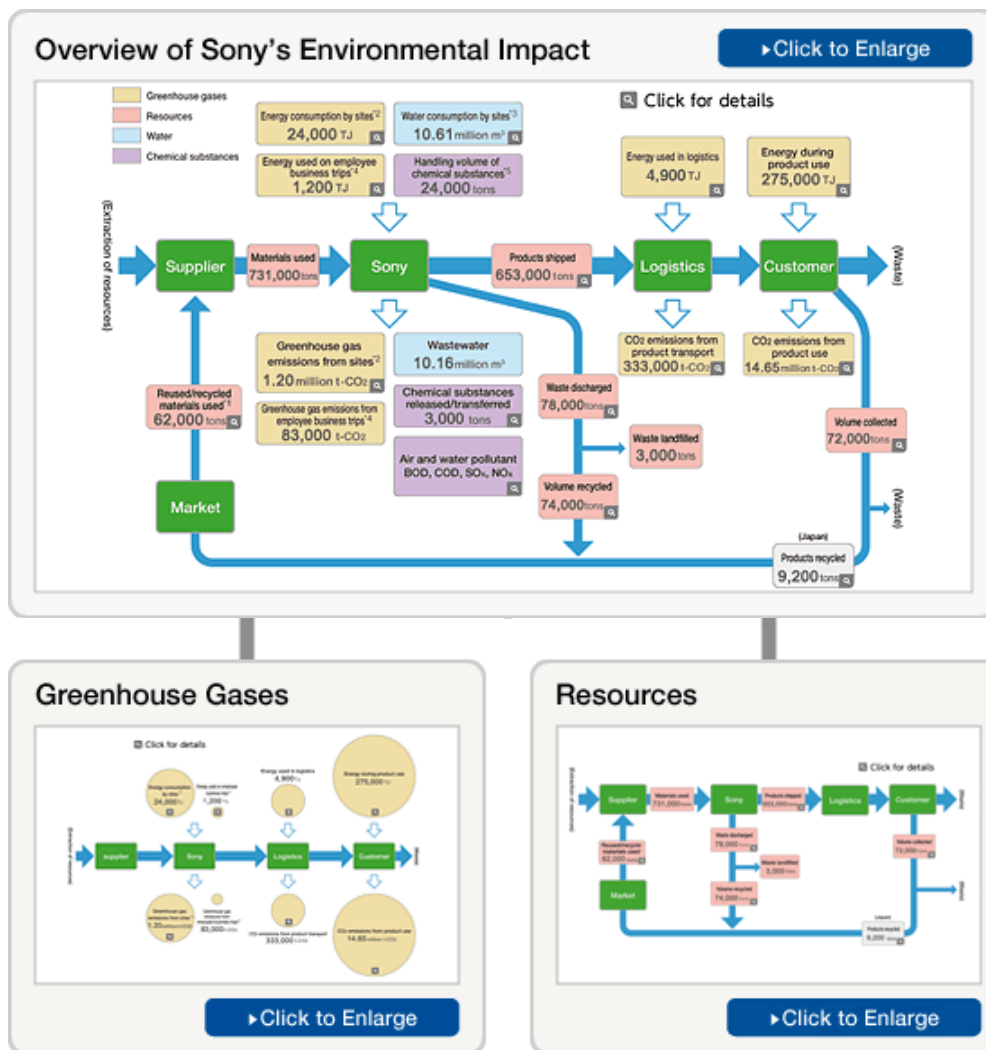
## ISO14001 Certified Sites

# Environment

Updated on August 21, 2015

## Sony's Environmental Performance

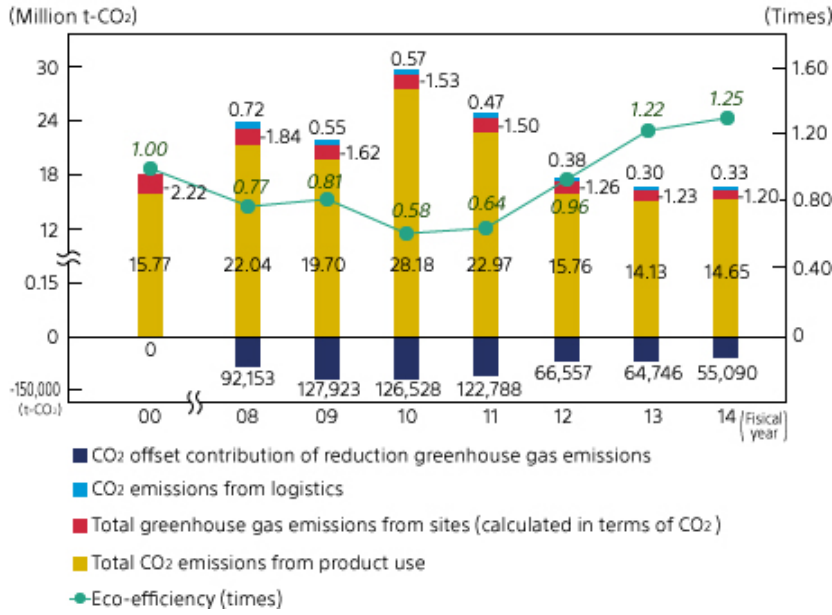
### Overview of Environmental Impact





## Eco-Efficiency

### Greenhouse Gas Efficiency



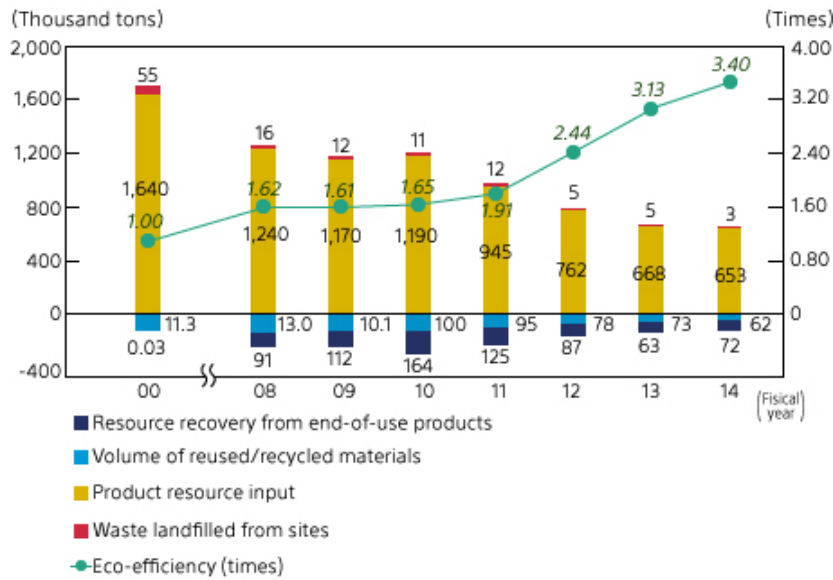
### Greenhouse Gas Efficiency

[Million t-CO<sub>2</sub>]

	Total greenhouse gas emissions from sites (Calculated in terms of CO <sub>2</sub> )	Total CO <sub>2</sub> emissions from product use	Total CO <sub>2</sub> emissions from logistics	Greenhouse gas emissions offset	Eco-Efficiency (times)
FY2000	2.22	15.77		0	1.00
FY2001	2.13	15.09		0.00075	1.08
FY2002	2.10	15.30		0.0026	1.06
FY2003	2.11	15.11		0.0068	1.07
FY2004	2.15	16.48		0.0065	0.95
FY2005	2.18	15.32		0.016	1.05
FY2006	2.03	17.83		0.013	0.97

FY2007	2.07	19.34		0.020	0.97
FY2008	1.84	22.04	0.72	0.092	0.77
FY2009	1.62	19.70	0.55	0.128	0.81
FY2010	1.53	28.18	0.57	0.127	0.58
FY2011	1.50	22.97	0.47	0.123	0.64
FY2012	1.26	15.76	0.38	0.067	0.96
FY2013	1.23	14.13	0.30	0.065	1.22
FY2014	1.20	14.65	0.33	0.055	1.25

**Resource Efficiency**



## Resource Efficiency

[Thousand ton]

	Waste landfilled from sites	Volume of product resource input	Volume of reused/ recycled materials	Resource recovery from end-of-life products	Resource macro indicator	Eco- Efficiency (times)
FY2000	55	1,640	113	0	1,581	1.00
FY2001	45	1,500	97	10	1,443	1.14
FY2002	37	1,460	114	14	1,367	1.18
FY2003	18	1,450	110	15	1,338	1.21
FY2004	26	1,430	162	17	1,280	1.21
FY2005	23	1,250	134	30	1,113	1.45
FY2006	20	1,230	129	36	1,087	1.65
FY2007	17	1,230	131	68	1,084	1.77
FY2008	16	1,240	130	91	1,034	1.62
FY2009	12	1,170	101	112	967	1.61
FY2010	11	1,190	100	164	940	1.65
FY2011	12	945	95	125	736	1.91
FY2012	5	762	78	87	603	2.44
FY2013	5	668	73	63	537	3.13
FY2014	3	653	62	72	523	3.40

## Environment

Updated on August 21, 2015

### Greenhouse Gas Emissions

#### Greenhouse Gas Emissions from Sites

	(Unit: t-CO <sub>2</sub> )	(Unit: t-CO <sub>2</sub> )	(Unit: t-CO <sub>2</sub> )	(Unit: t-CO <sub>2</sub> /million yen)
	total greenhouse gas emissions	greenhouse gas emissions offset*	the emissions from which greenhouse gas emissions offset is subtracted	Emissions divided by consolidated sales(Emission Intensity)
Fiscal 2000	2,218,026	0	2,218,026	0.303
Fiscal 2001	2,127,425	748	2,126,677	0.281
Fiscal 2002	2,101,783	2,570	2,099,213	0.280
Fiscal 2003	2,120,414	6,837	2,113,577	0.281
Fiscal 2004	2,151,875	6,469	2,145,406	0.298
Fiscal 2005	2,195,959	15,715	2,180,244	0.290
Fiscal 2006	2,041,080	12,984	2,028,096	0.244

Fiscal 2007	2,091,963	20,008	2,071,955	0.234
Fiscal 2008	1,928,847	92,153	1,836,694	0.238
Fiscal 2009	1,745,217	127,923	1,617,294	0.224
Fiscal 2010	1,653,011	126,528	1,526,483	0.213
Fiscal 2011	1,623,664	122,746	1,500,918	0.231
Fiscal 2012	1,328,193	66,548	1,261,645	0.186
Fiscal 2013	1,295,817	64,746	1,231,071	0.158
Fiscal 2014	1,253,641	55,090	1,198,551	0.146

\* CO<sub>2</sub> emissions offset by means that include power generation by renewable energy, purchasing of electricity generated by renewable energy, and purchasing of renewable energy certificates. Figures are calculated by multiplying CO<sub>2</sub> conversion rate by power generation (kWh) or quantity of purchase (kWh).

## Emissions by Business Category in Fiscal 2014

(Unit: t-CO<sub>2</sub>)

Electronics	Other than Electronics			
	Music	Movie	Finance	Others
1,141,716	4,836	38,652	1,341	12,230

## Scope 1 (Direct Emissions from Sites)

(Unit: t-CO<sub>2</sub>)

	Greenhouse Gas Emissions						CO <sub>2</sub> Emissions from Energy Use	Total
	HFCs	PFCs	SF <sub>6</sub>	NF <sub>3</sub>	Other	Total		
Fiscal 2000	7,823	242,580	51,947	2,780	235	305,365	586,121	891,486
Fiscal 2001	6,553	206,780	43,118	8,669	443	265,563	542,291	807,854
Fiscal 2002	6,754	150,996	39,351	5,988	1,131	204,220	532,942	737,162
Fiscal 2003	4,275	130,464	45,481	7,833	6,634	194,687	522,212	716,899
Fiscal 2004	5,619	150,298	58,163	15,637	6,931	236,648	480,397	717,045
Fiscal 2005	4,492	150,928	62,099	11,490	8,864	237,873	439,993	677,866
Fiscal 2006	4,915	121,073	53,725	14,025	16,381	210,119	334,938	545,057
Fiscal 2007	4,872	127,328	49,053	15,221	52,469	248,943	276,848	525,791
Fiscal 2008	7,898	119,596	47,117	14,971	20,793	210,374	254,379	464,753
Fiscal 2009	6,817	64,063	30,210	12,049	10,831	123,970	246,080	370,050
Fiscal 2010	3,470	70,364	47,896	15,025	13,640	150,396	212,233	362,629
Fiscal 2011	3,412	49,489	43,989	19,049	23,453	139,392	214,067	353,459
Fiscal 2012	2,861	45,300	36,778	16,021	27,715	128,674	172,547	301,221

Fiscal 2013	5,692	43,025	43,838	20,144	26,811	139,510	164,734	304,244
Fiscal 2014	3,980	44,582	44,889	26,324	26,144	145,918	143,503	289,420

## Scope 2 (Indirect Emissions from Sites)

(Unit: t-CO<sub>2</sub>)

	Purchased Electricity		Purchased Heat	Total	
	total greenhouse gas emissions	the emissions from which greenhouse gas emissions offset is subtracted		total greenhouse gas emissions	the emissions from which greenhouse gas emissions offset is subtracted
FY2000		1,325,478	1,061	1,061	1,326,539
FY2001		1,317,742	1,081		1,318,823
FY2002		1,360,856	1,195		1,362,051
FY2003		1,393,452	3,226		1,396,678
FY2004		1,423,706	4,656		1,428,362
FY2005		1,496,083	6,295		1,502,378
FY2006		1,467,183	22,173		1,489,356
FY2007		1,515,172	30,991		1,546,163
FY2008		1,342,423	29,518		1,371,941
FY2009		1,221,392	25,853		1,247,245
FY2010	1,267,240	1,141,048	23,143	1,290,383	1,164,191
FY2011	1,240,416	1,118,110	29,789	1,270,205	1,147,899
FY2012	980,626	914,350	46,347	1,026,973	960,697
FY2013	958,647	894,154	32,926	991,574	927,081
FY2014	934,949	879,858	29,272	964,221	909,130

## Scope 3 Emissions in Fiscal 2014 (Other Emissions)

Category		Emissions (t-CO <sub>2</sub> )	Overview of calculation
1	Purchased goods and services	5,832,000	Emissions associated with raw materials and parts for use in electronics products sold by and the goods purchased by the Sony Group, from the extraction of resources through to production, as well as emissions related to certain data center use.
2	Capital goods	547,000	Emissions associated with the production of capital goods invested in by the Sony Group.
3	Fuel- and energy-related activities (not included in scope 1 or scope 2)	101,000	Emissions associated with procurement of fuels and energy consumed by Sony Group sites.
4	Upstream transportation and distribution	365,000	Emissions associated with the transportation and storage of electronics products sold by the Sony Group and purchased parts.
5	Waste generated in operations	47,000	Emissions associated with the treatment and disposal of waste generated by Sony Group sites.
6	Business travel	83,000	Emissions associated with travel (by air) for business purposes by Sony Group electronics group companies employees in Japan, Europe, North America and China.(excluding Sony Mobile Communications)



7	Employee commuting	116,000	Emissions associated with employees' commutes from their homes to their workplace.
8	Upstream leased assets	-	Not applicable (accounted for in other categories)
9	Downstream transportation and distribution	3,000	Emissions associated with the distribution of electronics products sold by the Sony Group from retailers to consumers.
10	Processing of sold products	3,000	Emissions associated with the assumed post-sale third-party processing of electronics products sold by the Sony Group.
11	Use of sold products	14,646,000	Emissions associated with the consumption of electricity over their lifetime by electronics products sold by the Sony Group.
12	End-of-life treatment of sold products	300,000	Emissions associated with the assumed end-of-life recycling or disposal of electronics products sold by the Sony Group.
13	Downstream leased assets	-	Not applicable
14	Franchises	-	Not applicable
15	Investments	19,000	Emissions associated with the business activities of companies in which the Sony Group has invested.

# Environment

## Environmental Data for Sites

[Environmental Data for Sites \(Worldwide\)](#)

[Environmental Data for Sites \(Japan / East Asia region\)](#)

[Environmental Data for Sites \(North America region\)](#)

[Environmental Data for Sites \(Latin America region\)](#)

[Environmental Data for Sites \(Europe region\)](#)

[Environmental Data for Sites \(Pan Asia region\)](#)

[Environmental Data for Sites \(China region\)](#)

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (Worldwide)

#### Energy (Unit:t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	1,325,478	312,151	240,770	34,261	1,912,660
Fiscal 2001	1,317,742	275,016	234,095	34,261	1,861,114
Fiscal 2002	1,360,856	334,793	165,083	34,261	1,894,993
Fiscal 2003	1,393,452	326,985	161,859	36,594	1,918,889
Fiscal 2004	1,423,706	301,464	149,299	34,290	1,908,759
Fiscal 2005	1,496,083	285,848	125,247	35,193	1,942,371
Fiscal 2006	1,467,183	238,798	83,466	34,847	1,824,295
Fiscal 2007	1,515,172	209,680	56,823	41,336	1,823,011
Fiscal 2008	1,342,423	189,150	56,057	38,690	1,626,320
Fiscal 2009	1,221,392	185,514	44,167	42,252	1,493,325
Fiscal 2010	1,141,048	171,358	31,086	32,932	1,376,424

Fiscal 2011	1,118,110	167,044	42,333	34,479	1,361,966
Fiscal 2012	914,350	111,189	36,023	25,334	1,086,897
Fiscal 2013	894,154	111,319	28,660	24,755	1,058,888
Fiscal 2014	880,083	101,966	22,695	18,842	1,023,586

\* Electricity consumption is calculated based on the CO2 conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

**Water (Unit: m<sup>3</sup>)**

	Water consumption	Water discharge
Fiscal 2000	26,883,710	
Fiscal 2001	24,381,288	
Fiscal 2002	24,627,784	
Fiscal 2003	21,438,431	
Fiscal 2004	22,943,862	
Fiscal 2005	23,705,314	
Fiscal 2006	22,345,200	15,287,388

Fiscal 2007	21,287,613	16,501,885
Fiscal 2008	18,186,286	16,817,247
Fiscal 2009	15,204,523	14,285,398
Fiscal 2010	15,726,486	13,631,873
Fiscal 2011	16,728,666	15,157,421
Fiscal 2012	12,073,829	11,418,107
Fiscal 2013	11,001,944	10,451,845
Fiscal 2014	10,605,162	10,161,756

\* Effective from fiscal 2003, water used represents the volume of water used less contribution to water conservation (water cultivation).

\* Amount of water used is subtracted from amount of water consumed after fiscal 2000 and onward.

Amount of water used is of water directly taken from the source for the purpose of heat exchange and is returned to the same source. The amount of such water used is subtracted from the "amount of water consumed" since water is not polluted and amount of water neither increases nor decreases from this process.

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled	Waste weight reduced
Fiscal 2000	281,450	226,046	55,404	
Fiscal 2001	257,769	212,630	45,141	
Fiscal 2002	223,726	186,528	37,198	

Fiscal 2003	224,166	195,156	29,010	
Fiscal 2004	214,807	189,197	25,610	
Fiscal 2005	213,120	189,893	23,377	
Fiscal 2006	193,120	173,066	20,055	
Fiscal 2007	191,582	174,768	16,814	
Fiscal 2008	168,160	152,454	15,706	
Fiscal 2009	147,371	134,909	12,461	
Fiscal 2010	128,124	117,175	10,949	
Fiscal 2011	115,596	104,073	11,523	
Fiscal 2012	84,586	78,933	5,455	199
Fiscal 2013	79,871	75,069	4,695	106
Fiscal 2014	77,575	74,206	3,298	71

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

\* Since FY2012, waste weight reduced due to measures including incineration is subtracted from the amount of waste landfilled.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000	3.9	703	17,042	27,490	45,239

Fiscal 2001	0.35	468	19,221	26,627	46,315
Fiscal 2002	0.37	203	16,292	43,408	59,904
Fiscal 2003	0.71	177	14,412	36,013	50,604
Fiscal 2004	0.67	85	15,594	28,460	44,140
Fiscal 2005	0.61	20	16,083	28,895	44,998
Fiscal 2006	1.91	0	10,215	37,674	47,891
Fiscal 2007	1.84	0	24,932	37,279	62,213
Fiscal 2008	1.60	0	9,163	30,995	40,159
Fiscal 2009	1.20	0	7,370	41,839	49,210
Fiscal 2010	5.25	0	8,019	59,949	67,973
Fiscal 2011	0.71	1,003	17,691	65,580	84,275
Fiscal 2012	1.23	913	12,462	33,778	47,154
Fiscal 2013	1.39	964	12,685	30,071	43,720
Fiscal 2014	1.17	1,027	13,403	29,085	43,516

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

## Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (Japan / East Asia region)

Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	596,848	139,828	190,680	7,556	927,355
Fiscal 2001	628,628	130,598	176,099	7,556	935,324
Fiscal 2002	661,642	134,177	137,168	7,556	940,543
Fiscal 2003	696,061	129,054	148,726	7,952	981,793
Fiscal 2004	717,417	92,605	138,267	7,819	956,108
Fiscal 2005	772,465	98,398	116,936	6,062	993,861
Fiscal 2006	828,487	119,805	78,447	2,501	1,029,240
Fiscal 2007	865,003	129,068	52,068	7,503	1,053,642
Fiscal 2008	805,517	121,779	51,586	7,860	986,742
Fiscal 2009	729,831	117,166	42,786	7,119	896,903
Fiscal 2010	707,116	111,316	30,567	6,918	855,917



Fiscal 2011	726,178	110,214	38,063	6,487	880,943
Fiscal 2012	582,073	77,965	35,078	4,140	699,256
Fiscal 2013	547,206	73,487	27,260	3,651	651,604
Fiscal 2014	528,721	73,502	22,018	2,537	626,777

\* Electricity consumption is calculated based on the CO2 conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

**Water (Unit: m<sup>3</sup>)**

	Water consumption	Water discharge
Fiscal 2000	14,117,409	
Fiscal 2001	14,257,885	
Fiscal 2002	14,279,835	
Fiscal 2003	13,027,101	
Fiscal 2004	14,880,167	
Fiscal 2005	16,175,227	
Fiscal 2006	14,709,548	11,398,578

Fiscal 2007	14,484,305	12,649,224
Fiscal 2008	12,749,799	12,095,146
Fiscal 2009	11,030,734	10,844,237
Fiscal 2010	12,031,106	10,654,861
Fiscal 2011	12,499,642	11,623,179
Fiscal 2012	9,154,454	9,022,644
Fiscal 2013	8,125,495	8,200,485
Fiscal 2014	7,990,699	8,023,153

\* Effective from fiscal 2003, water used represents the volume of water used less contribution to water conservation (water cultivation).

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled	Waste weight reduced
Fiscal 2000	116,815	108,399	8,416	
Fiscal 2001	116,305	112,215	4,090	
Fiscal 2002	91,055	88,041	3,014	
Fiscal 2003	92,554	89,916	2,638	
Fiscal 2004	82,269	80,584	1,685	

Fiscal 2005	80,449	78,502	1,947	
Fiscal 2006	72,759	70,827	1,933	
Fiscal 2007	74,596	73,404	1,192	
Fiscal 2008	64,055	62,892	1,163	
Fiscal 2009	54,382	53,456	926	
Fiscal 2010	53,337	52,406	932	
Fiscal 2011	51,472	50,495	977	
Fiscal 2012	36,096	35,759	139	199
Fiscal 2013	35,712	35,541	65	106
Fiscal 2014	33,406	33,268	67	71

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

\* Since FY2012, waste weight reduced due to measures including incineration is subtracted from the amount of waste landfilled.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000	3.85	146	6,832	13,924	20,906
Fiscal 2001	0.26	66	7,116	17,663	24,845

Fiscal 2002	0.35	61	6,078	27,446	33,584
Fiscal 2003	0.70	37	6,745	28,928	35,711
Fiscal 2004	0.67	27	6,780	21,460	28,267
Fiscal 2005	0.61	17	7,629	23,788	31,435
Fiscal 2006	1.88	0	7,414	32,650	40,066
Fiscal 2007	1.79	0	21,211	33,403	54,616
Fiscal 2008	1.60	0	7,250	28,265	35,517
Fiscal 2009	1.20	0	5,465	39,463	44,930
Fiscal 2010	5.25	0	6,219	57,530	63,754
Fiscal 2011	0.58	859	14,538	53,115	68,513
Fiscal 2012	0.23	729	10,557	22,938	34,224
Fiscal 2013	0.10	668	10,283	19,683	30,634
Fiscal 2014	0.04	665	10,634	16,007	27,306

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

\* Japan / East Asia region: Japan, Taiwan Region and South Korea

## Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (North America region)

Since fiscal year 2009, North America and Latin America, which are part of the Americas region, have been managed separately. Data prior to fiscal 2009 show the sum of North America's and Latin America's data.

#### Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	403,204	108,780	407	4,274	512,391
Fiscal 2001	377,713	84,722	4,160	4,274	466,596
Fiscal 2002	402,200	130,579	16	4,274	537,069
Fiscal 2003	373,939	131,959	1,392	1,731	509,021
Fiscal 2004	360,260	131,316	2,164	1,379	495,119
Fiscal 2005	372,722	133,029	1,224	1,520	508,495
Fiscal 2006	278,572	40,478	77	3,018	322,145
Fiscal 2007	269,101	31,169	50	5,975	306,295
Fiscal 2008	244,326	28,854	58	4,553	277,791

Fiscal 2009	193,316	30,750	167	9,784	234,018
Fiscal 2010	137,496	20,312	182	5,865	163,855
Fiscal 2011	100,399	18,872	352	8,237	127,860
Fiscal 2012	99,374	21,853	20	7,786	129,033
Fiscal 2013	98,170	23,658	20	8,217	130,065
Fiscal 2014	96,141	19,142	15	6,564	121,863

\* Electricity consumption is calculated based on the CO2 conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

**Water (Unit: m<sup>3</sup>)**

	Water consumption	Water discharge
Fiscal 2000	5,786,088	
Fiscal 2001	5,275,979	
Fiscal 2002	5,549,278	
Fiscal 2003	4,301,028	
Fiscal 2004	3,587,359	

Fiscal 2005	3,347,347	
Fiscal 2006	2,687,557	580,313
Fiscal 2007	2,609,021	501,570
Fiscal 2008	1,588,178	1,336,592
Fiscal 2009	1,144,837	890,192
Fiscal 2010	888,375	713,410
Fiscal 2011	772,107	704,393
Fiscal 2012	720,029	653,663
Fiscal 2013	688,257	602,098
Fiscal 2014	612,511	556,207

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled
Fiscal 2000	97,958	71,042	26,916
Fiscal 2001	83,125	58,517	24,608
Fiscal 2002	77,430	57,355	20,075
Fiscal 2003	75,841	62,101	13,740

Fiscal 2004	75,593	64,508	11,085
Fiscal 2005	79,881	67,783	12,256
Fiscal 2006	66,268	54,688	11,580
Fiscal 2007	52,964	44,464	8,500
Fiscal 2008	42,655	36,310	6,345
Fiscal 2009	35,804	31,078	4,726
Fiscal 2010	23,642	20,608	3,034
Fiscal 2011	19,872	17,904	1,968
Fiscal 2012	14,740	13,500	1,241
Fiscal 2013	11,616	10,751	865
Fiscal 2014	12,397	11,601	795

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000	0.05	112	8,875	10,375	19,362
Fiscal 2001	0.09	36	10,760	6,041	16,837



Fiscal 2002	0.01	67	9,136	14,552	23,755
Fiscal 2003	0.01	74	6,856	5,556	12,486
Fiscal 2004	0	46	7,975	4,510	12,531
Fiscal 2005	0	0	7,477	2,779	10,256
Fiscal 2006	0	0	2,561	2,287	4,847
Fiscal 2007	0	0	2,865	688	3,552
Fiscal 2008	0	0	1,101	384	1,485
Fiscal 2009	0	0	364	311	675
Fiscal 2010	0	0	145	400	545
Fiscal 2011	0	19	124	268	412
Fiscal 2012	0	12	115	204	331
Fiscal 2013	0	10	115	199	324
Fiscal 2014	0	10	68	85	164

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

## Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (Latin America region)

Since fiscal year 2009, North America and Latin America, which are part of the Americas region, have been managed separately. This page shows data for Latin American region since fiscal 2009.

#### Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2009	2,080	247	0	85	2,411
Fiscal 2010	2,540	362	69	190	3,161
Fiscal 2011	2,805	333	79	729	3,946
Fiscal 2012	1,451	61	48	40	1,599
Fiscal 2013	1,408	0	39	33	1,481
Fiscal 2014	841	0	65	33	939

\* Electricity consumption is calculated based on the CO<sub>2</sub> conversion rate used in the countries in which Sony sites are located in fiscal 2000.

Water (Unit: m<sup>3</sup>)

	Water consumption	Water discharge
Fiscal 2009	54,310	46,164
Fiscal 2010	97,163	82,589
Fiscal 2011	64,392	54,733
Fiscal 2012	45,036	38,281
Fiscal 2013	46,197	36,958
Fiscal 2014	30,198	26,016

## Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled
Fiscal 2009	2,442	2,171	271
Fiscal 2010	5,555	3,716	1,839
Fiscal 2011	7,549	4,684	2,864
Fiscal 2012	6,057	5,311	746
Fiscal 2013	4,949	4,916	33
Fiscal 2014	2,676	2,653	23

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

## Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2009	0	0	0	0	0
Fiscal 2010	0	0	11	0	11
Fiscal 2011	0	0	9	0	9
Fiscal 2012	0	43	23	0	67
Fiscal 2013	0	24	6	0.02	29
Fiscal 2014	0	0.12	2	0.003	2

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

### Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (Europe region)

Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	92,008	32,954	7,633	8,313	132,595
Fiscal 2001	82,186	35,175	4,619	8,313	121,981
Fiscal 2002	78,154	46,644	6,048	8,313	139,160
Fiscal 2003	85,687	39,217	5,760	11,041	141,705
Fiscal 2004	79,368	50,758	5,944	12,079	148,149
Fiscal 2005	54,672	30,640	5,299	10,739	101,350
Fiscal 2006	37,473	12,212	4,805	9,228	63,718
Fiscal 2007	35,039	11,729	4,653	9,906	61,327
Fiscal 2008	117	9,212	4,386	9,434	23,149
Fiscal 2009	0	8,720	13	8,787	17,519
Fiscal 2010	0	7,475	137	7,150	14,762

Fiscal 2011	0	6,019	260	6,570	12,849
Fiscal 2012	0	1,752	501	689	2,942
Fiscal 2013	0	1,533	481	615	2,629
Fiscal 2014	0	1,313	377	318	2,008

\* Electricity consumption is calculated based on the CO2 conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

**Water (Unit: m<sup>3</sup>)**

	Water consumption	Water discharg
Fiscal 2000	2,052,375	
Fiscal 2001	1,161,808	
Fiscal 2002	1,010,868	
Fiscal 2003	1,159,588	
Fiscal 2004	1,075,356	
Fiscal 2005	574,234	
Fiscal 2006	311,957	133,828

Fiscal 2007	305,479	130,326
Fiscal 2008	292,069	260,126
Fiscal 2009	233,650	187,703
Fiscal 2010	163,140	130,515
Fiscal 2011	132,005	120,352
Fiscal 2012	73,829	68,085
Fiscal 2013	61,438	48,850
Fiscal 2014	56,346	51,058

\* Amount of water used is subtracted from amount of water consumed after fiscal 2000 and onward.

\* Amount of water used is of water directly taken from the source for the purpose of heat exchange and is returned to the same source. The amount of such water used is subtracted from the "amount of water consumed" since water is not polluted and amount of water neither increases nor decreases from this process.

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled
Fiscal 2000	32,176	24,327	7,849
Fiscal 2001	26,558	19,983	6,575
Fiscal 2002	30,360	23,007	7,353

Fiscal 2003	29,415	24,004	5,411
Fiscal 2004	30,957	26,079	4,878
Fiscal 2005	27,938	23,851	4,087
Fiscal 2006	30,579	28,287	2,291
Fiscal 2007	34,381	32,964	1,416
Fiscal 2008	36,679	35,663	1,016
Fiscal 2009	25,630	24,943	688
Fiscal 2010	15,994	15,639	355
Fiscal 2011	7,004	6,792	213
Fiscal 2012	5,163	5,074	90
Fiscal 2013	5,501	5,354	146
Fiscal 2014	5,602	5,521	82

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000	0	127	699	490	1,317



Fiscal 2001	0	48	689	253	990
Fiscal 2002	0	27	466	745	1,238
Fiscal 2003	0	4	360	872	1,236
Fiscal 2004	0	1	304	1,162	1,467
Fiscal 2005	0	1	383	620	1,004
Fiscal 2006	0	0	80	241	320
Fiscal 2007	0	0	86	312	398
Fiscal 2008	0.01	0	65	294	359
Fiscal 2009	0	0	40	318	358
Fiscal 2010	0	0	38	259	297
Fiscal 2011	0	10	1,156	10,033	11,199
Fiscal 2012	0.001	7	107	8,958	9,071
Fiscal 2013	0.08	4	120	7,974	8,098
Fiscal 2014	0	3	121	7,239	7,364

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

### Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (Pan Asia region)

Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	197,365	24,842	30,336	13,267	252,542
Fiscal 2001	194,095	20,406	39,855	13,267	254,356
Fiscal 2002	179,725	17,287	10,573	13,267	220,852
Fiscal 2003	183,478	16,101	3,438	13,580	216,598
Fiscal 2004	181,220	16,102	2,788	11,634	211,744
Fiscal 2005	189,803	14,580	1,171	15,322	220,877
Fiscal 2006	190,365	13,771	131	15,352	219,619
Fiscal 2007	192,352	9,449	46	16,644	218,491
Fiscal 2008	149,340	3,107	15	13,720	166,183
Fiscal 2009	145,457	3,218	1,196	13,528	163,398
Fiscal 2010	137,726	3,152	121	10,093	151,093

Fiscal 2011	110,793	3,200	1,259	9,872	125,124
Fiscal 2012	81,483	3,422	82	9,505	94,491
Fiscal 2013	84,972	3,740	68	9,106	97,886
Fiscal 2014	85,337	4,946	86	6,584	96,954

\* Electricity consumption is calculated based on the CO<sub>2</sub> conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

#### Water (Unit: m<sup>3</sup>)

	Water consumption	Water discharge
Fiscal 2000	4,927,838	
Fiscal 2001	2,317,156	
Fiscal 2002	1,883,386	
Fiscal 2003	1,544,897	
Fiscal 2004	1,647,736	
Fiscal 2005	1,706,043	
Fiscal 2006	1,749,326	1,417,563

Fiscal 2007	1,868,089	1,403,573
Fiscal 2008	1,592,292	1,328,884
Fiscal 2009	1,455,200	1,212,427
Fiscal 2010	1,448,098	1,190,619
Fiscal 2011	1,258,339	1,055,108
Fiscal 2012	1,016,419	844,036
Fiscal 2013	961,082	777,482
Fiscal 2014	897,091	753,425

\* Fiscal 2000 data includes China region's data.

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled
Fiscal 2000	34,502	22,279	12,222
Fiscal 2001	27,830	18,467	9,364
Fiscal 2002	20,744	14,868	5,877
Fiscal 2003	21,640	17,023	4,617
Fiscal 2004	18,973	15,007	3,965

Fiscal 2005	17,328	14,597	2,730
Fiscal 2006	15,668	12,420	3,248
Fiscal 2007	19,539	15,970	3,569
Fiscal 2008	14,613	10,692	3,920
Fiscal 2009	19,610	16,223	3,387
Fiscal 2010	20,564	16,276	4,288
Fiscal 2011	17,974	14,446	3,528
Fiscal 2012	12,901	10,732	2,169
Fiscal 2013	11,926	9,871	2,055
Fiscal 2014	12,066	10,859	1,208

\* Fiscal 2000 data includes China region's data.

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000	0	318	636	2,701	3,655
Fiscal 2001	0	276	619	1,435	2,330

Fiscal 2002	0	29	577	311	917
Fiscal 2003	0	25	424	249	698
Fiscal 2004	0	8	457	232	697
Fiscal 2005	0	2	439	166	607
Fiscal 2006	0	0	150	388	538
Fiscal 2007	0	0	157	244	401
Fiscal 2008	0	0	119	130	250
Fiscal 2009	0	0	111	37	148
Fiscal 2010	0	0	106	35	141
Fiscal 2011	0	2	324	13	339
Fiscal 2012	1	11	536	14	563
Fiscal 2013	1	106	566	83	756
Fiscal 2014	1	214	983	140	1,338

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

\* Pan asia region: Southeast Asia, Middle East, Africa and Oceania

## Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Environmental Data for Sites (China region)

Energy (Unit: t-CO<sub>2</sub>)

	Electricity consumption	Gas consumption	Oil consumption	Vehicle fuel	Total
Fiscal 2000	36,054	5,748	11,714	850	53,517
Fiscal 2001	35,120	4,116	9,361	850	48,598
Fiscal 2002	39,136	6,106	11,278	850	57,369
Fiscal 2003	54,286	10,654	2,543	2,290	69,772
Fiscal 2004	85,442	10,681	135	1,380	97,638
Fiscal 2005	106,420	9,201	616	1,551	117,788
Fiscal 2006	132,285	52,533	6	4,749	189,572
Fiscal 2007	153,677	28,265	7	1,308	183,256
Fiscal 2008	143,123	26,198	12	3,122	172,456
Fiscal 2009	150,707	25,414	5	2,949	179,075
Fiscal 2010	156,170	28,740	9	2,715	187,634

Fiscal 2011	177,934	28,407	2,320	2,583	211,245
Fiscal 2012	149,971	6,137	296	3,173	159,577
Fiscal 2013	162,398	8,901	791	3,134	175,224
Fiscal 2014	169,043	4,166	134	2,805	176,149

\* Electricity consumption is calculated based on the CO<sub>2</sub> conversion rate used in the countries in which Sony sites are located in fiscal 2000.

\* Figures for vehicle fuel in fiscal 2000 and 2001 are not available and have been substituted by figure in fiscal 2002.

#### Water (Unit: m<sup>3</sup>)

	Water consumption	Water discharge
Fiscal 2000		
Fiscal 2001	1,368,460	
Fiscal 2002	1,904,418	
Fiscal 2003	1,405,816	
Fiscal 2004	1,753,245	
Fiscal 2005	1,902,463	
Fiscal 2006	2,886,812	1,757,106



Fiscal 2007	2,020,718	1,817,192
Fiscal 2008	1,963,949	1,796,498
Fiscal 2009	1,285,793	1,104,676
Fiscal 2010	1,098,603	859,880
Fiscal 2011	2,002,182	1,599,657
Fiscal 2012	1,064,062	791,398
Fiscal 2013	1,119,475	785,972
Fiscal 2014	1,018,316	751,897

\* Fiscal 2000 data is included in Pan Asia region's data.

#### Waste\* (Unit: tons)

	Waste generated	Waste reused/recycled	Waste landfilled
Fiscal 2000			
Fiscal 2001	3,951	3,448	504
Fiscal 2002	4,137	3,257	880
Fiscal 2003	4,716	2,111	2,605
Fiscal 2004	7,015	3,019	3,996

Fiscal 2005	7,524	5,160	2,356
Fiscal 2006	7,847	6,844	1,003
Fiscal 2007	10,102	7,965	2,136
Fiscal 2008	10,159	6,896	3,262
Fiscal 2009	9,503	7,039	2,464
Fiscal 2010	9,031	8,530	501
Fiscal 2011	11,725	9,753	1,972
Fiscal 2012	9,629	8,558	1,071
Fiscal 2013	10,167	8,636	1,531
Fiscal 2014	11,428	10,304	1,123

\* Fiscal 2000 data is included in Pan Asia region's data.

\* "Waste" includes valuables, substances to be treated by outsourcing, and non-industrial waste.

#### Chemical substances (Unit: tons)

	Class 1 substances used	Class 2 substances used	Class 3 substances used	Class 4 substances used	Total
Fiscal 2000					0
Fiscal 2001	0	42	37	1,234	1,313

Fiscal 2002	0	19	36	355	410
Fiscal 2003	0	38	27	409	473
Fiscal 2004	0	3	78	1,096	1,178
Fiscal 2005	0	0	154	1,542	1,696
Fiscal 2006	0	0	10	2,109	2,119
Fiscal 2007	0	0	613	2,633	3,246
Fiscal 2008	0	0	627	1,921	2,549
Fiscal 2009	0	0	1,390	1,710	3,099
Fiscal 2010	0	0	1,511	1,725	3,236
Fiscal 2011	0	113	1,540	2,151	3,803
Fiscal 2012	0.04	110	1,124	1,664	2,898
Fiscal 2013	0.08	151	1,596	2,132	3,879
Fiscal 2014	0	136	1,593	5,612	7,342

\* Fiscal 2000 data is included in Pan Asia region's data.

\* Chemical substances used represents the volume handled less the volume recycled.

\* Classification of some substances has changed since FY2011.

\* China region: Mainland China, Hong Kong

## Environmental Data for Sites

## Environment

Updated on August 21, 2015

### Emissions of Air and Water Pollutant (Worldwide)

(Unit: Tons)

	NOx	SOx	BOD	COD
Fiscal 2002	457	156	140	420
Fiscal 2003	351	52	142	337
Fiscal 2004	288	64	135	311
Fiscal 2005	274	59	142	158
Fiscal 2006	167	48	280	279
Fiscal 2007	182	35	205	113
Fiscal 2008	176	8	133	73
Fiscal 2009	174	11	141	39
Fiscal 2010	187	9	254	96
Fiscal 2011	163	9	252	62
Fiscal 2012	110	8	214	20

Fiscal 2013	132	10	210	15
Fiscal 2014	109	12	203	18

## Environment

Updated on August 21, 2015

### Handling Volume of Chemical Substances

(Unit: tons) (Unit: tons) (Unit: tons) (Unit: tons) (Unit: tons/million yen)

	Class 1 substances	Class 2 substances	Class 3 substances	Total handling volume	Handling volume divided by consolidated sales (Volume Intensity)
Fiscal 2006	2.25	0	17,672	17,674	0.0021
Fiscal 2007	1.91	0	35,077	35,079	0.0040
Fiscal 2008	2.12	0	18,179	18,181	0.0024
Fiscal 2009	1.41	0	16,236	16,238	0.0023
Fiscal 2010	5.25	0	15,914	15,920	0.0022
Fiscal 2011	0.83	1,023	28,738	29,762	0.0046
Fiscal 2012	1.31	934	21,477	22,413	0.0033

Fiscal 2013	1.52	985	21,327	22,314	0.0029
Fiscal 2014	1.21	1,048	22,560	23,609	0.0029

\* Classification of some substances has changed since FY2011.

# Environment

Updated on August 21, 2015

## Environmental Data for Products

### Greenhouse Gas Emissions from Product Use (Unit: t-CO<sub>2</sub>)

	Television	Video	Audio	IT	Professional use	Game	Total
Fiscal 2000	12,067,418	407,618	1,964,006	67,893	1,008,853	256,561	15,772,350
Fiscal 2001	10,818,776	280,299	2,461,309	132,360	871,437	529,577	15,093,758
Fiscal 2002	11,961,737	197,346	1,365,062	143,076	538,146	1,095,122	15,300,489
Fiscal 2003	11,738,773	228,719	2,055,160	207,479	432,057	447,826	15,110,014
Fiscal 2004	12,908,566	527,432	2,043,388	161,243	511,678	331,595	16,483,902
Fiscal 2005	12,393,225	322,432	1,586,781	109,593	616,053	295,299	15,323,383
Fiscal 2006	13,599,236	372,547	1,609,150	73,821	1,369,409	810,242	17,834,405
Fiscal 2007	14,978,341	341,573	1,689,645	90,784	1,135,557	1,105,117	19,341,017
Fiscal 2008	18,098,177	269,676	1,531,332	89,710	1,242,233	813,700	22,044,828
Fiscal 2009	16,156,097	242,823	1,185,915	92,017	1,242,459	782,127	19,701,438
Fiscal 2010	21,421,269	809,914	1,720,336	164,365	1,000,725	3,063,777	28,180,386



Fiscal 2011	17,067,704	745,164	1,422,973	104,891	1,274,451	2,351,648	22,966,831
Fiscal 2012	10,794,851	493,583	1,254,898	82,966	964,387	2,166,091	15,756,776
Fiscal 2013	9,418,343	434,038	884,063	51,772	615,255	2,730,839	14,134,310
Fiscal 2014	9,396,018	350,493	687,578	-	652,497	3,559,259	14,645,845

## Rationale

Production volume × (Operating power consumption × Estimated hours of operation per year + Standby power consumption × Estimated standby time per year) × Years used × CO<sub>2</sub> conversion rate

### Total Volume of Resources Used in Products (total products shipped)\* (Unit: tons)

	Television	Video	Audio	IT	Professional use	Devices/ Others	Game	Music	Total
Fiscal 2000	735,844	59,731	444,736	40,874	9,815	185,804	27,614	134,688	1,639,105
Fiscal 2001	638,865	64,135	378,147	57,007	6,825	174,675	51,016	134,112	1,504,783
Fiscal 2002	629,294	105,203	259,564	44,127	5,628	204,956	57,784	150,144	1,456,701
Fiscal 2003	575,353	137,931	280,320	40,636	6,121	208,271	39,990	156,480	1,445,103
Fiscal 2004	611,575	96,428	287,155	32,300	9,915	206,549	18,630	170,430	1,432,982
Fiscal 2005	469,549	81,746	251,249	34,278	9,280	222,058	17,196	168,258	1,253,614
Fiscal 2006	432,164	80,537	250,927	26,194	13,526	184,202	65,256	179,510	1,232,316

Fiscal 2007	421,231	81,721	261,180	36,343	15,883	163,821	95,713	190,585	1,266,477
Fiscal 2008	450,545	83,481	235,509	41,290	15,291	150,097	85,038	178,501	1,239,752
Fiscal 2009	401,334	79,621	186,951	49,840	13,679	165,899	74,406	195,629	1,167,359
Fiscal 2010	443,085	73,834	193,716	59,348	14,855	130,739	75,936	200,740	1,192,253
Fiscal 2011	335,685	61,407	176,900	37,126	10,707	69,614	68,411	185,147	944,997
Fiscal 2012	222,532	44,674	175,548	29,707	10,889	61,791	55,053	162,191	762,385
Fiscal 2013	196,920	34,832	140,554	19,799	10,754	58,371	62,010	144,843	668,083
Fiscal 2014	225,958	28,654	107,648	10,184	11,650	58,911	80,250	130,090	653,345

\* Total weight of resources used in products, accessories, instruction manuals and packaging.  
The weight of total products shipped is substituted for this value.

## Environment

Updated on August 21, 2015

### Product Recycling Data

#### Weight of End-of-Life Products Collected

(Unit:ton)

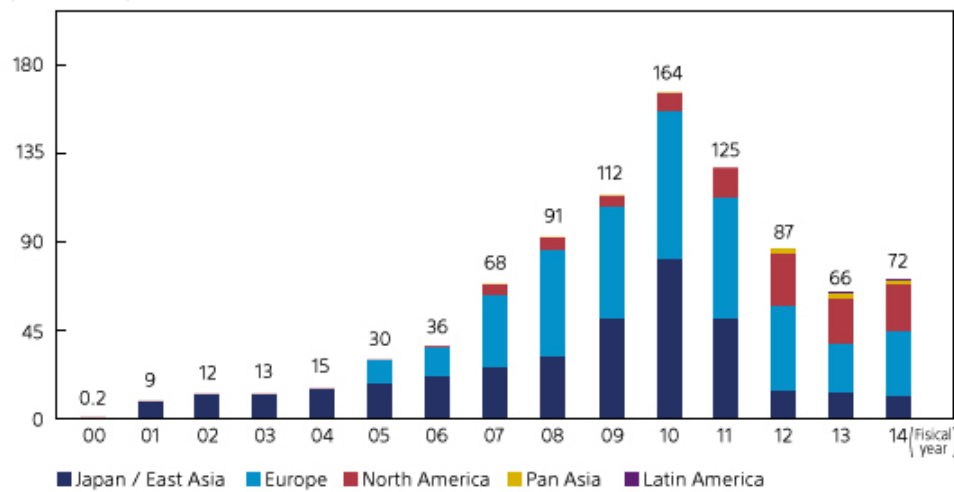
	Japan/East Asia	Europe	North America	Pan Asia	Latin America	Total
Fiscal 2000	0	0	253	0	0	253
Fiscal 2001	8,851	0	46	0	0	8,898
Fiscal 2002	12,026	0	117	0	0	12,143
Fiscal 2003	12,931	0	126	0	0	13,057
Fiscal 2004	15,407	0	73	0	0	15,480
Fiscal 2005	17,906	12,087	53	0	0	30,046
Fiscal 2006	21,574	14,726	55	0	0	36,355
Fiscal 2007	26,282	36,090	5,761	0	0	68,133
Fiscal 2008	31,619	52,980	6,589	0	0	91,188

Fiscal 2009	50,766	56,300	5,221	0	0	112,287
Fiscal 2010	80,000	74,000	9,572	0	0	163,572
Fiscal 2011	50,560	61,215	13,620	0	0	125,396
Fiscal 2012	13,878	45,425	26,684	1,269	0.018	87,256
Fiscal 2013	12,124	31,040	20,338	2,190	227	65,919
Fiscal 2014	11,464	33,872	23,920	1,375	1,223	71,854

\* The figure for Europe does not include Belgium and the Netherlands for FY2014.

**Weight of End-of-Life Products Collected**

(Thousand tons)



\* The figure for Europe does not include Belgium and the Netherlands for FY2014.

## Environment

Updated on August 21, 2015

### Examples of Polyvinyl chloride (PVC)-free Products and Brominated Flame Retardant (BFR)-free Products

Examples of PVC-free Products and BFR-free Products: Model Name (As of July 2015)

	Polyvinyl chloride(PVC)	Brominated Flame Retardant(BFR)
Product Category	Examples of PVC-free Products Model Name(*1)	Examples of BFR-free Products Model Name(*2)
Xperia™ Smartphone	All models	All models
Xperia™ Tablet	All models	All models

MP3 players WALKMAN®	NW-F885 / F886 / F887	NW-F885 / F886 / F887
	NWZ-F885 / F886 / F887	NWZ-F885 / F886 / F887
	NW-S784 / S785 / S786 / S784K / S785K	NW-S784 / S785 / S786 / S784K / S785K
	NW-E083 / E083K	NW-E083 / E083K
	NWZ-E583 / E584 / E585	NWZ-E583 / E584 / E585
	NWZ-E383 / E384 / E385	NWZ-E383 / E384 / E385
	NWZ-B183 / B183F	NWZ-B183 / B183F
		NWZ-W273
		NWZ-W273S / W274S
		NW-W273S / W274S
		NW-WH303
		NWZ-WH303
		NWZ-WH505
		NW-ZX1
		NWZ-ZX1
	NWZ-M504	NWZ-M504
	NW-M505	NW-M505
	NW-S14 / S15 / S14K / S15K	NW-S14 / S15 / S14K / S15K
	NW-A16 / A17	NW-A16 / A17
	NWZ-A15 / A17	NWZ-A15 / A17
		NW-WS615
	NWZ-WS613 / WS615	
	NW-ZX2	

IC recorder	ICD-UX533 / UX533F / UX533FA / UX543 / UX543F / UX544F	ICD-UX533 / UX533F / UX533FA / UX543 / UX543F / UX544F
	ICD-SX733 / SX734 / SX1000	ICD-SX733 / SX734 / SX1000
	ICD-TX50 / TX650	ICD-TX50 / TX650
	ICD-FX88	ICD-FX88
	ICD-PX333 / PX333F / PX333M	ICD-PX333 / PX333F / PX333M
	ICD-PX440	ICD-PX440
	ICD-PX240	ICD-PX240
	ICD-BX122	ICD-BX122
	ICD-BX140	ICD-BX140
Memory Card Recorder		ICD-LX30 / LX31
Portable Radio Recorder	ICZ-R51	ICZ-R51
	ICZ-R100	ICZ-R100
		ICZ-R250TV
Linear PCM Recorder		PCM-M10
		PCM-D100

Video Camera Handycam®	NEX-VG30	NEX-VG30
	NEX-VG30H	NEX-VG30H
	NEX-VG30EM	NEX-VG30EM
	NEX-VG900	NEX-VG900
	FDR-AX1	FDR-AX1
	HDR-CX240	HDR-CX240
	HDR-PJ810	HDR-PJ810
	FDR-AX100	FDR-AX100
	HDR-CX900	HDR-CX900
	HDR-CX405	HDR-CX405
	HDR-CX440	HDR-CX440
	HDR-PJ410	HDR-PJ410
	HDR-PJ440	HDR-PJ440
	HDR-CX480	HDR-CX480
	HDR-CX620	HDR-CX620
	HDR-CX670	HDR-CX670
	HDR-PJ620	HDR-PJ620
	HDR-PJ670	HDR-PJ670
	FDR-AX33	FDR-AX33
	FDR-AXP33	FDR-AXP33
FDR-AX30	FDR-AX30	
FDR-AXP35	FDR-AXP35	



Video Camera Action Cam	HDR-MV1	HDR-MV1
	HDR-AS30V	HDR-AS30V
	HDR-AZ1	HDR-AZ1
	HDR-AZ1VR	HDR-AZ1VR
	HDR-AZ1VW	HDR-AZ1VW
	HDR-AZ1VB	HDR-AZ1VB
	HDR-AS20	HDR-AS20
	HDR-AS200V	HDR-AS200V
	HDR-AS200VR	HDR-AS200VR
	HDR-AS200VT	HDR-AS200VT
	HDR-AS200VB	HDR-AS200VB
	FDR-X1000V	FDR-X1000V
	FDR-X1000VR	FDR-X1000VR

Digital Still Camera Cyber-shot™	DSC-HX300	DSC-HX300
	DSC-HX400	DSC-HX400
	DSC-HX50	DSC-HX50
	DSC-HX50V	DSC-HX50V
	DSC-HX60	DSC-HX60
	DSC-HX60V	DSC-HX60V
	DSC-HX90	DSC-HX90
	DSC-HX90V	DSC-HX90V
	DSC-KW1	DSC-KW1
	DSC-KW11	DSC-KW11
		DSC-RX1
		DSC-RX1R
		DSC-RX10
	DSC-RX100	DSC-RX100
	DSC-RX100M2	DSC-RX100M2
	DSC-RX100M3	DSC-RX100M3
	DSC-TX30	DSC-TX30
	DSC-W800	DSC-W800
	DSC-W810	DSC-W810
	DSC-W830	DSC-W830
	DSC-WX220	DSC-WX220
	DSC-WX350	DSC-WX350
	DSC-WX500	DSC-WX500
DSC-WX80	DSC-WX80	
DSC-H300	DSC-H300	
DSC-H400	DSC-H400	

Interchangeable lens digital camera α™		SLT-A99
	ILCA-77M2	ILCA-77M2
	SLT-A58	SLT-A58
	ILCE-6000	ILCE-6000
	ILCE-5000	ILCE-5000
	ILCE-3000K	ILCE-3000K
	ILCE-3500J	ILCE-3500J
		ILCE-7
		ILCE-7R
		ILCE-7S
	ILCE-5100	ILCE-5100
		ILCE-7M2
PSP® (PlayStation®Portable)	PSP-3000 series	PSP-3000 series
	PSP-E1000 series	PSP-E1000 series
PlayStation®Vita	PCH-1000 series	PCH-1000 series
	PCH-1100 series	PCH-1100 series
	PCH-2000 series	PCH-2000 series
Digital Book Reader Reader™	PRS-350 / 650 / T1 / G1 / T2 / T3 / T3S	PRS-350 / 650 / T1 / G1 / T2 / T3 / T3S
Portable DVD Player	DVP-FX780	DVP-FX780
	DVP-FX980	DVP-FX980
Portable Blu-ray Disc™/DVD Player	BDP-SX910	BDP-SX910
	BDP-Z1	BDP-Z1
Memory Stick™	MS-HX32B / HX16B / HX8B	MS-HX32B / HX16B / HX8B
	MS-MT16G / MT8G / MT4G / MT2G	MS-MT16G / MT8G / MT4G / MT2G
	MS-M16 / M8 / M4	MS-M16 / M8 / M4
SxS™ memory card	SBP-128B / 64B	SBP-128B / 64B
	SBS-64G1A / 32G1A / 16G1B	SBS-64G1A / 32G1A / 16G1B

	<p>*1 Parts in which PVC is eliminated are as below: Xperia™ Smartphones and Tablets: in all applications Products other than Xperia™ Smartphones and Tablets: in casings and internal wiring (excluding accessories)</p>	<p>*2 Parts in which BFRs are eliminated are as below: Xperia™ Smartphones and Tablets: in all applications. Products other than Xperia™ Smartphones and Tablets: in casings and main PWBs (excluding accessories)</p>
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## Environment

Updated on August 21, 2015

### Environmental Cost

#### Environmental Cost\*1

	Cost for Environmental Activities at Sites	Cost for Environmental Technology Development*2
Fiscal 2010	1.1 billion yen	32.6 billion yen
Fiscal 2011	0.9 billion yen	32.1 billion yen
Fiscal 2012	0.2 billion yen	21.9 billion yen
Fiscal 2013	0.2 billion yen	19.9 billion yen
Fiscal 2014	0.3 billion yen	23.1 billion yen

\*1 Total cost of Sony Corporation and its subsidiaries related to electronics businesses.

\*2 Environmental technology development costs incurred at Sony Group companies (including Sony Corporation) and corporate research labs.

# Environment

Updated on August 21, 2015

## Independent Verification Report

### Purpose and Scope of Verification

Sony has obtained third-party verification since fiscal 2001 to ensure the credibility of data reported and facilitate the ongoing improvement of its environmental management. Since fiscal 2003, Sony has sought independent verification from the Bureau Veritas (BV) Group, the external auditing organization for the Sony Group's global environmental management system. In fiscal 2014, Sony asked the BV Group to undertake independent verification of the reliability of data collection and reporting processes, as well as the accuracy and the appropriateness of conclusions drawn from such data, at production sites, non-manufacturing sites, design sites and Sony's headquarters. Furthermore, amount of greenhouse gas emissions is verified in accordance with ISO14064-3 since fiscal 2011.

## Independent Verification Report

 [Click to enlarge \(PDF\)](#)

### CSR Reporting Independent Verification Report



BUREAU  
VERITAS

To: Sony Corporation

31<sup>st</sup> July 2015

Bureau Veritas Japan Co., Ltd.  
System Certification Services Headquarter



#### Objective of Verification

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) verified the FY2014 environmental data selected by the Sony Corporation (Sony) for inclusion in the Sony CSR Report (the Report), issued under the responsibility of Sony's management. The aim of the verification is to assess the reliability and accuracy of environmental performance data detailed in the Report and to provide a verification opinion based on objective evidence.

#### Sites visited for verification

Bureau Veritas visited the following sites, business sections and Sony's headquarters where all of the target data were aggregated.

- Sony Energy Devices Corporation Koriyama Plant
- Sony Corporation Video & Sound Business Group

Bureau Veritas also assessed the reliability of environmental performance data management across other sites and business sections by testing the implementation and effectiveness of the Sony Global Environmental Management System (GEMS).

#### Data Item

##### Site environmental data

- Energy consumption (including fuel for motor vehicles) and associated CO<sub>2</sub> emissions
- Emissions of PFCs and other greenhouse gases
- Water consumption and discharge
- Water pollutant (BOD/COD) emissions

##### Product environmental data

- CO<sub>2</sub> emissions from product use

##### Logistics environmental data

- CO<sub>2</sub> emissions from logistics

##### Other

- CO<sub>2</sub> Emissions from employee business trips

#### Verification Methodology

Bureau Veritas has conducted its verification activities to determine the following:

##### Sony Headquarters

1. The reliability and adequacy of data collection and aggregation systems and related processes
2. The effectiveness of internal verification processes
3. The resulting data accuracy (April 2014 to March 2015)
4. The validity of conclusions drawn from and reported on the basis of aggregated data

##### Sites

1. The relevance of the scope of data selected for inclusion in the report
2. The effectiveness of data measurement, collection, and aggregation methods, and of internal verification processes

Bureau Veritas has implemented a code of ethics across its business which is intended to ensure that all our staff maintain high standards in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest. Bureau Veritas activities for Sony Corporation are for environmental and social reporting verification only and we believe our verification assignment did not raise any conflicts of interest.

3. The reliability and adequacy of data monitoring and collection and the accuracy of final aggregated data

This verification was conducted using Bureau Veritas' standard procedures and guidelines for external verification of non-financial reporting, based on current best practice. Bureau Veritas refers to the International Standard on Assurance Engagements (ISAE) 3000 in providing a limited assurance for the scope of work stated herein.

Opinion

As a result of the above scope of work Bureau Veritas is of the opinion that:

- The environmental data reported at sites' level is measured, collected and aggregated based on established and effective internal systems and processes.
- All errors in reported data identified during the verification process have been duly corrected.
- Product related environmental impact data are subject to an effective aggregation process, resulting in clear and unambiguous results.
- Therefore, nothing comes to our attention to suggest that there are any data that are not reliable or free from significant error or bias.

Bureau Veritas has implemented a code of ethics across its business which is intended to ensure that all our staff maintain high standards in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest. Bureau Veritas activities for Sony Corporation are for environmental and social reporting verification only and we believe our verification assignment did not raise any conflicts of interest.





# Greenhouse Gas Emissions Verification Statement

[Click to enlarge \(PDF\)](#)

**GREENHOUSE GAS EMISSIONS VERIFICATION STATEMENT**

To: Sony Corporation

Bureau Veritas Japan Co., Ltd.  
System Certification Services Headquarters

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) was engaged by the Sony Corporation (Sony) to conduct independent verification of the greenhouse gas (GHG) emissions reported by Sony in its CSR Reporting for the period of April 1, 2014 through March 31, 2015.

**1. Scope of Verification**  
 Sony requested Bureau Veritas to verify the accuracy of the following GHG information, to a limited level of assurance:

- 1) Scope 1 and Scope 2 GHG emissions:
  - GHG emissions through business operations of all ISO 14001-certified sites as of March 31, 2015 in Sony Group
- 2) Scope 3 GHG emissions:
  - CO<sub>2</sub> emissions from the electricity consumption during product use
  - CO<sub>2</sub> emissions from logistics (\*1)
  - CO<sub>2</sub> emissions from employee business trips (\*2)

(\*1) Total CO<sub>2</sub> emissions from logistics include emissions arising from transportation of electronics products handled by the Sony Group over 40 countries around the world including Japan, the United States, Europe, and Asia. GHG emissions from logistics within Japan also include those from components transportation.

(\*2) Emissions are calculated for business trips undertaken by employees from central departments, which account for the largest share of business trips taken by employees of the Sony Corporation and Sony Group Electronics Business companies in Japan, Europe and North America and for business trips taken by employees from some electronics-related companies in China. (In the case of Japan and North America, trips taken by employees from some music-related companies are included. Trips taken by employees from Sony Mobile Communications Inc. are excluded.)

**2. Methodology**  
 Bureau Veritas conducted the verification in accordance with the requirements of the international standard 'ISO 14064-3(2006): Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions'.

As part of Bureau Veritas' assurance, the following activities were undertaken:

- Interviews with relevant personnel of Sony responsible for the identification and calculation of GHG emissions;
- Review of Sony's information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions; and
- Audit of a sample of source data to check accuracy of quantified GHG emissions.

**3. Conclusion**  
 Based on the verification work and processes followed, there is no evidence to suggest that the GHG emissions assertions shown below:

- are not materially correct and are not a fair representation of the GHG emissions from activities within scope of work.
- are not prepared in accordance with the methodology for calculating GHG emissions established and implemented by Sony.

Verified greenhouse gas emissions		
Scope 1	Scope 2	Scope 3
289,000 t-CO <sub>2</sub> e	909,000 t-CO <sub>2</sub> e	15,062,000 t-CO <sub>2</sub> e

The breakdown of Scope 3 emissions are as follows:  
 CO<sub>2</sub> emissions from the electricity during product use: 14,646,000 t-CO<sub>2</sub>e  
 CO<sub>2</sub> emissions from logistics: 333,000 t-CO<sub>2</sub>e  
 CO<sub>2</sub> emissions from employee business trips: 83,000 t-CO<sub>2</sub>e

**[Statement of independence, impartiality and competence]**  
 Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 180 years history in providing independent assurance services. No member of the verification team has a business relationship with Sony, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest. Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has an excellent understanding of Bureau Veritas standard methodology for the verification of greenhouse gas emissions data.

## Environment

Updated on August 21, 2015

### History of Environmental Activities at Sony

		Principles and Organization	Action
1976	April	Establishes Environmental Conference, chaired by the President	Promotes prevention of hazardous materials use and occupational health and safety in Sony Group operations in Japan
	May	Establishes Environmental Science Center	Hazardous waste materials and working environments of Group operations in Japan are evaluated
1985	April		Sony Corporation of America begins environmental audits
1989	March	Convenes special committee to study measures to eliminate CFC use	
1990	August	President's Policy on the Environment is disseminated among Sony Corporation staff	
	October	Organizes Sony Environmental Conservation Committee	

1991	October	Formulates policy for product assessment	
	November		Signs business charter for sustainable development of the international chamber of commerce
1993	January		Inaugurates Environmental Fund System, a program supporting development of environmental protection technologies
	March	Sony Global Environmental Policy and Environmental Action Program is formulated	
	April		Use of fluorocarbons for cleaning is completely phased out from the Sony Group's production processes worldwide
1994	February		Launches Sony Environmental Award program
	April	Establishes Corporate Environmental Affairs Department Establishes Center for Environmental Technologies (CET) at the Sony Research Center (operated until 1999)	

	May		Launches Greenplus Project to promote environmental consideration with respect to products
	July	Guidelines for acquiring ISO environmental certification are established and introduced	
1995	May		Sony Kohda Corporation becomes the first Sony company in Japan to acquire ISO 14001 certification
1996	July		Sony Deutschland's Service Division becomes the first non-manufacturing site in the Sony Group to acquire ISO 14001 certification
	October	Revises Sony Environmental Action Program and formulates Green Management 2000	
1997	October	Initiates operations at Recycle Research Center in Ichinomiya (ongoing until 2005)	

	December		Four sites in Singapore become the first non-manufacturing sites in Asia to acquire ISO 14001 certification
1998	September	Establishes environmental R&D laboratory in the Environmental Center Europe, Germany	
	November	Establishes the Green Management 2002 Sony Mid-Term Environmental Action Program	
1999	February		Completes the process of acquiring ISO 14001 certification at all 38 manufacturing sites in Japan
2000	April		Incorporates environmental factors into Network Companies' evaluations; formulates Guideline for the Environmental Risk Management; launches fire risk survey program for European and Asian operations
	October	Establishes the Sony Environmental Vision	

2001	March	Revises Sony Mid-Term Environmental Action Program; Formulates Green Management 2005	
	April		Japan's Home Appliance Recycling Law becomes effective and the 14-plant recycling network of Green Cycle Corporation, where Sony is the principal shareholder, begins processing four types of appliances; environmental evaluation standards are extended from Electronics to Game, Music and Pictures businesses
	September		Begins using the Green Power Certification System
	October		PS one game console shipments temporarily halted in the Netherlands due to containing cadmium above the legal limit

2002	March	Formulates Sony Technical Standards, SS-00259 "Management Regulations for the Environment-related Substances to be Controlled which are included in Parts and Materials"	
	April		Completes ISO 14001 certification process at all manufacturing sites worldwide
	June		Initiates "Sony Group Environmental Month"
	July		Introduces Green Partner Environmental Quality Approval Program
2003	July	Revises Sony Mid-Term Environmental Targets (Green Management 2005)	
	November	Revises Sony Environmental Vision and renames it "Sony Group Environmental Vision"	
2006	March		Finishes putting in place the globally integrated environmental management system it commenced in fiscal 2004

	April	Establishes Green Management 2010	
	July		Begins participation in World Wide Fund for Nature (WWF)'s Climate Savers Programme
2007	November		Use of renewable energy at Sony DADC Austria's Anif Plant reaches 100%
2008	April		Launches a scheme to support forest conservation efforts in Noshiro, Akita prefecture using a Green Power Certification system purchase contract
	June		Announces the energy-saving KDL-32JE1 LCD television
	September		Commences pilot program to collect small e- waste in the city of Kita-Kyushu
2009	January		Announces new V5/VE5/WE5 series of BRAVIA™ LCD televisions with energy-saving features, including a "Presence Sensor" and "Energy Saving Switch," that facilitate a substantial reduction in energy consumption



	June		Releases mercury-free alkaline button battery (LR)
	July		Achieves use of 100% renewable energy at European sites; percentage of total energy used by Tokyo headquarters building accounted for by renewable energy reaches 50%
	October		Sony Chemical & Information Device Corporation's Kanuma Plant wins Minister of Economy, Trade and Industry Award for "Resource Recycling Techniques and Systems"
	November	Announces at presentation to the media that it has positioned "the environment" as one of four key strategic priorities	

2010	February		Announces VAIO W series of "eco body model" PCs with features that evoke Sony's commitment to environmental conservation, including components that are 80% made with recycled plastic and carrying case made from 100% recycled PET materials
	April	Announces new "Road to Zero" global environmental plan, revises Sony Group Environmental Vision and formulates "Green Management 2015," a new set of mid-term environmental targets for the Sony Group	
	October		Presentation on groundwater recharge for idle rice paddies (project undertaken by Sony Semiconductor Kyushu Corporation's Kumamoto Technology Center) given at COP10 Biodiversity Conference

2011	February		Develops SORPLAS™, plastic made 99% from recycled materials, for use in the bezel (screen rim) components of BRAVIA™ LCD televisions
	March		Sony Forest, maintained by Sony EMCS Corporation's Kohda Site, earns Superlative Stage (top rank) certification under the Social and Environmental Green Evaluation System (SEGES) in Japan
	April		Launches 1.2 kWh-capacity energy storage modules containing rechargeable lithium-ion batteries made with olivine-type lithium-ion iron phosphate
	June	Begins implementation of "Green Star Program" which assesses the environmental performance at each site	
2012	February		Developed "authentication outlets" that let a user proactively manage his/her use of electric power

	September		Xperia™ P smartphone receives European Green Smart Phone award from the European Imaging and Sound Association
	December		The DSC-HX30/20 series of Cyber-shot™ digital still cameras and BDV-N790W Blu-ray Home Theater System are honorees in the Eco-Design and Sustainable Technologies category at the CES Innovation Awards 2013
2013	March		Sony Electronics Asia Pacific Pte Ltd. presented with the 2013 Green Luminary award by Channel NewsAsia, which praised Sony's medium- to long-term commitment to sustainability under the Road to Zero initiative, innovative environmentally conscious materials such as SORPLAS™ and local CSR activities involving both employees and the community

			Sony Semiconductor Corporation's Oita Technology Center earns top-rank Superlative Status certification under Japan's Social and Environmental Green Evaluation System (SEGES)
	November		Sony Service and Operations of Americas receives Mexico's Index National Environmental Award 2013 for its environmental activities and performance
2014	January		Sony EMCS Malaysia KL Tec's environmental management system and activities to reduce environmental footprint receive two Prime Minister's Hibiscus Awards from the Malaysian Ministry of Natural Resources and Environment (MNRE)


	February		The television advertisement "Water Rock"—showcasing one of Sony's environmental initiatives—receives the Grand Prix award at the 17th Environmental Communication Awards in Japan in the environmental television advertisement category
	October		Sony EMCS Malaysia KL Tec selected as 2nd runner up for the 2014 ASEAN Energy Awards in the Large Industry Category of the Energy Management in Building Industry for its Sustainable Energy Management Program
	December		Sony Electronics Inc. receives the Sustainable Materials Management from the United States Environmental Protection Agency for its initiatives for recycling waste from electronic goods



Note: Organization names appear as they were at the respective dates; some may not be current.

# Community



Sony is committed to pursuing sustainable business practices while working to realize a better future for society. Sony also undertakes community engagement activities in fields where it is best able to do so to help address the needs of the communities.

<p><b>Vision of Sony's Founder</b></p>	<p>In Sony's Founding Prospectus, co-founder Masaru Ibuka set "the promotion of education in science among the general public" as a primary goal.</p>	
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<p><b>Policy, Main Scope and Structure</b></p>	<p><b>Policy</b> In line with the vision of its co-founder and the spirit behind its "For the Next Generation" phrase, Sony undertakes a variety of activities that capitalize on its unique capabilities.</p> <p><b>Main Scope</b> Sony strives to help solve global issues in four key areas: education for children, environmental conservation, international cooperation, and emergency relief.</p>	  
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### Resources

Sony leverages its products, services, content, technology, innovations and the capabilities of its employees in its community engagement initiatives. Sony also builds partnerships for community engagement programs with such external stakeholders as international institutions, NGOs and other organizations possessing expertise.



### Structure

In addition to Sony's global program, which is spearheaded by its headquarters in Tokyo, Sony Group companies worldwide as well as six foundations promote initiatives tailored to local needs while cooperating with various external stakeholders. Additionally, employees are encouraged to play an active role in their communities.



[Related Link : Volunteer Systems for Employees](#)

### Expenditures

In fiscal year 2014, the Sony Group spent approximately 3.2 billion yen on community engagement initiatives. These initiatives focused on education, particularly science education. Expenses for programs undertaken by Sony—which leverage Sony's particular strengths—accounted for 67% of this expenditure.





## Activities

Taking into account issues of concern to external stakeholders, Sony undertakes a broad range of programs that aim to address social and environmental issues that represent risks or opportunities for Sony.



### Dream Goal

An example of these activities is Dream Goal, a social contribution initiative that utilizes the power of soccer, one of the world's most popular sports. Since launching Dream Goal in 2009, Sony has been making the most of its products, technologies and services along with the skills of its employees to make this initiative a success.

As part of Dream Goal, Sony initiated its Street Football Stadium project in fiscal 2014. Under the project, Sony donated 25 pop-up stadiums, to seven countries in Central and South America. Sony also held a contest to give people worldwide an opportunity to support the program by creating illustrations for the stadium walls. About 3,500 illustrations were submitted from around the world, and the contest garnered over 1.1 million votes. Also under the project, Sony supports workshops designed to help children understand social issues, including poverty and gender, in the countries where the stadiums were donated, such as Brazil. To date, about 40,000 children have participated in the workshops.



## Related Link

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### Contributing to the International Community through Business Activities

Guided by its founders' spirit of innovation, which emphasizes the provision of creative technologies, products and services, Sony promotes contributions to the international community through its business activities.



### Sony Museums and Foundations

Sony organizes exhibitions of various kinds, including exhibitions at educational museums that are designed to stimulate interest in media, science, technology and entertainment.



## Community

Updated on August 21, 2015

### Vision of Sony's Founder

In Sony's Founding Prospectus, co-founder Masaru Ibuka set "the promotion of education in science among the general public" as a primary goal. He was convinced that enhancing scientific literacy would be critical for the recovery of post-war Japan and that science education for children was the key. In 1959, 13 years after Sony's establishment, he set up the Sony Fund for the Promotion of Science Education to support elementary schools in the pursuit of science education excellence.



Masaru Ibuka



Research presentation by schools assisted under the Sony Fund for the Promotion of Science Education

# Community

Updated on August 21, 2015

## Community Engagement Policy, Main Scope and Structure

### Sony's Community Engagement Policy

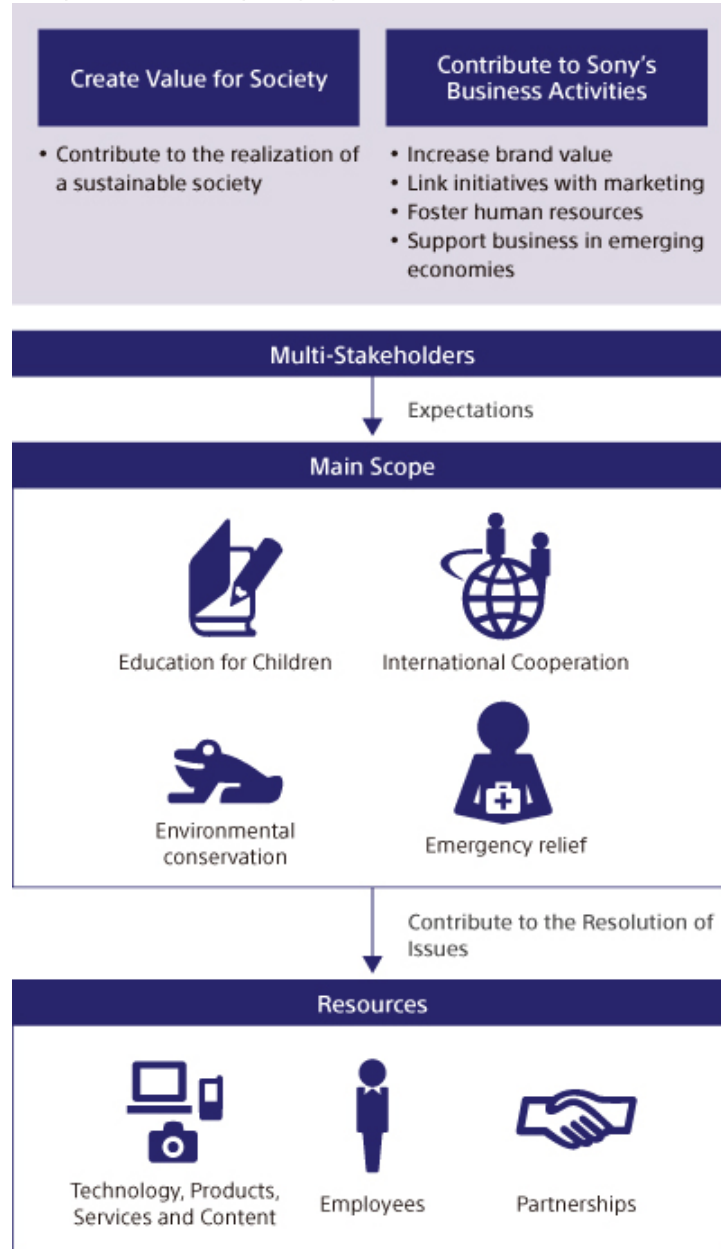
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Following the course set by its co-founder Masaru Ibuka, Sony has established a Community Engagement Policy based on its "For the Next Generation" CSR philosophy. Accordingly, Sony creates and implements community-based initiatives designed to help solve global issues in the key areas of education for children, which Sony has supported for years, as well as environmental conservation, international cooperation, and emergency relief. In pursuing these initiatives under the policy, Sony capitalizes on its partnerships with stakeholders and draws on the expertise of its group employees while making the most of its products, services, technologies, and innovations.

For the Next Generation

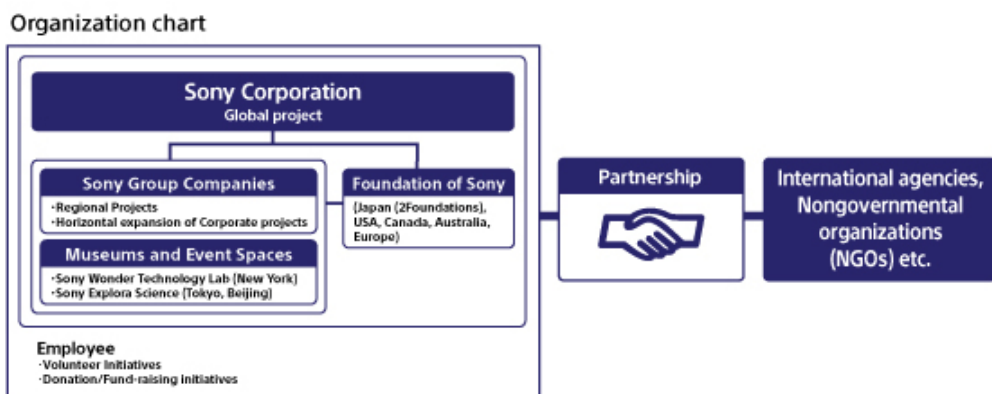
As a means of informing as many people as possible about these issues, Sony also undertakes educational campaigns linked to its marketing initiatives and incorporates its CSR goals into its internal human resource development. Hence, Sony not only seeks to contribute to the resolution of social and environmental issues but also to integrate community engagement into its business operations as a way of enhancing those operations.

Sony's Community Engagement



## Framework for Community Engagement

In addition to Sony's global program, which is spearheaded by its headquarters in Tokyo, Sony Group companies worldwide as well as six foundations promote initiatives tailored to local needs in accordance with the Sony Group's community engagement policy, cooperating with various international organizations including NGOs. Additionally, employees are encouraged to play an active role in their communities through participation in, for example, volunteer and fundraising programs.



## Community

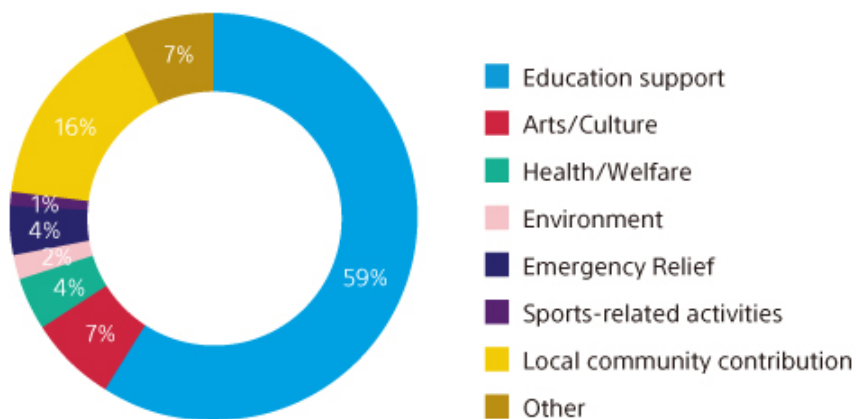
Updated on August 21, 2015

### Expenditures for Community Engagement Initiatives

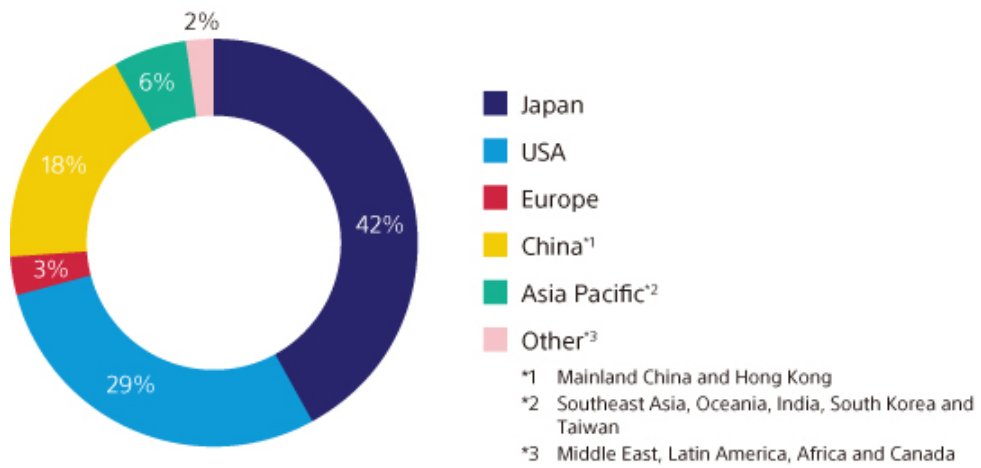
In fiscal year 2014, the Sony Group spent approximately 3.2 billion yen\* on community engagement initiatives. These initiatives focused on education, particularly education for children.

\* Cumulative figure. In addition to donations, sponsorships and independent program expenses (including facility operation expenses), this amount includes the market prices of products donated.

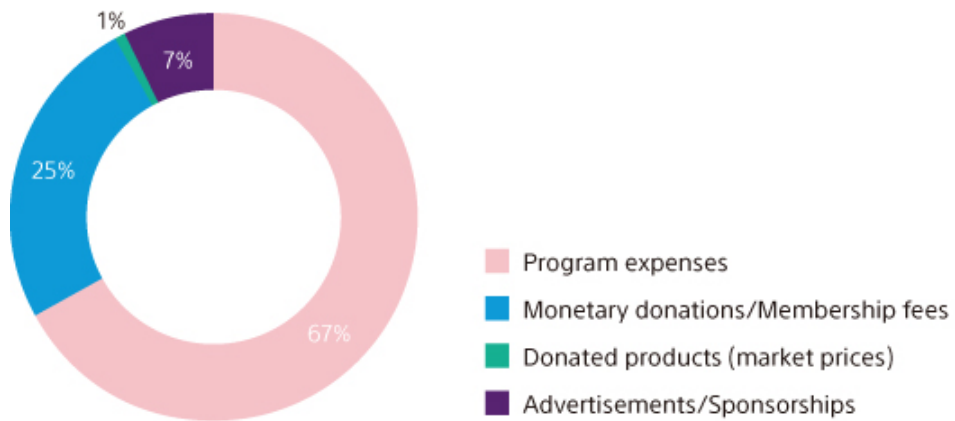
Community Activity Expenditures by Field (Fiscal Year 2014)



Community Activity Expenditures by Region (Fiscal Year 2014)



Community Activity Expenditures by Category (Fiscal Year 2014)





## Community

Updated on August 21, 2015

### Volunteer Systems for Employees

#### Employee volunteer promotion program: "SOMEONE NEEDS YOU"

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Sony has a global in-house volunteer program known as "SOMEONE NEEDS YOU" (the name developed using the letters S, O, N and Y), the aim of which is to encourage employee involvement in efforts to help local communities. Under this program, Sony Group companies create volunteer programs tailored to local needs and encourage continued employee participation in the community. In fiscal year 2014, a total of 80,000 Sony Group employees\* participated in volunteer initiatives.

\* Cumulative participants in fundraising initiatives, blood drives and other activities.

#### Leave for volunteer purposes

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To support employee participation in volunteer activity initiatives, Sony Corporation has an employee volunteer support system, making it easier for employees to participate in volunteer activities by allowing them to use accumulated holidays for initiatives requiring extended leaves of absence.

## Charitable donation systems for employees

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Sony has put several systems in place for encouraging employees to donate money for emergency relief and other worthy causes, including matching gift programs. Employees can donate money by bank transfer or by using electronic money with Sony's Felica™ contactless IC card system.

### Related information:

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[Activities to promote employee participation](#)

## Community

Updated on August 21, 2015

### Contributing to the International Community through Business Activities

#### Working to Address Social Development through the Utilization of Technology

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##### I. Model Study of Community Electrification in Bangladesh Using a Long-life Storage Battery System

From August 2013 through February 2014, Sony undertook a study\* in an unelectrified area of Bangladesh (Gaibandha district, Saghata sub-district) aimed at encouraging the effective use of renewable energy generation and improving living conditions and hygiene for local people using a long-life storage battery system\*\* and photovoltaic (PV) panels. Based on the results of this study, Sony has begun considering the feasibility of building a new business model.

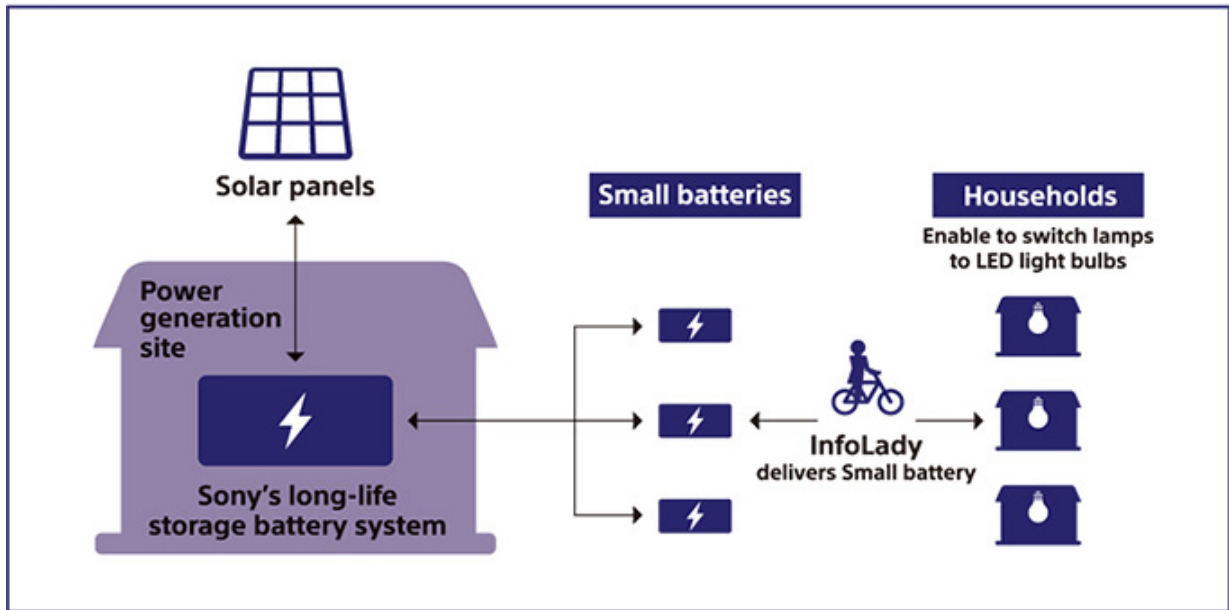
Project name:

Electrification of an unelectrified area using solar power generation and a long-life storage battery system

Objectives:

- To effectively utilize renewable energy generation and to promote the use of electricity
- To contribute to the reduction of greenhouse gas emissions
- To improve living conditions and hygiene through the electrification of an unelectrified area

## Project Overview



## Research Overview:

1. Store renewable energy generated by a solar PV system in Sony's long-life storage battery system.
2. Transfer the stored energy to portable batteries and deliver to 100 households in an unelectrified area to supply power.
3. This energy enables to replace kerosene lamps with LED light bulbs which consume lower energy. (A portable battery powers a 2-watt LED light bulb for approximately 15 hours.)
4. Residents can work and study indoors even after sunset. Indoor air contamination is also reduced, thereby enhancing living environments.



Benefits:

- Be able to charge the long-life storage battery system with solar power generation during daylight hours. The stored energy will be divided into portable batteries and are delivered to the village to supply power for use at night.
- Residents can work and study indoors even after sunset, which leads to an improvement in residents' quality of life.
- Inside the houses, air contamination by kerosene lamps is reduced.
- The power is also used to charge widely used mobile phones and enhances convenience.

Secondary benefits:

The project employed InfoLady\*\*\*consultants to deliver portable batteries to each household and undertake programs to promote the uptake of the system. The InfoLady program is managed by a local NGO, and can be described as "a consultation-based assistance program carried out for women and by women." By utilizing the InfoLady program, the project promoted increased employment of local women and contributed to their empowerment.

Based on knowledge gained in the study conducted by Sony Energy Devices Corporation, Sony Corporation and cooperating organizations as outlined above, Sony has begun from May 2014 considering the feasibility of developing a new business in partnership with local companies.

\* Details on this study are [here](#).

\*\* Sony used an olivine-type lithium-ion iron phosphate battery, which boasts a very stable crystalline structure, and even at high temperatures the material exhibits excellent thermal stability. Sony also applied its proprietary powder-design and cell-structure technologies to realize high output and long battery life of over 10 years (in the case of a room temperature of 23 °C, and charging/discharging once per day).

**[Expanding from the Development of Olivine-Type Lithium-Ion Iron Phosphate Storage Batteries to Include Other Peripheral Devices](#)**

\*\*\* This is an action program managed by local NGO D.Net. The program seeks to organize entrepreneurially minded women in rural areas. At present the program covers 12 areas from 13 offices, with approximately 80 women acting as InfoLady consultants. The participants use netbooks, digital still cameras and mobile phones while making rounds in their assigned coverage areas on bicycles. They provide information and knowledge necessary for life in rural areas (related to health and hygiene, legal matters affecting women and agricultural matters). This program is attracting significant worldwide attention as a successful case of ICT use in a developing country for poverty reduction and empowerment of women.



## II. Solving Social Issues in Urban Bangladesh by Utilizing IC Card Technology

Sony is involved in activities that aim to solve social issues in urban Bangladesh by using Sony's FeliCa™ contactless IC card technology.

In the capital city of Dacca, majority of people use buses for their transportation, which causes traffic jams and were their social problem. Moreover, people have to purchase paper tickets by the roadside for every boarding, which made it inconvenient and easy to do fare dodging.

To help solve such problems, an IC card-based system using FeliCa technology was introduced in 2011 to replace paper tickets. In addition to improving convenience for passengers, it realized speedy boarding and alighting time, utilizing incoming and outgoing records to optimize bus operation management, and the system has also contributed to the alleviation of traffic jams and improvement of air pollution, and made fare collection more transparent.



Commuter in Dacca, Bangladesh, pays his bus fare using a SPASS IC card

# Community

Updated on August 21, 2015

## Sony Museums and Foundations

Sony organizes exhibitions of various kinds, including exhibitions at educational museums that are designed to stimulate interest in media, science, technology and entertainment.

### Sony Museums

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#### Sony ExploraScience (Tokyo and Beijing)

In these science museums produced by Sony, visitors can actually see, touch and enjoy the principles and laws of science in action and the progress and fascination of digital technology.

#### [Sony ExploraScience \(Tokyo\)](#)

#### [Sony ExploraScience \(Beijing\)](#)

#### Sony Wonder Technology Lab (New York)

This interactive museum brings technology and creativity together to make learning experiential, entertaining and fun. The Lab's exhibits showcase the positive impact technology can have on virtually any discipline, from medicine to movie-making.

#### Sony Wonder Technology Lab (New York)

## Sony Archives (Tokyo)

Sony Archives showcases the pioneering products that Sony has given the world as well as a variety of documents.

[Sony Archives \(Tokyo\)](#)

## Sony Foundations

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[Sony Education Foundation \(Japan\)](#)

[Sony Music Foundation \(Japan\)](#)

[Sony USA Foundation Inc. \(USA\)](#)

[Sony Foundation Australia Limited \(Australia\)](#)

[Sony Canada Charitable Foundation \(Canada\)](#)

[Stichting Sony Europa Foundation \(Pan-Europe\)](#)



## GRI Guidelines G4 Content Index

Updated on October 14, 2015

### Global Reporting Initiative (GRI) Sustainability Reporting Guidelines G4 and its Content Index

Sony's CSR reporting refers to international standards and guidelines related to CSR activity reporting.

Sony has participated to GRI Sustainability Reporting Guidelines' planning and revision's multi-stakeholder processes.

Below GRI Sustainability Reporting Guidelines Content Index includes related information available on Sony websites.

Indicators		Related Website
<b>Strategy and Analysis</b>		
G4-1	Statement from the most senior decisionmaker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability.	<a href="#">Management Message Form 20-F Item3</a>
G4-2	Description of key impacts, risks, and opportunities.	

Organizational Profile		
G4-3	Name of the organization.	<a href="#">Form 20-F Item4</a>
G4-4	Primary brands, products, and services.	
G4-5	Location of organization's headquarters.	
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	
G4-7	Nature of ownership and legal form.	
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	
G4-9	<p>Scale of the organization, including</p> <ul style="list-style-type: none"> <li>● Total number of employees</li> <li>● Total number of operations</li> <li>● Net sales(for private sector organizations) or net revenues(for public sector organizations)</li> <li>● Total capitalization broken down in terms of debt and equity (for private sector organizations)</li> <li>● Quantity of products or services provided</li> </ul>	<a href="#">Form 20-F Item 6</a> <a href="#">Human Resources &gt; Employee Data</a>

G4-10	<ul style="list-style-type: none"> <li>● Total number of employees by employment contact and gender.</li> <li>● Total number of permanent employees by employment type and gender.</li> <li>● Total workforce by employees and supervised workers and by gender</li> <li>● Total workforce by region and gender</li> <li>● Whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors.</li> <li>● Any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)</li> </ul>	<a href="#">Form 20-F Item 6</a> <a href="#">Human Resources &gt; Employee Data</a>
G4-11	Percentage of total employees covered by collective bargaining agreements.	<a href="#">Form 20-F</a>
G4-12	Organization's supply chain	<a href="#">Form 20-F</a>
G4-13	<p>Any significant changes during the reporting period regarding the organization's size structure, ownership, or its supply chain, including;</p> <ul style="list-style-type: none"> <li>● Changes in the location of, or changes in, operations, including facility openings, closings, and expansions</li> <li>● Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations)</li> <li>● Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination"</li> </ul>	<a href="#">Form 20-F</a>

G4-14	Whether and how the precautionary approach or principle is addressed by the organization.	<a href="#">Environment</a>
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives of which the organization subscribes or which it endorses	<a href="#">Compliance CSR at Sony</a>
G4-16	List membership of associations (such as industry associations) and natural or international advocacy organization in which the organization; <ul style="list-style-type: none"> <li>● Holds a position on the governance body</li> <li>● Participates in projects or committees</li> <li>● Provides substantive funding beyond routine membership dues</li> <li>● Views membership as strategic</li> </ul>	<a href="#">Compliance CSR at Sony Accessibility and Usability</a>
<b>Identified Material Aspects and Boundaries</b>		
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents b. Whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report	<a href="#">Form 20-F</a>
G4-18	a. Process for defining the report content and the Aspects Boundaries. b. How the organization has implemented the Reporting Principles for Defining Report Content.	<a href="#">About CSR Reporting CSR at Sony</a>
G4-19	List all the material Aspects identified in the process for defining report content	<a href="#">CSR at Sony</a>

G4-20	For each material Aspect, report the Aspect Boundary within the organizations	<a href="#">CSR at Sony</a> <a href="#">CSR</a> <a href="#">Organizational Structure</a> <a href="#">Stakeholder Engagement and Partnership</a>
G4-21	For each material Aspect, report the Aspect Boundary outside the organization	<a href="#">CSR at Sony</a> <a href="#">CSR</a> <a href="#">Organizational Structure</a> <a href="#">Stakeholder Engagement and Partnership</a>
G4-22	Effect of any restatements of information provided in previous reports, and the reasons for such restatements.	N/A
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	<a href="#">Environmental Data</a>

Stakeholder Engagement		
G4-24	Basis for identification and selection of stakeholders with whom to engage.	<a href="#">CSR at Sony</a> <a href="#">Human Resources</a> <a href="#">Quality and Services</a>
G4-25	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	
G4-26	Organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder groups, and an indication of whether any of the engagements was undertaken specifically as part of the report preparation process	
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns	
Report Profile		
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	<a href="#">About CSR Reporting</a>
G4-29	Date of most recent previous report (if any)	
G4-30	Reporting cycle (such as annual, biennial).	
G4-31	Contact point for questions regarding the report or its contents	<a href="#">CSR Contacts</a>
G4-32	a. 'In accordance' option the organization has chosen b. GRI Content Index for the chosen option c. Reference to the External Assurance Report, if the report has been externally assured.	<a href="#">About CSR Reporting</a>

G4-33	<p>a. Organization's policy and current practice with regard to seeking external assurance for the report.</p> <p>b. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided.</p> <p>c. Relationship between the organization and the assurance provider</p> <p>d. Whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report.</p>	Environmental Data
<b>Governance</b>		
G4-34	Governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	Governance Structure
G4-35	Process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	Corporate Governance
G4-36	Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	Corporate Governance
G4-37	Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body.	Corporate Governance

G4-38	Composition of the highest governance body and its committees	<a href="#">Sony Initiatives</a>
G4-39	Whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement).	<a href="#">Sony Initiatives</a>
G4-40	Nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members	<a href="#">Board of Directors' Determination regarding Internal Control and Governance Framework</a>
G4-41	Processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders	<a href="#">Corporate Governance Compliance</a>
G4-42	The highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value of mission statements, strategies, policies, and goals related to economic, environmental and social impacts	<a href="#">Corporate Governance</a>
G4-43	Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics	N/D



G4-44	<p>a. Processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Whether such evaluation is independent or not, and its frequency. Whether such evaluation is a self-assessment.</p> <p>b. Actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and organizational practice</p>	N/D
G4-45	<p>a. The highest governance body's role in the identification and management of economic, environmental and social impacts, risk, and opportunities. Include the highest governance body's role in the implementation of due diligence processes.</p> <p>b. Whether stake holder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities.</p>	Corporate Governance Compliance
G4-46	The highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics.	Corporate Governance
G4-47	Frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities	Corporate Governance Compliance

G4-48	The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered.	<a href="#">CSR at Sony</a>
G4-49	Process for communicating critical concerns to the highest governance body.	<a href="#">Corporate Governance</a>
G4-50	Nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them.	N/D
G4-51	<p>a. Remuneration policies for the highest governance body and senior executives</p> <p>b. How performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives.</p>	<a href="#">Form 20-F</a>
G4-52	Process for determining remuneration. Whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Any other relationships which the remuneration consultants have with the organization.	<a href="#">Form 20-F</a>
G4-53	How stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable.	<a href="#">Corporate Governance</a> <a href="#">CSR at Sony</a>
G4-54	Ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country.	N/D

G4-55	Ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	N/D
<b>Ethics and Integrity</b>		
G4-56	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	<a href="#">Sony Group of Conduct</a>
G4-57	Internal and External mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.	<a href="#">Ethics and Compliance Communication and Training</a>
G4-58	Internal and external mechanisms for reporting concerns aboutt unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	<a href="#">Ethics and Compliance Communication and Training</a>

Disclosures on Management Approach		
G4-DMA	<p>a. Why the Aspect is material. The impacts that make this Aspect material.</p> <p>b. How the organization manages the material Aspect or its impacts.</p> <p>c. The evaluation of the management approach including;</p> <ul style="list-style-type: none"> <li>● The mechanisms for evaluating the effectiveness of the management approach</li> <li>● The results of the evaluation of the management approach</li> <li>● Any related adjustments to the management approach"</li> </ul>	<p>Corporate Governance</p> <p>Compliance</p> <p>Human Resources</p> <p>Responsible Sourcing</p> <p>Quality and Services</p> <p>Environment</p> <p>Community</p>

Economic		
Economic Performance		
G4-EC1	Direct economic value generated and distributed	Form 20-F
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Environment > Climate Change
G4-EC3	Coverage of the organization's defined benefit plan obligations	Form 20-F
G4-EC4	Financial assistance receive from government	N/A
Market Presence		
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Careers

G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	<a href="#">Human Resources &gt; Recruitment</a>
<b>Indirect Economic Impacts</b>		
G4-EC7	Development and impact of infrastructure investments and services supported	<a href="#">Contributing to the International Community through Business Activities</a>
G4-EC8	Significant indirect economic impacts, including the extent of impacts	<a href="#">Form 20-F</a>
<b>Procurement Practices</b>		
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	<a href="#">Procurement Activities</a>

<b>Environmental</b>		
<b>Materials</b>		
G4-EN1	Materials used by weight or volume	<a href="#">Conservation of Resources Used in Products and Services</a>
G4-EN2	Percentage of materials used that are recycled input materials	<a href="#">Conservation of Resources Used in Products and Services</a>

Energy		
G4-EN3	Energy consumption within the organization	<a href="#">Environment &gt; Environmental Data</a>
G4-EN4	Energy consumption outside of the organization	<a href="#">Environment &gt; Environmental Data</a>
G4-EN5	Energy intensity	<a href="#">Environment &gt; Environmental Data</a>
G4-EN6	Reduction of energy consumption	<a href="#">Environment &gt; Climate Change</a>
G4-EN7	Reduction in energy requirements of products and services	<a href="#">Environment &gt; Products and Services</a>
Water		
G4-EN8	Total water withdrawal by source	<a href="#">Environment &gt; Resources Conservation</a>
G4-EN9	Water sources significantly affected by withdrawal of water	N/A
G4-EN10	Percentage and total volume of water recycled and reused	<a href="#">Environment &gt; Environmental Data</a> <a href="#">Environment &gt; Resources Conservation</a>

Biodiversity		
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<a href="#">Environment &gt; Biodiversity Conservation</a>
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	N/A
G4-EN13	Habitats protected or restored	<a href="#">Environment &gt; Biodiversity Conservation</a>
G4-EN14	Total number of IUCN red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	N/A
Emissions		
G4-EN15	Direct greenhouse gas(GHG) emissions (SCOPE1)	<a href="#">Environment &gt; Environmental Data</a> <a href="#">Environment &gt; Climate Change</a>
G4-EN16	Energy indirect greenhouse gas(GHG) emissions(SCOPE2)	<a href="#">Environment &gt; Environmental Data</a> <a href="#">Environment &gt; Climate Change</a>

G4-EN17	Other indirect greenhouse gas(GHG) emissions(SCOPE3)	<a href="#">Environment &gt; Environmental Data</a> <a href="#">Environment &gt; Climate Change</a>
G4-EN18	Greenhouse gas(GHG) emissions intensity	<a href="#">Environment &gt; Environmental Data</a>
G4-EN19	Reduction of greenhouse gas (GHG) emissions	<a href="#">Environment &gt; Environmental Data</a> <a href="#">Environment &gt; Climate Change</a>
G4-EN20	Emissions of Ozone-depleting substances(ODS)	<a href="#">Environment &gt; Chemicals Substances</a>
G4-EN21	NO <sub>x</sub> ,SO <sub>x</sub> ,and other significant air emissions	<a href="#">Environment &gt; Environmental Data</a>
<b>Effluents and Waste</b>		
G4-EN22	Total water discharge by quality and destination	<a href="#">Environment &gt; Environmental Data</a>
G4-EN23	Total weight of waste by type and disposal method	<a href="#">Environment &gt; Environmental Data</a>
G4-EN24	Total number and volume of significant spills	<a href="#">Environment &gt; Chemicals Substances</a>



G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel convention annex I, II, III and VIII, and percentage of transported waste shipped internationally	N/A
G4-EN26	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	N/A
<b>Products and Services</b>		
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	<a href="#">Environment &gt; Products and Services</a>
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	<a href="#">Environment &gt; Resource Conservation</a>
<b>Compliance</b>		
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	<a href="#">Environment &gt; Chemicals Substances</a>
<b>Transport</b>		
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	<a href="#">Environment &gt; Procurement</a> <a href="#">Environment &gt; Logistics</a>
<b>Overall</b>		
G4-EN31	Total environmental protection expenditures and investments by type	<a href="#">Environment &gt; Environmental Data</a>

Supplier Environmental Assessment		
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	<a href="#">Responsible Sourcing</a>
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	N/D
Environmental Grievance Mechanisms		
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	N/A

Social		
Employment		
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	<a href="#">Form 20-F Human Resources &gt; Employee Data</a>
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	N/D
G4-LA3	Return to work and retention rates after parental leave, by gender	<a href="#">Human Resources &gt; Diversity</a>
SUB: Labor practices and decent work		
Labor/Management Relations		
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	N/D

Occupational Health and Safety		
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	<a href="#">Human Resources &gt; Occupational Health and Safety</a>
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number or work-related fatalities, by region and by gender	<a href="#">Human Resources &gt; Global Workplace Injury Statistics</a>
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	<a href="#">Human Resources &gt; Occupational Health and Safety</a>
G4-LA8	Health and safety topics covered in formal agreements with trade unions	<a href="#">Human Resources &gt; Basic Polity and Management System</a>
Training and Education		
G4-LA9	Average hours of training per year per employee by gender, and by employee category	<a href="#">Human Resources &gt; Training Activities</a>
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	<a href="#">Human Resources &gt; Employee Communication</a>

G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	<a href="#">Human Resources &gt; Training &amp; Talent Development</a>
<b>Diversity and Equal Opportunity</b>		
G4-LA12	Composition of Governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	<a href="#">Human Resources &gt; Employee Data</a> <a href="#">Human Resources &gt; Diversity</a> <a href="#">Human Resources &gt; Training &amp; Talent Development</a>
<b>Equal Remuneration for Women and Men</b>		
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	<a href="#">Form 20-F</a>
<b>Supplier Assessment for Labor Practices</b>		
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	<a href="#">Responsible Sourcing</a>
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	N/A
<b>Labor Practices Grievance Mechanisms</b>		
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	N/A

SUB:Human rights		
Investment		
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	N/A
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	<a href="#">Compliance</a> <a href="#">Human Resources &gt;</a> <a href="#">Diversity</a> <a href="#">Human Resources &gt;</a> <a href="#">Training &amp; Talent Development</a>
Non-discrimination		
G4-HR3	Total number of incidents of discrimination and corrective actions taken	N/A
Freedom of Association and Collective Bargaining		
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	<a href="#">Responsible Sourcing</a>
Child Labor		
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	<a href="#">Responsible Sourcing</a>

Forced or Compulsory Labor		
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	Responsible Sourcing
Security Practices		
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	N/A
Indigenous Rights		
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	N/A
Assessment		
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	N/A
Supplier Human Rights Assessment		
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	Responsible Sourcing
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	N/A
Human Rights Grievance Mechanisms		
G4-HR12	Number of Grievances about human rights impacts filed, addressed and resolved through formal grievance mechanisms	N/A

SUB:Society		
Local Communities		
G4-S01	Percentage of operations with implemented local community engagement, impact assessments, and development programs	<a href="#">Community &gt; Contributing to the International Community through Business Activities</a>
G4-S02	Operations with significant actual and potential negative impacts on local communities	<a href="#">Investor Relations</a>
Anti-corruption		
G4-S03	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	<a href="#">Compliance</a>
G4-S04	Communication and training on anti-corruption policies and procedures	<a href="#">Compliance</a>
G4-S05	Confirmed incidents of corruption and actions taken	N/A
Public Policy		
G4-S06	Total value of political contributions by country and recipient/beneficiary	N/A
Anti-competitive behavior		
G4-S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	N/A

Compliance		
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	N/A
Supplier Assessment for Impacts on Society		
G4-SO9	Percentage of new suppliers that were screened using criteria for impact on society	<a href="#">Responsible Sourcing</a>
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	N/A
Grievance Mechanisms for Impacts on Society		
G4-SO11	Number of grievances about impacts on society on society filed, addressed, and resolved through formal grievance mechanisms	N/A
SUB:Product Responsibility		
Customer Health and Safety		
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	<a href="#">Quality and Services &gt; Product Quality and Quality Management</a>
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	<a href="#">Quality and Services &gt; Product Quality and Quality Management</a>
Product and Service Labeling		
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	<a href="#">Procurement Activities</a>



G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and services information and labeling, by type of outcomes	N/A
G4-PR5	Results of surveys measuring customer satisfaction	<a href="#">Quality and Services &gt; Responsiveness and Customer Service</a>
<b>Marketing Communications</b>		
G4-PR6	Sale of banned or disputed products	<a href="#">Important Notice</a>
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	N/A
<b>Customer Privacy</b>		
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	<a href="#">Compliance</a>
<b>Compliance</b>		
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	N/A

N/A No related activities or no significant issues to be reported

N/D Not disclosed