

# CSR ACTIVITIES IN THE CONSTRUCTION AND CONCRETE INDUSTRIES: AN ANALYSIS OF WEB-BASED REPORTING

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## ABSTRACT

In this paper, the utilization of the Internet for reporting and disseminating CSR activities within the concrete and construction industries was investigated. It was found that while the amount of CSR and sustainability information varied between different homepages, detailed CSR reports were generally available in PDF format. The companies were found to act in ten key areas covering governance, environment, and social aspects, and the reported case studies reflected this diversity of activity areas. However, the homepages provided few means for community discussion of CSR and sustainability.

**Keywords:** CSR, sustainability, governance, environment, society, community, Internet

## 1. INTRODUCTION

The construction industry plays an important role in improving and preserving the health, safety, security, and prosperity of society through the creation and maintenance of infrastructure facilities. However, construction activities also carry a variety of negative environmental and social impacts, including large-scale emissions of greenhouse gases and particulate matter, massive consumption of natural resources such as water, sand and aggregates, and widespread waste generation from demolished structures [1-3]. Concrete, as the primary material used in infrastructure construction and second most-utilized resource in the world [4], is a major contributor to environmental issues, and it is important for the industry to pursue opportunities to reduce or offset its impacts and to improve industry and global sustainability.

Corporate social responsibility (CSR) is a blanket term that describes the activities a corporation carries out to serve a social or environmental good beyond its normal business interests. However, much like sustainability, the meaning of CSR varies depending on the perspective and conditions of the stakeholder at hand, and there are a wide variety of specific definitions and models of CSR that attempt to more concretely define its scope. As proposed by Elkington, CSR is often tied to the “triple bottom line” of “people, planet, profit,” which cover social and environmental responsibility of a firm’s actions along with corporate profit performance [5]. The World Business Council for Sustainable Development (WBCSD) defined CSR as “...the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large” [6], and suggested a model which encompasses the triple bottom line

concept as a means for understanding the relationship between CSR and sustainable development (Fig. 1).

Within the construction industry, however, conflict often arises between the social and environmental benefits to society as a whole and the financial performance of a corporation [7]. While it has been shown that CSR ultimately has a neutral affect on financial outcomes [8], the perceived conflict between these different aspects is still a significant barrier to improving sustainability, especially in the Japanese concrete industry [9]. Furthermore, the negative image of concrete as an unsustainable construction material is another barrier to improving sustainability [9].

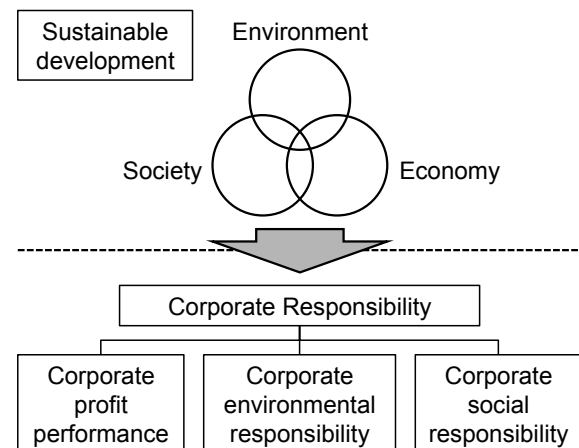


Fig. 1 The triple bottom line of corporate responsibility as derived from the three pillars of sustainable development

Implementing CSR can be one means for offsetting the negative environmental and social impacts of construction activities and for improving the image of the concrete and construction industries. However, it is important to determine what sort of

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activities are being carried out by industry stakeholders and, moreover, how these stakeholders are attempting to educate the general public about their CSR efforts. An understanding of the current state of CSR activities and its reporting in the concrete and construction industries can provide a starting point for discussions on opportunities for the private sector to improve the sustainability of infrastructure construction, as well as establish basic information for comparison to activities being carried out in other industries.

In this paper, the utilization of the Internet for reporting and disseminating CSR activities within the concrete and construction industries is analyzed. In particular, the framework and policies, contents, reports and documentation, interactive forums, and adherence to guidelines or initiatives are examined among a selection of major Japanese and foreign corporations, with an interest in the balance between the environmental, social, and economic aspects of CSR.

## 2. METHODOLOGY

This investigation was carried out by examining CSR- and sustainability-related reporting on the official homepages of selected companies in both Japan and from overseas. As shown in Table 1, 12 firms were chosen for this study – seven from Japan and five from overseas – with representatives from both the general contractor and cement company stakeholders. The selected companies are all international firms with a global presence, and the investigation utilized the English-language version of their homepages for the analysis. In the case of the Japanese firms, it is possible that the contents reported in English differ from those reported in Japanese; however, this difference is beyond the scope of this paper.

Table 1 Characteristics of selected companies

Code	Country	Stakeholder
Gc1 – Gc4	Japan	General contractor
Ce1 – Ce3		Cement company
Gc5	UK	General contractor
Gc6	US	
Gc7	Sweden	
Ce4	Mexico	Cement company
Ce5	France	

The analysis of the web-based reporting examined both the information available on the homepages themselves as well as that available in the more extensive PDFs (typically Annual or Corporate Reports) available on said homepages. The analysis items are summarized in Table 2 and include a general CSR framework or policy outline, specific CSR activities and contents (such as social, economic, and environmental aspects), presence of an archived CSR report library, as well as documented case studies or other assessment reports, reference or adherence to ISO 26000 series (guidelines for social responsibility), presence of a blog or forum for enabling updates and discussion, and (for the cement companies only)

reference to the Cement Sustainability Initiative. These items were not decided explicitly before the study but were identified and developed as the investigation was carried out. The items were examined either in the case of the homepage (provided directly on the web site, and thus easier to view) or in the case of a PDF or linked file (less easy to view due to the need to browse through longer or more detailed documents).

Table 2 Analysis items and criteria

Item	Criteria
CSR framework & policies	Explanation of the framework and policies for CSR or sustainability (homepage)
CSR activities & contents	Discussion of specific contents covering social, environmental and economic aspects (homepage or PDF)
CSR report library	Availability of current and archival CSR reports (homepage)
Case studies & other reports	Availability of other documents such as case studies, assessment reports, etc. (homepage)
ISO 26000	Reference to guideline for social responsibility (homepage or PDF)
Blog / forum / feedback	Provision of updates or interaction regarding CSR and sustainability issues or for eliciting feedback (homepage)
Cement Sustainability Initiative	Reference to the Cement Sustainability Initiative (homepage)

## 3. RESULTS & DISCUSSION

The results of the homepage analysis are summarized in Table 3 for the selected companies. Each analysis item will be discussed in detail in the following sections.

### 3.1 CSR framework & policies

The CSR framework or policy is a simple and direct means for informing a reader of the approach which a company is taking to implement CSR and sustainability into its business practices. Therefore, it is important that such information be clearly available and summarized – preferably visually – on the company's homepage, without having to click through to a PDF file. It was found that such information was provided on eight of the 12 homepages investigated, although such information for three of the other four companies could be found in the provided CSR report. These frameworks include a wide variety of concepts and activities, and will be discussed in greater detail in the next section.

### 3.2 CSR activities & contents

A diverse amount of activities fall within the boundaries of CSR and sustainable development. When examining the homepages of the selected companies,

Table 3 Comparison of CSR reporting among the different companies

Items	Japanese firms							Overseas firms				
	Gc1	Gc2	Gc3	Gc4	Ce1	Ce2	Ce3	Gc5	Gc6	Gc7	Ce4	Ce5
CSR framework & policies	○	○	○	○				○		○	○	○
- Compliance / governance	○		○	○		○	○		○	○	○	○
- Transparency			○			○	○					
- Employee development	○	○	○	○		○	○		○	○	○	○
- Consumer interaction		○		○		○		○				
- Global perspective		○			○	○					○	○
- Human rights			○	○			○					
- Stakeholder communication	○	○				○				○	○	○
- Safety / health		○	○	○	○		○	○	○	○	○	
- Community involvement	○		○	○		○	○	○	○	○	○	○
- Environmental preservation	○	○	○	○	○	○	○	○	○	○	○	○
CSR report library	○	○	○	○		○	○	○	○	○	○	○
Case studies & other reports			○					○		○	○	○
ISO 26000	○	○	○	○			○		○			
Blog / forum / feedback	○							○				
Cement Sustainability Initiative*	n/a	n/a	n/a	n/a			○	n/a	n/a	n/a	○	○

\* *Cement companies only*

ten key areas were found which appeared to reflect the different approaches to implementing CSR in the construction and concrete industries (Fig. 2). While not every key area was explicitly identified by each company, the investigation tried to summarize which areas appeared to receive more emphasis when examining the information reported on their homepage or summarized in their CSR report. Considering the breadth of activities that fall under the CSR umbrella, however, there is sure to be some areas that were not identified for some companies due to the way they presented their information.

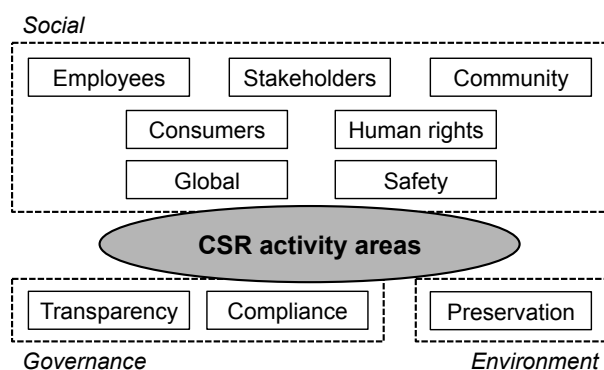


Fig. 2 CSR activity areas &amp; contents

Among the 12 companies, environmental preservation was the most-cited and received the highest emphasis among the ten key areas. This demonstrates the importance placed on the environment in the current sustainability model and the efforts made by companies to increase their awareness of environmental impacts. Social issues such as community involvement, health and safety (both in the workplace and of society in general), and employee

development were also strongly emphasized in the online reporting. Human rights, while a critical issue, was not explicitly stated on most homepages, but implied when discussing other social issues. With relation to governance, promoting compliance and ethics was also widely found in the CSR activities; while the importance of transparency was explicitly declared on some homepages, it was generally implied to be part of compliance on many of the others.

### 3.3 CSR report library

Transparency and reporting are considered important aspects of corporate ethics and integral to the proper implementation of CSR and sustainability initiatives. Access to data and archived information on past performance serves an important role in establishing transparency and trust through open reporting. CSR reports serve this role by covering a wide variety of topics related to the corporate performance, such as explaining the CSR framework and policies (as discussed earlier), introducing the different CSR activities and expanding on how they meet the concepts put forth in the framework or policy, and also providing detailed data on the financial performance, environmental impacts, auditor reports, social and human resource information, and so on. They can also provide a platform for establishing a new corporate vision and promote future research activities and development aimed at greater sustainability.

Considering the importance and broad scope of the CSR report, it is understandable that nearly all of the surveyed homepages provided access to both the current report as well as archived reports from previous years. These are generally available in the form of PDF files, which may be considerable in size and thus difficult for readers from countries with less developed Internet technologies to access. In general, it appeared

that much or all of the information available on the CSR or sustainability-related homepages was covered, often in greater detail, in the CSR reports. The level of detail at which the homepage summarized the contents of the CSR reports, however, varied widely between the different companies.

### 3.4 Case studies & other reports

While CSR reports are often extensive in nature and cover a wide variety of topics, including detailed data regarding environmental performance, it may also be useful to demonstrate the implementation of new technologies or initiatives through the publication of case studies or other, additional assessment reports. One Japanese and two overseas general contractors as well as two overseas cement companies included extensive reporting of case studies specifically related to CSR and sustainable development. These case studies varied widely in scope but included studies both directly related to business operations as well as activities outside said operations.

**Table 4 Examples of CSR and sustainability case studies**

Area	Example
Education	Conducted educational program on environmental preservation awareness at school in southeast Asian country
Environment	Planted trees for protection of coastal environment and reduction of CO <sub>2</sub> in southeast Asian country
Human resources	Carried out leadership training program for company participants to development business and leadership skills and identify future leaders
Technology	Developed new type of concrete batching plant to acquire contract award by focusing on sustainability action plan
Conservation	Partnered with conservation organization to improve management of biodiversity
Safety	Introduced safety features on company vehicles to reduce risk of traffic accidents with cyclists
Finance	Created affordable credit scheme to enable home owners to build or renovate their homes in a southeast Asian country

Some examples of the reported case studies are given in Table 4. Many of the case studies found online focused on specific projects in which new technologies or innovations were implemented in construction projects. However, other case studies focused on areas which fell outside the companies' business area, such as in partnership with a conservation organization to improve biodiversity or implementation of additional safety measures to improve traffic safety and reduce cyclist-vehicle collisions. These types of activities – which were often

carried out in countries around the world, particularly in developing economies – could be said to fall within the realm of CSR, as they strive to enhance companies' involvement in non-construction fields and contribute to bettering the environment and society.

### 3.5 ISO 26000

The ISO 26000 Social Responsibility standard is unique among the ISO standards in that it provides only guidance without specifying requirements; as a result, it is not a certifiable standard. However, it was developed to help raise awareness of social responsibility in corporations and provide guidance on the implementation of CSR activities. Among the selected companies, all four of the Japanese general contractors and one of the Japanese cement companies, along with one overseas general contractor, specified that they prepared their CSR reports following the guidelines provided by ISO 26000. Neither the homepages nor the PDF reports of the other companies appeared to acknowledge this guideline. Considering that it is not a certifiable guideline, it is not necessary for these companies to follow it; however, it does provide a general background and means for easier comparison between different companies' approaches if a standard approach is utilized.

### 3.6 Blog / forum / feedback

Blogs and forums enable the dissemination of information at a more personal level and can spur discussion on a given topic with the interested public. As CSR and sustainability are continually evolving, providing such a means for interaction is one way to connect with the online community and elicit feedback on the related topics. However, only two homepages provided any such means for participation. In one case, only a feedback form specifically for CSR was provided; in the other case, though, a full-bodied blog was available, written by a variety of experts both from inside and outside the company, and commenting was enabled on the blog posts. This allowed people reading the blog to respond to the post and share and discuss their thoughts experiences regarding the topic at hand.

### 3.7 Cement Sustainability Initiative

Finally, the homepages of the selected cement companies were examined to see if they provided any direct reference or link to the Cement Sustainability Initiative (CSI). The CSI is a joint global effort carried out under the auspices of the WBCSD by cement companies around the globe to promote more sustainable practice across the spectrum of concrete construction; of the five cement companies selected in this paper, four are members of the CSI. While three of them made reference or linked to the CSI, only one company explicitly discussed the CSI and provided information about its activities related to the CSI. The other homepages did mention the CSI in terms of stakeholder cooperation or environmental action, but they did not clearly identify themselves as belonging to the CSI nor did they explicitly discuss the CSI.

#### 4. CONCLUSIONS

- (1) The web-based reporting of CSR and sustainability activities carried out by construction and concrete companies in Japan and overseas was investigated.
- (2) The dissemination of CSR and sustainability information was found to vary widely between homepages; however, in general a large amount of information could be found when examining the CSR reports (available as PDF) that were linked to from the company homepages. The difference in detail thus appeared to depend on how much of the content in the CSR reports were summarized for the respective homepages.
- (3) Ten key areas of CSR and sustainability activities were identified: transparency and compliance (governance), preservation (environment), and employees, stakeholder, community, consumers, human rights, global perspective, and safety and health (social).
- (4) The types of case studies available varied widely and included both technology-related studies, such as the implementation of new techniques in construction, as well as studies outside the normal scope of business, such as biodiversity management and traffic safety.
- (5) Explicit reference to the ISO 26000 guidelines for social responsibility was more common among Japanese companies.
- (6) The investigated companies provided few means for community interaction and discussion of CSR and sustainability issues on their homepages.

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