

Creating Sustainable Future

2011 Asia Cement Sustainability Report



Report Overview

This sustainability report contains the overall aspects of sustainability of Asia Cement to its stakeholders, across economy, environment and social sections based on GRI and the first report verified by the independent assurance authority.

With this sustainability report published, Asia Cement will meet the national standards as required and become sustainable company by benchmarking global leading companies.

Keeping transparency in disclosing the company-wide achievement across economy, society and environment and making it the means of communication with stakeholders, we will incorporate the requirement and expectation by stakeholders to become socially responsible and trusted company.

Reporting period and scope

The reporting period is from January 1, 2011 to December 31, 2011. To provide more reliable information, the report includes data and information of 2009 and 2010 if trend analysis is required.

This report has been written mainly on headquarter in Seoul, Jecheon Plant, branch Plant and other business places run by Asia Cement.

Reporting principle

This report is planned to be published biennially, next one to be dated June 2014.

ISO26000 and GRI G3.1 was referred to provide this report.

Reporting verification

This report contains the contents and information that meet the Level B of GRI guideline through the all-process various examination by Korea Productivity Center(including interview, data review and due diligence).

The results are contained in Appendix "Assurance report".

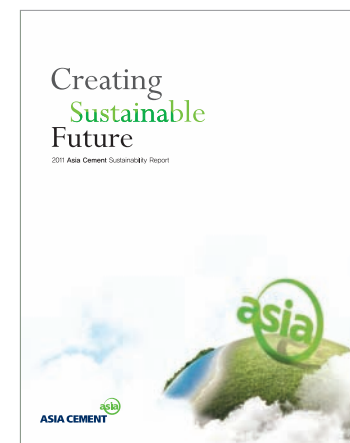
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Greetings from CEO



Dear stakeholders.

We are very honored to have interest and support from you, now publishing our own sustainability report to share Asia Cement's economic, social and environmental activities and outcome together.

In 2011, we have seen the construction economy slump followed by lowered domestic shipment and deteriorated profitability caused by factors that increase production cost: bituminous coal, electricity, as well as enforced environmental regulations under different economy circumstances. To be proactive with such environment changes, Asia Cement has incorporated its head office and Jecheon Plant, achieving 30-year consecutive dividend with steady process improvement and developing new products. Besides, in recognition of good quality, we could become a single provider of ultra-low heating cement for Jamsil Lotte Super Tower, received the minister of environment award at Aquatic Ecosystem Recovery Successful Case Contest and selected as best company for consecutive 2-years at the Dow Jones Sustainability Indexes(DJSI) in the Building Materials & fixtures sector.

We, Asia Cement is committed to the following activities to be socially responsible, actively keeping up rapidly changing business environment changes.

First, to realize profit by enhancement of our business competitiveness

We will make our best effort to enhance our competence to increase expertise and sales forces as well as practical management involved with developing high value-added products and reducing cost. We will focus on our overseas business for metal silicon as our new growth engine rather than the existing domestic business, in order to solidify stable profit.

Second, to enhance our eco-friendly corporate image

Although Cement industry is known as much consumed energy and emitted GHG, we will overcome and turn the risk into opportunity. For this, low carbon and eco-friendly products will be developed, investment made to improve energy efficiency and environmental pollution prevention facilities continuously, and our master plan will be implemented for better environment around our plants.

Third, to become a socially responsible company through various social contribution activities

We have recently signed the social contribution activity agreement with the Korean Red Cross, with specific plan for social responsibility. Through such activities, we will be socially responsible and going-concern with volunteer and sharing. This sustainability report contains the figure of growing, reliable and responsible Asia Cement in communication. For all our stakeholders, every employee of Asia Cement is committed to being the going-concern to the next generation.

Thank you!

Ko Kyu-hwan CEO, Asia Cement, Co., Ltd
June 2012

Company Overview

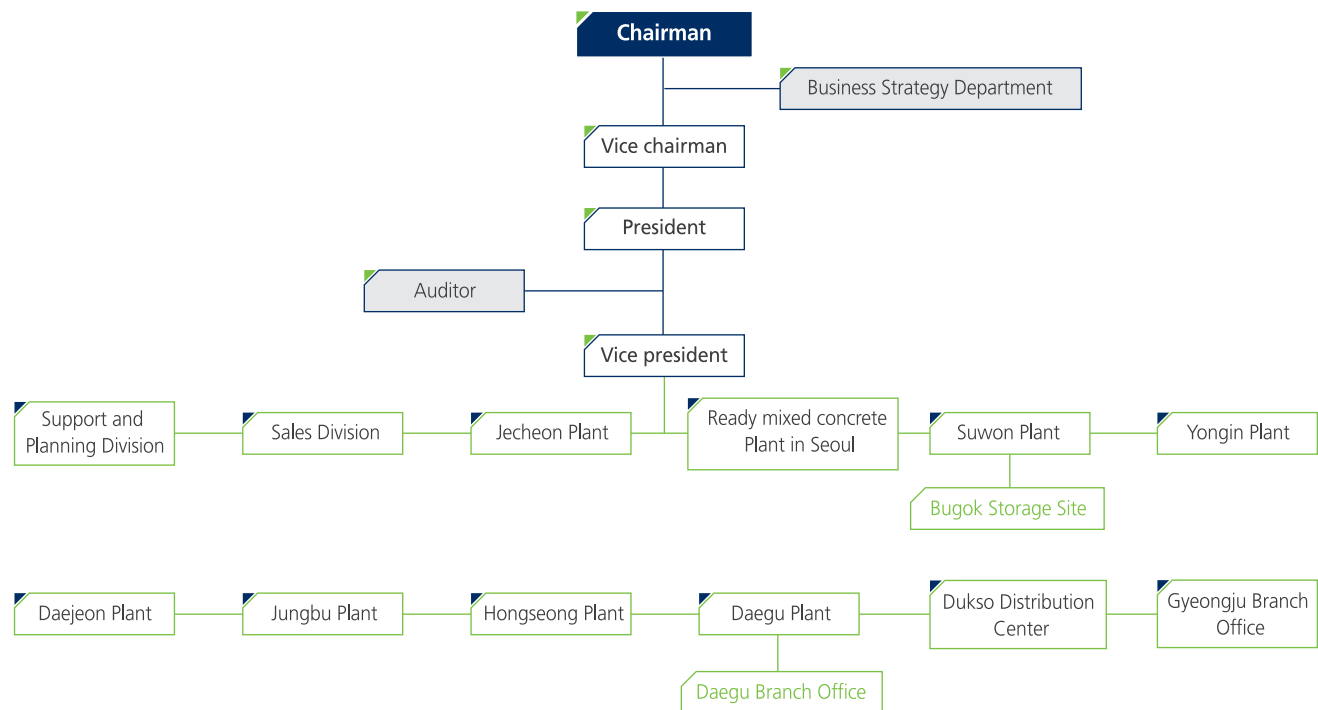
Since its foundation as Cement business in 1965, Asia Cement has grown and progressed to national infrastructure and basic building material business for 47 years.

As a large-scale producer equipped with Cement facilities of annually 5 million tons of production and Ready Mixed Concrete as well as Dry-Mortar, we have held quality limestone mine with rich reserves in domestic Cement industry, which ensures mining for 200-years in the future.

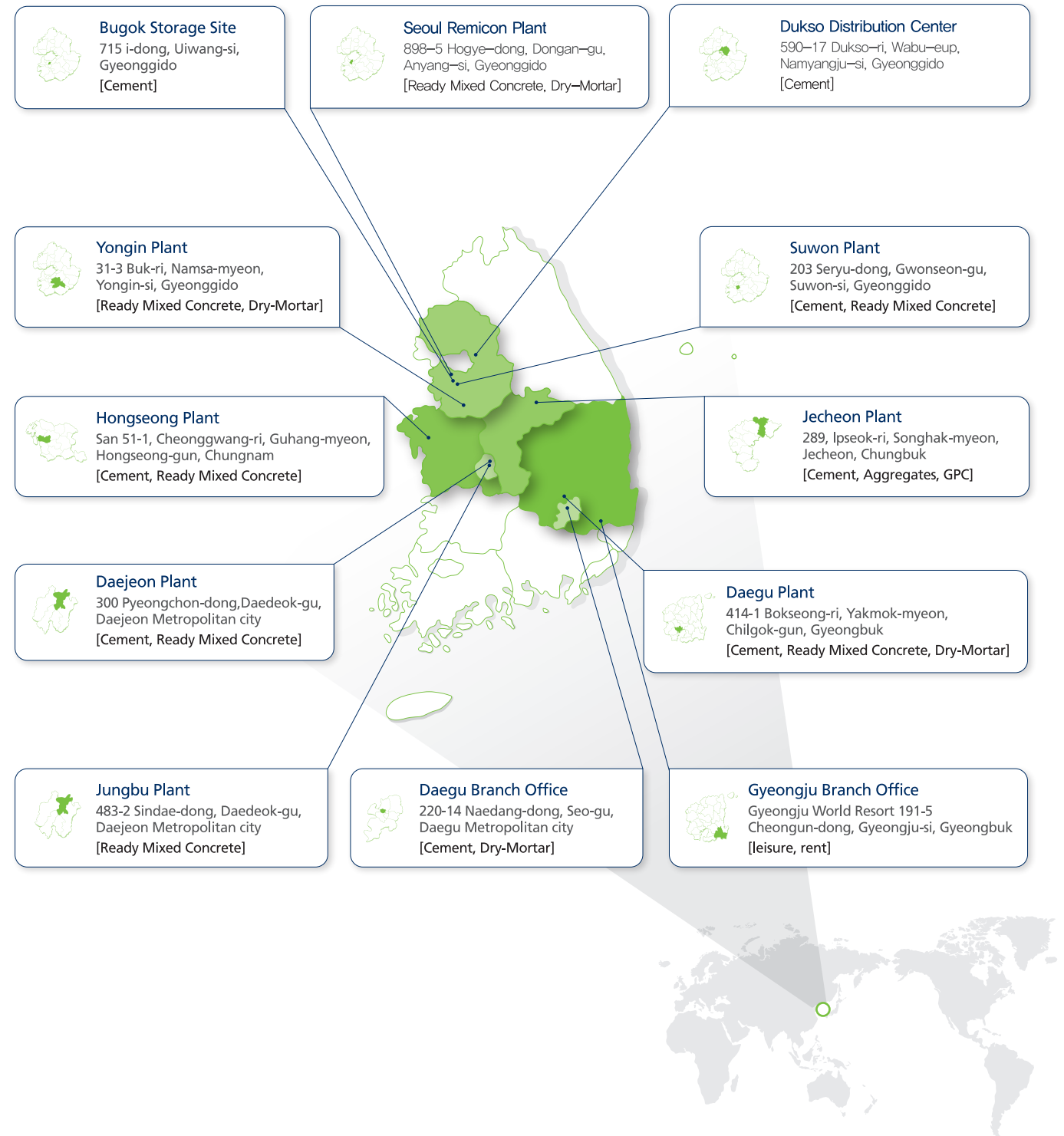
Based on Yeoksam-dong, Seoul, we are running Jecheon Plant, as well as two Cement-only Distribution Centers, seven Ready Mixed Concrete plants and three Dry-Mortar plants in Dukso, Suwon, Uiwang, Yongin, Daejeon, Hongseong and Daegu areas.

Name	Asia Cement, Co., Ltd	No. of employees	478
Foundation date	April 26, 1957(as Gyeongwon Co.,)	Total assets	928.7
CEO	Ko Kyu-hwan	Sales account	320.8
Business type	production of Cement, Ready Mixed Concrete, Dry-Mortar	Operation profit	8.4
		Capital	23.7
Address	726 Yeoksam-dong, Gangnam-gu, Seoul		

Organizational Chart



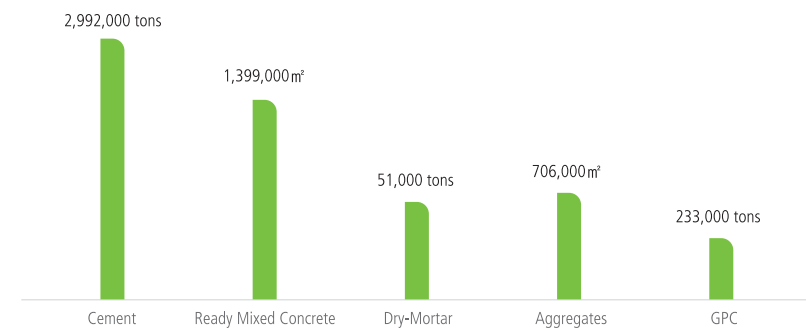
Our Business places



Our products

Asia Cement has produced fundamental materials, Cement, Ready Mixed Concrete, Dry-Mortar, Aggregates and customized special Cement that are essentially required for construction industry. All our employees think quality is our priority being fully responsible as architecture remains to the next generations.

Shipment per product



ASIA CEMENT

Cement

As high-flowing one proper to high-rise building, our Cement is superior in quality and technology, and produced in the richest quality limestone mine held by us among domestic Cement businesses. Our product lines are composed of Ordinary Portland Cement(for general construction and civil engineering), moderate heat Portland Cement(for dam, tunnel, road pavement, bridge), highly early strengthen type Portland Cement(for rapid or emergency construction), low heat Portland Cement(for dam, tunnel, bridge) and sulfate resistance Portland Cement(for sewage treatment facility, ocean structures, nuclear reactor construction).

Ready mixed concrete

As our concrete uses ordinary Portland Cement with good liquidity, it has focused on various types of highly functional concrete in consideration of site conditions, producing no-tramp, low heating high-strength concrete and ultra high-strength concrete(800kg/cm²) first ever in Korea, as well as high-strength, high-flowing concrete enabling easy pumping even for high-rise buildings.

Dry-mortar

Being innovational product instantly used on the spot only with water, Asia Cement's mortar is produced with strictly selected sand and excellent improvement product in scientific combination through automated state-of-art facilities. Various products are produced by highly efficient auto system and expert's complete quality management.

Aggregates

Our ground Aggregates for concrete is going under complete and strict quality control and approved by KS(Korean Standards) Mark that verifies to be best products. We are running the separate re-processing facilities to make particle-size as required by consumers under customized system.

GPC (Customized special Cement)

Our customized Cement binders are pre-mixed with Portland Cement and functional binder, to ensure high functional, cost saving and high quality concrete in line with higher and larger building structure trends. Our GPC has strong features to embrace various customer needs such as: eco-friendly GPC, highly early strengthen type GPC, ultra high-strength GPC, low heating GPC, explosion prevention GPC.

Interview with executive on sustainability

Vice president(General) Lee Hoon-beom



What do you think of the influence of social contribution activity to our company?

We believe the responsibility to go with community is not an option but something to do. In doing so, we have been able to grow to a company trusted by community. The brand value has been greatly increased.

What will be the conditions for us to become a sustainable company?

I believe we will become a sustainable company once all our employees have made effort for accomplishing profit through selection and concentration strategy and reasonably distributing such created economic value with stakeholders, being socially responsible.

Jecheon Plant manager Kim Kwan-hoe



What do you think of good labor-management relation?

Good labor-management relation begins at trust. Although there is difference between the both sides, employees will understand if management sincerely listens and makes effort.

What will be our actions on climate change?

As a much energy consuming business, we are trying to see risk and opportunity in management, being aware of this issue. Therefore, we are being proactive by saving energy for cost competitiveness, producing eco-friendly Cement and entering new market.

Head of Support and Planning Division Yang Seung-jo



What do you do for customer satisfaction?

As our products are directly related to building safety, our priority goal is quality in all management. Since 1998, ISO9001(Quality Management System) has been introduced for customer-oriented management with all employees oriented at quality. Especially in treating complaints and needs of customers, we are focusing on preventing reoccurrence by analyzing the causes and coming up fundamental solutions through technical meeting in which customers and experts participate.

Highlight 2011

Selected as best company by the Dow Jones Sustainability Indexes(DJSI) for consecutive 2 years

Asia Cement was selected as best company by DJSI Korea for consecutive 2 years in 2011 for Building Materials & fixtures sector. As a global standard jointly developed by SAM, Switzerland and Dow Jones, U.S since 1999, the plant is the comprehensive index to analyze and assess corporate economic, social and environmental value.



Beautification improvement construction completed for Dukso Distribution Center

Located in Wabu-eup, Namyangju-si area, Dukso Distribution Center held its completion ceremony for beautification improvement construction on October 28, 2011. The investment of KRW 5 billion in total made since November 2010, the building now became eco-friendly in harmony with the community.



Korea Economic Leader Award (Environment sector)

Ko Kyu-hwan, CEO of Asia Cement received the grand prize in environment management sector at 'Korea Economic Leader Award 2011' sponsored by The JoongAng Ilbo and held by weekly economic paper Economist on Sept. 27, 2011. Asia Cement has gained high score by examination (from academic/industry), in its environment management strategy, intermediate and long-term plans, eco-friendly activities and investment, economic/technical outcome.



Multi-purpose Healthcare Center built and then donated to community

Asia Cement has invested KRW 0.6 billion in building a 2-story Multi-purpose Healthcare Center on 1,061 m² area, being equipped with baths, Korean dry sauna (germanium, jade, red clay) and gym. The center was donated to the community. Its heating system uses the heat coming out from our Plant as fuel, there is no worry for fuel expenses. The profit will be given to community for resident welfare and local improvement projects.



Jecheon Plant manager awarded by Minister of Justice

Kim Kwan-hoe, Jecheon Plant manager awarded by Minister of Justice on Dec. 30, 2011. He has been a crime prevention committee along Ministry of Justice, paying attention to teens and child of head households living near our company since November 2009. He has sponsored and met them on a regular basis to help their difficulties.



The 25th Seo Bong Short-distant Marathon Contest

The 25th Seo Bong Short-distant Marathon Contest was held in Mungyeong-si, Gyeongbuk area (PM 10:00, Nov. 4). The marathon contest was held by Asia Cement and managed by Mungyeong Athlete Federation, accepting about 300 runners (3km for elementary, 5km for middle, 10km for high school and adult) This Contest has been enjoyed by residents, including new discovery and contribution to the athletic sports.



Single supplier of fundamental ultra-low heating Cement for "Jamsil Lotte Super Tower"

From June 4 to 5, Asia Cement has placed fundamentals of 123-story and 555m-high Jamsil Lotte Super Tower, successfully supplying 15,000 tons of ultra-low heating Cement for mass concrete. The ultra-low heating Cement has been jointly researched and developed by Asia Cement and Lotte Construction for 15 months, keeping high-strength, high-flowing and ultra-low heating characteristics required by large-scale fundamental construction of high-rise buildings, being designed as low carbon emission Cement concrete proper to eco-friendly standards.



Jecheon Plant, awarded by the Minister of Environment, at aquatic ecosystem recovery case contest

At "aquatic ecosystem case contest 2011" our Jecheon Plant was awarded by the Minister of Environment. The contest was held by the Ministry of Environment and the national Environment Corporation in order to provide directives of right aquatic ecosystem recovery activities. The Plant has received high score in its installing and operating natural-form constructed wetland to reduce non-point pollutant.



Awards

2010	2011
August Jecheon Plant Certified as Process Safety Management(PSM) P-Grade - Daejeon Office of Local Employment	September Evaluated as Sustainability AAA - Eco-frontier
September Selected by plant as best company in construction materials sector - Dow Jones, SAM, Korea Productivity Center	September Awarded with Korea Economic Leader Award (environment sector) - The JoongAng Ilbo
December Good company using licensed software Ministry of Culture - Sports and Tourism	September Awarded and selected as aquatic ecosystem recovery case - Ministry of Environment
December Jecheon Plant manager awarded as company of merit national industry development - Ministry of Knowledge Economy	October Awarded as consecutive 2-year best company in Building Materials & fixtures sector by the Dow Jones Sustainability Indexes(DJSI) - Dow Jones, SAM, Korea Productivity Center
※No award received in 2009	December Jecheon Plant manager awarded - Minister of Justice

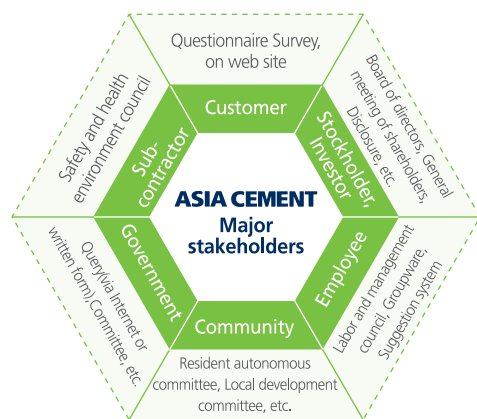
Stakeholders engagement and materiality assessment

The purpose of Asia Cement through this sustainability report is to analyze what is important to stakeholders. To ensure the transparent disclosure of economic, environmental, social outcome information and smooth communication with our stakeholders as the key of this report, we have incorporated various opinions through media research, questionnaire and interview with stakeholders. Such integrated issues were used to determine material issues, employing materiality assessment methodology of accountability.

Materiality Determination Process



Major stakeholders of Asia Cement



Step 1 - To identify main issues : To identify issues required for sustainable and socially responsible corporation, we analyzed various global standards including ISO26000. From this, 30 sustainability issues were identified for Asia Cement to be positioned toward.

Step 2 To conduct research with stakeholders : Based on 30 issues identified by Step 1 above, we conducted questionnaire survey with our 170 employees, interview with four executives, understanding what is important to stakeholders through the analysis of articles across domestic/international press. Through benchmarking the same type business as well as strategy meeting, Asia Cement defines customers, stockholders/investors, employees, community, government and subcontractor as its major stakeholders.

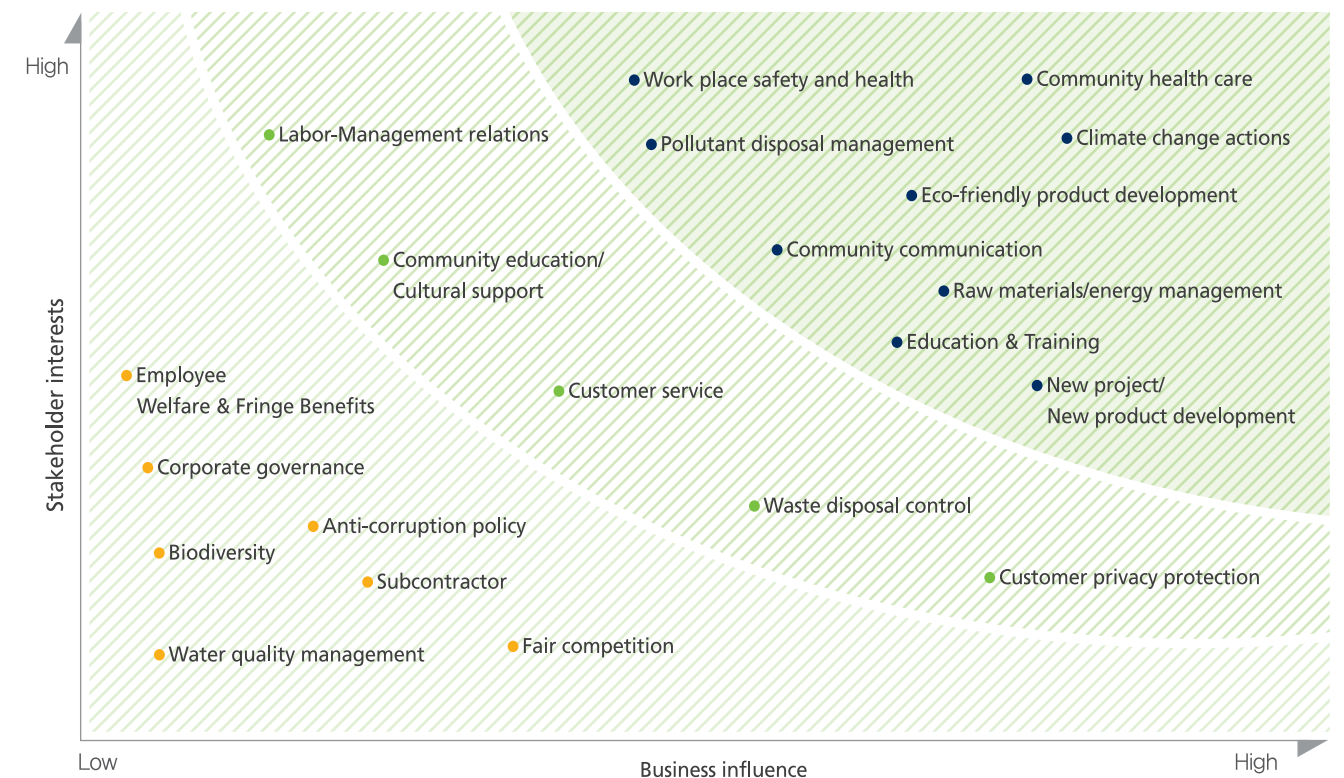
Step 3 To select material issue : In consideration of business influence and the concerned level of stakeholders based on five materiality analysis standards, nine material issues for 2011 have been selected. The issues include Safety and Health at work place, training, pollutant management, raw materials / energy management, climate change actions, eco-friendly product development, new project/new product development, community health care and community communication which are herein disclosed in detail.

Results of materiality assessment

The material issues analyzed as follows, according to the business influence and the concerned value of stakeholders in 2011. Asia Cement will increase the level of sustainability by analyzing the economic, social and environmental influence of the material issues and suggesting tasks to improve in the future. As well, the related activities and outcome will be disclosed through sustainability report.

Material issue reporting

Contents	Material issue	Page
Creating and distributing economic value	New project / New product development	26~27
Low carbon Green management	Eco-friendly product development, climate change actions, Pollutant management, raw materials/energy management	26~27, 32~41
Safety and Health	Work place Safety and Health	44~49
Improve the value of employees	Education/Training	52~53
Win-win with community	Community communication, community health care	61~63

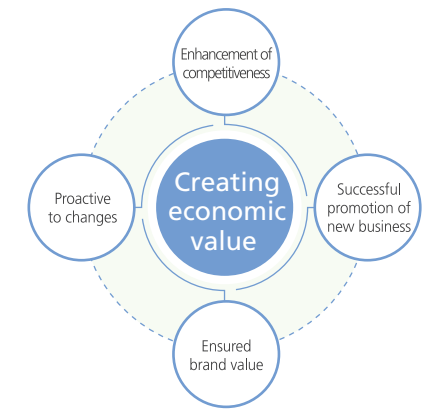




Economy

Strategic directions

Asia Cement is committed to creating economic value through the strengthened competitiveness as well as being socially responsible corporation through fair distribution.



business principles

Asia Cement has solidified its strong position through continuous R&D and investment, now keeping up with rapidly changing management environment by means of continuous challenging spirit and creative thinking in order to become a continuous corporation. As well, we will successfully conduct metal silicon business, our new growth engine, to lay the basis of stable profitability in the future.

Main outcome

● **Creating economic value** (Unit: KRW 1 million)

	2009	2010	2011
Sales account	322,607	280,811	320,756
Net profit	26,796	2,700	9,552

● **Dividends for the consecutive 30-years**
(Cash dividend 2011: KRW 750/share)

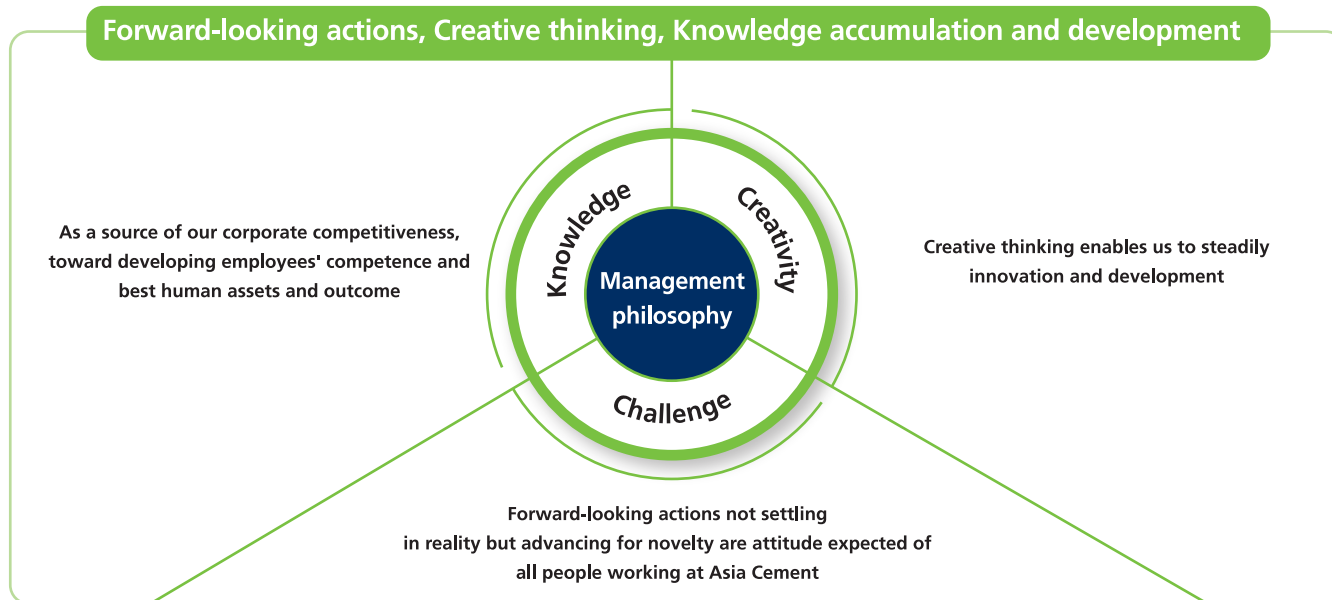
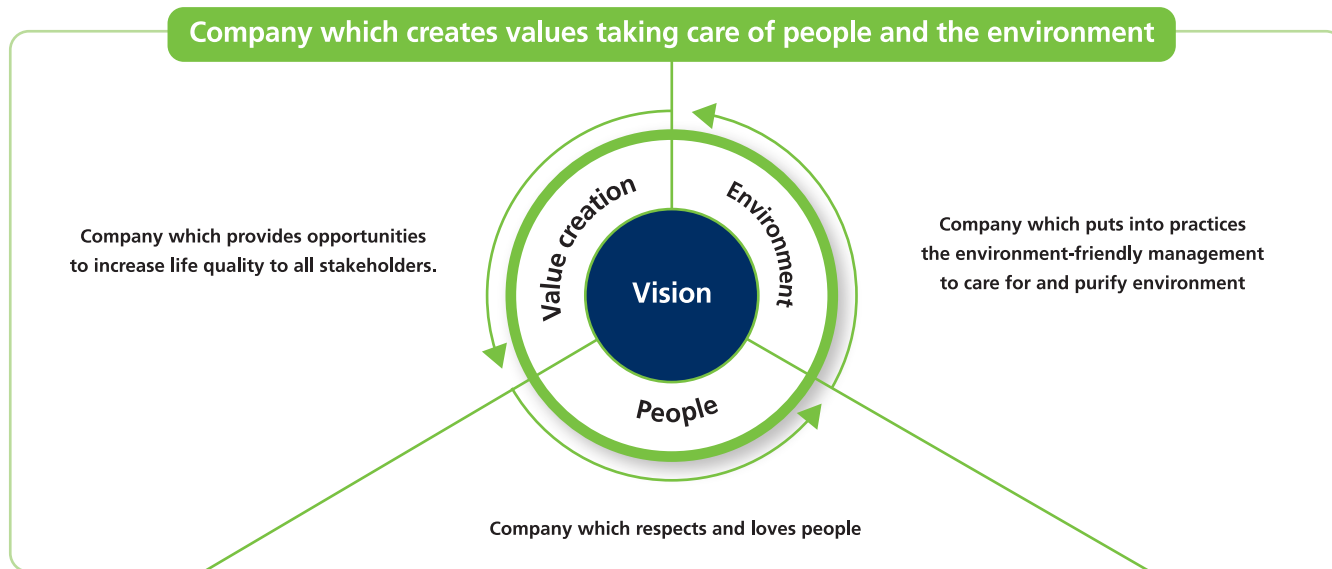
● **Tangible effect of innovation activity**

	2009	2010	2011
Saved amount(KRW 1million)	978	966	846
No. of suggestion	4,630	4,241	4,432

Sustainability Strategy

Asia Cement is committed to becoming a socially responsible continuous corporation by respecting our all stakeholders and implementing eco-friendly green business under the vision 'Company which creates values taking care of people and the environment'.

Vision and management philosophy



Economic value creation and distribution

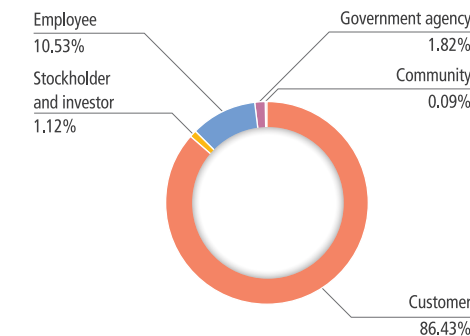
Although continuous world-wide liquidity crisis and economy slump, we have seen the Sales account of KRW 320.8 billion, which increases by KRW 40 billion compared to prior year period, as well as Operation profit(KRW 8.4 billion) and Net profit(KRW 9.6 billion).

Asia Cement has steadily enhanced the value with the support from various stakeholders as well as stockholders, with consecutive dividend for 30 years since 1982.

Economic value creation



Economic value distribution 2011



Distributed economic value

(Unit: KRW 1 million)

stakeholders	2009	2010	2011
Customer	239,455	232,081	254,654
Stockholder and investor	6,036	2,696	3,311
Employee	29,208	31,210	31,040
Government agency	5,380	2,827	5,361
Community	1,295	520	274
Total value created	281,374	269,334	294,640

* Total value created = Sales account + Financial investment profit + Profit from selling assets + Company reserves
 * Government agency = paid tax amount with tax deficits for 2010

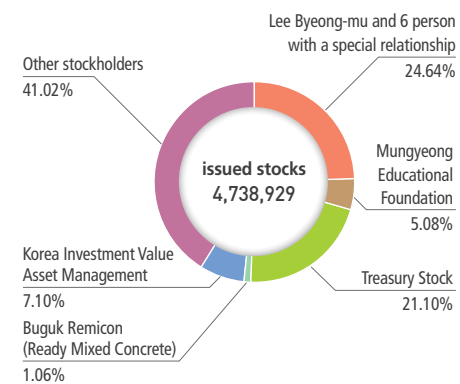
Corporate governance

Asia Cement has made effort to increase corporate value and ensure transparent decision-making by enforcing independence and transparency of corporate governance.

Board of directors members

At Asia Cement, the chairman of board of directors is also CEO. according to articles of association Article 33. The board of directors makes its resolution on material matters regarding those defined by laws or articles of association, those delegated by general stockholders' meeting and corporate policy and execution, supervising the directors' execution of their jobs. The board of directors is composed of 8 directors and 1 auditor (including 5 full-time directors, 1 part-time director, 2 outside directors). A director is appointed by general stockholders' meeting and a candidate is selected by the board of directors, to be confirmed as agenda to be submitted to the general stockholders' meeting. If a stockholder suggests according to the related laws in relation to the appointment of directors, the board of directors submits it as the agenda to the general stockholders' meeting. The remuneration for director is paid in the range of director remuneration as approved by on a regular basis general stockholders' meeting annually. The final amount of remuneration is determined by the agreement between the board of directors and directors, based on managerial outcome of the respective director.

Status of stockholders



*As of December 31, 2011

board of directors members

Title	Name	Position	Birth	No. of owned shares	Area
In-company director	Lee Byeongmu	chairman	October, 1941	658,484	over the entire business issues
	Lee Yoonmu	vice chairman	December, 1946	118,210	over the entire business issues
In-company director (part time)	Ko Kyu hwan	President	November, 1942	3,740	CEO. Chairman of board of directors
	Lee Hoon beam	Vice president	Jan. 1969	192,000	over the entire business issues
	Kim kwanhoe	Executive Director	March, 1953	-	over the entire business issues
Outside director	Lee Inbeom	-	March, 1971	146,300	Business counseling
	Song Jongeui	-	Sept. 1941	-	Former head of the Office of Legislation
Auditor	Park Namgyu	-	Jan. 1966	-	Current professor, Business School of Seoul Nat' Univ.
	Oh Giho	Executive Director	May, 1963	-	-

How stakeholders suggest their opinions to board of directors

A stockholder of Asia Cement may convey their opinions to board of directors and participate in the management by executing voting rights at general stockholders' meeting. The employees and executives have labor and management council, Groupware, strategy meeting, team had meeting that enable us to share corporate management and information and to convey opinions.

Ethical management committee

We have Ethical management committee under the board of directors. Its purpose is to settle healthy corporate culture through right corporate ethics, as well as to create continuous corporate culture that socially responsible by spreading clean and transparent management.

Conflict prevention process caused by interested relations within board of directors

Asia Cement distributed the documents previously prepared in detail per agenda, whenever agenda resolution made, so that the board of directors would play a role as our substantial decision-making organization. Therefore, we take time enough for review and examination, where the interest conflict does not take place at the time of final voting.

Status of board of directors held

Year	No. of meeting	Main agenda
2009	14	Promised borrowings for equipment investment for Korea Development Bank. Asset re-evaluation to be conducted
2010	13	Fixed credit line for Woori Bank. Fixed Foreign Currency Loan for Korea Development Bank.
2011	13	Additional transfer of Wooshin Venture Investment



Integrated risk management

As fundamental construction materials, Cement business has grown with nation-wide infrastructure, but its demand is gradually downward due to increased substitute goods and real estate slump. As there are more high functional and eco-friendly needs in line with increased special high-rise structures, we have operated our own risk management process to cope up with various risks.

Risk management process

To cope up with rapidly changing environment, Asia Cement has established its <risk management working-level committee> into its operation, setting up the process as well as management standard to identify/prevent potential management risk. As well, we have also introduced the quality management system, environment management system, Safety and Health management system as integrated risk management in consideration of environmental and social issues.

Risk Management Standards

Fuel risk	International supply and demand/Price change trends per bituminous coal type
Financial risk	Monetary market trends/ changes in interest/ exchange rate trends/ Rapidly increasing sales revenues, etc.
Personnel risk	Proper supply and demand in consideration of regular retirement
Market risk	Demand trends/ Substitute goods trends/ Price and market share, etc.
Facility/Technology risk	Facility replacement/ Whether to employ new technology, etc.
Environment risk	Environment laws/ Climate change/ grievance on environment issue/ accidents, etc.

Risk management working-level committee

Members	Chairman(Vice president in wholly charge)/ Member(Division director, Jecheon Plant manager)/ assistant administrator(Business Planning Team head)/ Related department heads
Role	To discuss the risk issues/ To set up actions/ To coordinate tasks per department

* The activities of risk management working-level committee are reported to board of directors on a regular basis.

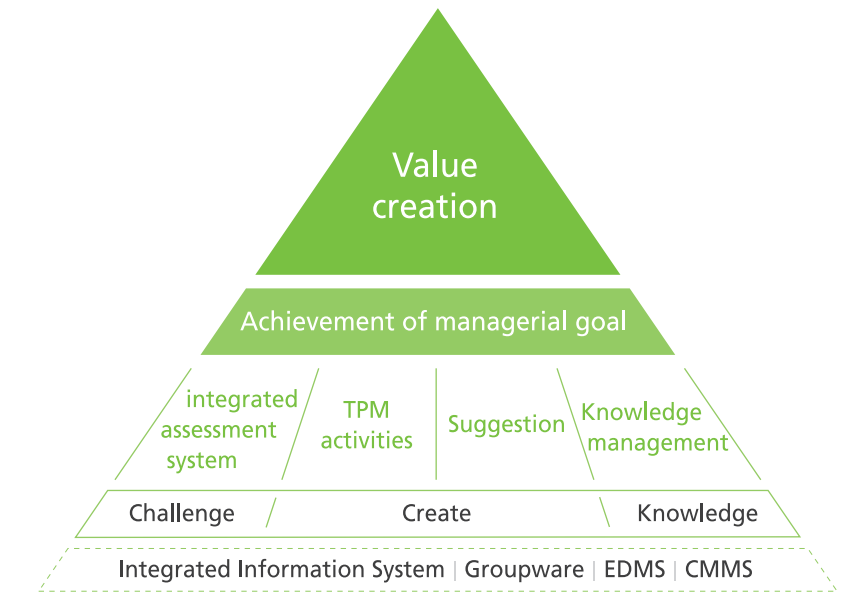
Risk management working-level committee operation process



Innovation activities

Asia Cement is keeping up rapidly changing environment and preparing for the future through continuous challenging spirit and creative accident.

Innovation activities process Model



Asia Cement defines its practical management philosophy as challenging (progressive behaviors), creativity(creative thinking), knowledge(accumulation and development) to lead and keep up with changes in 21 century environment, implementing various innovation activities.

TPM activities

We have expanded our TPM(Total Productive Maintenance) activities to enterprise-wide level in 2003, which was introduced in 1993 aiming at facility efficiency and reform of Jecheon Plant. Asia Cement has maintained total facility efficiency at high level through this activity, greatly contributing to cost saving by reducing the loss ratio(defect, disorder, disaster). All the activities are led by 56 working circles, supervised by the TQM Secretariat direct reports under the Jecheon Plant manager, to conduct 5-behavior diagnosis(4/year), TOP diagnosis(4/year), working circle leader meeting(6/year), TPM subcommittee meeting(12/year). In addition, the case studies of excellent working circles will be submitted to the enterprise-wide quality circle contest. This contest been continued for the past 23 years, as the place of knowledge exchange as well as the good faith competition.



The 23rd enterprise-wide quality circle contest (December 13, 2011)

Most excellent working circle 2011



- **Whahap circle** | Production Team, Jecheon Plant
- **Main activity case** | **Name:** Cost saving by improving how to operate #6 Cement grinder (saving electricity cost, and reducing grinding time) **Saving effect:** KRW 136 million/year
- **Impressions** | From this activity, we learned that we could take great cost saving effect only with small improvement.

TPM Main Outcome

(Unit: KRW 1,000)

	2009		2010		2011	
	No.of cases	saved amt	No.of cases	saved amt	No.of cases	saved amt
Cost saving activities	41	783,000	33	737,000	30	643,000
Unreasonable improvement activity	178	195,000	188	229,000	174	203,000

Knowledge Management



21st enterprise-wide technology seminar (Nov. 7~8, 2011)

To enforce productivity and core competence with shared and used knowledge, Asia Cement has introduced the knowledge management at the half quarter 2005, since the preparation since 2004. Our learning organizations are core activities of knowledge management, where employees voluntarily or unvoluntarily belong to, for them to cope up with interested areas, problem solution and risk per theme. The results of their activities are announced in the annually held enterprise-wide technology seminar and its outcome indicator(KPI) are connected to the outcome assessment system.

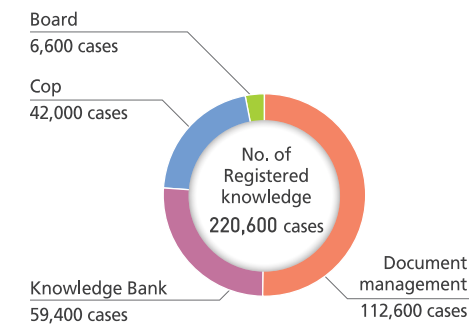
For easy utilization, such created knowledge and information are accumulated on the Groupware-based database called the Knowledge Bank.

For the knowledge management activities, there are 90 CoP(community) across the company, with the accumulated amount reaching 220,600 cases.

CoP(Community)

Classification	No.of registration	No. of members
Learning organization	41	714
Business place / Team	24	689
Hobby / Circle	25	579

No. of accumulated data by area

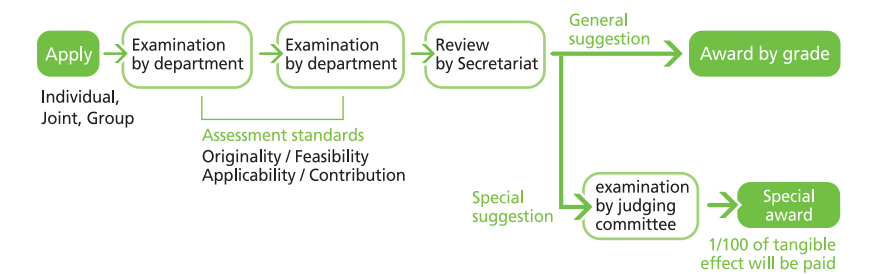


The knowledge management resulted in activated communication, increased problem solution ability through collaboration, created synergy and transferred from personal knowledge into organization's one, which contribute to enforced core competence of Asia Cement.

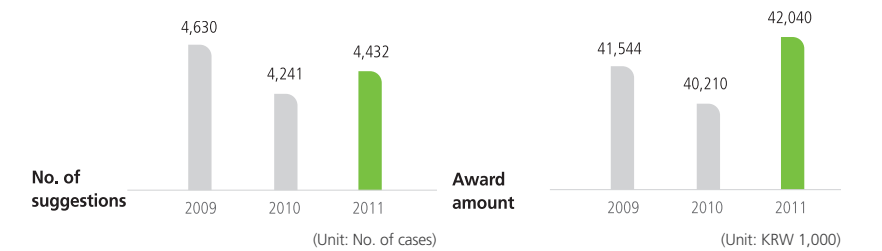
Suggestion activity

At Asia Cement, the suggestion activity began as QC(Quality Control) was introduced in 1969 first ever in Korea. Anybody is free to suggest, if it is helpful to be reasonably and efficiently conducted across the company. Such selected suggestions are immediately put into operation.

Procedure of operation



Performance of enterprise-wide suggestion activity



Best Suggestion Award 2011



- Kim Young-gil, working at Production of Jecheon Plant
- No. of suggestion: 199/year
- **Knowhow from Best Suggestion Winner**
 - Positive thinking "There are many ideas to suggest everyday life"
 - Immediately taking notes once idea came
 - No limit to what will be suggestion (It can be facilities improvements, how to work, safety and environment, etc.)
 - More you are interested in, more you see what to suggest

Introductory period

- Digital-minded learning activities (Digital administrator appointed per team)
- Identify knowledge system and transfer data
- Spread of internal communication with Groupware (Integrated board in operation, etc.)

Extensive period

- Learning organization in operation (Learning organization selected)
- Spread of knowledge management mind (Change leader selected)
- Assessment system linked

Mature period

- Extension of knowledge management system (e-approval, document management system linked)
- Establishment of knowledge information use (ERP linked, integrated management planning, etc.)

2004~2005

2006~2009

2010~



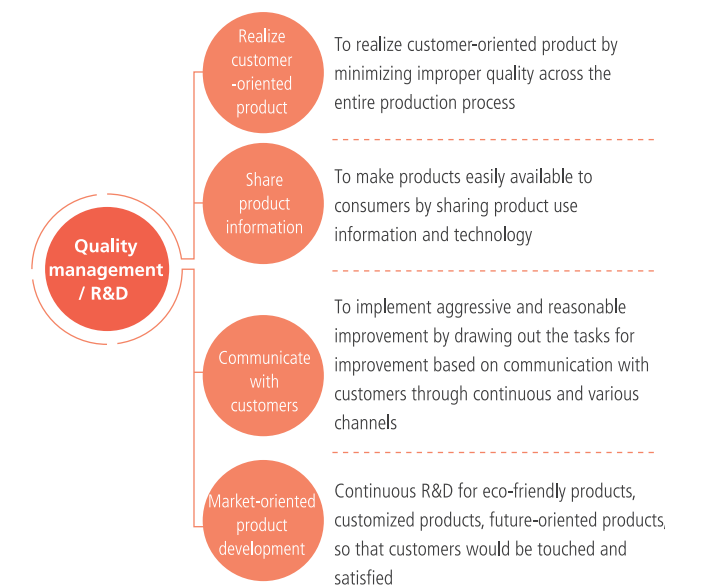
Customer Satisfaction Management

Customer satisfaction Management

Strategic directions

Asia Cement thinks communication as important, to approach our customers with higher quality and service than thought by customers. To touch customer's heart beyond customer satisfaction and create new value, we are making continuous effort for customer satisfaction.

Business Principles



Main Outcome

● Patent registration (Unit: case)		
2009	2010	2011
1	2	3

● R&D investment (Unit: KRW 1 million)		
2009	2010	2011
2,068	2,109	2,146

Quality management

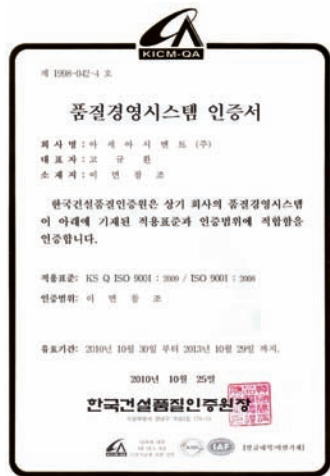
To realize the best-level quality where customers are satisfied and feel reliable, Asia Cement has introduced the ISO 9001 quality management system across the entire business places since 1998, ahead of other companies.

Therefore, we provide the customers only with completely monitored verified products across the entire process from raw materials warehouse-in, storage, production and shipment to delivery, as well as KS quality certification.



Status of certification

Type	certification	certification agency	Others
System	ISO 9001	Construction Quality Approval Institute	Quality management
	ISO 14001	Korea Standards Association	Environment management
Product	KS L 5201	Korea Standards Association	Portland Cement(Type 1, 2, 3, 4, 5)
	KS F 4009		Ready Mixed concrete(Remicon)
	KS L 5220		Dry Cement mortar (Dry-Mortar)
	KS F 3501		Filling material for asphalt pavement
	KS L 5210		Blast furnace slag Cement
	KS F 2563		Blast furnace slag fine particle for concrete
	KS F 2527		Ground aggregate for concrete



Raw materials Quality Test



Product Strength Test

Communication with customers

To ensure continuous communication with customers, Asia Cement makes our web site to customers(To Asia), as well as via wired/wireless phones or visits to us. There are various means of communication, listening to their comments and feedbacks through customer satisfaction questionnaire survey annually more than once, per product(Cement, Ready Mixed Concrete, Dry-Mortar, Aggregates).



Visit to our client



Visit from University student

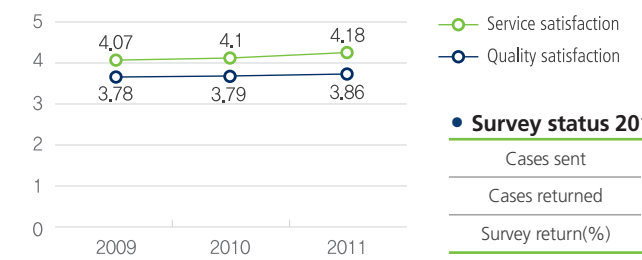
Communication process



Customer satisfaction Survey

In 2011, the questionnaire was sent to clients per product(Cement, Ready Mixed Concrete, Dry-Mortar, Aggregates) and the assessment was made on the lowest(1 score) to highest(5 scores) scale. The results are enterprise-wide shared so that the related departments can proceed cause analysis and problem solution for the items with rather lower satisfaction.

*Score1: Much dissatisfied, Score3: Normal, Score5: Very satisfied

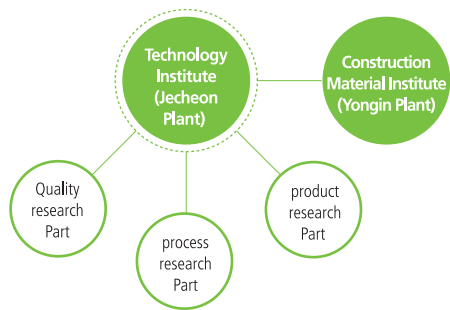


Survey status 2011

Cases sent	191
Cases returned	119
Survey return(%)	62

Research and Development (R&D)

R&D organization



After focusing on customized new technology and product development with quality competitiveness at Jecheon Plant Technology Institute and Yongin Construction Material Institute, we are positioned as a leader in this area, as a single supplier of special Cement to 123-floor building, Jamsil Lotte Super Tower as well as famous high-rise Tower Palace located in Dogok-dong, Gangnam area.



The trends of the recent construction market is high-rise, large-scale and diversification that are followed by increasing needs of special concrete and eco-friendly construction material. Our R&D activities are processed in line with such market changes. In doing eco-friendly products and joint projects with domestic universities and construction companies in order to keep up with climate change and preserve global environment, we incorporate various needs of customers and go together with them through customized and oriented R&D for the next-generation.

Status of our R&D

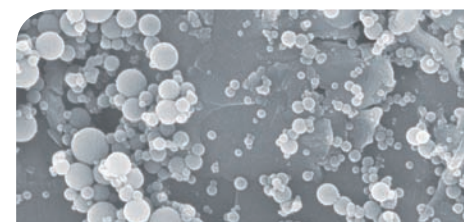
Eco-friendly Cement binder called [Eco-Ment] : In replacement of Cement at low temperature, it is the low carbon eco-Cement binder for concrete designed to increase initial strength and shorten the construction period, as well as to reduce CO₂ emission. Eco-Ment can be used as the binder for Ready Mixed Concrete and ground-stabilizing civil engineering, for various purposes to the site.

Customized [Solidification material for ground stabilization] : Under the joint R&D agreement with domestic construction company, the solidification material for ground stabilization is developed for customized ground stabilization, being divided into surface improvement and slurry dept mixing method.

Ultra high-strength Cement binder : The ultra high-strength Cement binder is excellent in liquidity by reducing water in manufacturing and lowering the concrete viscosity. Therefore, it is easy to manufacture high quality ultra high-strength concrete and increase easy construction of pumping while doing high-rise construction, as the Cement binder.

Status of R&D personnel (2011) (Unit: person)

Technology Institute	23
Construction Material Institute	4



Ultra Strong Cement(photo by electron microscope)



150MPa ultra high-strength application to site

Other R&D : Other products developed by our R&D include the red clay cement using activated red clay the low carbon low heating binder developed to reduce CO₂, the red clay Dry-Mortar for cavity filling, the eco-friendly/highly functional mortar for floor, and permeable Dry-Mortar and planting concrete developed to ground stabilization and forestation, and our R&D is undergoing jointly with the construction company using various Cement binder technology required by the construction sites.



Planting concrete



Special block using permeable Dry-Mortar

Dedicated facilities for special Cement(GPC, Green Premixed Cement)

Asia Cement has newly established its dedicated plant to produce and manufacture multiple special Cement(GPC), and provided ultra high-strength Cement for high-rise construction sites such as Mokdong Trapalace, Songdo 1st World, being a single supplier of 4-component premixed ultra-low heating Cement for basis mat at Jamsil Lotte Super Tower. We are proud of competitive edge as far as ultra high-strength/ultra-low heating binder area concerned.



Photo of ultra high-strength Cement/concrete applied



Photo of ultra high-strength Cement/concrete placement

Patent status

(Unit: case)

2009	2010	2011
1	6	4

R&D investment amount

(Unit: KRW 1 million)

2009	2010	2011
2,068	2,109	2,146

Special Cement product lines

Eco-friendly product	Customized product	Future-Oriented product
Eco-Cement	High flow Cement	Green/low carbon Cement technology
Red clay Cement	ultra-low heating Cement	Cement technology for nuclear power (shield)
Mixcon Alpha	ultra high-strength Cement	Cement technology for Dam/bridge / pavement
Low carbon low heating binder	Cement for initial strength	anti-bacterial / fluorescent Cement technology
Eco-friendly highly functional Mortar	Solidification material for ground enforced	IT converged Cement technology
Planting concrete	ultra early strong LMC	Other convergence new functional Cement
Cement mortar for permeable block	Black concrete	

Low Carbon, Green Management

Low Carbon, Green Management

Strategic directions

Asia Cement is committed to sustainable development and low carbon green management for clean environment to the next generation, by improving the environment management system, minimizing pollutant, expanding the use of resource and establishing the win-win system with Stakeholders, thereby reducing GHG and developing alternative energy.

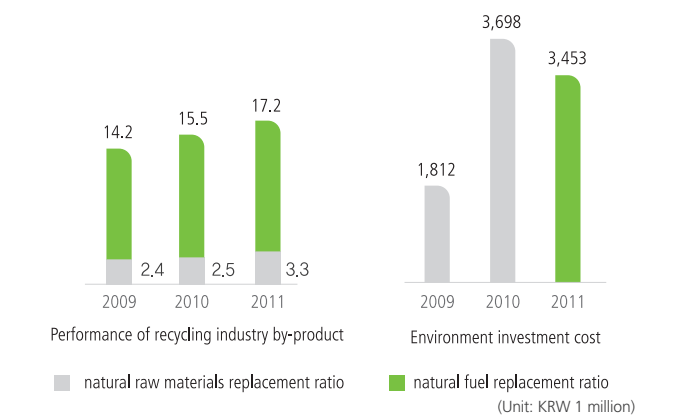
Business Principles

To minimize the pollutant emission, we define stricter self-management standards than defined by the emission-related laws, implementing green management across the entire process from product design, production to delivery. To preserve natural resource and recycle resources, we developed and used the by-product replaceable for combustion waste and ingredient, which in turn, to save cost and contribute to green management. Especially by installing the waste heat-power plants, we have organized activities to reduce GHG.

Main Outcome

● **Status of pollutant emission** (Unit: ton)

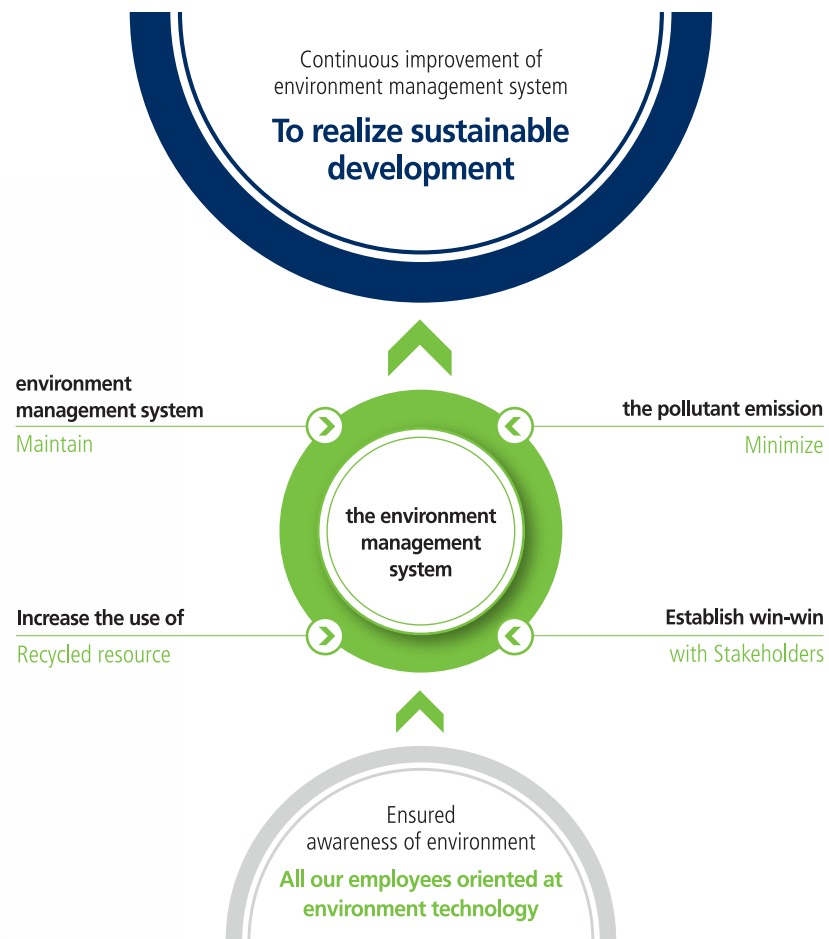
Type	2009	2010	2011
TSP	42.98	50.2	53.86
NOx	5,066	4,894	6,186
HCl	11.88	16.79	9.31
SOx	35.40	12.86	3.73



Environment management system

To ensure sustainable development, preserve neighbor environment and contribute to community, Asia Cement has set up and implemented its vision and policy especially for environment called continuously improvement of environment management system, thereby preventing environment pollution and creating such outcome.

Environment Vision



Environment Policy

To continuously improve environment management system, thereby preventing environment pollution and creating such outcome

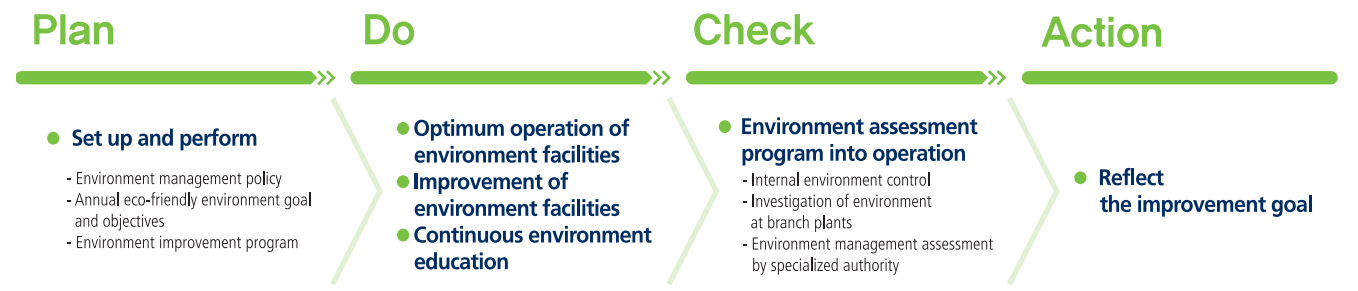
The employees at Asia Cement declares the environment policy to pass the clean environment to the next generation, efficiently distributes the resource and continuously seeks the system improvement in order to put its environment management into its operation.

- 1 In developing our all management and production activities, we will trust and completely observe its internal control standards and the regulations defined by environment related laws.
- 2 We will make and arrange all our organization and system to play a role of framework for environment management.
- 3 We will operate all our manufacturing facilities according to the environment management action plan across the entire process from design, production and delivery of our products.
- 4 We will become a leader of environment industry that helps the global environment, by continuously improving and developing environment technology.
- 5 We will prevent environment pollution and minimize waste, and continuously make effort to increase recycling the useful resource.
- 6 We will raise the awareness of environment through continuous education for all our employees, sharing more environment information with the community.



Environment management system

The environment management of Asia Cement is operated by its organized system: Plan → Do → Check → Action



Environment pollutant management

Asia Cement is making its best effort to minimize the influence on air/water quality, through equipment investment and improvement activities to reduce environment pollutant emission.

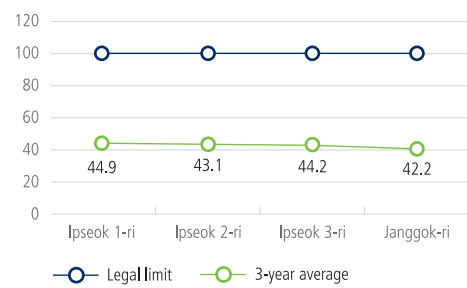
Minimize pollution in air

As main Cement manufacturing facilities called burning process, operate at high temperature of 1,450°C, it emits GHG and nitrogen oxide, while others emit dust, particle materials. In addition, there is noise in the grinding process of ingredient and product, we continue to make effort to minimize air pollution and noise.

Air pollution emission and prevention facility management

As it is very important to not only reduce air pollution also raise energy efficiency, we replaced the entire air pollution prevention facility(electricity dust collection → with dust catch by filter collection), to minimize pollutant and dust. For nitrogen oxide at the high temperature is handled by optimum operation and our new SNCR) at 70% level of legal emission standards(230ppm ~250ppm).

Fine dust around Plant at average for 3-years



* Results measured by a specialized company, (Hoam Engineering)

Fine dust measured around Plant

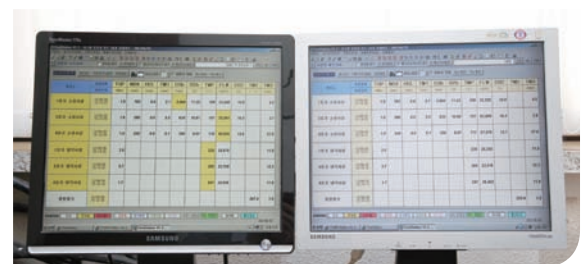
Period	Ipseok 1-ri	Ipseok 2-ri	Ipseok 3-ri	Janggok-ri	
2009	First-half	42.4	39.8	46.9	35.8
	Second-half	42.8	42.4	42.3	37.9
2010	First-half	43.5	39.6	40.8	41.3
	Second-half	43.7	43.1	42.6	45.6
2011	First-half	48.6	46.1	45.4	47.8
	Second-half	48.5	47.3	46.9	44.8
Average for 3-years		44.9	43.1	44.2	42.2



Air measurement system

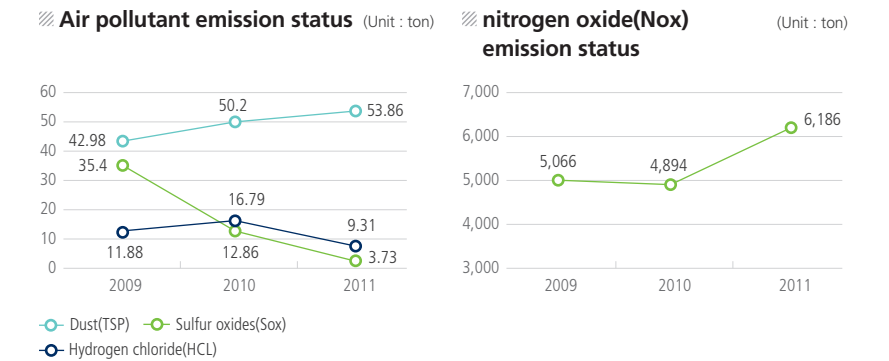


TMS monitoring



Air measurement system

Besides, to control scattered dust, we have made all fuel storage facilities airtight, more recently restraining scattered dust through 2-stage dust protective layer at each gate of the storage places. The limestone conveying belts connected to our Plant are improved to dome-form to minimize scattered dust.



Noise reducing prevention activities

Our Jecheon Plant has set up its 3-step plans to reduce noise by conducting precise noise diagnosis across its site to know the influence on its boundary and the neighbor community. For the 1st year(2010), it added silencer and sound proof chamber on high noise emitting I.D. Fans and Blowers at high places. For 2nd year(2011), it has installed the sound proof facility on the large-scale grinding chamber, which resulted in lower measurement than required by law(55dB(A) at the site boundary).



Dust layer



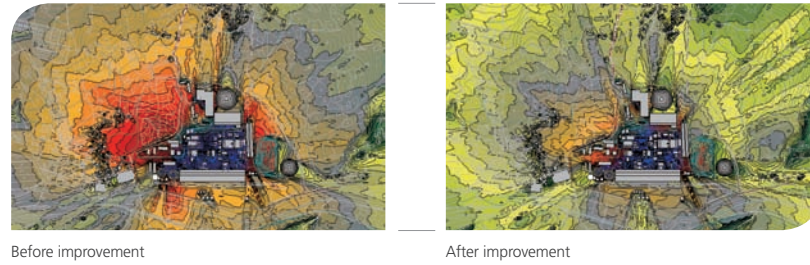
Muffler



Limestone belt conveyor

Noise distribution map around plant

* Darker red means noisier area



Minimize influence on water environment

As the cooling water is mostly used as industrial water in the Cement manufacturing process, we do not operate the waste water emission facilities. There are no waste water discharging facilities also at the Jecheon Plant because it has minimum waste water from boiler water. However, in case of any accident, we have installed Oil-Water Separators at any place of potential oil leakage during the cooling water process. All waste water from the Plant is purified at the sewage treatment system operated by the Plant, in Songhak-myeon area. Meanwhile, our Ready Mixed Concrete Plant is operated to recycle the entire water. This is how we recycle the water : waste water from cleaning, cure, mixing facilities → 1st screening → 1st fluid adjustment facility → 2nd screening → 2nd fluid adjustment facility → filtering facility → 3rd fluid adjustment facility → storage in water tank → recycling to be re-used in the physical treatment method.



Tire washer facility

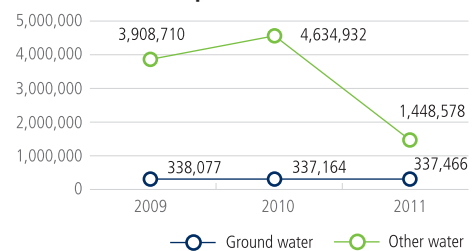


Oil-Water Separator



2-step Precipitation tank

Amount of use per water (Unit: m³)



*Why the use of other water had been reduced in 2011 : Because cooling water had been entirely recycled

Amount of industrial water

Stream water and ground water are used as industrial water, for cooling water at Cement manufacturing process and for Ready Mixed Concrete manufacturing process. Since 2011, Asia Cement has recycled the entire cooling water for re-use, which reduced the amount from the water sources by 64% compared to 2010.

Special page

Biodiversity protection

Asia Cement's process features no waste water and re-uses cooling water that will not flow into neighboring stream called Mudo-cheon(or Sigok-cheon). However, water from the ground(non-point pollutant source) when it rains, may cause any pollution, Asia Cement is keeping aquatic ecosystem healthy by making constructed wetland.

Constructed wetland in operation by Jecheon Plant

Since the first time of 2008 in Korea, two constructed wetlands in natural form have been designed and constructed with our own technology, and now in operation, where aquatic plants are planted such as reed, Phragmites japonica Steud, water parsley, cattail and native catfish, rice fish, loach, round-tailed paradise fish released for breeding, now increasing in their population.

Status of facilities installed to reduce non-point pollutant

1st emission area

Basin size	Precipitation	Stay time	Treatment facility Capacity	capacity	planting tree species
88,186m ²	441m ² /day	16hr	tank + Detention site + constructed wetland	2,946m ²	reed, cattail

2nd emission area

Basin size	Precipitation	Stay time	Treatment facility Capacity	capacity	planting tree species
184,485m ²	923m ² /day	9hr	tank + Detention site + constructed wetland	6,076m ²	reed, Phragmites japonica Steud, cattail,

1 Company handling for 1 Stream Movement

Our Jecheon Plant has designated its neighboring stream called Mudo-cheon(or Sigok-cheon) as the one to be managed, holding stream purification events more than once quarterly, in order to ensure Biodiversity and healthy stream. They keep the aquatic ecosystem healthy by continuously patrolling to prevent stream pollution causing behaviors. The outcome was recognized by the Ministry of Environment 2011 when being awarded with Encouragement Award at the aquatic ecosystem recovery successful case contest. Mudo-cheon, the stream starts from Mudo-ri, Songhak-myeon, passes beside the Plant to join the main stream of Pyeongchang River, then flowing into Namhan River. The Plant covers about 3km

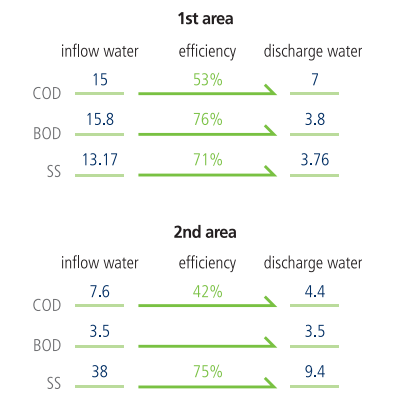


1st emission gear constructed wetland



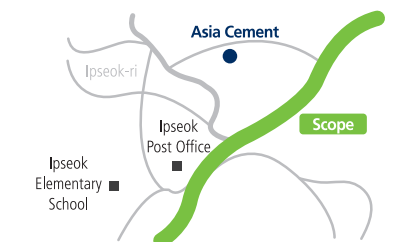
1 Company handling for 1 Stream Movement

Non-point pollutant treatment facility efficiency



(Unit: mg/l)

Scope of 1 Company handling for 1 Stream Movement



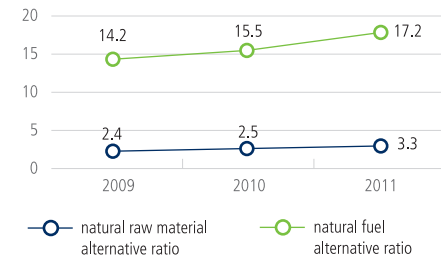
Resource recycling

Waste Emission (Unit : ton)

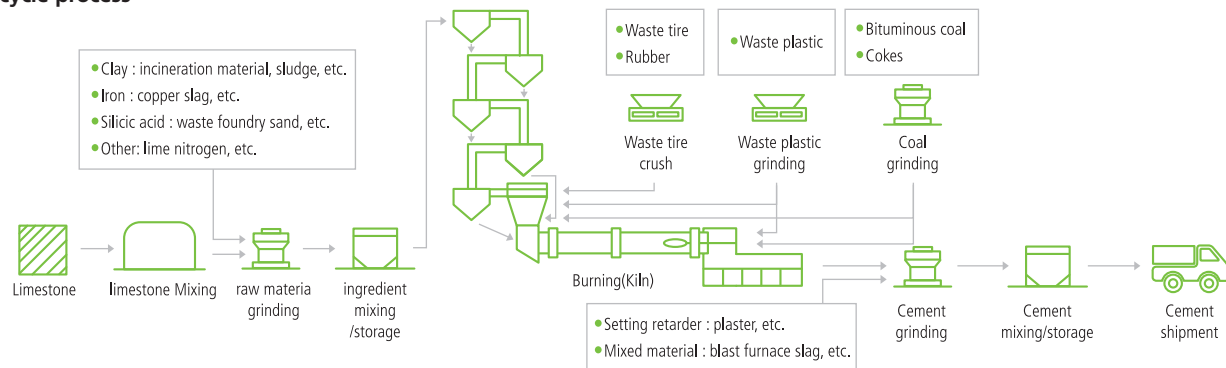
Type	2009	2010	2011	
General waste	incineration	67	54	67
	Self-treatment(recycle)	1,283	1,643	3,491
	Outsourcing(recycle)	2,937	4,111	3,218
Subtotal	4,287	5,808	6,776	
Designated waste	incineration	221	174	184
	Out-sourcing	23	22	19
	recycle reclamation	1,110	1,829	5,612
Subtotal	1,354	2,025	5,815	
Total	5,641	7,833	12,591	

* Why the amount of designated waste(reclamation) increased? : Because of the increase in waste refractories in proportion of the operating hour of burning Plant

Performance: recycle of by-product



Recycle process



Asia Cement has placed its dedicated department in operation to manage, leading in reducing natural resources by recycle by-product as fuel/raw material.

Use and recycle of natural resources

The Cement industry adopts bituminous coal and bunker fuel oil C to keep high temperature of 1,450°C at the burning process, much consuming natural resources for Cement manufacturing such as clay, iron and silicic acid. Therefore, we are making combustible by-product available for recycle, greatly contributing cost saving.

We are outsourcing to recycle the entire general amount emitted by its respective business place, and recycled the most of designated waste, except for dust and waste refractories related to the operation of facilities.

Recycle of by-product

Asia Cement mainly uses bituminous coal as heating sources for manufacturing Cement, where the alternative fuel for bituminous coal includes waste tire, waste synthetic rubber and waste synthetic resin. To recycle such by-product, we operates the facilities, lowering heating source unit and contributing to cost saving. In addition, to raise the ingredient alternative ratio, we replace the natural resources(clay ingredient) with sludge, fly ash and cinder. We will continuously make effort to lower our use of natural resources(bituminous coal, clay) through process improvement and equipment investment.

Our recycle system features of prevention of 2nd pollution(odor and incineration material) through the high temperature treatment of large volume at 1,450°C, without any secondary processing.

Climate change actions

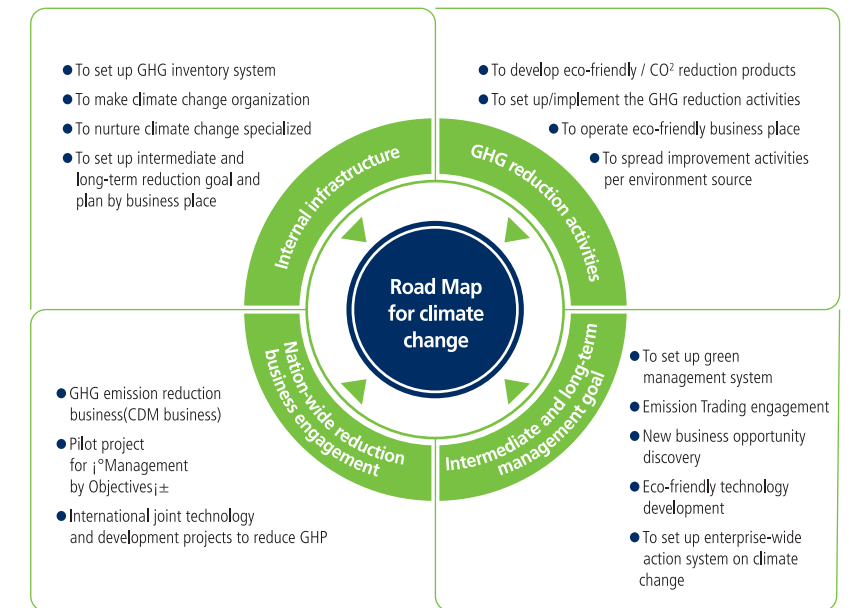
As the Cement industry highly depends on energy such as fossil fuel and electricity, there is higher risk factor in relation to climate change. In line with this, Asia Cement is aggressively taking actions by setting up intermediate and long-term action plan and road map.

Risk and opportunity factors in line with climate change

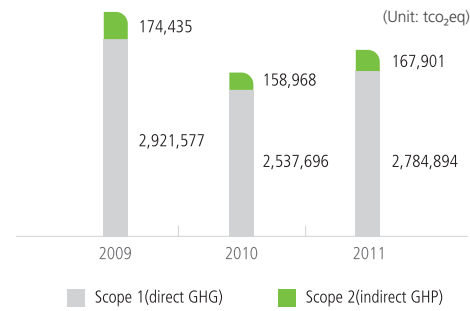
It is expected to enforced government regulations, as there is much of energy consumption and GHG emission used by Asia Cement, where the government's GHG Emission Trading may be big threatening factor to us. However, Asia Cement seeks methods to effectively to keep up with climate change issues and grow forward since 2000, in order to change from the risk factors into opportunity factors.

In line with the Emission Trading, we have developed eco-friendly Cement and improved facilities and process for lower CO₂ emission. Such as, the proactive activities will be our new source of profit and greatly contribute to raising our corporate image.

Road Map of Asia Cement



Scope 1 & Scope 2 Emission



To establish internal infrastructure

To Construction GHG Emission inventory system

Asia Cement has GHG inventory across its entire business places including head office and Jecheon Plant. Its GHG emission and energy consumption have been verified by Anjin Accounting Firm for 2011, which helped to know where are our main emission sources and we make effort to minimize the influence on global warming by raising efficiency and replacing with the low carbon-oriented energy sources.

Direct/Indirect energy consumption

In 2011, Asia Cement's energy consumption amounts to 15,436 TJ in total, where bituminous coal accounts for about 55%. In addition, our indirect energy source, electricity accounts for about 21%, meaning 3,241 TJ consumed in total. Since 2011, we have reported not only energy source directly input to our production process but its entire energy source for high transparency.

Energy consumption

Type	Energy source	2009	2010	2011
Direct energy	Bituminous coal	8,512	7,440	8,422
	Diesel	224	234	221
	LNG/ LPG	15,242	15,074	146
	Oil refining Plant fuel	-	-	123
	Combustion by-product	-	-	3,232
	Other	50	21	36
Indirect energy	Electricity	3,367	3,069	3,241
Total		27,395	25,838	15,421



Waste heat power plant



Tree planting event

To conduct energy diagnosis

We have conducted energy diagnosis on a regular basis through the outside party certification to seek how to reduce energy consumption and lower both energy and GHG through our facility improvement.

GHG reduction activities

Operation of generation facility through waste heat return

We have operated our power generation facility for recovery and recycle of waste heat from our burning kiln #4 since 2005, annually producing the electricity 20,000MW and reduce 10,000 tons of CO₂.

Operation of recycle facilities

Since 1999, we have installed and operated our facilities to make the broken waste from business place(waste tire, waste synthetic resin, rubber) available as our fuel, which reduced waste from the aspects of environment, annually saved bituminous coal more than 50,000 tons, and reduced CO₂ of over 130,000 tons.

Eco-friendly facilities

High efficiency inverter installed : We have installed high efficiency inverter onto large-scale fans year-by-year, which resulted in the reduction of 1,600 tons of CO₂ as well as 3,300MW annually.

High efficiency lighting installed : We have replaced the existing 2,500 lighting units at each site, with high efficiency LED lamp, contributing CO₂ reduction and electricity cost.

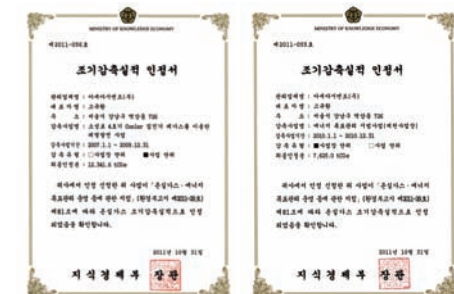
CO₂ emission monitoring

Since 2007, we have installed automatic CO₂ measuring systems onto burning kiln, understanding the emission status and continuously seeking how to reduce its emission.

Planting trees event

At each business place(our Jecheon Plant and branch plants), we made green sites to reduce GHG and annually hold planting event to beautify environment and reduce noise. At Daejeon Plant, free lots are provided as weekend farm to neighboring residents to contribute to environment improvement.

Certificate recognizing early reduction



Nation-wide project engagement

Energy Management by Objectives pilot project engagement

We have participated in the energy Management by Objectives pilot project since 2009, which resulted in 7,600 tons of CO₂ reduction as a leader of energy saving.

Volunteer agreement engagement for energy saving

We have signed the volunteer agreement so that we would make effort to reduce GHG emission, prevent global warming caused by GHG and cope up with climate change agreement through energy saving.

Status of Planting trees

Year	tree species	seedling	Planted place
2009	nut pine, birch, azalea, etc	1,500 trees	Around waste recycle chambers
2010	nut pine, zelkova tree, Dawn redwood, ginkgo tree, etc.	4,900 trees	seedling site, expanded site, around playground
2011	fruit tree, ginkgo tree, zelkova tree, nut pine, etc.	3,600 trees	seedling site, playground, expanded site and around the wetland

Forestation event

Asia Cement and the Youngwol National Forest Office have jointly held Forestation event every year.



To set up and implement intermediate and long-term management goal

Asia Cement defines its goal of intermediate and long-term reduction as 8.5% compared to BAU(national GHG goal) by 2020, implementing the activities to achieve it. To firmly set up the enterprise-wide climate change action system, we calculate accurate GHG emission by our appointed representatives at each Plant, seeking GHG and energy reduction method. In addition, for lower emission from limestone carbonation reaction process that accounts for 60% of GHG, we are leading developer of GHG reduction Cement such as slag Cement, limestone Cement. Besides, to efficiently keep up with the Emission Trading to be enforced as of 2015, we are closely cooperating with the Ministry of Knowledge and Economy and its agencies, for the activities such as Reduction Research Society and climate change action team.

Cement sector's reduction goal

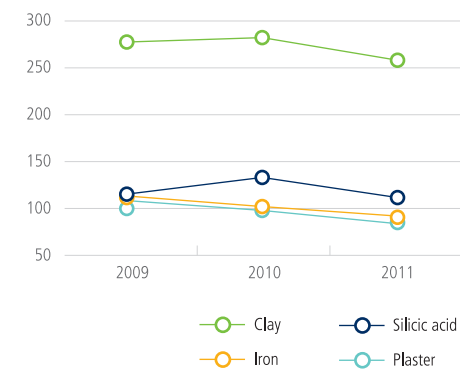
Year	2012	2013	2015	2020
Goal(%)	0.5	0.9	3.0	8.5

* Basic period 2007~2009

Energy saving main activities

Main energy saving activities	Description
Localization in replacement of foreign products	By changing the import-depending facilities at our plants into localized ones, we reduces the reliance on import and make effort to boost national economy. (Reduced cost : 497,000,000 won)
Cooling water supply improvement	By re-using water through improved supply of cooling water, we minimize waste of water, contributing cost saving as well.
Process improvement in waste ready mixed concrete treatment facilities	Through the process improvement in the facilities that recycle the waste Ready Mixed Concrete, we make effort to solve the waste treatment issues as well as energy saving. (Saved amount: 11,900,000 won)
Change of boiler fuel	By changing our boiler fuel from diesel or kerosene to LNG through the replaced facilities, we are reducing energy and GHG emission. (Saved amount: 46,790,000 won)

Status of raw materials consumed



Consumed amount of raw materials

At Asia Cement, the Cement raws are slag(from steel industry); fly ash(by-product from thermal electric power plant); and sludge(by-product from domestic water). By gradually increasing such industry by-product, we are contributing to gain competitiveness and save both industry waste and energy.

Status of raw materials consumed

(Unit : ton, sheet)

Raw materials	2009	2010	2011
Limestone	4,040,163	4,231,526	3,975,395
Clay(grit, fly ash, etc.)	276,697	282,414	253,514
Iron(slag, etc.)	108,546	101,568	91,799
Silicic acid(silica, sandstone, etc.)	109,515	131,239	113,918
Plaster	99,794	100,167	88,277
Packing bag	8,745	6,466	6,464

Energy saving Effect

(Unit: KRW 1 million)

Saving Effect	2009	2010	2011
Saving amount-Fuel	159	525	47
Saving amount-Electricity	231	111	14
Saving amount Ingredient	613	54	27

Our actions/activities to save indirect energy

To save energy, Asia Cement has put commuting bus, car pool system and proper temperature at its offices into operation. It has restrained the energy consumption and GHG emission from frequent business trips, by introducing the video conference system between the Jechon Plant and the head office. In addition, our raw materials are purchased by means of railways to reduce GHG emission.

Health and Safety Management



Health and Safety Management

Strategic directions

safety and health management is one of our priorities in making-decision, with the goals of safe, pleasant and no-disaster working conditions through preventive actions including continuous improve and inspection at each area.

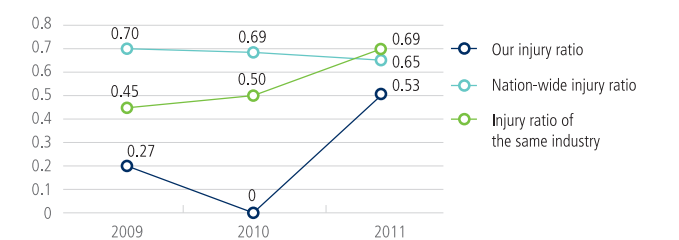
Business principles

Asia Cement has its self-management standards for all activities such as designing, manufacturing, installing, operating and repairing, in order to ensure more safe and pleasant working conditions, complying with the related laws such as safety, health and fire prevention. All our employees are voluntarily participate in safety and health training programs for Every Day Safety. In addition, each working site conducts risk assessment and harmful factor investigation to take previous actions and keep it safe and continuously improved. In addition, each working site conducts risk assessment and harmful factor investigation to take previous actions and keep it safe and continuously improved.

Main Outcome

In 2001 for the first time in same industry, we are recognized with the certification of safety and health management (KOSHA18001). In 2010, we have been selected as best certified company with P-Grade, the highest level of Process Safety Management(PSM).

Our injury ratio vs. injury ratio of the same industry



Safety investment cost

(Unit: KRW 1 million)

Year	2009	2010	2011
Cost	880	223	628

Building up safe work place

Asia Cement has its well-organized system for safety and health care of all our employees and interested parties as well as employees of subcontractor who visit us.

Status of certification

Certification	Adopted business place	Certification authority	Year
Safety and health management system (KOSHA18001)	Jecheon Plant	Korea Occupational Safety and Health Agency	2001
Process Safety Management P-Grade	Jecheon Plant	Ministry of Labor	2010

Such well-organized system and the realistic safety prevention activities at each site, are building up the business places with lower injury ratio than the same industry and across the nation.

Lockout tagout

In repairing all our facilities, we attach lockouts and tags onto the turning-on switches to prevent safety accidents due to possible wrong handling. Records are made on the books(for users and for construction history, respectively) that are checked on a regular basis, to prevent any worker from writing on the books.



5-minute meeting per shifting team/ Predictive danger activities

Due to the characteristics of Cement manufacturing industry, our facility operate for 24/7, where there are four teams(3-time shifting) working. We have 5-minute meeting before starting any work to raise the awareness of safety issues, when safety education and what to do are delivered to them. In addition, we do predictive danger activities from 1986 till now, in order to raise the safety awareness.

To advance and keep the two systems, a field manager/supervisor receives the no-disaster related education where safety and health persons and supervisors attend.



5-minute meeting per shifting team



Predictive danger activities

Customized safety education

We have self-developed safety education system in operation to raise safety awareness. To maximize the effect of regular education lead by supervisors, the education time is completed within 30 minutes once. For relocations and new employees, a safety and health manager gives more than 8 hours and over 56 hours on the job. After that, they can start working, to prevent any disasters caused by a person who does not know possible danger. The safety and health department monthly checks if each worker has completed safety education beyond in-company standards, to report it to the safety and health manager. Quarterly, instructors both from internal and external parties are invited to provide collective education opportunity for all our employees.

Emergency management

We identify explosion, leak accident(oil and Cement), concerned environmental pollution and natural disaster as our emergency. At these cases, we promptly notify for the actions against emergency, minimizing damages in proactive ways.



Asia Cement has minimized damage from leak accidents of Ready Mixed Concrete water at the Yongin Plant as well as bituminous coal emission accident at the Jecheon Plant, by providing education and training on a regular basis according to its emergency action plan and system.



No-disaster achievement award system

We give prize money when the goal was achieved, after assigning the classified no-disaster goals to the divided departments(those with Danger Rating 1, Danger Rating 2 and Other Danger Ratings) according to classified danger per department.

Joint statement declared for domestic every day safety campaign

To ensure increased level of safety of everyday life products and services, Asia Cement jointly declared with Korean Society for Quality Management at the ceremony "domestic every day safety campaign 2011", where we are committed to preventing safety accidents in various forms: △ Safety in the process of products to be used △ Emotional safety △ Information safety △ and Safe private life.



Maintaining our employees' health

Asia Cement places the various health-supporting programs and facilities in its operation, so that our employees may stay healthy.

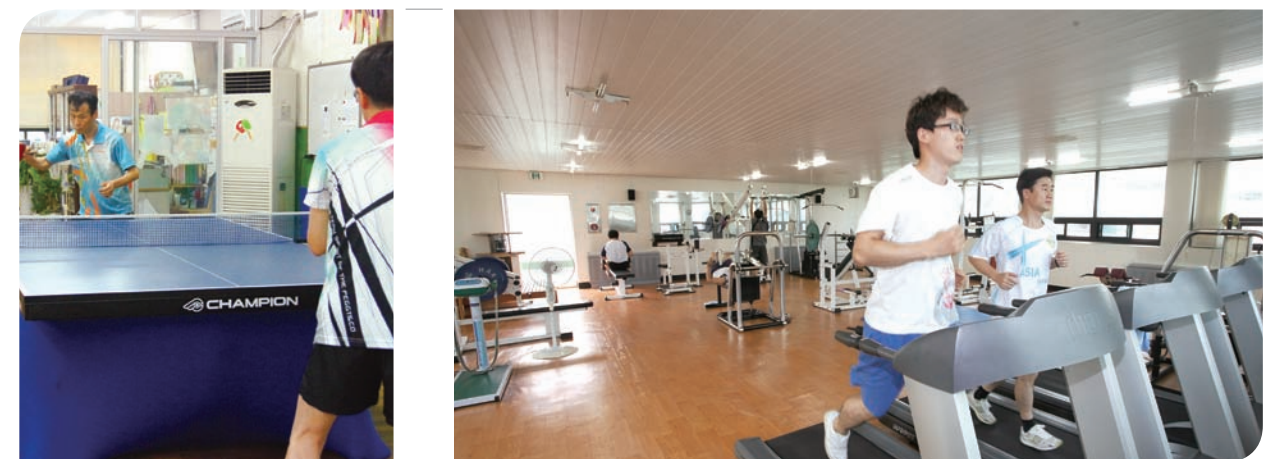
Medical checkup

We have both general/special medical checkup conducted by the selected large-scale hospitals. Even the spouses of our employees are subject to the medical checkup.



Fitness room

We have three fitness rooms to help our employees stay fit with 24/7 open, where they would train themselves in body and soul, preventing musculoskeletal disorders.



Health care center

We employ nurses from the outside party, weekly at our health care center. The health care center checks blood pressure, blood sugar, neutral fats and cholesterol for daily health care. In addition, if any disease found, such individuals are subject to visit more than once weekly per disease.



Hygiene and nutrition care

Towels for hygiene care purpose placed in bathroom, are divided by color per time zone, for easy replacement, so that anyone can easily check hygiene. We have laundry room within the business places. Meanwhile, we care the nutrition of workers working on the sites, and the lunch boxes per nutritionists' menu are directly delivered to them. Our in-company large-scale bath house helps the workers recover from the fatigue after work, for the next day work. We are making effort to provide better hygiene and nutrition care.



Safety and health program

Hearing protection program

There is much noise at Cement/Ready Mixed Concrete manufacturing plants, especially from the burning/grinding/mixing process, where we run comprehensive care program to prevent hearing impairment for workers(including those from subcontractors) at the area more than 90dB(A). The procedure repeat itself :Noise exposure assessment-> Engineering actions if in excess of exposure standards -> protection gears given to put on -> education informing the harm and prevention of noise -> regular hearing test. The hearing test is conducted more than once a year by a specialized hospital, while the assessment on working condition is measured/recorded once a year, to improve or maintain according to such results.

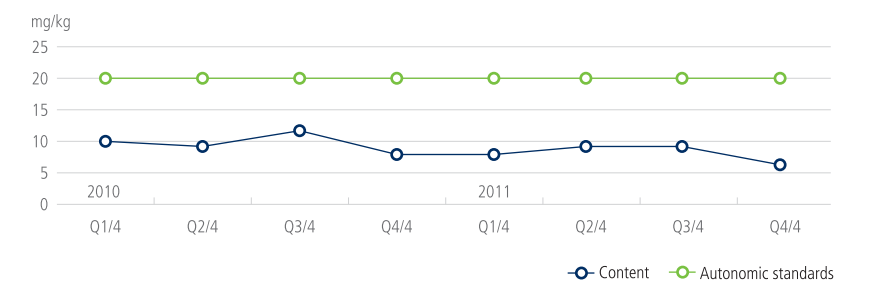
Respirator protection program

Dust refers to solid particles of 0.1~100u taken from grinding, crush, abrasion and explosion. The comprehensive care program is to prevent respiratory organ- related environment, for all workers(including those from subcontractors) at the areas where dust takes place over 10m³. The working condition is checked by our safety and health department. The program is applied to the work places that are in excess of exposure standards and where there are potential health problem caused by dust-related works. Such workers is subject to special medical checkup once a year and post-care according to its results, and will attend the education in relation to harm of dust as well as wearing respiratory protection gear.

Safety care of Cement products

During the process, Cement goes under the burning at high temperature, with its contained chrome turning into harmful hexavalent chrome that can harmfully affect a worker handling Cement. Therefore, we keep hexavalent chrome contained in our ship-out Cement below the autonomic management standards(20mg/kg) defined by Korea Cement Association.

Hexavalent chrome content in Cement product



Improve the value of employees



Improve the value of employees

Strategic directions

Asia Cement makes effort to be the company where our employees may display their competence, having established win-win labor-management relations based on trust accumulated through various communication channels.

Business principles

To build up happy work place, we have set up/developed/implemented human asset-nurturing and learning programs, fair personnel reward system, win-win labor-management relations and welfare area and working condition for increased life quality of our employees.

Main Outcome

● Average years of continuous service

17 years

● Education time per capita

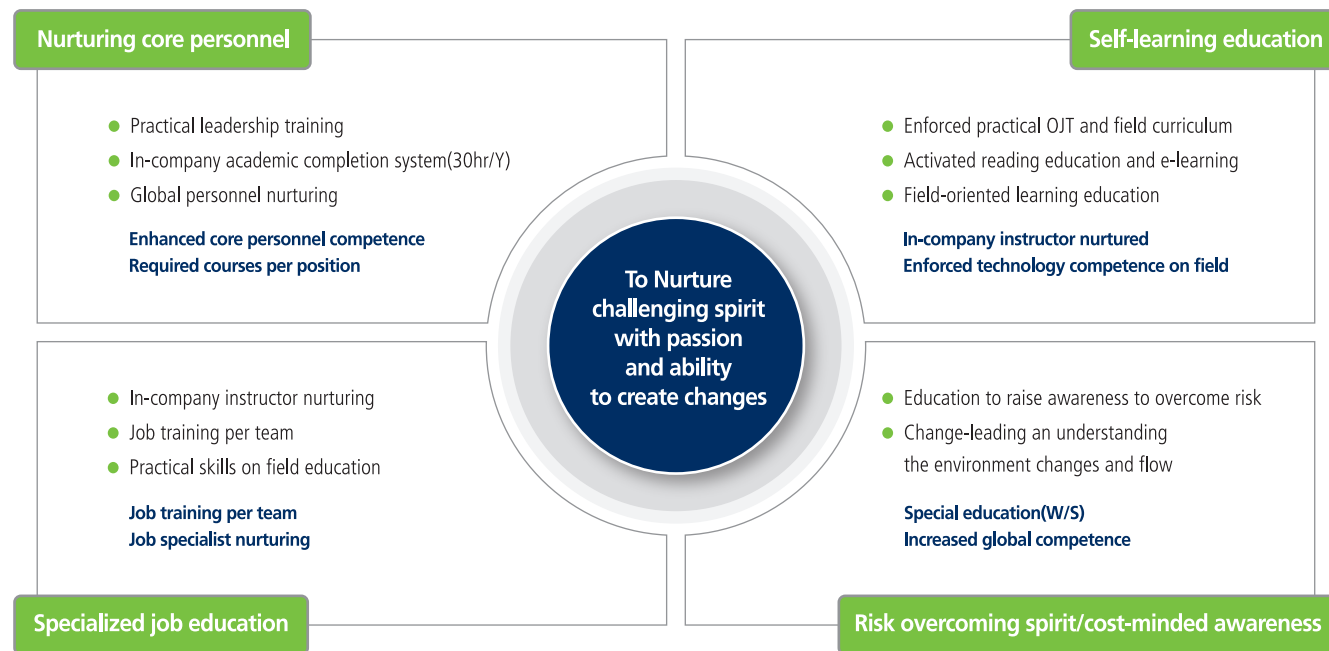
(Unit: hr)

2009	2010	2011
20.2	20.9	27.8

HR program

To ensure strong competitiveness in the rapidly changing business environment, Asia Cement focuses on nurturing competent personnel, with various education programs aiming at nurturing the challenging, the intellectual and the creative people as specialists who will lead the next-generation.

Goal and policy



Training courses

Asia Cement implements various education and training programs by position and job type, in order to raise personnel/organizational competitiveness, by employing/nurturing specialized personnel qualified with core competence and by forming lively organizational culture.

Required cyber education(Cyber MBA course) : To strengthen leadership and job skill of employees, the representative professors from business and management(Accounting, Marketing, HR, Leadership) teach via online.

Training performance

Year	No.of personnel	Hr per capita	Cost per capita
2009	957	20.2	371,469
2010	796	20.9	437,307
2011	1,205	27.8	513,867

To nurture core personnel STAK MBA : Since 2011 at Sangnam Institute Management of Yeonsei University, its short-term MBA course is provided to grow core personnel by sector for next-generation.

Overseas training for long service/good example employee : A long service(over 20 years) and a good example employee are subject to this overseas training, contributing to encouraging and achieving organizational competence through overseas field trip to excellent companies.

Status of training

Our main training programs for 2011, include in-company training(576 participants in hierchial/field/leadership/sales strategy programs), 200 kinds of online courses(239 participants), communication programs(224 participants) and language courses.



Competence development process for manager



New employee training



Labor-Management partnership education



Short-term MBA completion

Fair assessment and reward

Asia Cement is operating its assessment system that enables to contribute increased corporate value and create outcome, as well as that can be connected between the increase in individual competence and corporate growth, reflecting them into annual salary and promotion based on assessed data by grade.

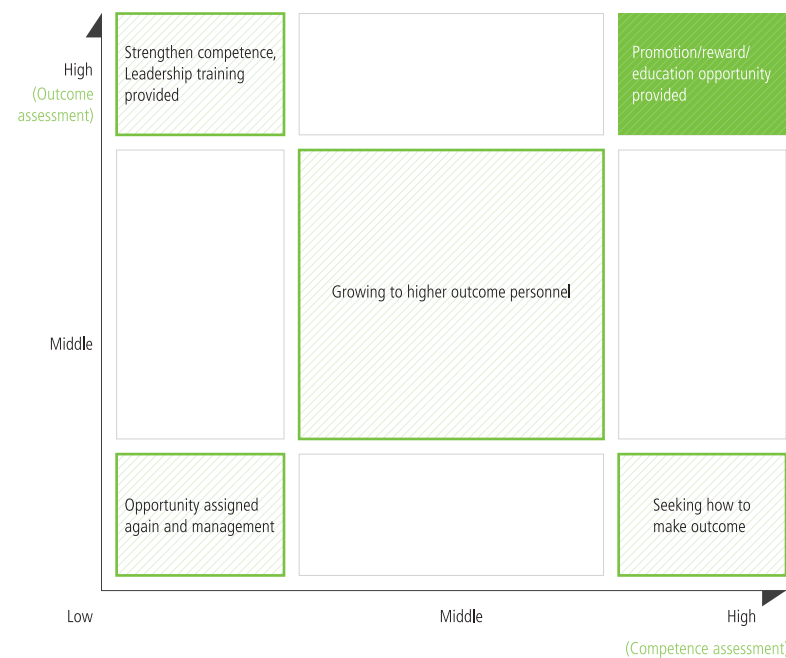
Assessment system

The individual assessment is divided into outcome and competence displayed items. For the outcome item(KPI), the individual and team jobs are set to achieve the annual setting goal, where the assessment is made according to how much the achievement has been made. For the latter item, it is assessed depending on whether an individual has reached the previously defined level in order to enforce the competence. The weight of assessment(distribution ratio per item) is divided per occupational group, in order to reflect the characteristics of each job, for objective assessment. (289 persons out of the entire 478, are subject to 60.5%).

Reward and management

The results of assessment are not just one-time reward. Instead, they are connected to the entire areas of human assets, including intermediate and long-term goals and inspiration of developing individual competence/career.

Standards to manage assessment results by area



Distribution ratio by assessment item

Occupational group	Outcome item	Competence item	Contribution
Support	30%	60%	10%
Sales/Technology	60%	30%	10%

Assessment rating and personnel distribution ratio

Assessment rating	S	A	B	C	D
personnel distribution ratio	5%	15%	60%	15%	5%

Win-win labor-management relations

Building up win-win culture through smooth communication between the company and the employees, Asia Cement is creating new value beyond mutual trust and cooperation through various labor and management council programs and regular events.

An employee below 4-grade is subject to the labor union found since March 1968. Once employed, they are auto-joined(Union Shop). As of the end of 2011, 53%(257 persons) of 478 are the member of the labor union, which means 100% of membership, given the conditions to join.

Labor and management council program

Labor and management council : As our highest-level of cooperation organization, the council is held quarterly. Any agenda discussed by this labor and management council is the priority for solution. As necessary, the working-level conference will be organized for prompt making-decision, raising trust and partnership.

Safety and health environment management council : The council makes resolution across the safety/health care as well as environment and fire prevention, preventing reoccurrence through the analysis of causes and action plans. The Plant managers, committee chairman and safety managers and health care managers have to attend quarterly for its conference. Most of issues on field are discussed through this organization, showing much improvement until today.

Working circle leader meeting : The motto is the immediate solution of grievances on field, through monthly held meeting between the Plant manager and working circle leader.

Organization and operation of council with subcontractor : To stabilize not only labor-management relations but also that of in-Plant subcontractors, a Plant manager monthly holds the council with subcontractor, in order to understand their grievance and make them proud of being the family of Asia by improving forward.

Benchmarking of other companies known as good labor-management relations : The opportunity of overseas field trip is given to the representatives members of labor union together with executives.



Regular labor and management council



Open talks with executives

Labor and management council regular events

Hanmaum training (Labor and management council joint workshop) : Labor and management council joint workshops are held, where the concerned parties including union leaders, C. E. O. and Plant managers attend for harmony.

Hanmaum Athletic Meeting : The Athletic Meeting in spring and fall helps solidify trust and mutual understanding by forming family-like culture.

Company-wide mountain climbing : From our employee to those from subcontractors, all participants in this mountain climbing, being proud for member of Asia Cement and gaining new challenge spirit.

Hanmadang Festival : Welcoming May Day, our labor union committee chairman and Plant manager will award along with the barbecue party to the effort of labor union members.



Athletic Meeting



Labor and management council harmony training



Labor and management council festive in one spot

Welfare & Fringe Benefit Programs

We believe that our employees' enjoyable and pleasant working conditions will also boost our performance, running various welfare-related programs to raise their life quality.

In-company workers' compensation and welfare fund

The in-company workers' compensation and welfare fund was formed to guarantee the benefits of welfare to our employees. Funded with KRW 167.3 hundred million, it has been used as the sources of child education, comprehensive medical checkup, loans for housing, lease and living cost.

Retirement pension system

Asia Cement has operating its retirement pension system according to the Retirement pension Act, where salary over 1 month will be paid to the person who serviced for 1 year. The retirement pension system enables our employees to prepare for later year through stable payment. As of the end of 2011, KRW 33 billion (94% of severance amount) is deposited to Samsung Life and other financial institutions.

Status of welfare

Type	Description	Amount to be given
Housing	Housing loans to non-homeowners	KRW 30 million
	Housing loans to non-homeowners	KRW 15 million
	Grant Cement(for purchase and new construction)	500 packages (equivalent to KRW 1,500,000)
	Company and dormitory(for workers at Jecheon Plant)	
Living cost support	living cost living loans	KRW 5 million
Education	Child tuition(entire amount for middle/high school and college)	Pre-schooling child
	Entire amount	KRW 400,000 a year(5-year, 6-year old)
Holiday	4 days of summer holiday and bonus	KRW 400,000/ year
	Summer retreats (Youngwol, East Coast) and condominium operating	
congratulations and condolence	Day-off and expenses to be given for various types	
Other support	Amount for health and fitness	KRW 100,000/Month
Insurance policy	To guarantee disease, injury and death	Entire amount covered biennially
comprehensive medical checkup	employees and spouses	Full support (biennial)
Other	Operation and support for various hobby clubs (clay shooting, baseball games, photograph, mountain climbing, fishing, etc.)	



Hobby club

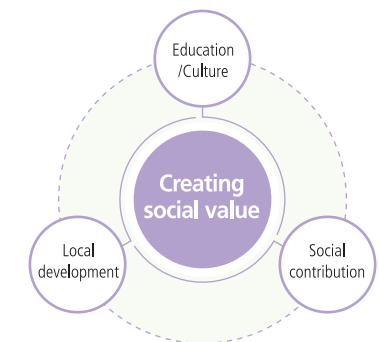
Social Contribution Activities



Social Contribution Activities

Strategic directions

Through its continuous communication with its community, it has made effort for key problem solution and harmony with residents, with its social contribution activity oriented at social volunteer activity, local development and education/culture, in order to build up warm society.



Business principles

To be socially responsible for continuous society, Asia Cement makes systemic and steady social contribution activity instead of one-time event.

As our social contribution activity, we voluntarily provide labor and support for neglected class and areas. For 'local development' we take the sense of responsibility for going forward with its community, seeking the win-win through channels with local residents.

Main Outcome

● **Social contribution activity performance** (Unit: KRW 1,000)

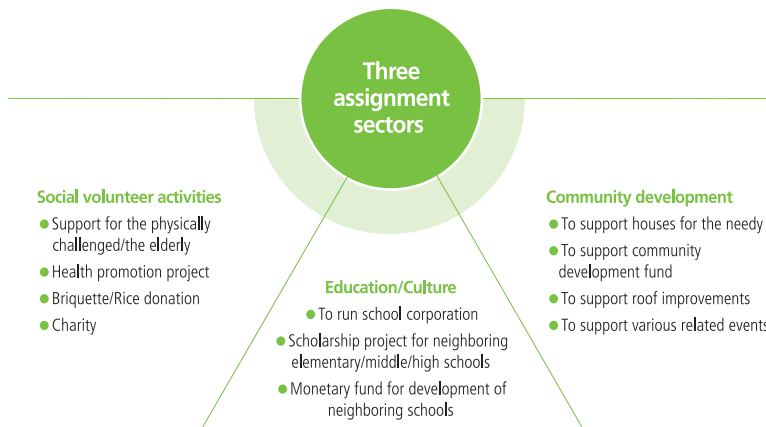
Total cost	Social contribution activity	Local development	Education/ Culture	% of participation
602,274	8,110	462,000	132,164	37.9%

/// Social contribution activity strategy

With its responsibility for going forward with community together, Asia Cement will build warm-hearted world where every people happily smiles, by increasing value of life through communication and social contribution activity.

Three assignments for our social contribution activity

Under the Social Ecosystem, as a corporation is inseparable from its community, we are aware of our responsibility, not an option, for the social contribution activity. Therefore, we have three assignments to realize and process the social contribution activity.



/// Social volunteer activities

Our in-company volunteer activity club named 'Jinggeomdari' and 'Hanmaum' Club are key players monthly engaging in volunteer activity. They visit a senior citizen who lives alone, nursing home, the physically challenged welfare centers, child head of households, to give them essential living goods as well as cleaning and bath. Especially, the 'Hanmaum' Club gave the neglected class KRW 230 million collected from its daily coffee shop since 1988, helping them have dream and hope.

Social volunteer activities performance

Type	2009	2010	2011
% of participant	11.1	13.6	37.9
Support amount for living goods (KRW 10,000)	260	370	811

Besides our social volunteer activities clubs, we have other regular social volunteer activities on a monthly basis. For example, the Jecheon Plant has supported St. Bonaventure Sanatorium, while the head office in Seoul has visited and donated as well as labor.



Community development

To help its community develop, Asia Cement has annually donated KRW 0.2 billion to the Plant-neighboring village as well as KRW 12 million for their roof improvements since 1973, so that residents can live in pleasant and convenient living conditions. In addition, we built the detour road to the gate of the plants and gave our Cement and cleaning cars to help the housing for the needy as well as snow-clearing from roads.

Community development project

We donated our built Multi-purpose Healthcare Center equipped with bathrooms, dry sauna rooms and fitness center, to the community, so that the neighboring residents may enjoy their free time. For fuel, as we provide circulated heat from our process along the pipes connected to the center, there is no worry for expenses.

This center is directly operated by the community, which means the profit returned to them, for the purpose of resident welfare promotion and local development.

Status of monetary donation of community development (Unit: KRW 1,000)

Type	2009	2010	2011
Amount	232,970	456,663	247,923



Multi-purpose Healthcare Center



Making flower bed around streams



Donated wheelchairs to a sanatorium

Buy-community agricultural products movement

Since 2008, we are running the section of Buy-community agricultural products within the cafeteria, where advertised and sold to our employees as well as visitors. Our foundation day gifts and the ingredients at the cafeteria are bought from the neighboring areas, which contributes to community development.



Buy-community agricultural products section

Ingredients purchased by our cafeteria

Type	2009	2010	2011
Food expenses	144,267	161,373	213,578

(Unit: KRW 1,000)

Communication with community

For communication with community residents, Asia Cement has periodically held a gathering with a local development committee since 1973, through which we can identify and solve the current issues. Besides, we are making warm-hearted community where the company and the residents go along through the heads of local government gatherings and the various village events.

Education/Culture

Following up the intention of our deceased chairman, Lee Dong-nyeong who had much interested in education, we have established and operated the education/culture foundation and scholarship committee, in order to discover/nurture creative human assets as well as to improve regional education that falls behind.

Status of education/culture fund donation

Type	2009	2010	2011
Scholarship	146,860	141,372	130,164
Development fund	103,000	2,000	2,000

(Unit : KRW 1,000)

To establish education/cultural foundation and give scholarship

We have established the Munchang high school and the Mungyeong Girls' high school in 1956, the Seobong Cultural Foundation and Isong Scholarship committee, that contribute to personnel nurturing and local development with the support of scholarship/development fund to elementary/middle/high schools around our plants and Mungyeong area.



Scholarship grant



Front view of Mungyeong Girls' high school



Lesson at Mungyeong Girls' high school



Seo Bong Short-Distant Marathon Contest

Following up the intention of our deceased chairman, Lee Dong-nyeong who believed the whole-man education in harmony of quality arts and physical education, the Marathon Contest turned its 25th anniversary in 2011, at Mungyeong Civil Stadium where about 500 players and executives participated. We will make effort for the development of Korean Marathon, through new discovery of good players.



Asia Tower, Art Collection

There is art exhibition on the 1st and the 2nd floor of our head office, so that visitors may easily access art every day, raising aesthetic eyes and mitigating their fatigue.

Besides, the stylish works in various forms are making our corporate image more friendly.

Appendix

- _Condensed Balance Sheet
- _Condensed Income Statement
- _Our membership with outside party authorities
- _Current Status of Employee-related reports
- _GRI Index
- _Independent assurance opinion
- _Cases of leak of environment pollutant
- _Environmental proceeding case
- _Legal obedience for environment

Condensed Balance Sheet

Item	2009	2010	2011
Current assets	197,060	190,949	216,905
Noncurrent assets	714,018	754,683	711,814
Total assets	911,078	945,632	928,719
Current Liabilities	66,758	62,998	95,757
Noncurrent Liabilities	125,169	130,655	114,082
Total Liabilities	191,927	193,653	209,839
Capital stock	23,695	23,695	23,695
Other Paid-in Capital	4,395	4,395	4,395
Earned surplus	603,638	599,896	606,498
Other capital structure factor	87,423	123,993	84,292
Total Liabilities and net worth	719,151	751,979	718,880

(Unit: KRW 1 million)

Condensed Income Statement

Item	2010	2011
Sales	280,810	320,755
Cost of Sold Goods	248,020	272,452
Gross Profits	32,790	48,303
General & Administrative Expenses	34,027	40,217
Other Operating Revenues	1,849	909
Other Non-operating Expenses	903	590
Operating Revenues(Expenses)	-291	8,405
Interest Revenues	9,479	6,080
Interest Expenses	3,206	1,973
Loss on disposition of investment in subsidiaries	3,846	
Earnings before corporate taxes	2,136	12,512
Corporate taxes(benefits)	-564	2,961
Net profit	2,700	9,551
Other comprehensive income(loss)	33,867	-40,780
Total Comprehensive Income for the Period	36,567	-31,229

* According to the International Financial Reporting Standards adopted by Korea, we stated the 2-year of comprehensive income statement.

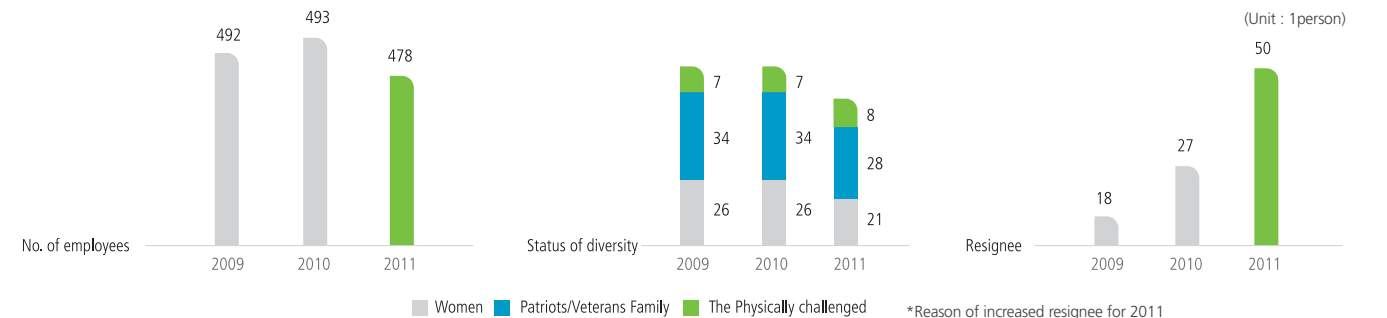
(Unit: KRW 1 million)

Our membership with outside party authorities

Korean Standards Association	Korea Industrial Safety Association	Korea Cement Association	International Management Institute
Korea Productivity Center	Korean Recycled Construction Resource Institute	Korea Fire Safety Association	Korea Mining Association
Federation of Korean Industries	Korea Federation Ready Mixed Concrete Industry Co-Operatives Intranet	Korea Chamber of Commerce	Korean Society of Concrete
Architectural Institute of Korea	Korea Radioisotope Association	Korea Society Of Waste Management	
Korea Chemicals Management Association	Korea Aggregates Association	Korea Conformity Laboratories	

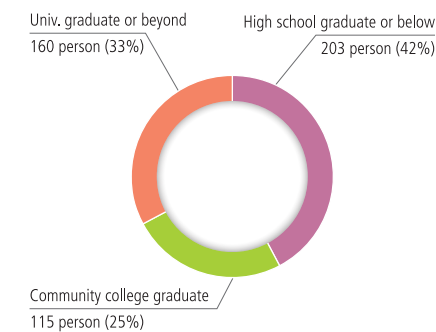
Current Status of Employee-related reports

Asia Cement seeks happy business place where everybody is happy to work for, making effort to raise the value of individual and organization through natural communication channels. In turn, we have contributed to local economy as a small but happy and rich-felt business place where 478 employees are characterized as 17-year of continuous service at average and the working from fathers to son, as of the end of 2011(Workers from community account 72% at the Jecheon Plant). Besides, we comply with labor law, without discrimination treatment to women, sweating or other illegal labor behavior.

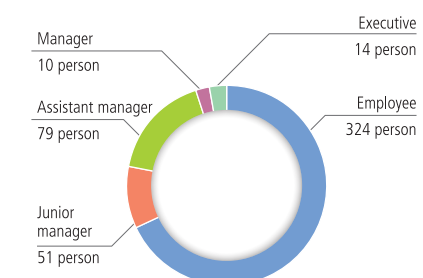


*Reason of increased resignee for 2011
1 Increased persons who left due to integration into Jecheon Plant
2 Increased retired persons (age)

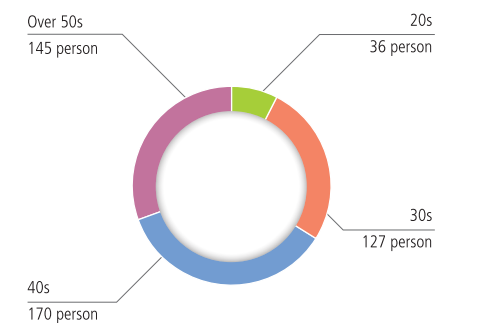
Status of personnel by academic background



Status of personnel by position level



Status of personnel by age



GRI Index

● : Complete report ● : Partial report ○ : Non-reported N/A : N/A

Indicator	Description	PAGE	Reporting ratio	Remarks
1. Strategy & Analysis				
1-1	Statement made by top decision-maker on the relation between the reporting organization, strategy and sustainability	2, 3	●	
1-2	Description of key impacts, risks, and opportunities	3, 37	●	
2. Organization and Profile				
2-1	Name of Organization	4	●	
2-2	Representative brand, product and service	6	●	
2-3	Organizational structure of main business division, company and subsidiaries	4, 5	●	
2-4	Locations of Head office / Division	4	●	
2-5	Number of countries where our business takes place, Name of countries that are connected to sustainability issues handled by the report	5	●	
2-6	Characteristics of ownership structure and legal type	16	●	
2-7	Target market(Classification by region, business area, customer/profit gaining party type)	5	●	
2-8	Size of reporting organization	4	●	
2-9	Material changes in size, structure or ownership structure during the reporting period		●	No material change during the reporting period
2-10	Award history during the reporting period	9	●	
3. Report parameter				
3-1	Reporting period(e.g.: Fiscal year/Calendar year)	0	●	
3-2	Date when the most recent report published		●	It is the first report
3-3	Reporting period	0	●	
3-4	Contact point of report and the related contents	0	●	
3-5	Report contents identifying process	11	●	
3-6	Reporting boundary	0	●	
3-7	Scope of report	0	●	
3-8	Reporting standards that may greatly influence on comparability of period or between the organizations, such as joint company, subsidiary, lease and outsourcing.	0	●	Does not include an organization that makes big influence on the comparability
3-9	Data measuring method and calculation standards including the assumptions and methods that support estimates such as performance indicators applied to information gathering process		●	The economic performance is reported according to K-IFRS, the Energy / GHG for Environment related performance according to the goal management standard, and the environmental data reported according to the measurements as it is the first report
3-10	Reason and Effect of re-description of information presented in the previous report		N/A	as it is the first report
3-11	Material changes of scope, boundary and measuring method in the report compared to the previous reporting period		N/A	as it is the first report
3-12	Table in the report that shows the location of standard disclosures	68-71	●	
3-13	Verification and Assurance	72-73	●	
4. Corporate governance				
4-1	Corporate governance	16	●	
4-2	Whether the chairman of board of directors holds an executive position as well	16	●	
4-3	The number of members of board of directors	16	●	
4-4	Mechanism where stockholders and employees advice board of directors	17	●	
4-5	Remuneration for board of directors, high-level manager and executive and the relations between the organization and performance	16	●	
4-6	Process to prevent interest conflict within the board of directors	17	●	
4-7	Process that determines the expertise standards and the qualifications of members of board of directors, in order to help economic/environmental/and social strategies	16	●	Refer to careers
4-8	Statement, code of conduct and principle that state the internal mission/core value, with relation to economic/environmental/and social activities	14	●	
4-9	Procedure of board of directors that identifies and manages economic/environmental/and social performance	18	●	
4-10	Process that assess the performance of board of directors such as economic/environmental/and social performance	18	●	
4-11	Whether to adopt the principles of prevention and how to approach	18	●	
4-12	Outside initiative that joins or supports, such as economic/environmental/and social charters or principles	46	●	Complies the international principles such as ILO, having jointly declared the national safety campaign
4-13	Status of membership of nat./int. associations and organizations	66	●	
4-14	List of engaged interested party group	10	●	
4-15	Identification and selection criteria of interested party engagement	10	●	
4-16	Status of engagement of interested party such as engagement type and frequency by interested party group	10	●	
4-17	Key themes and interested issues raised through interested party engagement, as well as the actions plans	11	●	

● : Complete report ● : Partial report ○ : Non-reported N/A : N/A

Type	Item	PAGE	Reporting ratio	Remarks	
Economy Sector					
	DMA	13	●		
Economy performance	EC1	Creation and distribution of direct economic value (e.g. : profits, operating expenses, donations, investment in community, retained earnings, payment to fund providers, taxes, etc.)	15	●	Environment Sector
	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	37	●	
	EC3	Scope of pension provided	57	●	
	EC4	Government subsidies received		○	
Market position	EC5	Ratio of salaries to new employees, compared to legally lowest salaries at local business places		○	
	EC6	Local purchase policies, practices and ratio of main business places		○	
	EC7	Local people preferred hire procedures and ratio of senior managers locally employed at main business places	67	●	There is no local preference hire policy.
Indirect economic impacts	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or probono engagement	62, 63	●	
	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts		○	
Environment Sector					
	Environment DMA	29	●		
Ingredients	EN1	Ingredients usage based on weight or volume	41	●	
	EN2	Ratio of used recycled ingredients	36	●	
Energy	EN3	Direct energy consumption per the 1st energy source	38	●	
	EN4	Indirect energy consumption per the 1st energy source	38	●	
	EN5	Energy amount saved by saving and improving efficiency	39, 40	●	
	EN6	Reduced energy through business and effort to supply energy efficient or recyclable product/service	27	●	
	EN7	Direct energy saving projects and their performance	41	●	
	EN8	Total water per source	34	●	
Water	EN9	Water supply source that greatly influenced by water sourcing		N/A	There is no water source that greatly influenced by water sourcing
	EN10	Total amount and ratio of reused or recycled water	34	●	
Biodiversity	EN11	Location and Size of protection zone, high biodiversity area and the neighboring land owned, rent or managed by use	35	●	
	EN12	Influence on biodiversity of activity/product/service at protection zone and high biodiversity area	35	●	
	EN13	Protected or recovered habitats	35	●	
	EN14	Strategy, actions and plan to manage biodiversity	35	●	
	EN15	International and national endangered species that live in the business impact areas	35	●	
Air emissions, Waste water, Waste	EN16	Total direct/indirect GHG emissions	38	●	
	EN17	Other indirect GHG emissions		○	
	EN18	GHG reduction project and performance	38	●	
	EN19	Ozone destructive material emissions		N/A	ODS material not used in our process
	EN20	NOx, Sox and other major air pollutant material emissions	32, 33	●	
	EN21	Total waste water emissions and water quality per the final emission site	34	●	
	EN22	Waste emissions by type, method and treatment method	36	●	
	EN23	The number of hazardous materials outflow and its quantity	74	●	
	EN24	Ratio of waste sent to overseas as well as transport/in and out/ treatment quantity as defined by the Basel Convention		N/A	
	EN25	Our waste water emissions influenced water area, the name of the related habitats, size, protection status and biodiversity value		N/A	There is no waste water in our Cement and ready-mixed concrete processes
Product	EN26	Product and service environment impact reduction activities and performance	27	●	
	EN27	Ratio of recycling of sold products and packages		○	
Law	EN28	Penalty amount imposed by environmental law and the number of non-monetary restrictions	74	●	
Transport	EN29	Material environment impact of product, raw material and personnel transport	41	●	
Overall	EN30	Total amount of expenditures and investments in relation to environment protection	29	●	

GRI Index

● : Complete report ● : Partial report ○ : Non-reported N/A : N/A

Type	Item	PAGE	Reporting ratio	Remarks
Labor conditions				
Employment	LA1	67	●	
	LA2		●	
	LA3	57	●	
Labor-management relations	LA4	55	●	
	LA5		●	Any material issues will be reported at least 30 days before
Safety and Health	LA6	55	●	
	LA7	43	●	
	LA8	47-49	●	
	LA9	55	●	
Training	LA10	51, 53	●	
	LA11	52, 53, 57	●	
	LA12	54	●	
Diversity and equal opportunity	LA13	67	●	
	LA14		○	
employment	LA15		○	
Human Rights				
Investment and sourcing	HR1		○	
	HR2		○	
	HR3		○	
Non-discrimination	HR4	67	●	No cases of discrimination
Gathering	HR5	55, 56	●	
Child labor	HR6	67	●	
Compulsive labor	HR7	67	●	
Safety practices	HR8		○	
Native rights	HR9		○	
Assessment	HR10		○	
Improvement	HR11		○	

● : Complete report ● : Partial report ○ : Non-reported N/A : N/A

Type	Item	PAGE	Reporting ratio	Remarks
Social Sector				
Local community	SO1	35, 63	●	
	SO2		○	
Corruption	SO3		○	
	SO4		●	There is no corruption case found
Public policy	SO5		○	
	SO6		○	
Competition inhibited	SO7		○	
Legal compliance	SO8	74	●	
Community	SO9	74	●	
	SO10	32-35, 62, 74	●	
Product Liability				
Customer health and safety	PR1	24	●	
	PR2	74	●	
Product and service labeling	PR3	24	●	
	PR4	24	●	No violation of rules found
	PR5	25	●	
Communication through marketing	PR6		○	
	PR7		○	
Customer information	PR8		○	
Legal compliance	PR9		●	There is no violation of laws or rule, with relation to product/ service information and labeling

Independent assurance opinion

To interested parties of Asia Cement

Korea Productivity Center(herein referred to after assurance provider) was required to submit the independent assurance opinion as written below, on the Sustainability report of Asia Cement, 2011(herein referred to after Report).

Responsibility and Independence

Asia Cement shall be entirely responsible for information and opinion described in this report. We, as the assurance provider herein shall be responsible for its verified opinion on the report, but we do have any interested relation that may influence on its independence and have not related with preparing this report, as an independent verification authority.

This assurance was made based on the AA1000AS(2008), according to the Type 1 assurance and the Moderate level. According to the assurance principles AA1000APS(2008), we checked the compliance for comprehensiveness, importance and the principles of matching. As well, we checked this report complies with the GRI G3.1 Guideline.

Standards of assurance

The assurance was made on the outcome for the year of 2011, according to the assurance standards above, not including that on reliability of a certain data such as financial outcome, environment data(such as GHG), web site and linked information. In addition, as the Jecheon Plant of Asia Cement has performed the field assurance, we herein disclose that the results can be different if there will be additional assurance procedure on branch Plant and Distribution Center in the future.

Constraints

The assurance was made on the report through the following methods.

1. We checked if the company complies with the report contents and the principles of quality, based on the GRI G3.1 Guideline.
2. By checking the reporting ratio and the description method on each indicator of the GRI G3.1 Guideline, we checked if the company has met the requirement of the GRI Application level B. Partially omitted or none of indicators, we marked on the GRI indicator.
3. Through media research and benchmarking analysis, we checked if the main issues on this report have been properly selected and described.
4. We inspected the compliance and the expressional errors on this report, through the comparative analysis of other sources.
5. The assurance provider verified that this report sincerely and fairly reflected the statement of continuous activities and outcome of Asia Cement.

Assurance method

Recommendations In addition, the assurance provider verified that this report has met the requirement of GRI Application level B declared by Asia Cement.

1. Inclusivity : Interested party engagement

Inclusivity refers to the principle to ensure interested parties engagement in the course of a organization developing and achieving responsible and strategic countermeasures for sustainability. Through this assurance, we found out that Asia Cement has been making effort to comply with the principle of inclusivity. We found that Asia Cement classified its interested parties as customer, subcontractor, executive and employee, government, stockholder and investor, incorporating the comments and opinions from its interested parties through various communication channels in its implementing sustainability management. Through customer satisfaction survey, visit and web site, Asia Cement has incorporated opinions from customers into its internal policy. As well, we found that Asia Cement held council to incorporate grievances from subcontractors, and identified and took actions the community issues through gatherings with local development committee on a regular basis, continuously communicating with its internal/outside interested parties via online and offline. However, it is recommended that the company encourage more outside party interested parties such as government agencies, industry and experts engage as well as operate its communication channels with interested parties in more systemic way, in order to manage the opinions from interested parties in more systemic method.

2. Materiality : Selection and report of main issues

The principle of materiality indicates that the decision will have to be made on the issues important and relevant to major interested parties of the organization. Through this assurance, we found that Asia Cement has selected key issues relevant to its organization through reasonable materiality assessment method. Especially, the fact that the company has actively identified using various methodologies such as questionnaire survey, interview with executives, media research, benchmarking analysis and global standards analysis, tells us that the company has a good will to implement sustainability management, in its checking the related issues for the first-time for this report. Such identified various issues have been selected as key issues through materiality

assessment, and we found that most of key issues have been reported on the report. It is recommended that the company establish the interested party management system, so that it would continuously manage various issues in more details related to Cement industry and sustainability management in the future.

3. Responsiveness : Organizational response to issue

The principle of responsiveness indicates that the company shall respond to the issues that may influence on the outcome of interested parties. Asia Cement has aggressively responded to various issues identified by its communication with interested parties, and the outcome of such response can be seen on this report.

Especially, it is decided as excellent in the fact that the company has classified into 6 sectors(including economy, environment and employee) and divided such results into strategic directions, principle and Main Outcome on DMA(Disclosure on Management Approach) for strategic reporting of the responsiveness outcome. We found that the key issues from the materiality assessment have been uniformly reflected on the report. For Community with community issue among the issues, we found that there has been the effort of social contribution activity and communication of the company, as connected to the characteristics of the industry, such as the donation of Cement for the charity and the built Multi-purpose Healthcare Center. However, it is recommended the company report the specific outcome in details for Eco-friendly product development issues such as Eco-cement, low carbon low heating binder, planting concrete. In the future, it is recommend that the company analyze risk and opportunity factors according to its business strategy, clearly set up KPI and goal according to the sustainable strategy, and drive the systemic sustainability management through continuous monitoring such as outcome indicator and issues.

Recommendations The assurance provider highly assesses the various effort and outcome of Asia Cement to enhance sustainability, and recommends the company as follows to increase the level of sustainability management and the report publication in the future:

1. In order to implement the sustainability in more organized way, we recommend that the company set up the sustainability-related strategy, manage the outcome the goal and run a separate organization(e.g.: Sustainability Management Committee) that will report and manage to the top-level management.
2. We recommend that the company disclose the level of sustainability management and what to improve on the report, after finding them through various engagement opportunities(such as meeting, interview) with outside party interested parties including industry, NGO and experts group.
3. We recommend that the company establish the sustainability-related outcome indicator manageable on an intermediate and long-term level and make it the scale to annually assess the level of such achievement. Further, it is recommended to consider other comparable outcome indicators such as KRW won unit and product unit with other companies as well.
4. We recommend that the company maintain more various sustainability-related outcome indicators through the enterprise-wide integrated system, and use them in preparing the report.



Kim Dong-su,
Director of Center



Seo Jeong-seok,
Team Chief

Korea Productivity Center,
Chairman Jin Hong

진홍

Park Ju-mi,
specialized member

ju-mi

The Sustainability Center of Korea Productivity Center is a assurance authority officially certified by Accountability, the enacting agency of global international standards AA 1000 for interested party engagement and assurance, and is licensed to provide independent assurance service. As well, the assurance committee is composed of experts who have accumulated their experiences in sustainability counseling and assurance and completed specialist education.

Cases of leak of environment pollutant

Case. 1 bituminous coal emission accident

Around at 05:45 on February 20, 2011, the Coal Mill #1 B/F House was burt and damaged, where about 1 ton of pulverized coal has scattered to Ipseok 1 and 2-ri village as well as our Plant(from Co/Mill to front gate) for 10 minutes. Investigation results revealed that the accumulated fine particle between the lags(glass wool and tin) wrapping the pipes and the holes caused by worn duct curved part at the gate of bituminous coal grinder, which caused spontaneous combustion. Fire-flakes were suck into the filter, when the fire took place and the filter broken. This made bituminous coal fallen to Ipseok 1 and 2-ri village, roads, roofs and cars. Immediately after the accident took place, we had recovered the damage within 1 week through emergency network and emergency office. Then, Asia Cement has set up and implemented to prevent the reoccurrence of the same accident.



Case. 2 Leak of Ready Mixed Concrete water

As of May 15, 2011(dawn time) at Yongin Plant, water containing sludge of Ready Mixed Concrete water tank had run off to the neighboring stream, by about 7 tons. Immediately after the accident, we operated emergency network and cleaned using the excavator and personnel. The cause was that a worker did not turn off the switch and the pump continued to run. We took actions of installing the sensors onto the water tank, being automated to stop at the level of danger, we inspected and supplemented to prevent reoccurrence as well other plants for TPM diagnosis for the second quarter.

Environmental proceeding case

This case is 114 residents living near the construction site against Asia Cement, Korail, Hyundai Cement due to noise, dust, health and property damages that require people filed to the National Environmental Dispute Resolution Committee. The local residents have required KRW 167 million for the damage. As a result, the National Environmental Dispute Committee ruled more than 10 years residents of 16 people asked to pay back KRW 125 million. However, in the worldwide, there are no confirmed cases of fine dust hazards arising from the cement factory and the health impact assessment for residents who filed the lawsuit is underway to make hazard of fine dust and noise from cement factory sure. Currently, the Asia Cement have filed a non-existing liabilities lawsuit with the Seoul Central District Court on. Also, 40 local residents indemnity of KRW 362 million, has filed a civil lawsuit against Asia Cement and Hyundai Cement.

Legal obedience for environment

As the request of the local residents, Asia Cement Jecheon plants had measured noise. As a result, the noise from the lot lines exceed the standards. Because it had to work late at night. After noise exceed problem, Asia Cement had been working on noise improvement during 2 years. The result of the operation, the noise from the lot lines than the standard value measured low. also, we had leak accident of ready mixed concrete water at Yong-in plant. Asia Cement with respect to safety, health, fire management has not been detected by external inspection. Asia Cement also has not been due to administrative penalties.

(Unit : KRW 1,000)

Type	2009		2010		2011	
	Number of violation	Fine/Penalty	Number of violation	Fine/Penalty	Number of violation	Fine/Penalty
Jecheon plant			1	800		
Yongin plant					1	13,000



Asia Cement sustainability report

This report is downloadable on our web site(<http://www.asiacement.co.kr>)

For comments or questions on the sustainability report, please contact us:

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This report is printed with soy-based ink on environment-friendly paper.