CSR REPORT 2016

TAIHEIYO CEMENT CORPORATION
Corporate Social Responsibility Report 2016
Fulfilling two societal functions, with the goals of 2050 in mind

Commitment of Top Management

Social Functions of the Cement Industry

The cement industry has two major social roles. One is to ensure a stable supply of base materials for building social infrastructure, and the other is to take advantage of cement production technology to encourage the circulation of resources in society through the safe recycling of wastes and by-products as alternative raw materials and fuels for cement.

The social value Taiheiyo Cement Group seeks to create under its growth

Shuji Fukuda
President and Representative Director
Taiheiyo Cement Corporation
strategy calls for performing these two social functions in the Pacific Rim region, providing a sense of safety and security, and thereby contributing to sustainable development.

Launch of the 17 Medium-Term Management Plan

In fiscal 2015 we launched the 17 Medium-Term Management Plan for the three-year period from fiscal 2015 to fiscal 2017. This was the first step toward becoming an enterprise group that utilizes all of its capabilities to provide a sense of safety and security to society in the Pacific Rim region, which we have established as our vision targeting the mid-2020s.

In fiscal 2015 domestic demand for cement decreased due to the decline in public investment. On the other hand, overseas sales volume increased as a result of the economic recovery in the U.S. and robust domestic demand in Vietnam and the Philippines. We recognize that this trend of decreasing domestic demand and increasing overseas demand is also a key aspect of the long-term business environment.

Creating a Sustainable Recycling-based Society by 2050

The world population was about 7.3 billion in 2015 and is anticipated to exceed 9.7 billion in 2050, whereas the population of Japan over the same period is predicted to fall from the current 130 million to about 97 million. This means that the world population will increase by over 30% while Japan’s population will decrease by nearly 30%.

Responding to these changes in social structure requires strategically balancing production and supply in Japan and overseas. True to our company name, Taiheiyo Cement, in which “Taiheiyo” means “Pacific” in Japanese, we conduct business trading among the production sites in countries in the Pacific Rim region, including Japan, and pursue growth in the region by trading among production plants.

The Taiheiyo Cement Group’s contributions to emerging countries with growing economies are not limited to the stable supply of cement and other materials. Challenges such as resource and energy constraints and waste treatment have also emerged with the advance of industrialization and urbanization in these nations. We are confident that helping to address these environmental issues by employing the recycled-waste-to-cement technology we have developed over many years in Japan is a social contribution that only the cement industry can provide. These efforts will expand to become one of our core global businesses in the medium to long term.

We will further advance the group’s technologies to support the development of the Pacific Rim region into a sustainable recycling-based society by 2050. In addition, we intend to take advantage of our existing facility and equipment resources to develop new businesses.

Enhancing and Accumulating the Human Resources that Represent our Key Resources

To enhance the collective strength of the group and develop business across the Pacific Rim region, every group company must maximize its own strength while sharing the diverse management resources within the group. Above all, we recognize that cultivating human resources with a long-term perspective and getting the right people in the right places are future tasks for the group.

In fiscal 2015 we began to promote business efficiency company-wide. Workstyle reform is an action to “encourage all employees to participate in the efforts to create innovation,” as stated in the medium-term management plan. This reform is expected not only to improve business efficiency but also to lead to a better work-life balance and the empowerment of women. With Japan’s population expected to drop below 100 million in the next 35 years we must begin the reforms now in order to improve labor productivity and enhance organizational capacity by creating a working environment where employees are fairly treated and can be successful regardless of gender, nationality or beliefs.

We have publically announced our long-term numerical targets to promote the empowerment of women in light of the time required to accumulate human resources. We are committed to creating a vigorous organization in which employees can entrust their future.

Workplace safety is the foundation for the existence of the group in its determination to be an enterprise that provides a sense of safety and security to society. We continue to implement all possible measures based on placing the highest priority on safety at our workplace.

Participating in Initiatives to Change the World

In 2015 a series of efforts, including the UN Sustainable Development Goals and the Paris Agreement of COP21, were adopted to address issues that require global cooperation. As a citizen of the global society the Taiheiyo Cement Group will participate in these efforts to change the world through its business activities.

The Taiheiyo Cement Group will steadfastly fulfill its two vital societal functions to create a sustainable earth 50 and 100 years into the future.
Mission of the Taiheiyo Cement Group *G4-56*

Our mission is to contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position and bring value to our stakeholders.

Business Principles  Governing the Way the Company Conducts Business *G4-56*

- We are committed to creating sustainable value for our shareholders by generating synergies among the Taiheiyo Cement Group of companies.
- We aim to manage the environmental impact of our operations while supporting the development of a recycling-based society.
- We will act in an ethical manner and abide by the laws and regulations of those countries in which we operate.
- We will openly communicate with our stakeholders and proactively report on our business activities in a transparent manner.
- We are committed to the ongoing development and application of innovative technologies in order to provide products and services that benefit our customers and society.
- We are committed to maintaining an international outlook and conducting our business in accordance with global standards.
- We will strive to anticipate the changing business environment to assess new opportunities for growth.
- We are committed to achieving our full potential through training and self-development.
- We are devoted to providing a safe and healthy working environment where our employees are valued and the human rights of all individuals involved in our business are respected.

Under the Mission of the Taiheiyo Cement Group, which was established in June 2002, the company pledges to focus its management on the triple bottom line, the economy, the environment and society, to realize sustainable development, a shared principle of the WBCSD of which we are a member. In December 2002 we formulated the Business Principles of Taiheiyo Cement, which comprise nine principles for realizing the Mission of the Taiheiyo Cement Group, and are striving to implement them.
Future of the Taiheiyo Cement Group

Vision and direction targeting the mid-2020s

To become an enterprise group that utilizes all of its capabilities to provide a sense of safety and security to society in the Pacific Rim region.

CSR Objectives for 2025

<table>
<thead>
<tr>
<th>Area</th>
<th>Target (by FY2025)</th>
<th>Policy for Achieving the Target</th>
<th>Scope of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Prevention of Accidents</td>
<td>Zero fatalities</td>
<td>(1) Promote safety activities that ensure all employees of the group, affiliated companies and partner companies can independently implement PDCA cycles within each company.&lt;br&gt;(2) Improve working environments to eliminate incidents of workers being caught by or dragged into equipment or falling.</td>
<td>Employees of the Taiheiyo Cement Group including overseas business sites and partner companies</td>
</tr>
<tr>
<td>II. Reduction of Greenhouse Gas Emissions</td>
<td>Reduce the specific net CO₂ emissions per tonne of cementitious product by at least 10% from fiscal 2000 levels by fiscal 2025.</td>
<td>(1) Further contribute to creating a recycling-based society.&lt;br&gt;・ Promote the global expansion of our recycling technologies for producing cement with conventional waste and by-products.&lt;br&gt;・ Promote the development of technologies for handling wastes that are difficult to recycle, with a focus on reusing them as alternative energy resources.&lt;br&gt;(2) Promote further energy saving.&lt;br&gt;・ Introduce energy efficient equipment and install additional in-house power generation equipment such as waste heat power generation systems.&lt;br&gt;・ Promote further energy saving by adopting renewable energy sources.&lt;br&gt;(3) Promote R&amp;D activities that contribute to reducing global environmental impact, including R&amp;D into innovative cement production technologies.&lt;br&gt;・ Promote the development of new technologies for practical applications.</td>
<td>Cement production sites of Taiheiyo Cement and group companies, including overseas sites</td>
</tr>
<tr>
<td>III. Workplace Diversity</td>
<td>Increase the ratio of female to male employees under &quot;G Course&quot; categories to at least 30%.&lt;br&gt;Build an appropriate portfolio of human resources by increasing the ratio of female to male employees to at least 10%.&lt;br&gt;Promote the appointment of female employees to management positions with the objective of raising the ratio of newly appointed female managers to 10%.</td>
<td>(1) Build an appropriate portfolio of human resources and actively promote attraction and retention strategies for recruiting and retaining talented women, while also implementing initiatives to achieve this goal.&lt;br&gt;(2) Improve productivity and promote work-life balance management toward building an organization in which a variety of human resources can fully demonstrate their abilities in the workplace, while also implementing initiatives to achieve this goal.</td>
<td>Non-consolidated</td>
</tr>
</tbody>
</table>
Review of Operations at the Taiheiyo Cement Group

Taiheiyo Cement Profile (As of March 31, 2016)

- Company name: TAIHEIYO CEMENT CORPORATION
- Established: May 3, 1881
- Capital: 86.2 billion yen
- Headquarters: Daiba Garden City Building, 2-3-5, Daiba, Minato-ku, Tokyo 135-8578, Japan
- Number of employees: Consolidated: 12,574
- Net sales: Consolidated: 835.3 billion yen
- Subsidiaries: 198 (including 121 consolidated subsidiaries and 9 equity-method subsidiaries)
- Affiliates: 102 (including 46 equity-method affiliates)

Financial data

Economy

Net Sales

(FY) (millions of yen)
2015 300,842 835,359
2014 312,712 842,848
2013 346,844 840,288
2012 300,359 747,616
2011 273,184 727,849

Net Sales by Segment (consolidated, fiscal 2015)

- Others: 6.7%
- Construction Materials: 19.0%
- Environment: 8.2%
- Mineral Resources: 8.5%
- Cement: 67.6%

Ordinary Income

(FY) (millions of yen)
2015 36,214 60,225
2014 39,408 47,890
2013 48,821 69,590
2012 52,647 29,416
2011 18,496 22,908

Profit Attributable to Owners of Parent (consolidated), Net Income (non-consolidated)

(FY) (millions of yen)
2015 36,404
2014 44,114
2013 35,223
2012 15,182
2011 17,629

Non-financial Data (detailed data of reporting organization are provided on page 68)

Safety

Number of Fatalities

(FY) (number of cases)
2015 0
2014 2
2013 1
2012 5
2011 6

Lost Time Injury Frequency Rate

(FY) (per million man-hours)
2015 1.18
2014 0.88
2013 0.77
2012 1.23
2011 1.05

CSR Objectives for 2025

- 2025: 0

Taiheiyo Cement Profile  (As of March 31, 2016)
**Environment**

**Reduction Rate of Specific Net CO₂ Emissions per Tonne of Cementitious Product (Compared with Fiscal 2000)**

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR Objectives for 2025 (%)</th>
<th>Reduction Rate (FY) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>4.9</td>
<td>5.7</td>
</tr>
<tr>
<td>2012</td>
<td>5.7</td>
<td>5.9</td>
</tr>
<tr>
<td>2013</td>
<td>6.8</td>
<td>5.9</td>
</tr>
<tr>
<td>2014</td>
<td>5.9</td>
<td>5.7</td>
</tr>
<tr>
<td>2015</td>
<td>5.9</td>
<td>5.7</td>
</tr>
</tbody>
</table>

**Diversity**

**Ratio of Female to Male Employees**

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR Objectives for 2025 (%)</th>
<th>Ratio of Female to Male Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>4.9</td>
<td>11.2%</td>
</tr>
<tr>
<td>2012</td>
<td>5.7</td>
<td>11.2%</td>
</tr>
<tr>
<td>2013</td>
<td>5.9</td>
<td>11.2%</td>
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<td>11.2%</td>
</tr>
<tr>
<td>2015</td>
<td>5.7</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

**Number of Employees by Gender (Consolidated)**

- Male: 11,170 (88.8%)
- Female: 1,404 (11.2%)

**Total**: 12,574 people

* Business locations where data for WBCSD-CSI KPIs are collected (fiscal 2015)
Products and Services

We contribute to the building of safe and secure social infrastructure by supplying a variety of high-quality construction materials.

Initiatives through our Business Operations

Environment

We contribute to the protection of the global environment and the creation of a recycling-based society through the use of waste and by-products as alternative raw materials and fuels for cement. Before accepting any waste or by-products we conduct environmental impact assessments and, under strict regulations governing their use, we ensure the stable operation of our cement plants and avoid the discharge of pollutants. Moreover, waste is stored in fully enclosed facilities inside our plants so that odor cannot escape into the surrounding areas. We work to ensure that our cement production kilns are being safely operated and install equipment to protect the environment including energy-saving equipment to maximize energy efficiency and equipment to reduce air polluting emissions. We also measure emissions of NOx, SOx, dust and dioxins, and then disclose the results. In our logistics operations we focus on reducing CO2 emissions through the installation of energy-saving equipment on ships and trucks and the use of cargo loading on return trips.

Society

We strive to ensure the stable supply of products by improving our distribution sites and increasing transportation capacity.

To ensure that the quality of all our products remains highly reliable we have implemented a quality management system in accordance with ISO 9001. In pursuit of the creation of a recycling-based society we continuously endeavor to use waste and by-products as alternative raw materials and fuels for cement, including those that are difficult to recycle in other industries.

In sales we place the highest priority on customer satisfaction and quickly and effectively respond to customer requirements through the collaboration of sales and technical staff and each business unit. In our technical divisions we conduct a wide range of activities, such as responding to customers’ technical requests related to product use and support for improving customers’ technical capabilities as well as quality assurance.

Under the motto “Safety is always a top priority,” we focus on improving our security and safety system at all our production sites, conducting related programs at Taiheiyo Cement as well as our group and partner companies. Also, we develop human resources with a long-term perspective while respecting diversity and human rights.

At our cement plants we communicate with the local population and contribute to their lives by holding community briefings on plant operations, offering worksite tours, making our facilities available for public use and participating in local festivals and events.

- Production and sales of a wide variety of products in Japan including Ordinary Portland and other cements, soil stabilizer, soil improvement materials and ready-mixed concrete
- Supply service through cement distribution sites across Japan
Mineral Resources Business

Outline of Business Operations

- Supply of raw materials for cement production, limestone products and aggregates for the construction, steel and chemical industries
- Soil solutions business, such as for the treatment of contaminated soil
- Functional materials business

Products and Services

In addition to supplying essential raw materials and minerals for the manufacturing and construction industries, we also provide products and services that meet environmental needs. These products and services include the recycling of construction soil as raw materials and fuels for cement, and solutions such as DENITE® for treating contaminated soil that is difficult to recycle. DENITE® is a heavy metal immobilization product for the effective treatment of contaminated soils. Furthermore, we produce and sell a material for LEDs called ChiccaLight® and ultra-high-purity silicon carbide which is a single crystal material for power semiconductors. As described above, we endeavor to create new eco-products that will meet the environmental needs of the future.

Initiatives through our Business Operations

In quarry operations, representing our core business, we strive to ensure safety and reduce environmental impact during all stages, from development to closure. Specific efforts vary by quarry and site location. In consideration of the environment, we endeavor to prevent pollution associated with quarry operations such as air and water pollution, noise and vibration. We also promote the greening of quarries by soil dressing and tree planting. For support and advice on quarry’s safety, we set up a working group that includes outside experts as needed and we continue to maintain stable conditions at old quarry sites, deposited soil sites and quarry slopes. In addition to these efforts, we leave the perimeter of the quarry intact which works effectively as a raised embankment to protect the scenery at some locations. With regard to conservation of biodiversity, which we were quick to address, we have been successful in the preservation and growth of rare plant species by using biotechnology.

Environmental Business

Outline of Business Operations

- Sophisticated waste treatment services (recycled-waste-to-cement system) using the characteristic features of the cement production process
- Development and sale of environmental products that utilize the resources we hold

Products and Services

Our recycled-waste-to-cement system enables us to safely recycle large volumes of various waste and by-products generated in other industries. By recycling waste and by-products as resources we not only extend the lifetime of landfills but also help reduce environmental impacts such as natural resource depletion.

In the environmental product business, we established a recycling system in which we not only sell limestone to thermal power stations as a flue-gas desulfurization material but also receive the gypsum generated by the power stations as a by-product, which we then use as raw material for cement. These are some of the ways in which we are contributing to the creation of a recycling-based society.

We are also expanding our environmental business in the area of water filtration and purification by consolidating water-related technologies across the group to address environmental issues.

Initiatives through our Business Operations

As a company engaged in the environmental business we also aim for good relationships with business partners and local communities and secure their trust by focusing on compliance and managing risk and safety matters. In order to safely handle waste we follow our manual for its acceptance and use and make sure that the waste has no adverse impact on the cement production process, an accident prevention or on environmental protection.
International Business

Products and Services

On the West Coast of the U.S. our business encompasses cement, ready-mixed concrete, aggregates and other operations. In China we operate three core joint venture companies for the production and sale of cement and are expanding our business, including the energy saving and environmental business, while drawing upon our cement production technologies. In Southeast Asia we manufacture cement and produce ready-mixed concrete from our operations in Vietnam, manufacture cement in the Philippines, operate an imported clinker grinding business in Papua New Guinea, and are involved in the purchase and sale of mineral products as well as other businesses in Thailand.

We are also focusing on the cement trading business, including the export of cement produced at our domestic and overseas plants and triangular trade, capitalizing on our international distribution network.

In the overseas market, blended cement made from slag and fly ash dominates the market due to stricter environmental regulations such as those restricting CO2 emissions. We expanded the capacity of the silo for blended cement in our Singapore cement terminal, allowing us to produce cement suitable for each local quality standard as well as the usage environment to meet the international market needs.

Initiatives through our Business Operations

Our overseas group companies develop their communication with stakeholders and address local issues. For example, we are involved in initiatives such as the provision of a scholarship program and assistance to communities in building up their healthcare service systems and strengthening infrastructure.

Construction Materials and Building Construction & Civil Engineering Business

We manufacture and sell construction materials and also install them as a contractor for various construction site needs.

In the field of construction materials we deal in cement-related products such as high-performance premix products and additives for concrete and concrete products, including autoclaved lightweight concrete (ALC) panels and paving blocks. We also conduct sales using the distribution network developed by the group.

In our building construction and civil engineering business we perform ground improvement projects and seismic retrofitting projects. We have also been conducting diagnostic and repair services to extend the life of concrete structures. Through these activities we contribute to the long-term safe and secure use of social infrastructure.

Other Business

We conduct many other business activities including real estate (utilization of properties, operation of fitness clubs and an insurance agency), transportation and warehousing, engineering for construction materials plants, and information processing.
Research and Development

Status of our R&D Activities

In the cement segment, with a focus on maintaining and improving product quality, we are involved in R&D activities such as advancing our innovative quality predictive system, lowering costs, protecting the environment, saving energy and reducing CO₂ emissions in the production of cement.

In the concrete segment we promote our “Concrete Solution Menu” to provide useful information to each user through a dedicated website utilizing the technical data we have accumulated. We also focus our R&D activities on cement-based materials with the world’s highest strength as well as diagnostic and repair technologies that contribute to ensuring the safety and security of infrastructure. Furthermore, we are striving to expand the use of concrete as a pavement material.

In the overseas segment we are focusing on the development of a system to design and provide cement and concrete that meet local market requirements under our globalization/localization (“glocalization”) as well as technical support in the area of environmental protection and reduced environmental impact.

In the mineral resources segment our activities are centered on developing functional materials that add value to the mineral resources we hold, such as hollow spheres and ultra-high-purity silicon carbide, as well as immobilizing agents, a technology for treating contaminated soil.

In the environmental segment we not only develop technologies for recycling waste that is difficult to recycle and recovering rare materials, but we also develop water-related technologies such as for wastewater purification, phosphorus recovery and the removal of material contaminated by radiation. In the construction materials and building construction and civil engineering segment we proceed with an initiative to serve as a center for generating synergies across the group’s R&D activities.

Research and Development Objectives

- Contribute to the sustainable growth of our businesses
- Serve as a driver for growth fields (overseas, mineral resources, environment and construction materials)
- Reduce environmental impact
- Contribute to national projects and infrastructure maintenance

Developing Concrete with the World’s Highest Compressive Strength

We developed concrete with the world’s highest compressive strength of 464 N/mm² (at least twice that of ordinary steel) using normal pouring and forming techniques. This concrete demonstrates an unprecedented level of ultra-high strength resulting from a new cement material and production method that minimized the hardened pores. Higher buildings and longer bridges can be built using the concrete because it dramatically reduces the cross-sectional area that can withstand a specific weight while also significantly reducing the weight of a concrete structure. It also demonstrates superior durability. We are focusing on conducting research and development toward commercializing this concrete as a new construction material that enables the construction of innovative concrete structures with an extremely long service life.
Value Chain of the Taiheiyo Cement Group

Key Stakeholders
We strive to fulfill our responsibilities in response to the expectations and demands of stakeholders while directly and indirectly maintaining sound relationships with them. Listed right are the Taiheiyo Cement Group’s key stakeholders, identified through consideration of our business characteristics and environment.
We reviewed the material issues of the group identified in fiscal 2013 following the three steps used for the previous review.

STEP 01  Identification of Issues

We organized our environmental and social issues based on an overview of our value chain.

Taiheiyo Cement’s value chain, the flow of our business activities from raw material procurement through to production, transportation and distribution of products, and including disposal and recycling, is expanding worldwide. To fulfill our responsibilities in response to public expectations and demand, we are addressing various environmental and social issues toward realizing a sustainable society.

<table>
<thead>
<tr>
<th>Major Expectations and Demands</th>
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</thead>
<tbody>
<tr>
<td><strong>Economy</strong></td>
</tr>
<tr>
<td>Management stability and growth potential</td>
</tr>
<tr>
<td>Stable valuation of profits</td>
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<tr>
<td>Stable supply of products</td>
</tr>
<tr>
<td>High value-added products</td>
</tr>
<tr>
<td>Improved economic efficiency of waste disposal</td>
</tr>
<tr>
<td>Improved work environment</td>
</tr>
<tr>
<td>Improved resource circulation in the community</td>
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<tr>
<td>Payment of reasonable price</td>
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<tr>
<td>Sharing social costs</td>
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<tr>
<td>Tax payment</td>
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<tr>
<td>Activity support and sponsorships</td>
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<tr>
<td>Payment of reasonable price</td>
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<tr>
<td>Maintenance of work safety and environment</td>
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<tr>
<td>Maintenance of work safety and environment</td>
</tr>
<tr>
<td>Resource cycle efficiency</td>
</tr>
<tr>
<td>Appropriate use of water resources</td>
</tr>
<tr>
<td>Maintenance of work safety and environment</td>
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<tr>
<td>Maintenance of work safety and environment</td>
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<tr>
<td>Maintenance of work safety and environment</td>
</tr>
</tbody>
</table>

A major characteristic of the cement industry is its safe, large-scale reuse of industrial and municipal waste as alternative raw materials and fuels. The industry serves an important role in reverse logistics.
We identified sustainability issues while referring to international guidelines and stakeholder feedback in the context of our business. Through internal meetings we then held discussions on the priority themes for the Taiheiyo Cement Group, resulting in 11 priority aspects of the material issues.

**Priority Themes of the Taiheiyo Cement Group**

**Economic**
- Creating economic value through business operations and properly distributing that value throughout society

**Environmental**
- Striving to reduce the environmental impact associated with our business operations to harmonize human activities with nature
- Contributing to the formation of a resource recycling society by taking advantage of cement production technologies
- Contributing to the reduction of society’s environmental impact through the supply of products and services

**Social**
- Maintaining site safety as a foundational aspect of our company
- Maintaining our operations and physical distribution to ensure the stable supply of high-quality products and thereby contributing to the construction of social infrastructure
- Respecting human rights and diversity as fundamental principles for establishing a sustainable society
- Participating in efforts to fulfill local community needs in order to grow together with the communities

In the process of steps 1 and 2 we referred to:
- GRI Sustainability Reporting Guidelines [G4]
- ISO 26000
- AA1000SES (AA1000 Stakeholder Engagement Standards)
- ESG surveys and evaluations
- Internal questionnaire and feedback surveys
- Stakeholder Dialogue
- CSR report questionnaire survey
- Opinions and advice from outside experts and advisors

**Various sustainability issues**
- Appropriate use of water resources
- Appropriate management of chemical substances
- Compliance with environmental laws and regulations
- Mitigation of environmental impacts of transfer and transport
- Human resource development
- Work life management balance
- Sound labor-management relations
- Fair trade
- Corruption prevention
- Marketing communication
- Personal information protection
- Information disclosure
- Protection and use of intellectual property

**Materiality**

- Materiality for stakeholders (level of public expectations)
- Materiality of the impact of Taiheiyo Cement (contribution to the issue and our growth, and the risk level of the issue)

**High materiality**
- Respect for human rights
- Participating in and respecting local communities
- Preventing environmental pollution
- Offering environmentally sound products and services
- Creating and distributing economic value
- Mitigating climate change
- Occupational health and safety
- Improving energy and resource productivity (promoting resource recycling)
- Diversity and equal opportunity
- Maintaining product quality and safety and ensuring stable supply
## Material Issues and Approaches of the Taiheiyo Cement Group

<table>
<thead>
<tr>
<th>Categories</th>
<th>Material Aspects</th>
<th>Boundaries of Major Impact</th>
<th>Management Approaches</th>
<th>Report Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mitigating Climate Change</td>
<td>✓ ✓</td>
<td>Industry and regional waste-related facilities</td>
<td>System: • Setting up Environmental Management Committee • All plants, head office, branches and the Central Research Laboratory are operating in compliance with ISO 14001</td>
</tr>
<tr>
<td></td>
<td>Preventing Environmental Pollution</td>
<td>✓ ✓</td>
<td>Areas around plants</td>
<td>Evaluation: • CSR Objectives for 2025</td>
</tr>
<tr>
<td></td>
<td>Conserving and Restoring Biodiversity</td>
<td>✓ ✓</td>
<td>Areas around plants</td>
<td>• Group environmental targets based on the CSI Charter and KPIs • Monitoring and review by the Environmental Management Committee</td>
</tr>
<tr>
<td></td>
<td>Offering Environmentally Sound Products and Services</td>
<td>✓ ✓</td>
<td>Society</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diversity and Equal Opportunity</td>
<td>✓</td>
<td></td>
<td>Policy: • The Basic Policy Concerning the Development of Human Resources</td>
</tr>
<tr>
<td></td>
<td>Maintaining Product Quality and Safety and Ensuring Stable Supply</td>
<td>✓ ✓</td>
<td>Cement users</td>
<td>Policy: • Quality Policy</td>
</tr>
<tr>
<td></td>
<td>Participating in and Respecting Local Communities</td>
<td>✓ ✓</td>
<td>Areas around plants</td>
<td>Policy: • Basic Policy Concerning Human Rights and Labor Practices • Promoting company-wide activities under the Human Rights Committee • Contact points for counseling</td>
</tr>
<tr>
<td></td>
<td>Respect for Human Rights</td>
<td>✓ ✓</td>
<td>Partner companies</td>
<td>Policy: • Managing progress according to the company-wide action plan and facilitating the exchange of opinions and negotiations at labor-management consultations</td>
</tr>
</tbody>
</table>

### STEP 03 Validation

We confirmed the Principles of Completeness and Stakeholder Inclusiveness are applied to finalize the identification of the report content.

- Discussion at the CSR report editing task force meeting
- Reporting and approval at the CSR Management Committee

### STEP 04 Review

We implement a review every fiscal year for the report issued.

- Internally
  - Report booklets are distributed to all employees of Taiheiyo Cement Corporation and a questionnaire survey is conducted
  - CSR report briefing sessions are held at all business sites and plants (21 sessions in fiscal 2015)
- Externally
  - Third-party opinion by experts
  - CSR report questionnaire survey
  - Review by external advisors
A Conversation on How to Best Disclose CSR Information

Companies are accountable to all stakeholders for the impact of their business activities on the environment, society and the economy while at the same time striving to improve their external evaluations by communicating enterprise value through CSR information disclosure.

Does Taiheiyo Cement accomplish these objectives through its disclosure of CSR information? We exchanged opinions on the issues surrounding information needs and responses. The content of this dialogue is posted on the intranet for all employees to view and share so that we can more effectively promote our CSR activities.

(The dialogue took place April 4, 2016.)

A significant transformation of the times occurred in 2015

Moderator. I’d like to hear about major recent events concerning information disclosure by companies.

Kawaguchi. One major event was that the Government Pension Investment Fund (GPIF), the world’s largest fund management organization and leading pension fund in Japan, signed the Principles for Responsible Investment (PRI) in September 2015. PRI refers to investment, such as buying stocks and lending money, with consideration for the environmental, social and governance (ESG) efforts of the companies that receive investments. PRI has altered the investment world. For example, whereas investment decisions in the past had been solely based on financial information, now the status of the business foundation integrating ESG factors behind the financial information are also included in the evaluation indices of the investment destination. This change has considerably spread throughout Europe and the U.S. In Japan, it is at an early trial-and-error stage but is expected to become a major trend.

Goto. Another important event was the adoption of the UN Sustainable Development Goals in September, followed by the adoption of the Paris Agreement on climate change...
in December. These actions have changed the vector into the direction of considerable restriction that does not allow unlimited CO₂ emissions. Ms. Kawaguchi mentioned changes on the side of investors, but industries have also started to take action. Toyota Motor, for example, announced “Toyota Environmental Challenge 2050,” which includes the long-term goal: “to reduce to zero all life-cycle CO₂ emissions from the manufacturing, transportation, disposal and recycling of cars.”

As investors who are improving their skills in evaluating ESG, companies will need information disclosure and dialogue that withstand these tests in order to be recognized. I think that 2015 will go down as a pivotal year for CSR.

The need to set long-term goals and explain ways of achieving them

- **Kitabayashi**: I am impressed by “Toyota Environmental Challenge 2050.” In fiscal 2015 we set quantitative goals in the form of CSR Objectives for 2025 for the medium term in the process of realizing our mission. We can present quantitative goals for the next ten years because we have a certain level of supporting data for this period. I suspect that investors and society expect longer-term goals; however, I feel that presenting goals without reasonable expectations for achieving them may be difficult.

- **Goto**: I often say that the goals of Japanese companies are accompanied by the shadow of guaranteed fulfillment. Japanese people tend to think that they cannot set long-term goals because goals must be achieved. However, a person at Toyota said, “We must innovate from the procurement stage to social system reform and request the cooperation of various people. It will not be easy, but we dared to set goals for us to try hard in every way possible.” I think society is changing its attitude to announce goals without reliable supporting data.

- **Matsushima**: In our past IR events, investors’ interest has focused on financial matters. Nevertheless, in a recent interview with overseas investors key questions were about ESG, including concrete target values for measures to mitigate climate change, and the introduction and improvement of the basic principles of corporate governance. I felt anew...
the rising need for ESG evaluation in my bones.

Murakami: I think that environmental and social issues have become truly important considerations for business management and that companies must change their attitude and respond to new social needs. To accomplish the goal of the Paris Agreement of limiting global warming to well below 2°C, we need to change social and business systems themselves. With society moving in the direction of sustainability, investors are turning their attention to whether companies are sensitive enough to tap into the flow and seize the moment. This is why companies are expected to offer directions for both long-term growth and response to risks.

Stories cement companies should tell

Moderator: Considering the characteristics of the industry, how can a cement company more effectively disclose information for the sake of clearer public understanding and higher evaluation?

Kawaguchi: There have already been calls to reduce carbon emissions as a measure for mitigating climate change. Although cement production releases a major volume of CO₂, the material is essential for building safe and secure social infrastructure. While climate change is a serious threat, maintaining biodiversity and creating resilient cities that can resist extreme weather are also important. Alternatives for vehicles and energy sources exist, but there is no replacement for cement as an infrastructure material. I think we have to properly assess the role of cement in society and the significance of the cement business. It goes without saying that the cement industry should strive to reduce CO₂ emissions, but it can also demonstrate its social value.

Kitabayashi: There is no alternative material that satisfies the same purposes and can be supplied in such a large volume.

Matsushima: Although there is no alternative for cement we have not been content with conventional operations and instead have been honing our technologies for using waste and by-products as raw materials and fuels. I feel that we should communicate our contribution toward a recycling-based society through this recycling aspect of cement production.

Kitabayashi: After the Great East Japan Earthquake we restored the quake-stricken Ofunato plant to accept and recycle a million tonnes of earthquake waste for use as raw materials for cement. Only the cement industry can use a massive volume of disaster waste and produce the cement necessary for the reconstruction of the region. Governments also recognize this role. We have concluded agreements with local governments to accept debris on a priority basis. This social contribution is made possible by our track record and technologies for using waste as raw materials for cement.

Murakami: Taiheiyo Cement, in regard to CSR, tends to focus on efforts for reducing environmental impact, but it can place greater emphasis on the social value of the cement industry. First, get people to understand the characteristics of the industry, and then properly communicate the value that you generate. You have mentioned the reuse of earthquake waste. A concrete structure has a lifespan of 50 to 100 years and must be demolished after a certain number of years. In this sense, cities are full of future waste. If you can adequately position the cement industry and its technologies in the long-term circulation of society’s resources, I think you can also demonstrate your social value in this way.

Kitabayashi: Concrete is a material that can last for more than 100 years, but most concrete buildings are rebuilt before the end of their life. In this respect, it may also be important to communicate the idea that you have mentioned: that after a building has been demolished, the waste can be recycled and used as raw materials for concrete.

Change the cement company image

Goto: Regrettably, cement companies are generally
associated with the active mining of mountains as well as producing cement and emitting CO2. You want people to understand that you are serving society in both production and waste treatment as a key player in a recycling-based society, but just saying we are doing these good things will be perceived as marketing. Your company calculates deemed benefits in your environmental accounting. Using this kind of evaluation may also be a good way to go.

**Kawaguchi**: From the perspective of branding, you may want to consider removing “cement” from your company name. A company circulating the wastes of society to provide cement as an end product is not simply a cement company but is a company that also produces cement. Against a background where CO2 is a very major environmental issue, I think that it is necessary to propose environmental value in the business cement industry model and incorporate this value into the overall awareness of society. Because cement is so common and familiar, I think you need to demonstrate your potential under a completely different business category and growth industry.

**Matsushima**: Because cement is basically a BtoB product, some level of ingenuity will be necessary to instill a deeper understanding of the meaning of the industry in individual citizens and investors.

**Murakami**: Provide the readers of your report and investors with answers, which have been well thought through, to potential questions such as: “Why is it important?” and “How will accomplishing this change the company?” This could also make you more persuasive in regard to investor relations. These points may not have been sufficiently narrowed down even within the company. Sharing these answers could become a CSR action.

**Kitabayashi**: We published an environmental report when we first started reporting on our CSR activities. Since then we have extended our disclosure of information. Because of that I do not think we have been able to skillfully communicate our contribution to society. We intend to think from the perspective of readers so that we can communicate why it is important and how accomplishing this will change the company.

**Impressions of the Dialogue**

**Comments from Employees**

- The dialogue strongly conveys the beginning of a tide where ESG viewpoints are essential for evaluating enterprise value. I feel that we must determinedly work to communicate the social value of the cement industry in our disclosure of CSR information.

- The branding strategy to remove “cement” from the company name to impress the social value of the industry is a very interesting idea. This may appeal to people in an extraordinary way and be necessary to change the public’s view of the industry.
The Republic of the Philippines consists of as many as 7,107 islands. Of these, Cebu Island especially thrives on tourism. Taiheiyo Cement Philippines, Inc. (TCPI) operates in the neighborhood of the City of Cebu, which is recognized as the second largest city of the Philippines.

Located in the path of tropical cyclones in the Pacific Ocean, the country is vulnerable to typhoon damage, drought caused by the El Nino effect and, above all, the impacts of extreme weather associated with climate change. The government of the Philippines enacted the Disaster Reduction and Management Act in 2010 and is working to develop resilient cities. Demand for cement is increasing as a result of enhancing infrastructure to prevent disasters as well as to encourage economic growth. Demand in 2015 (24.30 million tonnes) exceeded that of 2010 by 1.5 times with further increases expected for the future.

To meet this and future rises in demand, we are expanding and reinforcing facilities, including a new clinker grinding mill in 2015, to boost cement production capacity by about 70% (2.40 million tonnes annually) over the current capacity. In addition, we have expanded the port capacity dedicated to the plant from five to ten cement carriers. We also focus on human resource development, the foundation of our operations, by incorporating expanded education and training in our Plant Manager Objective in 2016.

Creating the Future of the Philippines Together
Empowering Human Resources for Our Business Activities

Maintaining accurate and efficient operations is essential for the stable production of high-quality products and for this we are reliant on our human resources. In January 2016 we opened a training center to pass on knowledge and skills to employees. Our goal is to train engineers who thoroughly understand their own jobs and responsibilities as well as the operations of the entire plant across departments, and who are therefore able to better manage their worksite by demonstrating leadership. Currently, Production Department personnel as well as staff engaged in mechanical and electrical operations receive training, primarily through classroom lectures based on relevant curriculums in the course of their work assignments. Experienced local engineers rehired in their retirement years serve as lecturers. Also, we have enhanced our on-the-job training by setting goals that incorporate technical guidance in each department.

Supporting the Next Generation for the Future of the Community

TCPI operates the SDMP, under which some of its profits are contributed to community support. In the program, the company continually provides scholarships through to graduation to junior and senior high school and university students in the districts around the plant. Some programs, such as for leadership, forge connections among scholarship recipients who live in different areas. We provide the same kinds of support that we would offer to our own children, hoping that the young people will believe in their infinite potential and develop the confidence to positively contribute toward the future of the Philippines. Since we are a cement company we are also able to donate cement for the construction and repair of schools and health centers, road pavement and other projects to improve local infrastructure.

TCPI strives to create stronger communities by fulfilling its social functions through its business operations on two fronts: supplying cement to construct infrastructure and supporting SDMP to encourage local participation.

VOICE

We Strive to Grow with the Community by Developing People

The cement industry is locally based. To maintain long-term operations in a particular location, a company must be accepted and needed by the people of the area in which it operates. Therefore, we are actively promoting local participation with the spirit of living together in the Philippines. We can produce high-quality cement consistently as a result of developing and securing human resources with sophisticated technical capabilities. Local human resources represent a vital workforce. In fact, manufacturing starts with the building of human resources. I also believe that human power will create the future of the Philippines. We strive to contribute to the future of the country and to grow together with the community by developing people for both TCPI and the area in which we operate.

Satoshi Asami  President and Chief Executive Officer (CEO), Taiheiyo Cement Philippines, Inc.
About 1 kg of waste is generated per person each day*, and the shortage of final disposal sites has emerged as a nationwide waste treatment issue. The difficulty of constructing new landfills makes it necessary to extend the operational life of existing ones. While incineration is being used to reduce the volume of waste, there has been a recent trend toward reusing waste as a resource. One way is to use the ash from incinerated general domestic waste as raw material and fuel for cement instead of dumping it in a landfill. This initiative began in heavily populated urban areas.

Taiheiyo Cement accepts waste incineration ash, collects usable materials for recycling and reuses the remaining ash as raw material and fuel for cement. This considerably reduces the amount sent to landfill, as only noncombustible material is ultimately landfilled. Using incineration ash in this way reduces the consumption of natural resources that might otherwise be used and also reduces greenhouse gas emissions from cement production.

Helping a Local Government Address Problems

Sapporo City in Hokkaido also experienced the need to extend the operational life of landfills so Taiheiyo Cement offered to accept incineration ash at its Kamiiso plant in Hokuto City. At first we accepted under 100 tonnes as a trial in fiscal 2008, and then the initiative was fully implemented in fiscal 2013. Subsequently, the plant has increased the volume of ash it accepts each year, reaching 15,000 tonnes in fiscal 2015, thus contributing to recycling while also extending the operation of landfills in Sapporo City. The Kamiiso plant is the only facility in Hokkaido accepting waste incineration ash in 2016. The plant started to accept waste incineration ash from other cities in Hokkaido and the main island to expand the scope of its contribution. We will continue to advance the development of sustainable cities by completing this recycling loop.

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1: A container holding municipal waste incineration ash is transferred from a freight car to a collection and delivery vehicle. 2: The Hokkaido Shinkansen intersects with a belt conveyor that connects the Kamiiso plant with Garou mine. Cement produced in the Kamiiso plant was used to construct bridge girders. 3: Safety patrol on an offshore pier. 4: The central control room oversees the operations of the complete process cycle. 5: A view of the Kamiiso plant from the top of Garou mine, which has been a source of minerals for 300 years. The mine produces about seven million tonnes of limestone annually. 6: The Kamiiso plant has 120 years of history with the largest capacity in East Japan. 7, 8: A diesel-electric locomotive of Japan Freight Railway transporting containers for municipal waste incineration ash from a Sapporo cargo terminal to a Hakodate cargo terminal.

* State of the Generation and Treatment of Municipal Solid Waste (fiscal 2014), Ministry of the Environment of Japan
About 600,000 tonnes of waste are generated every year in Sapporo City. Ash generated by incinerating the waste is either brought to landfills or used as raw material for cement. By continuing to use incineration ash as material for cement at the current pace for ten years, we can reduce the amount to landfill by 150,000 tonnes and extend the operating life of landfills by about two years.

A dedicated offshore pier stretching for 2 km from the Kamiiso plant (photo above)

A Recycling-based Model for Fully Using Waste as a Resource

We extract useful materials from wastes that are disposed of as being no longer usable and then use the final incineration ash as material for cement. We developed this technology by advancing techniques for preventing contamination by foreign substances in the cement production process and applied it to this field. We have been very excited to have cement production at the Kamiiso plant contribute to solving a problem that Sapporo City experienced. While waste treatment is not glamorous work, it is indispensable for the planet’s future. I am proud that we are a part of this recycling model, in which waste generated by a city is used to produce cement that in turn is used for urban infrastructure. We will further expand the scope of accepting incineration ash to contribute to wider areas and over many more years to come.

Akihiro Inubushi
Chief of Facilities Planning Division, Waste Plant Management Section, Environmental Planning & Waste Management Department, Environment Bureau, Sapporo City Government

Hiroshi Takasago
Manager, Environmental Business Department, Hokkaido Branch

About 600,000 tonnes of waste are generated every year in Sapporo City. Ash generated by incinerating the waste is either brought to landfills or used as raw material for cement. By continuing to use incineration ash as material for cement at the current pace for ten years, we can reduce the amount to landfill by 150,000 tonnes and extend the operating life of landfills by about two years.

A dedicated offshore pier stretching for 2 km from the Kamiiso plant (photo above)
Creating a sustainable future for the earth

Our Commitment to:

- Management  26
- The Environment  36
- Collaborating with Society  50
CSR Management

We aspire to be a pioneer in the creation of a sustainable future for the earth. To achieve this group aspiration we established the CSR Management Committee as a means for sharing information about CSR issues and activities across departments and aligning our CSR initiatives with our business operations.

Corporate Framework for CSR

The Mission of the Taiheiyo Cement Group is the highest level concept and guiding principle of our business activities. Our Business Principles present more specific guidelines for action based on our Mission.

The vision and direction targeting the mid-2020s has been established as our vision for the future based on the Mission to present the value and direction of the group in qualitative terms.

The Medium-Term Management Plan sets forth our management strategy and targets for the next three years, while the CSR Objectives for 2025 are long-term, quantitative CSR targets. We strive to realize our vision and direction based on these targets.

Basic Policy for Promoting CSR Management

We promote CSR management in accordance with our CSR guidelines which specify actions that are essential for realizing the Mission of the Taiheiyo Cement Group and implementation of our Business Principles. The guidelines direct the company in conducting activities in and outside of the business that fulfill our social responsibility while we pursue sustainable growth for both the company and society as a whole. Moreover, they lay down basic policies for promoting CSR management.

Our System for Promoting CSR Management

To promote our CSR management we have created a cross-departmental CSR Management Committee, chaired by the company president, with all board directors as members, under the direct oversight of the Board of Directors. The CSR Management Committee’s role is to screen CSR action plans and other material items and review their progress. Reporting to this committee are seven specialized committees for individual CSR subjects, each chaired by the director responsible for that area. The department most closely associated with any given issue acts as the secretariat for the related committee.

[ Basic Policy for Promoting CSR Management ]

1. Based on our Mission and Business Principles, the company will clarify the ideal form of CSR management to be pursued and strive to advance operations based on CSR.
2. Promoting a corporate culture that places great importance on compliance, we aspire for all directors and all employees to always make the most appropriate independent judgments.
3. We will manage the company with awareness that our social mission includes environmental protection, defense of human rights and contribution to communities.
4. We will proactively engage on key CSR issues and undertake the most appropriate prioritization and resource allocation.
5. We will practice appropriate information disclosure and communication with stakeholders, based on the status of our CSR management promotion, and build relationships of trust.
6. We will treat CSR management and promotion as a group-wide activity and ensure all group companies are kept well informed.
**CSR Training and Education**

We provide CSR education through training programs for each position, including sessions for newly hired employees, follow-up courses for second-year employees, career development (around ten years after joining the company) and training for newly appointed managers. For education on specific issues such as human rights, each specialized committee provides the relevant training programs. We also conduct executive-level CSR training, including for group companies, once a year. In addition, we continued to hold CSR report presentations at all our business sites in fiscal 2015.

- **Executive-level CSR Training (FY2015)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Companies in Attendees</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 9, 2015</td>
<td>104</td>
<td>- Creating a workplace free of harassment&lt;br&gt;- Role of management in the new era of risks</td>
</tr>
</tbody>
</table>

- **CSR Report Presentations (FY2015)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>October–December 2015</td>
<td>21 sites, including the headquarters, branches, plants and central research laboratory</td>
<td>822</td>
</tr>
</tbody>
</table>

**Collaboration with External Organizations**

- **WBCSD Cement Sustainability Initiative**

We have participated as a member of the Cement Sustainability Initiative (CSI) of the WBCSD since 2000. As a core member of the CSI we work with 23 other cement companies from around the world to address the sustainable development challenges facing our industry.

In 2002 the CSI published an Agenda for Action detailing joint commitments by ten core member companies in accordance with research based on dialogues with stakeholders worldwide about the sustainable development of the cement industry. Following this Agenda for Action, which was created as a vision for the following 20 years, the CSI established working groups for each key challenge. These include climate protection, effective use of raw materials and fuel, reduction of air pollutant emissions, biodiversity, global water issues, employee health and safety and supply chain management. Members have been developing key performance indicators (KPIs; see page 66 for fiscal 2015 performance) and various guidelines to meet the challenges. Member companies set and publish their individual targets in areas such as emissions reductions, and take their own actions to create a sustainable society.

With respect to climate protection in particular, the CSI has developed a common methodology for calculating CO₂ emissions and energy use, a standard CO₂ and energy protocol for reporting by the world’s cement companies, and a regime for providing highly reliable information on CO₂ emissions. The CSI also built a global database and reports actual CO₂ emission volumes and energy use data for a significant number of the world’s cement plants. We recognize that the issues the CSI addresses are the same as the company’s key management challenges, which is why we are working diligently to tackle them.

- **Participation in the Industrial Federation for Human Rights, Tokyo**

We participate in the Industrial Federation for Human Rights, Tokyo. Established in November 1979 the federation now consists of 125 companies (representing about 1 million employees as of May 2016), most of which are headquartered in Tokyo. Under its basic philosophy of voluntary management and full participation, the federation actively tries to resolve the issue known as Dowa, a discrimination issue in Japan, and other human rights issues.
Results of FY2015 CSR Efforts

Organization Risk Management & Compliance Committee

1. Continuously improve risk management based on PDCA cycles, including group companies, respond to new risks, and enhance efforts to resolve existing issues

   • Response to the Minamata Convention on mercury
   • Information risk including measures against the spread of slander and negative reputation (Information Security Committee)
   • Countermeasures against accidents during transit
   • Countermeasures for the inefficient management of unused equipment
   • Countermeasures for heavy rain, flood and inundation due to levee failure
   • Countermeasures against risks and terroristic attacks
   • Countermeasures against earthquakes and tsunamis
   • Countermeasures for financial compliance
   • Continuous improvement of risk management using PDCA cycles

2. Further raise awareness of compliance

   • Implement education, training and dissemination of information
   • Master procedure for appropriate response to whistle-blower reports
   • Countermeasures for financial compliance
   • Continuous improvement of risk management using PDCA cycles

Organization Information Security Committee

1. Enhance Information Security Management System (ISMS) and ensure its ongoing operation and improvement: maintain and manage the company’s information security while enhancing a group-wide information security system

   • Achieve statutory employment ratio for persons with disabilities: 2%
   • Response to the Minamata Convention on mercury
   • Established the Mercury Countermeasures Committee
   • Conducted risk assessment for hazardous materials
   • Developed the Mercury Countermeasures Committee Action Plan
   • Conducted an evaluation of the Mercury Countermeasures Committee

2. Improve security level by implementing safety incident/trouble countermeasures based on the plan and implementing information security-related projects

   • Implement three information security-related projects in FY2015 based on the plan
   • Develop information security-related investment plan for FY2016
   • Have an external expert conduct vulnerability check
   • Revise the implementation period to FY2016

Organization Human Rights & Labor Practices

1. Promote human rights awareness and continuing training programs throughout the group

   • In-house training and awareness raising
   • In-house training and awareness raising for group companies
   • The Industrial Federation for Human Rights
   • Promote employment of persons with disabilities group-wide

2. Promote employment of persons with disabilities group-wide

   • Achieve statutory employment ratio for persons with disabilities 2%
   • Support employment of persons with disabilities at group companies

3. Initiatives to address issues related to human rights and labor practices

   • Promote employment and retention for promoting the empowerment of women
   • Education and training based on the new training system and global human resource development

4. Results of FY2015 CSR Efforts

   - G4-27

Organizational Governance and Fair Operating Practice

3. Initiatives to address issues related to human rights and labor practices

   • Promote employment and retention for promoting the empowerment of women
   • Education and training based on the new training system and global human resource development
1. **Collection and feedback of health and safety data**
   - Developed a system to develop CSR activities which is planned to start operating under the leadership of a work
   - Completed the design of a system to develop CSR activities which is planned to start operating under the leadership of a work
   - Completed the design of a system to develop CSR activities which is planned to start operating under the leadership of a work

2. **Countermeasures to mitigate climate change**
   - Revised the FY10 Safety Design Standard to prevent falling accidents from bulk cement trucks, completed equipment improvements at cement plants and included the costs of these improvements at group companies and other sites in the budget for completion within the next fiscal year.
   - Conducted a pointing and calling campaign at cement plants, achieved virtually zero accidents during downtime.
   - As a result of stabilizing emission-heavy machinery, began assessing the work risks of using heavy machinery at cement plants.
   - Conducted training and proactively raised awareness in response to the amendment to the fiscal laws and a request from the central government, efforts include revision of the health and safety regulations on subject radiations, risk assessment of chemical substances, and stress checks.
   - Issued a revised notification to the department in charge as necessary.

3. **Horizontal roll-out of accident prevention activities**
   - Participated in an intern audit in October and November.
   - Conducted an intern audit on October and November.
   - Conducted an intern audit in October and November.

**Plan**

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<thead>
<tr>
<th>Organization</th>
<th>Health &amp; Safety Committee</th>
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<tbody>
<tr>
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<td><strong>3.</strong> Horizontal roll-out of accident prevention activities</td>
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**Results**

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**Evaluation**

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**See Also**

- 1: 60, 61
- 2: 60, 61
- 3: 60, 61

**Note:** "Results" column content has been prepared using information reported by specialized committees as of the end of March 2016.
Corporate Governance

Strengthening corporate governance is essential in order to increase corporate value and fulfill our commitment to shareholders and all other stakeholders. As a reliable and responsible company we continuously strive to ensure the management of our organization is sound.

Management Organization

Corporate Governance System
We are striving to ensure the sustainable growth of the company and medium- to long-term increase in corporate value by continuously improving our corporate governance in accordance with the Taiheiyo Cement Corporation Basic Policy on Corporate Governance established on December 22, 2015.

Our organizational structure is anchored by our Board of Directors and Board of Auditors. We have also introduced an executive officer system in order to separate management decision making and monitoring/supervisory functions from executive administration.

We have 13 board directors, including 2 representative directors and 2 outside directors (one of which is female). We have 23 executive officers, including 10 officers who also sit on the Board of Directors. We have 4 corporate auditors, 2 of whom are outside auditors and assigned as independent auditors. We have a Corporate Auditor’s Office consisting of 1 manager and 2 subordinates, which comprehensively supports corporate auditors in performing their duties, including the provision of information relevant to their duties. Our Internal Auditing Department conducts internal audits, identifies issues that require improvement and reports audit results to the president, activities that increase the effectiveness of internal audits.

The president proposes candidates for board directors and auditors to the Board of Directors including outside directors in accordance with the Basic Policy on Corporate Governance. After deliberation and decision by the Board of Directors, candidates are recommended at the General Meeting of Shareholders and appointed based on its decision. For nomination of auditors, the president proposes candidates to the Board of Directors with prior approval from the Board of Auditors, including outside auditors.

Also, our CSR Management Committee determines the ideal direction for our business activities from the perspective of CSR and promotes the strengthening of corporate governance.

In fiscal 2015 we held 15 board meetings, with absences in only one, when one board director and one auditor were unable to attend.

Board Member Remuneration
Resolutions of the General Meeting of Shareholders determine the upper limits of remuneration for board directors and auditors. The levels of remuneration for individual board directors are decided by resolution of the Board of Directors and the levels of remuneration for individual auditors are decided through deliberation by auditors. Remuneration of internal board directors consists of fixed and variable compensation while remuneration of the outside directors and auditors consists solely of fixed compensation. In fiscal 2015 the total amount of remuneration was 773 million yen for 14 directors and 74 million yen for 7 auditors.

Internal Control System
In accordance with our Basic Policy for Building an Internal Control System, we are building a system that will enable us to enhance various activities from the following three perspectives: (1) efficiency of business operations, (2) risk and compliance, and (3) financial reporting. Our Internal Control Report, based on the policy, has confirmed that effective internal control over financial reporting for fiscal 2015 was maintained. An auditing firm we appoint has expressed its opinion that the report was appropriate. In the Business Report for fiscal 2015 we began presenting an overview of system operation to ensure the proper execution of operations in accordance with the basic policy.
Risk Management and Compliance

Legal compliance and risk management are at the foundation of our business activities. We strive to thoroughly ensure the compliance of group companies and continue efficient risk management activities toward maintaining and improving the soundness and sustainability of our business.

Basic Risk Management and Compliance Policies

Basic Risk Management Policy

The materialization of any significant risk at the company may not only damage our management resources but also adversely affect our stakeholders. Any resulting loss of stakeholder trust or public reputation could leave the company severely damaged. We formulated the following Basic Risk Management Policy to effectively respond to this risk and ensure the continued and sustainable growth of our business. In line with this policy we are creating our risk management system and pursuing effective risk management measures to reduce significant risks and minimize loss in the event that any risks materialize.

Basic Compliance Policy

Under our Business Principles we pledge that we will act in strict compliance with the law and in accordance with social mores. Fully aware that compliance is the foundation of CSR management, we published the Basic Compliance Policy and simultaneously created compliance rules in March 2005. We do not limit our definition of compliance to legal compliance; our definition includes compliance with the social mores from which our laws originate, the mission and business principles of our group, and internal regulations.

Basic Risk Management Policy

1. We prevent and reduce risks in order to ensure the quality and safety of our products and services, protect the lives and safety of our employees and their families, and earn greater trust from our stakeholders.
2. We create a system to appropriately manage a wide range of risks associated with our business activities.
3. We promote risk management through a plan-do-check-act cycle.
4. We quickly and appropriately deal with risks as they are identified.
5. In collaboration with group companies we build a system for immediately detecting new risks arising from changes in our business environment and for quickly and appropriately dealing with risks at the group level.

Basic Compliance Policy

Our president has ultimate responsibility for risk management and compliance promotion. The officer in charge of both areas is appointed by the President and presides over the Risk Management & Compliance Committee in order to advance organized and planned risk management and compliance promotion activities. The committee plays a core role in our risk management and compliance promotion system.

It embodies the policy, identifies company-wide risks, implements risk management activities based on PDCA cycles, and promotes compliance. Moreover, it studies and proposes the creation and revision of rules for risk management and compliance and gives instructions for advancing the awareness and education of employees. We held four Risk Management & Compliance Committee meetings in fiscal 2015.

Under the guidance of this committee each business site and group company has an officer responsible for risk management and compliance and a risk management promoter, who carry out duties such as promoting specific initiatives related to risk management and compliance promotion. In addition, the company offers various forms of support to group companies to ensure risk management and compliance across the group.
### Risk Management and Compliance Promotion System

**Ultimate responsibility: President**

**Officer in charge: Officer in charge of General Affairs Department**

**Risk Management & Compliance Committee**

- Chair: Officer in charge (Officer in charge of General Affairs Department)
- Members: Managers of business sites of headquarters

**Secretariat: General Affairs Department**

**Report on status of risk countermeasure**

**Analyze changes in the internal and external environments (SWOT analysis)**

- **Anticipate risks that may emerge or grow in the future**

**Identification of Risks Using a Risk Classification Table**

- Classify 161 risks, draw up worst-case scenarios, identify possible causes of problems in these scenarios from a 4M (man, machine, media and management) perspective, and conduct a quantitative risk assessment focused on the possibility of the risk materializing, its impact, and countermeasures

**Planning and Implementation of New or Reinforced Measures**

As a result, we identified 10 types of company-wide risk: (1) Air pollution, (2) Spread of slander and negative reputation,


### Risk Countermeasures

The following table summarizes major activities, including company-wide risk countermeasures in fiscal 2015.

#### Risk Management and Compliance Promotion Activities (FY2015)

<table>
<thead>
<tr>
<th>Major Risk</th>
<th>Major Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-wide risks</td>
<td>• Planned and implemented measures against the following company-wide risks:</td>
</tr>
<tr>
<td></td>
<td>(1) Air pollution, (2) Spread of slander and negative reputation,</td>
</tr>
<tr>
<td></td>
<td>(3) Inventory control failure, (4) Missed delivery dates and insufficient</td>
</tr>
<tr>
<td></td>
<td>performance, (5) Insufficient management of unused equipment, (6) Heavy rain,</td>
</tr>
<tr>
<td></td>
<td>flood and inundation due to levee failure, (7) Earthquakes and tsunamis, (8)</td>
</tr>
<tr>
<td></td>
<td>Riots and terrorist attacks, (9) Accidents during transit, and (10) Financial</td>
</tr>
<tr>
<td></td>
<td>compliance.</td>
</tr>
<tr>
<td>Improprieties and crimes by</td>
<td>• Distributed the revised Standard of Conduct Casebook to all employees, including</td>
</tr>
<tr>
<td>employees</td>
<td>employees of group companies</td>
</tr>
<tr>
<td>Earthquake</td>
<td>• Conducted a monthly e-learning training program for all employees</td>
</tr>
<tr>
<td>Law violation</td>
<td>• Exchanged opinions on initial response drills in cooperation with the employees</td>
</tr>
<tr>
<td></td>
<td>and dissemination of information about them</td>
</tr>
</tbody>
</table>

### Emergency Countermeasure Task Force

Although we received ten emergency reports in fiscal 2015, none required action by the emergency countermeasure task force.

### Risk Management and Compliance Promotion Training for Group Companies

We provide training for officers responsible for risk management and compliance as well as the risk management and compliance promoters within group companies to ensure effective risk management and promotion of compliance. In December of fiscal 2015 we conducted a training program on the appropriate responses and procedures for handling risk information to learn the basics of initial response to a variety of risk information that may be reported.
Information Security

Our Information Security Management Regulations are the basic regulations of our information security management system. We have created an Information Security Management Regime in accordance with these regulations and actively work to maintain information security under this regime.

In fiscal 2015 we focused on measures against failures of data center networks and unauthorized outbound internet traffic as well as enhancements to back-up centers. No serious incidents related to information security occurred in fiscal 2015.

Whistleblower Program

We properly handle reports and proposals in accordance with company procedures and have whistleblower hotlines both internally (at the CSR Group of our General Affairs Department) and externally (at a law firm).

Our internal hotline is located in a dedicated, locked room that is only accessible to hotline staff. It is equipped with dedicated phone and fax lines, and a computer with a dedicated address in order to safeguard the privacy of those submitting reports. Our external hotline has been made available to all employees of group companies in an effort to strengthen group governance, improve program effectiveness and reduce the burden on individual companies.

Moreover, we have created regulations so that whistleblowers who use the program are not subject to unfavorable treatment. In January 2015 we revised the regulations to also enable anonymous reporting (keeping secret the whistleblower’s name and department). In fiscal 2015 no report was made.

Group Legal Round Tables for Group Companies

Since fiscal 2005 we have been holding round-table discussions attended by management and legal affairs representatives from our group companies. These discussions provide opportunities to share legal information (including revisions to laws) in order to further our understanding of major laws relating to corporate management and to assist in the creation of our group’s compliance regime. In fiscal 2015 we discussed the following issues.

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Attendees</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>22nd</td>
<td>April 17, 2015</td>
<td>89 from 81 companies</td>
<td>• Current Punishments of the Antimonopoly Act&lt;br&gt;• How to use corporate lawyers&lt;br&gt;• Important points when checking a basic transaction agreement</td>
</tr>
<tr>
<td>23rd</td>
<td>December 10, 2015</td>
<td>111 from 98 companies</td>
<td>• Basics of trade secrets: Protecting and making use of trade secrets&lt;br&gt;• Check compliance with the Act Against Delay in Payment, etc. to Subcontractors and the Act against Unjustifiable Premiums and Misleading Presentations</td>
</tr>
</tbody>
</table>

Information Security Structure

[Diagram of Information Security Structure]

CSR Management Committee
(ultimate responsibility for information security: president)

Information Security Committee
Officer in charge of information security
Director of information security

Evaluation and Guidance

Business sites
Risk management officer<br>business site manager<br>Information handling officer<br>operations department managers /selected individuals

Group companies
Protection and Use of Intellectual Property

Intellectual Property Policy
Our fundamental intellectual property policy is to contribute to the profitability of the Taiheiyo Cement Group by managing intellectual property in line with business and R&D strategies.

Intellectual Property Management System
The company has established Intellectual Property Rights Handling Rules and an associated management system to guide our intellectual property activities. The Intellectual Property Department assigns its staff members to the headquarters and the Central Research Laboratory. Those assigned to the headquarters mainly perform administrative tasks while those assigned to the laboratory handle applications for and the protection of rights and research efforts. In addition, intellectual property promoters are assigned as contact points to the business divisions and the Central Research Laboratory to promote strategic intellectual property activities in collaboration with the Intellectual Property Department. We also regularly convene members in charge of intellectual property at key group companies to exchange information and conduct study meetings, and provide guidance for their respective business areas to promote intellectual property activities at group companies.

Outline of Our Intellectual Property
As of the end of fiscal 2015 the company (on a non-consolidated basis) had 644 patents pending, owned 985 patents and registered 250 trademarks, bringing the total number of group-owned patents to about 1,700.

The cement segment accounts for the largest share of patents owned by the company. However, over the past several years the share of patent applications in the environmental and mineral resources segments has been growing in line with our business and R&D strategies. Recognizing the need to obtain patents for technologies in order to increase business revenue from patents, including for peripheral technologies, we are broadening the scope of our applications while strengthening our overall patent portfolio. In June 2015 the company issued a press release that included: “a new cementitious material that achieves a compressive strength of 400 to 500 N/mm²” and it filed a large number of patent applications related to this technology.

The approximation graph showing the relationship of R&D expenses to the number of patent applications (fiscal 2014 results) indicates that the average inclination of all industries is 0.9 compared to the 2.4 figure for the general chemical industry. The chemical industry is expected to be highly efficient in creating a large number of inventions and the company (denoted by a red dot) is above the industry average, a testament to the effectiveness of our investment in invention.

Number of Domestic Patent Applications by Segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>Number of Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>985</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>212</td>
</tr>
<tr>
<td>Environment</td>
<td>197</td>
</tr>
<tr>
<td>Mineral Resources</td>
<td>181</td>
</tr>
<tr>
<td>Cement</td>
<td>205</td>
</tr>
<tr>
<td>Others</td>
<td>279</td>
</tr>
</tbody>
</table>

There were few patent applications from the ceramics division in fiscal 2014 because the division was transferred to another company.

Domestic Patents by Segment (FY2015)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>3%</td>
</tr>
<tr>
<td>Environment</td>
<td>33%</td>
</tr>
<tr>
<td>Mineral Resources</td>
<td>11%</td>
</tr>
<tr>
<td>Others</td>
<td>4%</td>
</tr>
<tr>
<td>Cement</td>
<td>45%</td>
</tr>
</tbody>
</table>

Number of Patent Applications to R&D Expenses in Japan

y = 2.437x
R² = 0.8037

Created by the company based on the “Study on IP management for implementing IP strategies” (November 2015), Japan Intellectual Property Association
Licensing Activities

While the company primarily conducts R&D to ensure competitive business advantages, we proactively license useful technologies to other companies as well. Of course, we are also granted licenses for technologies that are likely to contribute to our business from other enterprises.

Risk Management for Intellectual Property

Our acquisition and control of intellectual property is conducted under the Intellectual Property Strategy Guidelines. We formulated this guideline based on the Guideline for Acquisition and Control of Intellectual Property (the Ministry of Economy, Trade and Industry) to make sure that their implementation corresponds with the reality of our individual businesses.

Intellectual property, including pending patent applications, is handled through a centrally controlled database by the Intellectual Property Department.

On a daily basis we strive to prevent infringements of competitors’ patents through the regular circulation of selected patent information, a patent watch system and a patent review service. We are also increasing employee awareness through the workshops and in-house training described below. There have been no cases in which we have been sued for intellectual property infringement and thereby hindered in our business.

To manage trade secrets and prevent technology leaks we formulated and enforce Information Security Management Regulations and Document Management Rules respectively. In 2007 we formulated and enforced the Know-how Judgment Guidelines for guidance on judgment whether to file a patent application for a technology or keep it secret as internal expertise in order to prevent technology leaks.

We have instructed group companies to reinforce rules for handling intellectual property rights and ensure agreements are made for the transfer of rights with each inventor.

While actively licensing our technologies in Japan and overseas we also address the risks of overseas licensing. The legal systems of emerging Asian countries are different from the system in Japan. For example, licensers are responsible for quality/performance assurance in those countries. In addition to internal information dissemination, we are studying how to avoid risks in cooperation with specialized lawyers who are familiar with situations in those countries.

Training and Awareness Raising

To raise awareness of intellectual property the company encourages employees, especially members of the research division and the technology development division, to take the Intellectual Property Management Skills Test, a national licensing examination. Other employee training efforts include workshops held by the Japan Intellectual Property Association in addition to in-house training at our Central Research Laboratory and headquarters. The table summarizes training conducted in fiscal 2015 for 273 attendees, including employees from group companies. We raised awareness about intellectual property and provided instruction about the risks of infringing the rights of others as well as how to detect potential infringement of our rights by competitors. Through efforts including information exchange gathering and study meetings for employees in charge of intellectual property described above, we are strengthening the group’s capability in the management and use of intellectual property.

System of In-house Training on Intellectual Property

<table>
<thead>
<tr>
<th>Training Content</th>
<th>Taiheiyo Cement Corporation Employees</th>
<th>Group Company Employees</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>16</td>
<td>17</td>
<td>20</td>
<td>53</td>
</tr>
<tr>
<td>Description</td>
<td>13</td>
<td>12</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Infringement</td>
<td>145</td>
<td>33</td>
<td>0</td>
<td>178</td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The revised</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Patent Act</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>62</td>
<td>20</td>
<td>273</td>
</tr>
</tbody>
</table>

Seminar on writing patent descriptions
Environmental Management

We have created an Environmental Management Committee which proposes cross-functional environmental strategies and actively works to address environmental issues. Since having unified environmental management systems developed by individual plants and obtaining a unified ISO 14001 certification for the entire company in April 2009, we have been striving to further improve our environmental management.

**Environmental Management Policy**

Our environmental management policy declares an active commitment to environmental issues facing society, including not only preventing pollution but also creating a recycling-based society, mitigating climate change, reducing environmental impacts, protecting water resources and conserving biodiversity as key management challenges. Under this policy we are focusing on improving our environmental performance.

1. **Business Activities Impacting the Environment**
   - We improve eco-efficiency by assessing the environmental impact of our operations. Implementation of environmental management systems, together with development and adaptation of our products and technologies, reduce environmental impact. Furthermore, as a member of the local community, we strive to maintain a good environment.

2. **Compliance with Environmental Laws and Regulations**
   - As a minimum, we comply with all environmental laws and regulations applicable to our business activities. Furthermore, beyond compliance, we meet environmental commitments undertaken through voluntary agreements.

3. **Contributing to a Recycling-based Society**
   - Leveraging the inherent capabilities of the cement industry, we actively recycle industrial and municipal wastes as raw materials and fuels for cement production.

4. **Proactively Addressing the Issue of Climate Change**
   - We promote greater energy reduction throughout the whole of our business activities and strive to develop technology to help reduce society's total greenhouse gas emissions.

5. **Promoting Global Technology Transfer**
   - Through the worldwide transfer and deployment of our technology, we aid the development of greater energy conservation, environmental preservation and utilization of waste materials.

6. **Encouraging Environmental Conservation**
   - While encouraging the development of environmentally friendly products and technology, we focus on environmental conservation.

**Company-wide Environmental Management System**

In June 1997 Taiheiyo Cement initiated ISO 14001 certification of each of its plants and attained 100% certification by 1999. Recognizing, however, that plant level management systems alone are insufficient to ensure comprehensive environmental protection through environmental management projects, we built a company-wide environmental management system (EMS) and extended it beyond plants to cover our headquarters, branches and Central Research Laboratory.

In April 2009 we obtained ISO 14001 certification at the Japan Testing Center for Construction Materials (JTCCM), an incorporated foundation. In March 2015 the company-wide system was audited for the second time and recertified.

- **EMS Readiness**
  - Top management (officer in charge of the Production Department) chairs the Environmental Management Committee with ultimate decision-making authority for environmental management. Overseen by the Environmental Management Committee, the relevant headquarters division manages our plants, mines and branches using an “umbrella” system.

- **Company-wide EMS Readiness**

- **Taiheiyo Cement Group’s Environmental Target**

- **CO2 Emission Reduction Targets**
  - Cement production-related CO2 emissions from Taiheiyo Cement and group companies
  
  Reduce specific net CO2 emissions per tonne of cementitious product by 10% or more from fiscal 2000 levels by fiscal 2025. (CSR Objectives for 2025)

- **Reduction Target for Main Air Pollutants**
  - Emissions of NOx, SOx and dust from the main stacks of kilns at the cement production sites of Taiheiyo Cement and group companies
  
  Limit NOx, SOx and dust levels per tonne of clinker (g/t-clinker) to the target levels achieved in fiscal 2010
Group Efforts
Each group cement company in Japan and overseas is committed to environmental preservation efforts. As of fiscal 2015 over 95% of the group’s total cement output is produced in ISO 14001-certified plants. The plants that are not ISO-certified operate their own EMS. In 2016 CalPortland Company received their twelfth consecutive Energy Star Partner of the Year Award from the U.S. Environmental Protection Agency and Department of Energy in recognition of excellent environmental management practices.

Internal Environmental Audits
In fiscal 2015 we conducted internal environmental audits at all our sites.

As priority items from this year’s audit, confirmations of the review of compliance with laws as well as other requirements and external communications were identified as company-wide concerns. The status of a follow-up, including corrective and preventive actions for nonconformity with environmental requirements, and the status of responses to emergencies were identified as items that plants must deal with. The audit identified 15 findings including 4 for which improvements were requested. Corrective actions have been taken for all of the 4 findings for which improvements were requested.

Environmental Education
During Environment Month each June we deliver a message from the president and provide educational materials on the environment page of our portal site to increase awareness and encourage learning about the environment throughout the group. Each workplace also engages in a number of different activities, such as viewing environment-related DVDs, holding lectures and taking part in local cleanup activities. In fiscal 2015 more than 200 activities took place at group offices.

Compliance with Environmental Laws

Environmental Accidents
We had no legal or regulatory violations in fiscal 2015 that were subject to fines or penalties. Moreover, no environmental accidents occurred that could affect areas outside the premises of our plants. At our group’s mining companies two accidents occurred as a result of rocks being hurled from blasting operations.

Response to Environmental Accident
Each plant maintains emergency response plans in preparation for possible environmental accidents. They also conduct training, including fire fighting training in cooperation with local fire departments. Other education includes training on how to reduce environmental impact when an environmental accident occurs and how to report it to a government entity.

Environmental Complaints
As the waste and by-products we use become more diverse and increase, the number of environmental issues we need to consider also rises. We are therefore ramping up our efforts to reduce environmental impact through activities such as introducing indoor storage and sealed containers for waste and by-products, and improving our flue gas stacks. If we receive an environmental complaint, whenever possible we quickly travel to the site in question to check the situation, investigate the cause and provide an explanation. Then, if we find that our activities are the cause, we implement improvements.

In fiscal 2015 our cement plants received 19 environmental reports. We responded to 10 of these complaints that were associated with our operations.

Number of Environmental Complaints Received

- 2011: 12
- 2012: 10
- 2013: 7
- 2014: 7
- 2015: 10

<table>
<thead>
<tr>
<th>Year</th>
<th>Air</th>
<th>Noise</th>
<th>Water Quality</th>
<th>Vibration</th>
<th>Odor</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
Mitigating Climate Change

Most of the greenhouse gas emissions associated with our business operations are from cement production. To tackle this we have identified CO₂ reduction targets for cement-related CO₂ emissions in our CSR Objectives for 2025 and are working to reduce greenhouse gas emissions particularly by focusing on efforts to reduce emissions at individual cement plants.

Greenhouse Gas Emissions and Long-term Quantitative Targets

Among the total greenhouse gas emissions generated by our domestic group companies (excluding power generation companies) that are reporting their greenhouse gas emissions by business segment in accordance with the Act on Promotion of Global Warming Countermeasures, about 94% of greenhouse gas emissions were generated from cement production companies in fiscal 2013. The amount of greenhouse gas emissions associated with our service stations, headquarters and branches, a specified consignor and also electricity purchased by the group, was around 5% in fiscal 2015. Under Scope 3 (value chain) calculations for cement, for which downstream value is not calculated since cement is considered an intermediate product at this stage, the emissions were around 4.5% of Scope 1 and Scope 2 (direct air emissions) in fiscal 2015.

The bulk of greenhouse gas emissions associated with the operations of our group companies is CO₂ from cement production. We are therefore working to reduce emissions from cement production, as indicated in our CSR Objectives for 2025, in order to achieve our long-term quantitative target of reducing specific net CO₂ emissions per tonne of cementitious product by 10% or more from fiscal 2000 levels by fiscal 2025.

Some of our plants are taking part in the target setting-type emissions trading program for Saitama Prefecture and California’s cap-and-trade program, striving to achieve the reduction targets. To support voluntary approaches we are also working in line with Keidanren’s Voluntary Action Plan and the measures to reduce greenhouse gas emissions established by the WBCSD-CSI.

Efforts Related to the Cement Production Process

A large amount of carbon dioxide is produced in the course of cement manufacture. This is because the production process requires a high temperature of 1,450°C and limestone, used as raw material, is decarbonated through a chemical reaction during the calcination process (CaCO₃ → CaO + CO₂). About 35% of CO₂ emissions generated during cement production are from the consumption of energy, about 55% are from the calcination of raw materials and about 10% are from electricity use. To reduce CO₂ emissions, we have been working to conserve energy by installing energy-efficient equipment and improving the stability and efficiency of our kiln operations. We have also been implementing measures such as using waste- and biomass-derived energy sources to decrease our rate of use of fossil fuels. Moreover, we are moving toward using recycled resources with less carbonate content to bring down CO₂ emissions from the calcination of the limestone used as raw material and have started using waste heat power generation to tackle CO₂ emissions from electricity.

Even with a decrease in the specific heat consumption of clinker production and an increase in the usage rate of waste-derived energy, specific net CO₂ emissions per tonne of cementitious product for fiscal 2015 remained at the same fiscal 2014 level of 692 kg-CO₂/t-cementitious mainly due to a decrease in the use of mineral components. However, total CO₂ emissions decreased by 0.5% after a 0.5% drop in cement production.

As a member of the WBCSD-CSI we set a target to reduce specific net CO₂ emissions per tonne of cementitious product by 4.5% from fiscal 2000 levels by fiscal 2015 and have successfully exceeded our target with a 5.9% reduction.

Improving the Stability and Efficiency of Kiln Operations and Use of Waste Heat Power Generation Systems

In fiscal 2015 specific heat consumption of clinker production in the group’s cement production companies decreased by 17 MJ/t-clinker from the previous year’s level to 3,288 MJ/t-clinker. As a result, the specific net CO₂ emissions per tonne of cementitious product decreased by 0.2% (emission factor for coal: 0.096 kg-CO₂/MJ).

Total electric power generated by waste heat power generation systems at the group’s cement production companies in fiscal 2015 was 494 GWh, representing 10.3% of all electricity consumed in the production of cement. We were therefore able to reduce CO₂ emissions by about
341 thousand tonnes in fiscal 2015 compared to purchased power generated from coal-fired power plants (emission factor: 0.69 t-CO₂/MWh).

### Use of Alternative Energy Resources and Alternative Raw Materials

Our group uses alternative energy resources such as waste tires, plastics, oil and wood as well as waste and by-products that contain CaO, such as slag, as alternatives for limestone to reduce CO₂ emissions from cement production.

In fiscal 2015 non-fossil energy and biomass energy accounted for about 15.5% of all energy used for group kilns. A decrease of about 7.0 kg-CO₂/t-cementitious was also achieved by using alternative raw materials. As a result of using both alternative energy resources and raw materials, reductions in CO₂ emissions are expected to reach 2.20 million tonnes (emission factor for coal: 0.096 kg-CO₂/MJ).

### Reducing CO₂ Emissions during Transportation

We contract the delivery of our raw materials and products to transportation companies and are striving to reduce CO₂ emissions as a specified consigner. Major efforts include implementing a plan to transport goods on return trips, encouraging drivers to eco-drive, and promoting energy efficient devices such as digital tachometers and eco-tires on vehicles. In shipping we continue to pursue energy efficiency technologies and operate new ships that are equipped with many energy-saving features. We are also introducing conventionally powered ships with low environmental impact.

Our CO₂ emissions in fiscal 2015 decreased by 10% compared to fiscal 2014 mainly due to a 7% decrease in the amount transported.

### Mode of Transportation

<table>
<thead>
<tr>
<th>Mode of Transportation</th>
<th>Amount Transports (1,000 t)</th>
<th>Average Distance Transports (km)</th>
<th>Transports Tonne’s Kilometers (1,000 t × km)</th>
<th>CO₂ Emissions (1,000 t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship</td>
<td>17,755</td>
<td>463</td>
<td>8,226,363</td>
<td>104</td>
</tr>
<tr>
<td>Truck</td>
<td>11,281</td>
<td>54</td>
<td>715,470</td>
<td>42</td>
</tr>
<tr>
<td>Railway</td>
<td>5,072</td>
<td>27</td>
<td>139,307</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>36,108</td>
<td>251</td>
<td>9,081,140</td>
<td>149</td>
</tr>
</tbody>
</table>
Recycling Waste and Other Materials

We safely treat large volumes of waste and by-products produced by many industries, as well as household waste, using our cement manufacturing facilities to recycle them into cement. We strive through our recycled-waste-to-cement system to create and expand a recycling-based society in partnership with a wide range of industries and communities.

Resource Recycling with Industries

Electric Power Utilities

We accept large volumes of coal ash produced at coal-fired power plants and use it as a substitute for clay as a raw material in cement. In addition, we operate ash centers to use more ash. We also deliver limestone powder which is used as a flue-gas desulfurization material to scrub the harmful sulfur oxide from the exhaust produced by the burning of coal. The reaction of the flue-gas desulfurization material with sulfur oxide forms gypsum which we use effectively as a raw material for cement.

Steelmakers

In the steelmaking process impurities are removed from iron ore to make iron. We supply the limestone powder and quicklime used as purifying materials in the refining process. We also use by-products such as blast furnace slag and steel slag that remain after the refining process as raw materials for cement and mineral components.

Recycling of Construction Soil

Conventionally this soil had been dumped into landfills. By making effective use of it as an alternative raw material for cement we contribute to the material recycling of construction soil as well as to the extension of the lifetime of landfills. We are certified as a designated survey agency by the Ministry of the Environment and offer one-stop services from surveying, construction and distribution, to treatment at our plants. We have also set up intermediary facilities that organically link sites where construction soil is produced to our nationwide plants.

Resource Recycling with Communities

Although most municipal waste is incinerated and the ash is buried in landfills, finding new landfill sites has become very difficult. Waste treatment has particularly become a source of concern for Japan’s major city governments and the situation is expected to get worse. We have three systems for recycling municipal waste and strive to make effective use of such resources and resolve environmental issues.

Ecocement System

Ecocement is a new type of cement made primarily from the incineration ash from municipal waste. More than 500 kg of municipal waste incineration ash and other waste materials are used per tonne of Ecocement.

Ash Washing System

This is a preprocessing system that removes foreign objects from incineration bottom ash and washes fly ash to remove chlorine contained in the dust, allowing for the use of municipal waste incineration ash as an alternative raw material for cement at cement plants.

AK System

A system for recycling household waste and general business waste as alternative raw materials and fuels for cement manufacture. The waste is pre-processed through biological breakdown (fermentation) using a waste recycling kiln.

Mineral Resource Cycle with Electric Power Utilities and Steelmakers

Municipal Waste Recycling Systems for Cement Production

Ordinary Portland cement

Ecocement

Ready-mixed concrete plants

Concrete product manufacturing plants

By utilizing and recycling municipal waste, we contribute to the resource recycling and environmental conservation.
We recycle waste and by-products into alternative raw materials and fuels for cement. This helps to extend the lifetime of landfills, prevent the depletition of natural mineral resources, limit greenhouse gas emissions and reduce air pollution. In fiscal 2015 the volume of recycled waste and by-products decreased by about 388 thousand tonnes from the previous year to 6.567 million tonnes due to decreases in cement production and demand for blended cement. This means we recycled 407.4 kg of waste and by-products per tonne of cement produced.

Performance of Recycled-Waste-to-Cement System

We recycle waste and by-products into alternative raw materials and fuels for cement. This helps to extend the lifetime of landfills, prevent the depletition of natural mineral resources, limit greenhouse gas emissions and reduce air pollution. In fiscal 2015 the volume of recycled waste and by-products decreased by about 388 thousand tonnes from the previous year to 6.567 million tonnes due to decreases in cement production and demand for blended cement. This means we recycled 407.4 kg of waste and by-products per tonne of cement produced.

Waste and By-products Used in the Cement Manufacturing Process

- Limestone, iron wastes, etc., are mixed together, dried and ground in a raw mill.
- Materials are burned in a rotary kiln. The resultant material is then rapidly cooled to form an intermediate product called clinker.
- A small amount of gypsum is added to the clinker and ground in the finish mill to produce cement.
- The cement is then transported by ship, truck or railway freight car.

Waste and By-products Used in Cement Plants (FY2015)

<table>
<thead>
<tr>
<th>Waste and By-products</th>
<th>Total Amount (t)</th>
<th>Rate (kg/t-cement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal ash (including JIS fly ash)</td>
<td>2,004,488</td>
<td>124.4</td>
</tr>
<tr>
<td>Blast furnace slag</td>
<td>1,227,694</td>
<td>76.2</td>
</tr>
<tr>
<td>By-product gypsum</td>
<td>563,889</td>
<td>35.0</td>
</tr>
<tr>
<td>Unburned ash, dust emissions, dust</td>
<td>461,387</td>
<td>28.6</td>
</tr>
<tr>
<td>Construction soil</td>
<td>398,811</td>
<td>24.7</td>
</tr>
<tr>
<td>Dirt and sludge</td>
<td>373,753</td>
<td>23.2</td>
</tr>
<tr>
<td>Waste oil</td>
<td>128,607</td>
<td>8.0</td>
</tr>
<tr>
<td>Wood chips</td>
<td>121,742</td>
<td>7.6</td>
</tr>
<tr>
<td>Waste plastic</td>
<td>118,999</td>
<td>7.4</td>
</tr>
<tr>
<td>Other</td>
<td>693,142</td>
<td>43.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>6,092,512</td>
<td>378.0</td>
</tr>
<tr>
<td>Water treatment plant sewage sludge and ash</td>
<td>349,263</td>
<td>21.7</td>
</tr>
<tr>
<td>Municipal incinerator ash</td>
<td>106,195</td>
<td>6.6</td>
</tr>
<tr>
<td>Municipal waste, etc.</td>
<td>19,091</td>
<td>1.2</td>
</tr>
<tr>
<td>Subtotal</td>
<td>514,559</td>
<td>30.1</td>
</tr>
<tr>
<td>Total</td>
<td>6,567,061</td>
<td>407.4</td>
</tr>
<tr>
<td>Raw material-related</td>
<td>6,054,941</td>
<td>375.7</td>
</tr>
<tr>
<td>Fuel-related</td>
<td>512,121</td>
<td>31.8</td>
</tr>
</tbody>
</table>

Reference: Resources needed to produce one tonne of cement
- Limestone: 1,100 kg
- Clay: 200 kg
- Silica: 60 kg
- Iron, etc.: 30 kg
- Gypsum: 35 kg
- Coal, etc.: 110 kg
- Electric power: 105 kWh
Conserving Biodiversity

Conserving biodiversity in the course of doing business is a material corporate issue. Our approach to conserving biodiversity includes complying with strict legal requirements and striving to harmonize human activities with nature while interacting with the environment and wildlife in our cement and mineral resources business.

Considering Biodiversity in Operations

- **Environmental Impact Assessment**
  Cement production starts with quarrying limestone, the primary raw material for cement. Since quarrying requires the removal of topsoil, it has a significant impact on the natural environment and landscape. Our quarry development is not solely related to quarrying. We are acting with the belief that it is important to care for the conservation of the local ecosystem and promote the development of the local economy.

  We therefore study and implement conservation measures to minimize environmental impact and strive to achieve sustainable quarry development while taking into consideration the opinions and ideas exchanged with the local government, community and academics.

- **Protection of Rare Plant Species**
  Since 1972 we have been protecting and nurturing rare species of native plants on Mt. Buko, the location of the Minowa Quarry of Chichibu Taiheiyo Cement Corporation (Chichibu, Saitama Prefecture). We created a botanical garden at the quarry and, together with local experts and other people, we preserve 65 native plant species there while increasing the plant population.

  Additionally, since 1995 our Central Research Laboratory has continued to research and develop ways to preserve and grow endangered plants, starting with primrose and miyamasukashiyuri and then adding lady’s slipper orchid and sanicula tuberculate Maxim in 2011, and to verify genetic diversity of native plant species using biotechnology.

- **Protection of Water Resources**
  In quarrying we pay close attention to protecting not only terrestrial plants but also water resources such as spring water in an effort to conserve biodiversity. Spring water discharged from quarrying and rain water is directed into our retention basin to minimize impact outside of the quarrying area. In some quarries we drill wells for domestic water and supply the water to local communities for everyday use.

- **Greening Quarries**
  We are continuing our efforts to restore greenery to the quarry slopes on step-like rock layers that are formed during the quarrying process. We undertake these efforts immediately after the slopes are made. We also plant vegetation in stockyards for excavated topsoil where no construction work is expected. Buko Mining Co., Ltd. located in Mount Buko in Chichibu City, Saitama Prefecture, conducts a tree planting campaign with partner companies to improve awareness of quarry development and the importance of greening. In our efforts to protect ecosystems we use as many types of native species as we can in the locations where we plant, which are usually mountainous. All of our quarries are still under our operation; however, once our work there is completed our plan is to restore the areas as close as possible to the original natural environment.

- **Protection of Rare Animal and Plant Species**
  - Protection of rare animal and plant species
  - Prevention of environmental disruption

  Representative Activities
  - Preservation and propagation of rare plants at the Minowa Quarry and Fujiwara Quarry
  - Prevention of noise, dust and water pollution pursuant to laws, regulations and local pollution control agreements
  - Safeguarding wildlife pathways
  - Protection of bird nesting grounds

- **Use of Old Quarry Sites**
  - Development construction of the Ofunato Quarry (June 2011)
  - Post-project survey is currently underway.

- **Post-mining (Improvement of old quarry sites)**
  - Redevelopment construction of the Fujiwara Quarry (February 2012)
  - A post-project survey is currently underway.

- **Key performance indicators (KPIs) in accordance with the Guidelines on Quarry Rehabilitation developed by the WBCSD-CSI are listed on page 66.**
Appropriate Use of Water Resources

We began our analysis of associated risks and an assessment of water consumption by identifying issues that could emerge in the future.

Water Risk Analysis

According to the results of the water risk analysis conducted using Water Risk Filter*, the average score for total basin risk for all our plants (weighted average taking into account the cementitious production volume) was 2.5, which indicates no high risk. Two plants had the highest total basin risk score at 4.0 (maximum 5.0). The volume of cement produced at these plants accounted for about 5% of the production volume of all the plants. However, no imminent threat was found when we analyzed the condition of each plant.

* Water Risk Filter: A water risk mapping tool developed by the World Wide Fund for Nature (WWF) for evaluating impacts on businesses related to water scarcity, flooding, drought, seasonal variation, physical water quality risks, regulatory risks, etc.

Status of Water Consumption

Most of the water used at our cement plants is for cooling production equipment, exhaust gas and in-house power generators. The water discharged from the plants is therefore mostly mere cooling water and is not polluted, as defined in the Water Pollution Control Act. Our plants located near the ocean use seawater for cooling in-house power generation equipment. We circulate and reuse all fresh water at our plants (except for household wastewater) in an effort to reduce the amount of water withdrawal and prevent water pollution in discharge water.

The total withdrawal of fresh water for fiscal 2015 was about 35 million m³ and the total seawater withdrawal for the same fiscal year was about 150 million m³. The seawater was used for cooling in-house power generation equipment at our plants near the ocean and then released back to the ocean after use. Fresh water discharged was about 14 million m³, which means that about 21 million m³ of fresh water was used by our plants. However, the water was used for cooling equipment and exhaust gas but not as a raw material for our products, and subsequently it evaporated.

In fiscal 2015 we withdrew 0.760 m³ of fresh water (water withdrawal per unit of production) to produce 1 tonne of cement. Compared to fiscal 2013, when we started collecting data, the amount of water withdrawal decreased by about 2.2 million m³ and water withdrawal per unit of production decreased by about 5.1%.

<table>
<thead>
<tr>
<th>Status of Water Consumed</th>
<th>WBCSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2013</td>
<td>FY2014</td>
</tr>
<tr>
<td>Surface water</td>
<td>19,997</td>
</tr>
<tr>
<td>Ground water</td>
<td>14,216</td>
</tr>
<tr>
<td>Industrial water</td>
<td>2,986</td>
</tr>
<tr>
<td>Other</td>
<td>44</td>
</tr>
<tr>
<td>Total fresh water</td>
<td>37,242</td>
</tr>
<tr>
<td>Total seawater withdrawal</td>
<td>150,402</td>
</tr>
<tr>
<td>Total withdrawal</td>
<td>187,644</td>
</tr>
<tr>
<td>Total fresh water discharge</td>
<td>14,632</td>
</tr>
<tr>
<td>Total seawater discharge</td>
<td>150,402</td>
</tr>
<tr>
<td>Total discharge</td>
<td>165,034</td>
</tr>
</tbody>
</table>

Reference guidelines: WBCSD-CSI Protocol for Water Reporting Ver. 1.0

Appropriate Use of Water Resources

At present there are no foreseeable specific concerns regarding water resources that may be raised by local communities and we therefore remain focused on reducing the amount of water withdrawn from the perspective of improving production efficiency. Also, we continue to contribute to improving access to and promoting the appropriate use of water resources for local communities by maintaining close communication with them.

While Jiangnan-Onoda Cement Co., Ltd. in China operates a plant next to the Yangtze River, the surrounding areas are outside the range of the municipal water supply. The company therefore uses the water it withdraws from the river as industrial water and drinking water for employees after purifying it, and it also supplies the water to about 5,000 people living in the surrounding areas as drinking water. Furthermore, Taiheiyo Cement Philippines supplies clean water to local communities in the Philippines from a well drilled for the company.

Fresh Water Withdrawal per Unit of Production (FY2015)

<table>
<thead>
<tr>
<th>Year</th>
<th>Fresh Water Withdrawal (m³/t-cementitious)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0.780</td>
</tr>
<tr>
<td>2014</td>
<td>0.778</td>
</tr>
<tr>
<td>2015</td>
<td>0.760</td>
</tr>
</tbody>
</table>

(TAIHEIYO CEMENT CSR REPORT 2016)
Reducing Environmental Impact

We continue to act to protect and reduce impact on the environment through such means as preventing environmental pollution, making effective use of resources, reducing waste and appropriately managing chemicals.

Preventing Environmental Pollution

**Air Pollution**

The main air pollutants generated from cement production are NOx, SOx and dust contained in the combustion gases emitted from cement kilns. To ensure proper management of these substances we remain committed to reducing air pollutant emissions through measures such as continuously monitoring emission levels, improving NOx reduction systems and installing bag filter equipment to process gas emissions.

We have set our goal for reducing emissions of NOx, SOx and dust per tonne of clinker (g/t-clinker) by 5% from fiscal 2010 levels by fiscal 2015 and have continuously focused our efforts on achieving this goal. As a result, we have successfully achieved our targets set for SOx and dust. NOx levels, however, were slightly above our target. Considering that these values can slightly fluctuate depending on variations in operations and measurement while the degree of emissions remains low, we will focus on controlling the emission of air pollutants with our new goal for fiscal 2016 and onward, which is to maintain the emission level targets of fiscal 2010.

**Water Contamination**

Most of the water discharged from our plants to public waterways is cooling water and is not polluted, as defined in the Water Pollution Control Act. At our cement plants all water resources are reused as circulation water to minimize the impact of water discharge into public waterways. Also, we are working to prevent the leakage of pollutants by installing bunds around our oil tanks and acid/alkali tanks, as well as installing sedimentation tanks, water-oil separation tanks, oil film detectors, pH meters and suspended solid sensors on water discharge routes that connect to public waterways.

**Soil Contamination**

Taiheiyo Cement evaluated the risks associated with cement plants that may be sited on contaminated ground by consigning an expert consultant to undertake a soil history survey in fiscal 2000. We are in the process of conducting drilling studies, etc., starting with higher-risk locations, to verify whether the soil is contaminated or not. Actions are taken as necessary based on the findings.

We are also working to eliminate the possibility of soil contamination by preventing leakage of wastewater from scrap yards and fluid from oil tanks, acid/alkali tanks and so forth.
Reducing Waste

● Initiatives at Plants and Quarries
Our cement plants and quarries reduce the amount of waste handled by waste disposal contractors by reusing waste from operations as material for cement production. We also work to reduce the volume of waste to landfill by promoting the use of chromium-free kiln bricks. A major part of the waste is surplus soil from quarrying operations.

● Initiatives at Service Stations
Service stations reduce the waste handled by waste disposal contractors by returning any residual cement that remains in silos after switching cement products. The returned cement is recycled and used as raw material.

● Initiatives at Offices
Our special purpose subsidiary Taiheiyo Service Corporation installed a paper recycling machine to recycle the company’s used copy paper and in fiscal 2015 we recycled approximately 580 thousand sheets of A4 size paper.

Appropriate Management of Chemical Substances

● Pollutant Release and Transfer Register (PRTR)
The PRTR Law requires us to report on the equipment installed at our Kumagaya plant for the washing of municipal waste incineration ash. The ash washing process uses water, and our total discharge of dioxins and ferric chloride into public waterways are as follows.

● Management of PCB Waste
The Act Concerning Special measures against PCB Waste was created in June 2001. In accordance with this law we ensure that PCB waste at all 43 of our facilities nationwide is properly stored and processed, and we report an inventory every year. We signed a processing contract with the Japan Environmental Safety Corporation (JESCO) in 2006 and are processing the PCB waste that we have stored in line with our plan.

In fiscal 2015 the 113 capacitators stored at the Kumagaya plant, Miwa Quarry of Chichibu Taiheiyo Cement Corporation and Kobe service station were processed. A capacitor stored in the Nishitama Mine is scheduled for processing in fiscal 2016.

● Status of PCB Waste
(Unit: Number of machines)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacitors</td>
<td>121</td>
<td>6</td>
<td>113</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Transformers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Electrical ballasts</td>
<td>273</td>
<td>0</td>
<td>0</td>
<td>273</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>394</td>
<td>6</td>
<td>113</td>
<td>287</td>
<td>1</td>
</tr>
</tbody>
</table>
Environmetnally Sound Products and Services

- G4-EN27

In response to public concern about environmental protection we offer eco-products and services that capitalize on the advantages of cement and related technologies that we have developed, and contribute to conserving resources and reducing CO2 emissions.

- Ground Improvement Method, the “NJP-Dy Method,” for Preventing Liquefaction
  (Onoda Chemico Co., Ltd.)

Since the Great East Japan Earthquake, liquefaction prevention for revetments is underway in the Tokyo metropolitan and other areas as a countermeasure against possible large-scale earthquakes such as a Tokyo inland earthquake or Nankai Trough earthquake. Awareness of the need for such work has spread across Japan.

NJP-Dy is a ground improvement method with low environmental impact that was developed to prevent liquefaction by applying large-diameter ground improvement bored piles using ultra-high pressure jets. Displacement during the work is low and the volume of the mud sludge generated is reduced to about one-third of that produced by conventional methods.

The method has been used in many projects in the Tokyo metropolitan area and Kinki region to prevent liquefaction of revetments.

- Environmentally Sound Hydroelectric Power Generation, Using Water Resources on Yakushima Island
  (Yakushima Denko Co., Ltd.)

Hydraulic power generation is a clean, renewable source of energy that emits virtually no CO2. The company generates about 300 million kWh/year of hydroelectric power, harnessing the massive 8,000 mm/year of rainfall on Yakushima Island in Kagoshima Prefecture. Moreover, 75% of the electricity generated by the company is used for its production of silicon carbide*. We supply the remaining 25% of electricity to residents of the island, which represents almost all of the electricity its residents require. The operation reduces CO2 emissions on the island by about 200,000 tonnes/ year. The company will contribute to the sustainable growth of local communities through corporate activities that protect both the local and global environment.

- Material for Gardening and Greening Ground Cover Plants
  (Taiheiyo Materials Corporation)

Ground cover plants (GCPs) effectively prevent soil from drying out or sliding and inhibit the invasion and growth of weeds, thereby reducing the costs of managing green spaces.

Energy consumed by air conditioning can also be reduced by planting GCPs on building rooftops and in similar locations. The company delivers GCPs to planting sites (parks, roads, office buildings, condominiums, houses and factories) across Japan in collaboration with its partner farmers. It has recently been reaching more customers through an online shop, “Odaiba Garden Club,” as a BtoC activity.

- “TS-foam” Foaming Agent for All Types of Soil
  (Taiheiyo Shield Mechanics Corporation)

TS-foam is used with the shield tunneling method called the “foam shield method”, by which soil is excavated while injecting foam generated by the foaming agent into the front of a shield machine to stabilize the excavated surface. Since foam generated by the agent demonstrates a stable, high foam ratio (10-30 times), it can be applied to a wide range of ground types, from viscous to gravelly, by adjusting the aqueous solution concentration. Considering the impact of marine surface reclamation using excavated soil on the aquatic environment, TS-foam reduces the elution rate of surfactant content contained in the excavated soil into seawater to about 10% compared to conventional AOS* foaming agents. It also improves agent degradability and therefore reduces environmental impact.

* Silicon carbide (SiC): A non-oxide ceramic with high hardness and superior heat resistance and durability. Taking advantage of these properties, silicon carbide is used for heat resistant materials and polishing and grinding materials as well as ceramics and semiconductors.

* Alpha olefin sulfonate
Environmental Accounting

We calculate the costs and benefits of environmental conservation with the belief that we can accurately assess the cost effectiveness of our business activities and capital investment by ascertaining environmental impact and comprehensively identifying the costs of environmental conservation.

### Socioeconomic Benefits Derived from the Recycled-Waste-to-Cement System

Taiheiyo Cement uses the external economic benefit (EEB) evaluation method to express in monetary terms its evaluation of socioeconomic benefits from environmental impact reduction due to the increase in recycling of wastes accepted from outside the company.

As a type of deemed benefit, an EEB of 95.8 billion yen was identified for fiscal 2015.

In fiscal 2015 a decrease in cement production and the use of waste and by-products per unit of production led to about a 6% decrease in EEB compared to the previous year.

### External Economic Benefits (FY2015) - G4-EC1, EC2

<table>
<thead>
<tr>
<th>Impact</th>
<th>Inventory</th>
<th>Reduction (t)</th>
<th>Inventory Market Price (yen/t)</th>
<th>Economic Benefit (billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change mitigation</td>
<td>CO₂</td>
<td>2,948,632</td>
<td>818</td>
<td>24</td>
</tr>
<tr>
<td>Depletion of energy resources</td>
<td>Crude oil</td>
<td>267,016</td>
<td>18,400</td>
<td>49</td>
</tr>
<tr>
<td>Depletion of mining resources</td>
<td>Natural resources</td>
<td>4,957,928</td>
<td>1,000</td>
<td>50</td>
</tr>
<tr>
<td>Shortage of landfill</td>
<td>Waste</td>
<td>5,565,456</td>
<td>15,000</td>
<td>835</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9,086</td>
<td>5,297</td>
<td>22,046</td>
</tr>
</tbody>
</table>

**About Taiheiyo Cement's External Economic Benefit Evaluation**

- Taiheiyo has developed a unique evaluation method to estimate the contribution to overall environmental benefit to society by utilizing waste materials from other industries.
- We refer to information, including data collected for the WBCSD-CSI Cement CO₂ Protocol, and calculate the reduction in consumption of fossil energy and natural resources associated with the use of waste and by-products.
- EEBs are calculated by multiplying the reduced volumes of CO₂, crude oil, natural resources and waste (resulting from the utilization of waste and by-products in the cement production process compared to cement production without using waste and by-products) by market prices for each of the four items. The prices, assumed to be kept constant at year 2000 levels, are estimated as follows: CO₂: 3,000 yen/t (a hypothetical CO₂ emission tax rate), crude oil: import price, natural resources: estimated price, waste: controlled landfill cost in the Tokyo area.
- A portion of the EEB, such as the waste treatment fee, is accounted for in Taiheiyo’s profit and loss statement.

### Environmental Accounting for One of Our Projects - Ofunato Plant's New Equipment for Crushing Combustible Mixed Waste

The Ofunato plant has introduced equipment capable of crushing construction-related combustible waste, such as hard and soft plastic waste and wood chips, to improve its waste treatment capacity. The new equipment now makes it possible to treat 10,000 tonnes of combustible mixed waste per year, and the plant is thereby contributing to expanding the life of landfills and reducing the use of fossil fuels.

- **Investment**: Approximately 230 million yen
- **Financial effects of expanding the life of landfills**: Approximately 200 million yen/year
  
  (Estimated cost of landfill disposal is 20,000 yen/t.)
In order to help create a low-carbon, recycling-oriented society we track and manage the various ways that our business activities impact the environment, and remain committed to initiatives such as recovering waste heat from our manufacturing processes to generate electricity (cogeneration) and using waste and by-products as raw materials and fuel.

### Material Balance of Business Activities

- **G4-8, 9, 17, 23, EN1, EN2, EN3, EN15, EN16, EN21, EN22, EN23**

#### Input

<table>
<thead>
<tr>
<th>Energy</th>
<th>Raw Materials</th>
<th>Other Materials</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal (t)</td>
<td>Limestone (t)</td>
<td>Additives, etc. (t)</td>
<td>Water total (1,000 m³)</td>
</tr>
<tr>
<td>Petroleum coke (t)</td>
<td>Clay (t)</td>
<td>Explosives (t)</td>
<td>167,760</td>
</tr>
<tr>
<td>Heavy oil (kl)</td>
<td>Silica (t)</td>
<td>Refractory material (t)</td>
<td>Top water (1,000 m³)</td>
</tr>
<tr>
<td>Diesel oil (kl)</td>
<td>Gypsum (t)</td>
<td>Grinding media/Steel casing (t)</td>
<td>Industrial water (1,000 m³)</td>
</tr>
<tr>
<td>Kerosene, other (kl)</td>
<td>Other (t)</td>
<td>Lubricants/Chemicals (kl)</td>
<td>River water (1,000 m³)</td>
</tr>
<tr>
<td>Recycled fuels (t)</td>
<td>Iron wastes (t)</td>
<td></td>
<td>Ground water (1,000 m³)</td>
</tr>
<tr>
<td>Purchased electricity (MWh)</td>
<td>Fly-ash products (t)</td>
<td></td>
<td>Rainwater (1,000 m³)</td>
</tr>
<tr>
<td></td>
<td>Fly/Coal ash (t)</td>
<td></td>
<td>Seawater (1,000 m³)</td>
</tr>
<tr>
<td></td>
<td>Blast furnace slag (t)</td>
<td>Other (t)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>By-product gypsum (t)</td>
<td>9,747</td>
<td></td>
</tr>
</tbody>
</table>

#### Total Energy Input

![Energy Input Diagram](image)

#### Total Material Input

![Material Input Diagram](image)

#### Water Withdrawal

![Water Withdrawal Diagram](image)
### Output

<table>
<thead>
<tr>
<th>CO₂ Emissions</th>
<th>NOx Emissions</th>
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<td>CO₂* (1,000 t)</td>
<td>NOx* (t)</td>
<td>Waste externally consigned for treatment (t)</td>
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<td>From purchased electricity (1,000 t)</td>
<td>14,976</td>
<td>Amounts to landfill (t)</td>
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* Does not include CO₂ from transportation, which is calculated separately (see page 39)

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<th>SOx* (t)</th>
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<tr>
<td>2,010</td>
<td>334</td>
<td>Total water discharge (1,000 m³)</td>
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<td>* Cement and power generation businesses only (excluding purchased electricity)</td>
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| Dioxins* (g-TEQ/year) | 0.06 |
| Number of kilns covered by the study | 12, 12, 12 |
| Average exhaust gas concentration (ng-TEQ/m³NO₃=12%) | 0.007, 0.007, 0.007 |
| Total emissions (g-TEQ/year) | 0.10, 0.07, 0.06 |

* Cement and power generation businesses only (excluding purchased electricity)
Quality, Technologies and R&D

We have been developing production and quality control technologies for the manufacture of cement for more than 100 years. Using these technologies we have advanced our initiatives to guarantee the safety and security of our products. Under our Quality Policy, which declares our commitment to quality assurance, we maintain the highest product quality in the industry. We also continually improve product quality and systems to earn customer trust in our brand in both domestic and overseas markets.

Quality Policy

We established a quality policy based on our management policy in 1998, the year Taiheiyo Cement was launched, and have been continually raising awareness of the policy across the organization. We have made every effort to be a company that customers trust and rely on by implementing advanced technologies and establishing quality assurance systems that provide high-quality products and services through the efforts of each employee in accordance with the policy.

Quality Management System (QMS)

As one of our quality assurance initiatives we obtained ISO 9001 certification, the international standard for quality management systems, from the Japan Testing Center for Construction Materials. The scope of our certification encompasses the development, design and production of a range of cement, cement clinker, and cement-based soil stabilizer products. With 90% of our cement plants in and outside Japan, including group companies having obtained certification, we have strengthened our ability to meet ISO 9001 requirements for executive management responsibility, ongoing improvements in business operations and greater customer satisfaction. In addition, we have started to transition into the new ISO 9001:2015 this fiscal year toward completing introduction by the end of fiscal 2017.

- Strengthening Our Relationship with Customers

We place the highest priority on achieving greater customer satisfaction. We periodically exchange information among business units to strengthen production focused on quality that meets customer expectations. From our sales and technical staff at the branches and sales offices we collect information on customer requirements for product quality and services including delivery, and analyze the information in order to provide suggestions for improvements. To encourage overseas customers to adopt our high-quality products we have started to incorporate local needs into product quality, just as we do for domestic customers, and we are fine-tuning our products to meet the requirements of each overseas market.

As a result of these efforts the number of quality issues handled each year has fallen from between 40 and 60 at the time of Taiheiyo Cement’s incorporation, to between 20 and 30. In fiscal 2015 we launched an initiative to decrease the number of quality issues by 20% every year compared to 33 (the average number for the fiscal 2012 to 2014 period). However, we were not able to achieve our target in the first year when we experienced 32 quality issues because we had proactively identified potential quality risks and responded to them as if they were actual issues. We will investigate the causes of each issue and implement extensive countermeasures toward establishing a higher level quality assurance system.

Since fiscal 2013 we have been expanding our quality assurance system to include products of our group companies beyond Taiheiyo Cement products. We strive to identify and address material issues and verify quality incidents that significantly affected society through cross-divisional activities toward strengthening the reliability of the Taiheiyo brand as well as customer satisfaction.
Safety for Cement and Cement Products

Today every product is expected to be safe and secure, and cement, as a construction material that is indispensable for developing social infrastructure, is no exception. The cement industry has long made use of industrial waste and by-products such as blast furnace slag, coal ash and by-product gypsum as substitutes for natural mineral resources. In addition, using the technology to recycle household waste we developed for recycling municipal waste into raw material for cement, we also recycle construction-related soil and waste materials as well as other waste into raw material for cement. When our cement plants accept waste we work to prevent its dispersal and minimize release of odor by transporting the waste in a tightly sealed panel truck and storing it in a fully enclosed facility to protect the environment of the surrounding area as well as inside the plants.

Wastes, as well as natural raw materials, contain minute quantities of heavy metals such as chromium and lead. We reinforce the control of minor components as the volume of waste we receive at our cement plants increases. When we receive new types of waste or waste from new sources we strictly apply the rules under which we conduct three kinds of inspection related to the source of the waste, its chemical composition and the results of trial use to identify any potentially negative impact on product quality or the surrounding environment. We then make a final determination on whether to receive the waste.

Information Provision Using SDS and Labeling

To ensure safer use of cement products we post safety data sheets (SDS) with hazard statements on our website.

According to the Partial Amendment to the Industrial Safety and Health Act, manufacturers are required to display product information for their cement products on labels for bags, flexible containers and other packaging. We began implementing our labeling response before it was mandatory and have been gradually switching to labeled containers. We will ensure the health and safety of those who use the products while helping to protect the environment by providing accurate information.

Transition of Minor Components of Ordinary Portland Cement

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Ensuring Product Safety Following a Radioactive Accident

As a consequence of the nuclear accident at the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company, we discovered in 2011 that some industrial waste used for making cement contained highly radioactive material. We have established a system for ensuring that the radioactive concentrations in cement shipped from our plants are below the limit set by the Japanese government as the safety standard by strictly controlling the radioactive concentrations in raw materials and fuels for cement. In the interest of full disclosure we periodically post measurements of radioactive concentrations in our products on our website.

Initiative to Expand the Use of Concrete as a Pavement Material

Concrete pavements have recently attracted attention because they provide greater durability, lower life-cycle costs and reduced environmental impact. In addition, there is a more stable supply of raw materials for concrete pavements than asphalt pavements. The company partnered with the Japan Cement Association and Ready-Mixed Concrete Industrial Associations in implementing an initiative for the direct introduction of concrete pavements to the public in order to instill a deeper understanding and encourage wider use of concrete pavements because of the significant contribution they offer to society. The initiative is intended to promote the benefits of concrete as a pavement material and for its use in the rapid restoration of roads in projects and, as an example to introduce concrete pavements to contractors and specifiers, we conducted road refurbishment at our facilities.

We also paved a parcel of land owned by the Hidaka City government of Saitama Prefecture in front of the main gate of our Saitama plant. The land has been used as a gathering place for elementary school children on their way to and from school. It had not been paved and the surface had become rough due to the many nearby warehouses and heavy traffic of large trucks and was consequently collecting large puddles on rainy days. As part of our participation in local communities we obtained approval from the city government and carried out the work to increase the safety of children’s commutes.

We will continue our efforts to expand the use of concrete as a pavement material toward the building of social infrastructure that provides a sense of safety and security for society.

For more information about radioactive concentrations in our products, please visit:

http://www.taiheiyo-cement.co.jp/news/sokutei.html (Japanese only)

Initiatives through User Societies and Industry Associations

We founded and manage a variety of societies for cement users and industry associations to support them in strengthening their businesses and develop technological competitiveness. The National Taiheiyo Cement Ready-mixed Concrete Society, the largest of these organizations, has established 10 regional Taiheiyo Cement Ready-mixed Concrete Societies from Hokkaido to Kyushu and mutually communicate their technologies by conducting activities under a specific theme in each region.

In addition, in the precast concrete field we established the Taiheiyo Cement Association for the Paving Block Industry, SPLITTON Association Japan, and other associations to proactively deliver technical support for the mutual development of concrete companies.

Representative Activities of the Ready-mixed Concrete Society (under Specific Themes)

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<td>Survey of shipment results of special concrete</td>
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<tr>
<td>Tohoku</td>
<td>Concrete Strength Competition (participants declare their target strengths)</td>
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<td>Tokyo</td>
<td>Safety patrol to raise safety awareness and improve work environments at ready-mixed concrete plants</td>
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<tr>
<td>Kanto</td>
<td>Initiative for standardizing special concrete</td>
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<tr>
<td>Hokuriku</td>
<td>Demonstration of countermeasures for hot weather concrete work, using a high-performance AD water-reducing agent</td>
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<td>Concrete Strength Competition (participants declare their target strengths)</td>
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<tr>
<td>Kyushu</td>
<td>Survey of the state of training activities to promote in-house standardization and quality control</td>
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</table>
Initiatives through Taiheiyo Cement Association for the Paving Block Industry

With 23 member companies that manufacture and sell paving blocks and six group companies, this association actively develops new products and technologies, gathers information from within and outside the industry, and holds technical workshops to advance the entire industry.

In recent years the association has focused on addressing a major issue for the 2020 Tokyo Olympic and Paralympic Games: improving the roadside environment of roads to be used for some of the games. The association is conducting studies to reduce the surface temperature of sidewalks, using block paving technology to safeguard spectator safety in extremely hot weather.

Initiatives through the SPLITTON Association Japan

Eleven full member companies, which are manufacturers and sellers of SPLITTON blocks, two associate member companies that manufacture machinery, and Taiheiyo Cement, focus on technological development related to laying block products used for river revetments and road slopes.

The association has recently developed special blocks in order to reduce the brightness of river revetment blocks, which has been an issue, and offering revetment blocks with a uniform texture for an improved landscape.

Promotion of R&D Activities

Benefiting from the close cooperation between the Central Research Laboratory and each business division, the scope of our R&D encompasses peripheral fields such as mineral resources, the environment, building materials, architecture and civil engineering, with a focus on cement and concrete.

Development of a New Quality Control and Analysis Method for Blended Cement

We established a new method that facilitates the direct and automatic testing of admixture ratio, a key quality control item for blended cement. Using conventional methods this has been difficult to test, but by applying a new quantification technology for mineral phase with a powder X-ray diffraction method, it is possible to run the test in an automated analysis system at the plant. We are also developing a quality analysis method for fly ash (FA), which has complex components and exhibits a quality that fluctuates considerably. This particle analysis technology integrates electron microscope analysis with image analysis and has the benefit of being able to more precisely determine the characteristics of FA by checking individual particles. It is expected to be used for identifying factors that control fluctuations in FA quality and to establish a method for rapidly predicting FA quality. We will further improve the quality of blended cement, which is attracting attention in the market, by raising our quality management technologies to the next level.

Overview of Particle Analysis Technology

Development of Nutrient-supplying Aggregate Mantenmal

The nutrient-supplying aggregate Mantenmal is produced by coating a spherical-shaped base material that contains amino acid, a nutrient for marine life, with cement and then forming it. After Mantenmal is installed in seawater, fish and shellfish are attracted by the amino acid it supplies. Moreover, it contributes to improving the marine environment by facilitating the growth of seaweed, which serves as a prey of fish and shellfish and purifies water through photosynthesis. The fish catch has recently been declining in Japan due to environmental degradation of Japanese coastal areas such as a reduction in the areas of tidal flats and seaweed beds. The development of technologies to contribute to the improvement of coastal environments has been conducted in our water treatment business, as a part of our Aqua Business.

Verification Test in a Coastal Area

(Number of marine organisms)

- Mollusca
- Arthropoda
- Spinal animal
- Others

0 100 200 300 400

Mantenmal® Crushed stones (for comparison)
Fair Trade

We believe our continued growth depends on building relationships of trust and collaboration with business partners, preventing complicity with any of their actions that may be improper, and paying due consideration to their own efforts for continued growth.

**Fundamental Policy**

We pursue growth together with business partners. To build relationships of trust and collaboration we promote trade based on fair contracting as well as compliance in each commitment we make. Our Standard of Conduct includes the following statements under the section entitled “Dealing outside the company in good faith” to ensure we conduct fair trade.

1. We will conduct fair marketing and bidding, free from unfair practices such as collusion and cartels.
2. We will maintain decent and transparent relationships with our partner companies.
3. We will select business partners in a fair and equitable manner.
4. We will not offer entertainment or gifts to customers that go beyond what is legally and socially acceptable.
5. We will produce honest, sincere and faithful advertisements, displays and presentations.
6. We will respond sincerely to customer feedback.
7. We will maintain transparent relationships with governments.
8. We will respect the cultures and customs of the places in which we operate.

We believe relationships of trust with business partners depend on the conduct of each employee and therefore encourage our employees to advance fair trade through a variety of means.

**Trade Compliance Training**

- Distributing the Standard of Conduct Casebook
  We included fair trade in our Standard of Conduct, established as a guideline for individual action. We also created and distributed to all employees a Standard of Conduct Casebook that describes specific examples on how to act in line with the Standard of Conduct.

- Distributing the Antimonopoly Law Compliance Manual
  We published and distributed to employees an Antimonopoly Law Compliance Manual toward ensuring compliance. The manual first presents an outline of the Antimonopoly Law focusing on private monopoly, unfair restraint of competition (cartels) and unfair business practices, the three pillars of this law, and then offers examples of illegal conduct in the form of “Don’t” statements to help employees more thoroughly understand the law.

  In fiscal 2015 we continued to conduct monthly tests as part of e-learning programs to provide education on the Standard of Conduct Casebook and the Antimonopoly Law Compliance Manual for all company employees, including employees on loan to group companies or others.

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**[ Taiheiyo Cement Standard of Conduct ]**

A compass for action

We will think and act independently as members of the Taiheiyo Cement Group to help build social infrastructure, promote a closed resource cycle and vitalize local communities.

Dedication to fairness

We will maintain a fair and honest attitude at all times.

Dealing outside the company in good faith

We will deal with people outside the company fairly and in good faith.

Fostering collaboration and cooperation in the workplace

We will respect our colleagues and strive to grow together.

Appropriate use of company assets and information

Company assets and information are important management resources. We will handle them appropriately.

Officers lead by example

Directors and other officers recognize their role in setting the standard for conduct and will lead by example to ensure the thorough penetration of the Standard of Conduct throughout the company.
We disclose corporate information fairly, accurately and at the appropriate time, in accordance with the Information Disclosure Policy we created in May 2007. In fiscal 2015 we published 21 press releases. These and previous press releases are available on our website.

IR Activities

We are committed to disclosing information about our group in an appropriate and timely manner to our shareholders and investors. We hold results briefings with institutional investors twice each year to enable the president to communicate our management policies directly.

In fiscal 2015 we again held individual meetings and participated in IR conferences organized by a securities company. We also provide tours of our production sites (our plants and quarries) for our investors upon request.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Events</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results briefings</td>
<td>2</td>
<td>181</td>
</tr>
<tr>
<td>Individual meetings</td>
<td>207</td>
<td>295</td>
</tr>
<tr>
<td>Tours of our facilities</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Conferences organized by securities companies</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>

External Recognition

- **Selected as a Member of DJSI Asia Pacific in 2014 and 2015**
  Taiheiyo Cement was selected as a member of the Dow Jones Sustainability Asia/Pacific Index (DJSI Asia Pacific) for the second consecutive year. The DJSI is a representative selection of socially responsible investment indices that evaluate the sustainability of companies in terms of economic, environmental and social criteria.

- **CSR Report 2015 Won the “Excellence prize for special recognition” at the 19th Environmental Communication Awards**
  Our CSR Report 2015 was honored with an “Excellence prize for special recognition” at the 19th Environmental Communication Awards sponsored by Japan’s Ministry of the Environment. The recognition followed receiving the award for excellence in 2014.

- **Website**
  We post press releases as well as information on our products and services, recruitment and R&D division on our website.

- **Annual Reports**
  This IR tool, published annually for Japanese and international investors, publicly states our financial standing along with special topics for the year.

- **Technical Journal “CEM’S”**
  We publish “CEM’S” (a technical journal for users of our products) quarterly. The journal provides commentaries on technological trends in the field of cement and concrete, construction materials and the environment. It also introduces timely R&D activities, the latest construction examples and other information.

- **R&D Report**
  We publish a summary of our R&D outcomes twice each year. Extracts from back issues are also available on our website.

- **In-house Newsletter “Taiheiyo”**
  We publish six issues of our newsletter each year to communicate our management policy, group events, employee comments and other information. It is distributed to our local communities and the mass media as well as in-house.
Respecting Human Rights and Diversity and Creating an Energetic Workplace

We believe that respecting human rights and diversity is a fundamental principle for a sustainable society. With this principle we have been introducing measures concerning the development of human resources, the empowerment of women, the diversity of our workforce and improvement of the work-life balance. We are dedicated to creating employee-friendly workplaces where each employee can develop to their full potential.

Basic Policy Concerning Human Rights and Labor Practices

Acknowledging that respecting human rights and diversity is a fundamental principle for a sustainable society and taking into consideration the Universal Declaration of Human Rights and the labor standards of the International Labor Organization, we formulated our Basic Policy Concerning Human Rights and Labor Practices in April 2015.

1. Recognizing that respecting human rights is a foundational management concern; we will strive to address human rights issues.
2. We will respect diversity and will not tolerate discrimination or harassment in any form.
3. Applying accepted international principles and laws and labor practices in each country, we will respect the rights of all our workers, treat them to employment free of discrimination and strive to ensure equal employment opportunities.
4. We will strive for better working conditions and a workplace environment that ensures the health and safety of our employees.
5. We will not tolerate child labor or forced labor under any circumstances.

Respect for Human Rights

Under the Basic Policy Concerning Human Rights and Labor Practices we are committed to respecting the human rights of our employees and all those involved in our business activities. These strong commitments are reflected in our Standard of Conduct (see page 54), which governs the actions of each employee and is clearly expressed in statements such as “We will respect human rights and will not discriminate on the basis of national origin, gender or other factors” and “We will maintain a harassment-free workplace.”

Educational Activities on Human Rights

With the belief that education is the foundation for human rights we have been conducting a variety of educational activities focused on this issue. In fiscal 2015 we conducted harassment prevention training at all our business sites in addition to our conventional human rights training courses by position and those for the top management of our affiliates. We also support our group companies by assisting them with training courses, distributing booklets and providing information on human rights. In fiscal 2015 we assisted a total of 10 companies with 6 training courses provided for 40 employees. Moreover, during Human Rights Week, we promoted human rights awareness by collecting slogans from employees of the company and their families as well as our partner companies.

In-house Training Related to Human Rights Issues and Call for Slogans (FY2015)

<table>
<thead>
<tr>
<th>In-house Training and Call for Slogans</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human rights training courses by position at the headquarters</td>
<td>304 attendees</td>
</tr>
<tr>
<td>Human rights training at business sites</td>
<td>2,168 attendees</td>
</tr>
<tr>
<td>Top-management seminar at affiliated companies</td>
<td>132 attendees</td>
</tr>
<tr>
<td>Slogans to raise human rights awareness (from employees and their families)</td>
<td>1,519 slogans</td>
</tr>
</tbody>
</table>

Operating the Human Rights Hotline

Members of the Sexual Harassment Counseling Committee and Human Rights Committee assigned at all business sites conduct activities to raise awareness of human rights to prevent violations and handle any related complaints.

Human Resource Development and Evaluation

We see our employees as the most important management resources for achieving the sustainable growth of our group. We maintain a long-term human resource development system in accordance with our Basic Human Resources Development Policy, and a fair evaluation system to support the performance of all our human resources. These systems reflect diverse individual characteristics and values, regardless of nationality or gender.

Educational Activities on Human Rights

With the belief that education is the foundation for human rights we have been conducting a variety of educational activities focused on this issue. In fiscal 2015 we conducted harassment prevention training at all our business sites in addition to our conventional human rights training courses by position and those for the top management of our affiliates. We also support our group companies by assisting them with training courses, distributing booklets and providing information on human rights. In fiscal 2015 we assisted a total of 10 companies with 6 training courses provided for 40 employees. Moreover, during Human Rights Week, we promoted human rights awareness by collecting slogans from employees of the company and their families as well as our partner companies.
Human Resource Development
We implement company-wide measures, including group training by position and the development of global human resources. We also introduce measures aimed at developing the individual potential of each employee as a basis for energizing the organization. These efforts provide our employees with opportunities for personalized learning experiences that foster autonomy and independence and ultimately raise their motivation to the next level. We actively encourage and create environments in which employees can freely make decisions about their careers during their work and training.

In addition we ask all employees to submit personal reports once a year, including future career development aspirations, worksite preferences and family considerations, to help us improve their work environment where they can fully demonstrate their abilities and ensure stable employment.

Characteristics of Ideal Employees
From the standpoint of human resource development we have identified the following desirable characteristics and traits for revolutionizing the company and creating a dynamic Taiheiyo Cement.

Self-confident individuals who are able to contribute to the sustainable growth of the group with a firm commitment to achieving the group mission

1. Individuals with a wealth of innovative ideas, strong leadership and the ability to take bold actions
2. Individuals who can be competent by global standards
3. Individuals who can contribute to group management

Human Resource Evaluation System
We have adopted a human resource evaluation system that prioritizes development over compensation. The evaluation system assists employees in deepening their understanding of their evaluation results through feedback and also strongly emphasizes the exchange of opinions between evaluators and employees, who share their thoughts on issues such as identifying areas for future development.

We have been implementing a management (HR evaluation) training program since fiscal 2007 to enhance the evaluation, development and management of skills of evaluators. As of the end of fiscal 2015 about 600 people had participated in training under these programs.

Respecting Diversity

Promoting the Empowerment of Women
Acknowledging that promoting the empowerment of women is the biggest and most immediate challenge for creating an innovative labor force, we have been engaged in a wide range of efforts.

In July 2015 we established the Diversity Promotion Office and the women’s working group, which provides an opportunity to incorporate the opinions of more female workers on various topics, particularly those concerning employee retention. The ideas and discussions shared by the women’s working group were put into proposals, which were reported to management and distributed to all employees in a booklet form. These proposals are also brought into the general business owner action plans that we have formulated based on the Act on the Promotion of Women’s Active Participation in Their Occupational Lives (Women’s Active Participation Act) enforced in April 2016. In addition, we have been participating in Keidanren’s Action Plan on Women’s Active Participation in the Workforce and announced our voluntary action plans.

To achieve our objectives for increasing women’s participation (details are summarized in the CSR Objectives for 2025 on page 5), we will continue our sincere efforts to increase job opportunities for women and create an environment that fosters more female managers. We have been actively recruiting female employees to increase the ratio of female employees to over 10% by 2020. As a result of our employment approaches for recruiting more women, such as holding a career seminar for female students, the ratio of women who are “G Course” employees accounted for approximately 33% of new employees who joined the company in April 2016.
Employee-Friendly Workplaces

**Commitment to Work-Life Balance**

- **Support for Childcare and Caregivers**
  
  To support childcare and care for family members we introduced our family support system to make it easier to take leave, such as setting aside the first five days of the childcare/family-care leave as a paid leave, allowing the use of childcare/family-care leave in half-day increments and incorporating measures to support employees who do not elect to take leave (flextime system, shortened work hours and starting work early/finishing late).

- **Responding to the Act for Measures to Support the Development of the Next Generation**

  Since fiscal 2005 we have been formulating general business owner action plans based on the Act for Measures to Support the Development of the Next Generation. In fiscal 2015, marking the fourth term for our implementation of the general business owner action plans, we are working on various measures to achieve our goals in accordance with the plans we formulated.

**System to Rehire Employees Who Have Reached Retirement Age**

We rehire employees who want to continue working after they have reached the traditional retirement age of 60 until they are eligible for their pension. After they start receiving a pension we rehire them in accordance with specific rehiring standards under a labor-management agreement until they reach 65. We will continue to make sure there is a place to work for individuals who seek re-employment by expanding opportunities in group companies.

**Promoting Employment Opportunities for Persons with Disabilities**

In fiscal 2000 we set up a committee to promote employment of persons with disabilities and have been making improvements to the work environment, including regular hiring of new graduates and the establishment of three special purpose subsidiaries. As a result our employment ratio of persons with disabilities was 2.26% as of June 2015 with an annual average employment ratio of 2.29% for fiscal 2015, exceeding the statutory ratio for nine consecutive years. Since we have hired new graduates with disabilities in fiscal 2016, our employment ratio as of June 2016 was 2.37%, which also exceeds the statutory ratio.

**Support for Volunteer Activities**

In June 2012 we formulated a volunteer activity leave scheme and have been supporting volunteer activities undertaken by employees. A total of 29 employees have taken this leave up to fiscal 2015.

**Flexible Work Arrangements**

We are working to provide flexible work arrangements by adopting various employment systems that will enable our employees to enhance work-life management.

**General Business Owner Action Plans**

- **Period of the plan:** From April 2015 to March 2017 (2 years)
- **Objective 1**
  - Implement measures to promote the use of annual paid leave
  - Measures
    - Improve the rate of annual paid leave taken by setting up days when employees are encouraged to take annual paid leave, systematically providing annual paid leave, etc.

- **Objective 2**
  - Develop flexible working conditions that contribute to the revision of work styles and achievement of a healthy work and parenting balance
  - Measures
    - Improve working conditions to realize work-life balance management through the study and research of various ideal working conditions by specialized labor-management committees and other similar entities

**Major Work Systems that Allow Flexible Work Arrangements**

- Flextime system
- Discretionary labor system
- Half-day paid vacation
- “Special Reserved” leave (use of accumulated paid leave that has expired)
- “Refresh System”
- Human resource management system per course (region-limited employment) and others

**Status of Leaves Taken and Work Hours**

<table>
<thead>
<tr>
<th>Items</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees who took childcare leave (male employees in parentheses)</td>
<td>6 (2)</td>
<td>11 (6)</td>
<td>6 (3)</td>
</tr>
<tr>
<td>Childcare leave rate for female employees</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Rate of annual paid leave taken</td>
<td>68.6%</td>
<td>72.3%</td>
<td>73.2%</td>
</tr>
<tr>
<td>Overtime work (monthly average)</td>
<td>17.5 hours</td>
<td>17.7 hours</td>
<td>17.9 hours</td>
</tr>
</tbody>
</table>
Mental Healthcare
We provide mental health checkups for all our employees (consultation rate: 89.2% in fiscal 2015). We also provide workshops focused on preventing mental health problems. In addition, we provide free counseling and similar services through our mental health support system contracted through the company’s healthcare trust for employees as well as their families.

Employee Awareness Survey
To increase employee job satisfaction, we conducted an employee survey in November 2015, the second such survey since fiscal 2013. Although overall job satisfaction, as expressed through the survey, cannot be described as good yet, a significant improvement was seen in “Reliability of directors” and other items owing to initiatives such as talk sessions with the executive officers. Also we added a comment section to the survey so that employees could anonymously share any information on activities that may violate human rights and compliance requirements.

Results of the Employee Awareness Survey

Employee Status

<table>
<thead>
<tr>
<th>Committee</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee on personnel and treatment of employees</td>
<td>Review the entire personnel system and the treatment of employees</td>
</tr>
<tr>
<td>Committee on employment and employment formats</td>
<td>Examine the operation of personnel/labor management systems against the background of diversifying employment and employment status</td>
</tr>
<tr>
<td>Committee on work hours</td>
<td>Examine problems concerning work hours and work hour management, and the response to laws related to work hours</td>
</tr>
<tr>
<td>Committee on the promotion of diversity</td>
<td>Examine the measures necessary to promote diversity in the workplace</td>
</tr>
</tbody>
</table>

Sound Labor-Management Relations

All employees who have entered into a labor agreement with the company are members of a union. We occasionally hold labor-management consultation and briefing sessions which provide opportunities for labor and management to exchange opinions and negotiate issues on the basis of mutual trust and understanding. In fiscal 2015, 48 of these sessions were held encompassing labor contract negotiations as well as explanations of corporate performance, revisions to wages and bonuses, and amended systems and rules. Through these sessions we intend to improve communication between labor and management. In addition, four specialized committees set up as advisory bodies for labor-management consultation provide opportunities for active negotiation and exchanging views between labor and management.

Direct Communication between Executive Officers and Employees

As part of our efforts to enhance communication across the company we held talk sessions with the executive officers in fiscal 2015 that provided them, as well as the employees, with a valuable opportunity to interact directly. The sessions were held at our all 18 business sites and were attended by 1,110 people under the theme of the 17 Medium-Term Management Plan.
Creating a Healthy and Safe Workplace

We understand that the health and safety of our employees is part of the foundation of our company and we continuously advance organized programs for health, safety and security to eliminate work-related accidents and create comfortable working environments, including in our supply chain.

Taiheiyo Cement Health & Safety Policy

Our Occupational Health & Safety Policy is shown below. Under the policy our headquarters and business sites create and implement yearly health and safety (security) policies.

[Taiheiyo Cement Health & Safety Policy]

We are aware that the health, safety and security of our employees is part of the foundation of our company, and we effectively implement the following policy by devoting sufficient management resources to prevent work-related accidents and diseases in accordance with the Industrial Safety and Health Act and the Mine Safety Act.

Basic Policy

1. Promote health and safety activities through cooperation between management and labor, with the aim of eliminating work-related accidents.

2. Ensure the health and safety of our employees and those of our affiliates by complying with health and safety-related laws and regulations, and in accordance with health and safety regulations created by us, and health and safety regulations created by our business sites.

3. Strive to improve the level of safety and health by actively promoting the implementation and operation of an Occupational Safety and Health Management System, and by continually ensuring the true safety of our equipment, providing education and training, and raising awareness.

4. Continually improve the working environment and work methods through the company-wide and business site Health & Safety Committees, by applying technological progress and utilizing new knowledge and information about health and safety.

5. Ensure health and safety throughout the Taiheiyo Cement Group by advancing programs to eliminate work-related accidents under the leadership of the company-wide, business site, group company and affiliate Health & Safety Committees.

Occupational Health & Safety System

We have assigned a Health & Safety Committee at each business site, including plants, quarries and branches, which are overseen by the Companywide Occupational Health & Safety Committee at our headquarters (chaired by the officer in charge of safety). The committees have representatives from both management and labor. The Companywide Occupational Health & Safety Committee collects safety-related data from our group companies as well as the company itself and provides guidance.

We began using the OSHMS* at the company in 2002 and have been running the system at all cement plants and quarries since 2003.

* OSHMS: Occupational Safety and Health Management System

A framework that allows organizations to reduce potential dangers at workplaces and promote comfortable workplaces by voluntarily practicing continuous, uninterrupted health and safety management as prescribed in the guidelines of the Ministry of Health, Labor and Welfare.

Safety Operation Officer Certification System

Since fiscal 2007 we have been using the Safety Operation Officer System, which emphasizes the importance of improving leadership capability and therefore only certifies those who complete qualification seminars held at plants as leaders (safety operation officers) of working groups. To further improve the capability of these leaders we imposed a stricter requirement for the qualification seminars starting in fiscal 2015, which restricts participants to those who have completed the foreman training course stipulated in the Industrial Safety and Health Act.

Operating a Work-related Accident Database

We have maintained a work-related accident database since fiscal 2008 to help avoid the recurrence of accidents. The database contains information about accidents involving employees of the company and group companies as well as all employees of partner companies including temporary workers. It is also used to store information on identified accident causes and response reports, including measures taken in response to unsafe actions and equipment with respect to the “4 Ms” (men, machines, methods and management).

Number of Accidents Registered in the Work-related Accident Database

<table>
<thead>
<tr>
<th>(Number of accidents)</th>
<th>Death</th>
<th>Leave of absence</th>
<th>No leave of absence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>114</td>
<td>89</td>
<td>110</td>
</tr>
<tr>
<td>2012</td>
<td>89</td>
<td>110</td>
<td>98</td>
</tr>
<tr>
<td>2013</td>
<td>98</td>
<td>101</td>
<td>97</td>
</tr>
<tr>
<td>2014</td>
<td>101</td>
<td>97</td>
<td>101</td>
</tr>
<tr>
<td>2015</td>
<td>97</td>
<td>101</td>
<td>97</td>
</tr>
</tbody>
</table>

Fiscal Year
**Status of Our Health and Safety**

In fiscal 2015 we implemented measures such as the pointing and calling campaign at cement plants to eliminate accidents caused by unsafe actions and were able to produce positive results. For example, the number of work-related accidents that occurred at our directly managed cement plants was 10 in fiscal 2015 compared to 18 in fiscal 2014. However, we were unable to bring down the number of work-related accidents company-wide, as indicated by the increased fatalities from 2 to 4 from the previous year and the total number of work-related accidents remaining the same as in the previous year. We provided more stringent safety guidance to affiliates that experienced a high work-related accident rate and requested urgent comprehensive safety inspections.

- Quantitative results related to safety are listed on page 66.

- **Hands-on Safety Training**
  
  To enhance each employee’s sense of safety we have promoted hands-on safety training in which employees experience simulated dangers that could happen in daily operations. We decided in fiscal 2011 to provide on-site, hands-on safety training by instructors from outside the company at our plants on a rotating basis. Many of the employees working in the same plant participate together in the training so that they develop the same level of safety awareness.

  Training in fiscal 2015 was conducted at the Kumagaya plant on November 5 and 6 with a total of 158 employees from the Kumagaya plant and partner companies, who enthusiastically participated in and experienced simulated dangers involving heights, rotating equipment, electricity and an object hanging from a crane.

- **Health Management**
  
  We conduct annual health examinations for all employees in accordance with the Industrial Safety and Health Act. As in previous years the attendance rate in fiscal 2015 was 100%. We also hold clinics and provide information through an in-house newsletter for their health maintenance and improvement.

- **Absence Rate**

<table>
<thead>
<tr>
<th>Year</th>
<th>Absence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>0.411</td>
</tr>
<tr>
<td>FY2012</td>
<td>0.531</td>
</tr>
<tr>
<td>FY2013</td>
<td>0.570</td>
</tr>
<tr>
<td>FY2014</td>
<td>0.547</td>
</tr>
<tr>
<td>FY2015</td>
<td>0.439</td>
</tr>
</tbody>
</table>

- **Health Issues Caused by Asbestos**
  
  The status of health issues related to asbestos at Taiheiyo Cement is that of the former employees with certified work-related injuries/illnesses, 42 have died and 5 are currently undergoing treatment (as of May 31, 2016).

  We conduct continuing health examinations of employees who have been involved in the manufacture of products using asbestos, with a focus on retired plant workers. As of this time no nearby residents have reported health problems so we are not conducting health examinations for nearby residents.

  Please visit our website for more information.

- **http://www.taiheiyo-cement.co.jp/english/CSR → CSR Report → Data (Japanese only)**

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**Safety Patrol by Directors**

To realize the concept of “leading by example,” whereby top management personnel provide on-site guidance while patrolling plants, our plant directors conduct a full patrolling exercise during scheduled shutdowns. Taking full advantage of these events we also invite employees, officers of our partner companies and other related personnel to hold a safety talk session during which the status of the company’s safety measures are shared. We will continue to raise awareness of “safety first” through these activities.
Communication with Communities

With the goal of achieving sustainable growth in harmony with communities, all of our business sites in Japan and overseas participate in various activities that address local needs while applying the characteristic strengths of the Taiheiyo Cement Group.

### Major Activities (FY2015)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Activity</th>
<th>Sessions</th>
<th>Attendees</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection of the local environment</td>
<td>Plant tour</td>
<td>265</td>
<td>8,361</td>
<td>• Plant and quarry tours for children, students, residents and government entities in a community</td>
</tr>
<tr>
<td></td>
<td>Support for community medical services</td>
<td>2 55</td>
<td>30 36</td>
<td>• Free lease of company-owned land for use as a community gathering place in the stricken areas</td>
</tr>
<tr>
<td></td>
<td>Community briefing</td>
<td>39</td>
<td>776</td>
<td>• Briefing on waste treatment</td>
</tr>
<tr>
<td></td>
<td>Brief the community on environmental issues</td>
<td>9 154</td>
<td>19 178</td>
<td>• Brief members of a neighboring community on environmental issues</td>
</tr>
<tr>
<td></td>
<td>Environmental monitoring system</td>
<td>44</td>
<td>68</td>
<td>• Meetings, briefings and social gatherings of environmental monitors</td>
</tr>
<tr>
<td></td>
<td>Community cleanup activities</td>
<td>158</td>
<td>1,239</td>
<td>• Cleaning of roads and rivers surrounding business sites</td>
</tr>
<tr>
<td></td>
<td>Community forest conservation and nature protection activities</td>
<td>19 178</td>
<td>19 178</td>
<td>• Participation in forest conservation activities such as planting seedlings and thinning</td>
</tr>
<tr>
<td></td>
<td>Plant and quarry tours</td>
<td>265</td>
<td>8,361</td>
<td>• Plant and quarry tours for children, students, residents and government entities in a community</td>
</tr>
<tr>
<td></td>
<td>Opening facilities to the public</td>
<td>1,975</td>
<td>16,234</td>
<td>• Providing schools and local organizations with access to our grounds, gymnasiums and meeting rooms</td>
</tr>
<tr>
<td></td>
<td>Sponsoring, participating in and cooperating in local events</td>
<td>76 3,341</td>
<td>76 3,341</td>
<td>• Sponsorship of a boys baseball tournament</td>
</tr>
<tr>
<td></td>
<td>Provision of materials and rental of heavy machinery</td>
<td>30 36</td>
<td>30 36</td>
<td>• Providing and lending materials and heavy machinery to improve public spaces as well as roads and waterways in local communities</td>
</tr>
<tr>
<td>Regional development</td>
<td>Support for community medical services</td>
<td>19 216</td>
<td>19 216</td>
<td>• Provision of free medical checkups and medication</td>
</tr>
<tr>
<td></td>
<td>Support for the development of local industries</td>
<td>5 40</td>
<td>5 40</td>
<td>• Participation and cooperation in activities to support the development of local industries</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>11</td>
<td>71</td>
<td>• Support for economically distressed areas</td>
</tr>
<tr>
<td>Education and development of human resources</td>
<td>Scholarships</td>
<td>1 62</td>
<td>1 62</td>
<td>• Scholarships for students who need financial assistance living near our business sites</td>
</tr>
<tr>
<td></td>
<td>Developing engineers</td>
<td>10</td>
<td>106</td>
<td>• Opening free concrete technology schools to train concrete engineers</td>
</tr>
<tr>
<td></td>
<td>Internships and career experience opportunities</td>
<td>38 383</td>
<td>38 383</td>
<td>• Acceptance of domestic and foreign interns</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>12</td>
<td>80</td>
<td>• Provision of materials for building schools in local communities</td>
</tr>
<tr>
<td>Support for areas affected by disaster</td>
<td>Volunteering to support areas affected by disaster</td>
<td>2 55</td>
<td>2 55</td>
<td>• Participation in support groups</td>
</tr>
</tbody>
</table>

### Protection of the Local Environment

#### Communication on the Environment

We consider improving transparency through timely information disclosure and communication as one of our key responsibilities to local communities. We hold briefings for members of these communities when we start new business operations or relocate a quarry zone. We also periodically report on the status of our acceptance of waste and by-products for recycling, emissions measurements and other information of community interest. We ask members of the local communities who reside near our plants to act as environmental monitors to report information about the environment. This enables us to quickly ascertain and act on information about the environment near our plants. Furthermore, we offer tours of our business sites, especially our plants, to local residents and the families of our employees with a focus on school children and college students, as well as to government entities, people from industry and others.

For instance, CalPortland’s DuPont Aggregate Plant provides plant tours annually for neighboring communities. Being located near an area designated for environmental protection where there is diverse wildlife, they continue to work on deepening mutual understanding with communities by sharing their conservation activities in the surrounding environment and the status of their operations.

#### Enriching the Biodiversity of Local Rivers

(Saitama Plant)

The local fisheries cooperative has been maintaining riverbeds and releasing young catfish and crucian carp into the river as a conservation project for the Koaze River, which runs through Hidaka City. The Saitama plant has also been participating in these activities and fiscal 2016 marks the seventh year of their cooperation. Owing to their combined efforts, the once-damaged ecosystem of the Koaze River has recovered significantly.
Making Sports Facilities Available to the Community
(Kamiiso Plant)
The Kamiiso plant opens its gymnasium to local residents and is frequently used by junior and senior baseball teams. The venue has been a great indoor practice facility, especially during snowy winter weather. The plant also sponsors the Akiha Jinja Boys Baseball Tournament every summer, providing a grand stage for neighboring teams to demonstrate the results of their practice.

Participating in the Sanriku Ofunato Summer Festival
(Ofunato Plant)
The Ofunato plant participates in various local events to deepen their relationship with local communities. In the Sanriku Ofunato Summer Festival held in August 2015, 60 plant employees participated as dancers. They practiced regularly for several weeks before the festival and visually livened up the event with their matching Yukata, Happi coats (Japanese robe worn at festivals) and Zori sandals while dancing in a circle with thousands of other performers.

Support and Cooperation in the Farmland Conservation Activities of Local Communities (Fujiwara Plant)
The Fujiwara plant is in a mountainous agricultural area where the steep ridges between the fields make it difficult for farmers to cut grass and weeds. Since fiscal 2011 the Fujiwara plant has been providing communities with Lippia canescens seedlings to plant on the ridges as a farmland conservation initiative. In fiscal 2015 they provided 20 districts in the city with seedlings. Planting Lippia canescens reduces weed growth, which not only eliminates some need for weeding but also offers more attractive scenery.

Recycling Waste as Fuel and Raw Material for Manufacturing Cement in Collaboration with Local Authorities (Jiangnan-Onoda Cement Co., Ltd., China)
The Public Security office in Nanjing, China requested that the company dispose of about 2 tonnes of confiscated game machines (e.g., pachinko machines). While such waste is normally disposed of in a landfill, the company turned it into fuel and raw material for manufacturing cement. A local TV station broadcast progress of the work.

Promotion of Local Culture and Communication

Making Sports Facilities Available to the Community
(Kamiiso Plant)
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Participation in Collaborative Forest Restoration in Kochi Prefecture (Tosa Office, Kochi Taiheiyo Mining Co., Ltd.)
The Tosa Office of Kochi Taiheiyo Mining has been involved in the Collaborative Forest Restoration with the Environmentally Progressive Companies project organized by the Kochi prefectural government since 2011. In March 2016, 24 employees experienced forest thinning, essential to conservation, under instructions of staff from the Kochi Forest Cooperative Association. After the experience participants strengthened relationships with local residents while enjoying meals featuring local ingredients that were prepared by members of the Hanashobu, a local women’s civic organization.

Greening of Quarries (Dalian-Onoda Cement Co., Ltd., China)
The Yu Shan limestone mine of Dalian-Onoda Cement Co., Ltd., a typical urban quarry surrounded by residential homes, continues its greening of the quarry by minimizing the impact on the environment and committing to policies that promote symbiosis with local communities. The company planted desert false indigo, which is suitable to the Dalian climate and an effective greening option, and completed its greening efforts in the area at an altitude of between 124 and 148 meters by fiscal 2014 and a new area of about 4,000 square meters at an altitude of 112 meters in fiscal 2015.

Recycling Waste as Fuel and Raw Material for Manufacturing Cement in Collaboration with Local Authorities (Jiangnan-Onoda Cement Co., Ltd., China)
The Public Security office in Nanjing, China requested that the company dispose of about 2 tonnes of confiscated game machines (e.g., pachinko machines). While such waste is normally disposed of in a landfill, the company turned it into fuel and raw material for manufacturing cement. A local TV station broadcast progress of the work.
Regional Development

Certified as a Fire Department Partner by Kumagaya City (Kumagaya Plant)

In March 2015 the Kumagaya plant was certified as a Fire Department Partner by Kumagaya City. This program certifies businesses that allow employees with firefighting skills to be dispatched to their volunteer firefighting teams in the event of a fire, and actively cooperate with firefighting activities such as training sessions. The plant was the second business to be certified as a fire department partner in Kumagaya City. The plant actively contributes as the firefighting base for local communities.

Making Sports Facilities Available to the Community (Oita Plant)

The Oita plant opens its Chinu baseball field to local residents. The field has been especially appreciated in Tsukumi City, where there is a large population of baseball fans, and it is also used for other events. In fiscal 2015 the field was used 110 times by 1,980 people for events such as a kindergarten’s sports day, Japanese Bon-dance festivals and junior baseball games. The plant maintains a safe and comfortable field by mowing, leveling the ground, and repairing baseball nets.

Joining as a Judge in the Japanese Theatrical Contest at Yanshan University (Qinhuandao Asano Cement Co., Ltd., China)

Qinhuandao Asano Cement has been involved with Yanshan University since its founding through interpretation opportunities, employment, Japanese classes for employees and other activities. The university’s Japanese language department holds a theatrical contest in which students can demonstrate their Japanese skills through plays and choral performances. In fiscal 2015 the company also participated as a judge. Other exchanges between the company and university include a Japanese speech contest and plant tour for students.

Providing Free Medical Services (Taiheiyo Cement Philippines, Inc., Philippines)

Since fiscal 2006 the company has been providing free medical services to 18,000 local residents in 12 districts surrounding the plant. In fiscal 2015 free medical treatment, including medicine, and reading glasses were provided to about 1,900 people in the Tongo, South Poblacion and Tinubudan districts. Many people in the Philippines are unable to receive appropriate medical services due to financial reasons and therefore local residents and government bodies have been very grateful for the company’s support.

Donating Toilet Facilities to a Local Elementary and Middle School (Nghi Son Cement Corporation, Vietnam)

In January 2016 Nghi Son Cement Corporation and 9 other Japanese companies donated free toilet facilities equipped with areas for washing hands to an elementary and middle school located in the Tam Diep town of Tinh Ninh Binh. The toilet facilities of the school did not have a roof and had suffered severe corrosion, creating the worst hygiene conditions for the school. Clean toilet facilities contribute to the prevention of infectious diseases and diarrhea, which in turn lifts the school attendance rate.
Education and Development of Human Resources

- Accepting Interns from Overseas Countries (Central Research Laboratory)
The Central Research Laboratory enthusiastically accepts interns from overseas universities. In fiscal 2015 the laboratory accepted 4 interns from Canada (1), Indonesia (2) and China (1). During the ten-month training period, the interns received technical instruction in specialized fields and also experienced working and living in Japan, which deepened mutual understanding of different cultures.

- Providing Technical Guidance on Ready-mixed Concrete to University Students (Tohoku Branch, Tohoku Taiheiyo Namakon Co., Ltd., Kokusai Kigyo Co., Ltd.)
Every May sophomore students of Nihon University, College of Engineering, Department of Architecture, receive technical guidance on ready-mixed concrete. This provides the only opportunity for them to actually handle ready-mixed concrete during their four-year degree program. Through the practical course students learn how ready-mixed concrete is used at actual worksites. For two days a total of 250 participants, divided into groups, learned about the concrete slump test, a method for testing air content of freshly mixed concrete called the Pressure Method, a chloride content test, and how to produce specimens.

- Offering Cement Plant Tours and Practical Trainings (PNG Taiheiyo Cement Ltd., Papua New Guinea)
PNG Taiheiyo Cement offers plant tours and practical training to nearby universities and vocational schools focused on engineering. Although Lae, where the company is located, is the second-largest city in Papua New Guinea, there are only a few manufacturing plants and therefore the company receives a large number of requests for plant tours and related activities. In fiscal 2015 the company offered practical training in quality control, machine maintenance and vehicle maintenance to 9 people and plant tours to 130 people.

- Developing Concrete Engineers (Nghi Son Cement, Vietnam)
In Vietnam, where infrastructure development is underway in the wake of rapid economic growth, the need for more competent engineers has become an urgent public concern. Nghi Son Cement has opened a free concrete technology school to train Vietnamese concrete engineers. The company has operated schools in Hanoi City, Vinh City, Da Nang City, Nha Trang City and Ho Chi Minh City. At the school in Ho Chi Minh City the company offers both beginner and advanced courses to attain basic knowledge, such as concrete blending, and more specialized knowledge, including about special types of concrete and durability. As of March 2016, 1,204 students have graduated from these schools. The company will continue to support Vietnam’s growth through the development of human resources.

Supporting Areas Affected by Disaster

- Participating in the IPPO IPPO NIPPON Project in Support of Areas Affected by the Great East Japan Earthquake (Taiheiyo Cement Corporation)
We endorse and participate in the IPPO IPPO NIPPON Project, which is organized by the Japan Association of Corporate Executives and supports areas affected by the Great East Japan Earthquake. The project also serves as a platform for people who are particularly in need of support through donations. With the themes “development of human resources” and “revitalization of economy” it carries out medium and long-term support activities such as providing training materials for vocational schools.
In accordance with the CSI Charter member companies pledge to publicly disclose their performance on the priority issues in the cement industry using the key performance indicators (KPIs) developed by the CSI. They also pledge to set and make efforts to achieve reduction targets for CO₂ emissions and major air pollutants. We set group targets using the KPIs and achieved the results shown in the following chart.

In addition, group performance for CO₂ and climate protection, emission monitoring and reporting, health and safety, and water, has been third-party certified by KPMG AZSA Sustainability Co., Ltd.

### Key Performance Indicators of the CSI for Fiscal 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>FY2013</th>
<th>FY2014</th>
<th>FY2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂ and Climate Protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of facilities using CSI’s “The Cement CO₂ and Energy Protocol” guidelines for emissions inventory</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Percentage of facilities using CSI’s “The Cement CO₂ and Energy Protocol” guidelines for emissions inventory (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total CO₂ emissions (million tonnes/year)</td>
<td>Gross</td>
<td>33.6</td>
<td>33.4</td>
</tr>
<tr>
<td></td>
<td>Net**</td>
<td>32.2</td>
<td>32.1</td>
</tr>
<tr>
<td>CO₂ emissions per tonne of cementitious product*³ (kg-CO₂/t-cementitious)</td>
<td>Specific gross CO₂ emissions</td>
<td>715</td>
<td>720</td>
</tr>
<tr>
<td></td>
<td>Specific net CO₂ emissions</td>
<td>686</td>
<td>692</td>
</tr>
<tr>
<td>Emission from electricity purchased (million tonnes/year)</td>
<td>1.6</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Specific heat consumption of clinker production (MJ/t-clinker)</td>
<td>3,286</td>
<td>3,305</td>
<td>3,288</td>
</tr>
<tr>
<td>Alternative fuel rate (% of thermal energy consumption) of kiln</td>
<td>13.4</td>
<td>12.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Biomass fuel rate (% of thermal energy consumption) of kiln</td>
<td>2.1</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Clinker/cement ratio (%)</td>
<td>83.9</td>
<td>83.9</td>
<td>84.1</td>
</tr>
<tr>
<td>Alternative Raw Materials Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative raw materials rate: consumption of alternative raw materials, as a percentage of total raw materials for cement and clinker production (% calculated on a dry basis)</td>
<td>16.5</td>
<td>15.7</td>
<td>15.1</td>
</tr>
<tr>
<td>Health and Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatalities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of fatalities for directly employed</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fatality rate per 10,000 for directly employed</td>
<td>0.77</td>
<td>0.88</td>
<td>1.18</td>
</tr>
<tr>
<td>Number of fatalities for indirectly employed (contractors and subcontractors)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of fatalities involving third parties (not employed)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lost-time injuries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of lost-time injuries for directly employed</td>
<td>8</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Injury frequency rate (per 1,000,000 man-hours directly employed)</td>
<td>2.18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of lost-time injuries for indirectly employed (contractors and subcontractors)</td>
<td>9</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Emission Monitoring and Reporting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of clinker produced by kilns covered by a monitoring system, either continuous or discontinuous for main and other pollutants</td>
<td>NOx</td>
<td>99.6</td>
<td>99.9</td>
</tr>
<tr>
<td></td>
<td>SOx</td>
<td>99.1</td>
<td>54.0</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>99.6</td>
<td>99.9</td>
</tr>
<tr>
<td>Total emissions (tonnes/year)</td>
<td>NOx</td>
<td>51,430</td>
<td>55,503</td>
</tr>
<tr>
<td></td>
<td>SOx</td>
<td>2,339</td>
<td>2,947</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>1,581</td>
<td>1,696</td>
</tr>
<tr>
<td>Specific emissions (g/t-clinker)</td>
<td>NOx</td>
<td>1,289</td>
<td>1,404</td>
</tr>
<tr>
<td></td>
<td>SOx</td>
<td>64</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Local Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of sites with community engagement plans in place</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Percentage of active sites with quarry rehabilitation plans in place</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Numbers of active sites where biodiversity issues are addressed</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of withdrawal (1,000 m³)</td>
<td>Fresh water</td>
<td>37,242</td>
<td>35,791</td>
</tr>
<tr>
<td></td>
<td>Seawater</td>
<td>150,402</td>
<td>151,535</td>
</tr>
<tr>
<td>Amount of discharge (1,000 m³)</td>
<td>Fresh water</td>
<td>14,632</td>
<td>14,253</td>
</tr>
<tr>
<td></td>
<td>Seawater</td>
<td>150,402</td>
<td>151,535</td>
</tr>
</tbody>
</table>

* Accounting and reporting of KPIs for fiscal 2015 is in accordance with the WBCSD-CSI’s guidelines in “The Cement CO₂ and Energy Protocol” Ver. 3.1, “Guidelines for the Selection and Use of Fuels and Raw Materials in the Cement Manufacturing Process” Ver. 2.0, “Safety in the Cement Industry” Ver. 4.0, “Emissions Monitoring and Reporting” Ver. 2.0, “Guidelines on Quarry Rehabilitation” and “Protocol for Water Reporting” Ver. 1.0. 100% of data for subsidiaries and partner companies (regardless of percentage of ownership) subject to aggregation is counted.

** Net CO₂ emissions: gross CO₂ emissions minus the CO₂ emissions from alternative-derived fuels

³ Cementitious product: total clinker produced plus mineral components processed at the plants

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**G4-EN2, EN3, EN5, EN8, EN18, EN19, EN21, LA6, MM2, SO1**
Independent Assurance Report

To the President and Representative Director of Taheiyo Cement Corporation:

We were engaged by Taheiyo Cement Corporation (the "Company") to undertake a limited assurance engagement of the Key Performance Indicators of the CSI under the following areas (the "CSI KPIs") included in its CSR Report 2016 (the "Report") for the fiscal year ended March 31, 2016.

- CO₂ and climate protection.
- Health and safety.
- Emission (NO₅, SO₂ and dust from kilns) monitoring and reporting.
- Water.

1 Periodic accounting is based on the fiscal year 2015 for domestic plants and the calendar year 2015 for overseas plants.
2 Periodic accounting is based on the calendar year 2015 for domestic and overseas plants.

The Company’s Responsibility

The Company is responsible for the preparation of the CSI KPIs in accordance with the following standards (the "Criteria") issued by the Cement Sustainability Initiative of the World Business Council for Sustainable Development:

- CO₂ and Energy Accounting and Reporting Standard for the Cement Industry Version 3.1
- Guidelines for Emissions Monitoring and Reporting in the Cement Industry Version 2.0
- Safety in the Cement Industry: Guidelines for measuring and reporting Version 4.0
- Protocol for Water Reporting Version 1.0

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the CSI KPIs based on the procedures we have performed. We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information', ISAE 3416, Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines for the Assurance of Sustainability Information' of the Japanese Association of Assurance Organizations for Sustainability Information. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company’s responsible personnel to obtain an understanding of its policy for the preparation of the Report.
- Inquiring about the design of the systems and methods used to collect and process the CSI KPIs.
- Performing analytical reviews of the CSI KPIs.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the CSI KPIs in conformity with the Criteria, and also recalculating the CSI KPIs.
- Visiting to the following five out of a total of 22 plants of the Taheiyo Cement Group, selected on the basis of a risk analysis. (CO₂ emissions covered by the plants visited correspond to 21% of the combined total of the Group’s CO₂ emissions.)

Overseas plants
- Jiangnan Onoda Cement Co., Ltd.
- Dushan Onoda Cement Co., Ltd.
- Qingxiangzhou ASAMA Cement Co., Ltd.

Domestic plants
- Taheiyo Cement Corporation: Kamiyok Plant and Ofunato Plant

- Evaluating the overall statement in which the CSI KPIs are expressed.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the CSI KPIs in the Report are not prepared, in all material respects, in accordance with the Criteria.

Our Independence and Quality Control

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

KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
August 24, 2016
Editorial Policy

Through this report we intend to convey how we conduct our CSR activities to our stakeholders. The report will also serve as a communication tool and we hope to receive a wide range of comments from readers toward enhancing our activities and level of disclosure. CSR Report 2016 reflects the following efforts.

• The first half of the report (pages 2 to 23) serves as a summary of our CSR activities. In the latter half (pages 24 to 69) we report details of these various activities.
• At the beginning of the report we present the big picture of the group by sharing its future based on the targets on pages 4 and 5, and its present status on pages 6 and 7. Pages 6 and 7 present a “CSR dashboard” page where readers are provided with an outline of business operations as well as an integrated summary of past and current trends in financial and non-financial performance, and the group’s long-term objectives. It is also meant to serve as a ‘dashboard’ that indicates the state of the group.
• We implemented a review of materiality in accordance with the GRI G4 Sustainability Reporting Guidelines and updated material issues.
• We convened a dialogue under the theme of “A Conversation on How to Best Disclose CSR Information.”
• In each section of the report we indicated the relevant indicators of the GRI Guidelines as well as relevant SDG icons.

Guidelines Used for Reference
• GRI G4 Sustainability Reporting Guidelines (Version 4)
• Environmental Reporting Guidelines 2012 Edition (Ministry of the Environment)
• Environmental Accounting Guidelines 2005 Edition (Ministry of the Environment)

Publication Dates
September 2016 (previous report: September 2015, next report: September 2017)

SDG Icons
The 17 Sustainable Development Goals (SDGs) were adopted at the General Assembly of the United Nations held in September 2015. The goals are shared and implemented across the world to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda.

Through this report we intend to convey how we conduct our CSR activities.

The following information is available on our website
http://www.taiheiyo-cement.co.jp/english/

Disclaimer Regarding Forward-looking Statements
Plans and prospects included in this report are predictions based on information available at the time of publication and are subject to unpredictable risks and uncertainties. Consequently, there are no explicit or implied guarantees as to actual results, which may materially vary from the projected figures or measures cited in this report.

This is a translation of the Japanese-language report. If there is any discrepancy between the two versions, the Japanese version takes precedence.
I read the Taiheiyo Cement Group’s CSR Report 2016 as I did the previous year’s edition. My attention was first attracted by the following statement in the section at the beginning of the report entitled “Commitment of Top Management.” Referring to the Paris Agreement at COP21, the president states: “As a citizen of the global society, the Taiheiyo Cement Group will participate in these efforts to change the world through its business activities.”

The launching of a global framework on greenhouse gases was a landmark event in which all countries, including those that emit massive volumes of greenhouse gases, are required to submit and update their reduction targets every five years with the goal of restraining the rise in the global average temperature to well below 2°C above pre-industrial levels.

According to the IEA, the atmospheric concentration of greenhouse gases must be kept at a level of 450 ppm or lower to hold the increase in the global temperature below 2°C. A British NGO estimates that achieving this target will require cumulative CO₂ emissions to be no higher than approximately 3,000 Gt-CO₂, and estimated emissions through 2015 have already reached 2,002 Gt-CO₂. This means we can emit only 998 Gt-CO₂ in the future to restrain the rise in the global average temperature to less than 2°C. This upper limit of emissions is called the “Carbon Budget.” Increased awareness of this issue signals that the world has shifted to a carbon-constrained economy.

The stakeholder dialogue includes a statement about an advanced, long-term target adopted by an automobile manufacturer. This suggests that something more is happening than merely replacing one target with another to be achieved at any cost. Given the concerns over carbon restraints, we can no longer avoid discussing ways to reduce total emissions.

There is a gap between national goals for reducing total emissions and the efforts by companies to simply reduce specific emissions per unit of production. Now, following the adoption of the Paris Agreement, the way people view global companies has changed dramatically.

Over the last several years the Taiheiyo Cement Group’s CSR reports have been essentially the same in style and content. It would be beneficial to enhance the disclosure of the group’s extensive efforts to meet public expectations, which are changing with the times. One approach I suggest is to thoroughly and quantitatively review and explain the group’s societal functions, such as ensuring the stable supply of basic materials for building social infrastructures and recycling resources. The report would also be more persuasive if it included international comparisons of energy efficiency for the cement industry, which show that the performance of the Japanese industry is far ahead by an overwhelming margin.

In terms of specific items, I am somewhat concerned about the results of several initiatives: (1) the use of waste and by-products per unit production for fiscal 2015 dropped below the level of fiscal 2011 (page 41) and (2) the number of accidents registered in the Work-related Accident Database has not declined (page 60). Regarding disclosure, I am a little concerned about: (1) the limited number of items with targets and KPIs for all consolidated subsidiaries and (2) an item listed as a principal item that achieved good results in fiscal 2015 CSR activities is not mentioned on the relevant page (page 29). I look forward to seeing the group further enhance its initiatives and improve disclosure in the next fiscal year.

Response to Third-Party Opinion

I appreciate Mr. Adachi’s continued willingness to evaluate our efforts from the perspective of a global framework, as he did last year. I recognize that we should further promote the sharing of information based on the scientific and quantitative evaluation of social value we create amid the ongoing paradigm shift so that our efforts may be recognized by society. I also learned we must strictly evaluate ourselves using the results of this quantitative evaluation. Given the characteristics of the cement industry such an approach is not necessarily easy. However, we will continue to improve. He pointed out that the results of some of the initiatives were not satisfactory and the initiatives should be applied across the entire group. We will strive to address these issues and report any significant improvements.

We will further strengthen our communication with stakeholders so that we may better meet the expectations of society for the cement industry. We also look forward to receiving the frank opinions from readers of this report.

Shigeru Matsushima
Director, Managing Executive Officer, CSR
We commissioned the Itabashi Welfare Factory to print Japanese questionnaires and insert them into the report.

The Tokyo-based Itabashi Welfare Factory is helping persons with disabilities work and live independently in society. It is certified under ISO 9001 and the Information Security Management System.