

Sustainability Report 2009

# Foundations



- Company and innovation
- Environment and resources
- Employees and society

**HEIDELBERGCEMENT**

# Preface



Dear readers,

Sustainability, due to its long-term perspective, provides an important foundation for companies, especially in times of deep global financial and economic crisis. Our industry, with investment cycles stretching over 20 years or more, is geared towards the long term. The acquisition of the building materials manufacturer Hanson in 2007 and its extensive raw material supplies with an average range of 55 years, makes this obvious.

The present report on the years 2007/2008 shows considerable progress in the central areas of our sustainability strategy. With regard to climate protection and the preservation of resources, we have clearly surpassed our goals in part. We had committed ourselves to reduce our specific net CO<sub>2</sub> emissions by 15 % by 2010, compared with 1990. In 2008, a reduction by 18% had already been achieved. Regarding the use of alternative fuels, we continue to be the front runner in our industry with a proportion of 17.5 %. When it comes to the renaturation or recultivation of the quarries we strive to enhance biodiversity. By formulating Group-wide standards, HeidelbergCement strives to confirm its leading role in the promotion of biodiversity. The goal of “more sustainability” also applies to our product development: With innovative products we make substantial contributions to sustainable construction.

But sustainability as a safeguard to our future viability also includes the assumption of social responsibility. Our social responsibility is oriented regionally or locally, due to the strong ties with the locations at which we operate. According to our corporate philosophy “think global – act local”, it is therefore a central task of our local management. Worldwide, we rely on committed and qualified employees. The establishment of local management teams and consistent training and development of employees as well as the expansion of occupational health and safety are of highest significance. Furthermore, in 2008, the successful integration of over 20,000 Hanson employees in 15 countries was the focus of our activities. With the revision of our Leadership Principles and the further development of our compliance programme, we have adapted the framework for responsible action and have embedded additional points that are of central importance. The high degree of commitment and loyalty of our employees has proven to be especially valuable in the challenging times of today. Our thanks and appreciation go to them and the employee representatives, with which we traditionally work together in a constructive manner.

Much has been achieved, and we have made considerable progress on our way towards more sustainability in the last two years. We will continue to build on this foundation. Our Sustainability Ambitions 2020 describe the measures and goals in this respect. We will report on this matter in a regular and transparent manner.

Heidelberg, August 2009

A handwritten signature in black ink that reads "Bernd Scheifele". The signature is written in a cursive, slightly slanted style.

On behalf of the Managing Board  
Dr. Bernd Scheifele  
Chairman of the Managing Board

# About this report

**This Sustainability Report describes how HeidelbergCement puts sustainability into practice and accepts its responsibility to society. The report is entitled "Foundations", because it describes our commitment to the foundations of our business success: economic, ecological and social responsibility.**

## **Aim**

The report is aimed at our investors, suppliers and customers, employees, politicians, non-governmental organisations and authorities, as well as the people at the locations where we operate. In the report, we explain the fundamental challenges of sustainability, which are closely linked to our core business, and present our economic, ecological and social performance in a transparent and self-critical manner.

## **Scope of the report**

The 2009 Sustainability Report relates to the 2007 and 2008 financial years. It primarily covers the cement business line, as we are continuing to focus on making the processes involved in our cement production as efficient and sustainable as possible. For the first time, we will also report on several aspects of the aggregates business. A comprehensive reporting system is currently being set up and is expected to provide important data for the next Sustainability Report in 2011. The concrete business is not considered as its production, in comparison, has only a minor impact on the environment. In calculating the indicators, we have followed the consolidation rules that also apply to the Annual Report. For the environmental data, we have applied the calculation methods of the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD).

## **Reporting standards**

HeidelbergCement's Sustainability Report 2009 applies the guideline of the internationally recognised Global Reporting Initiative (GRI G3). In doing so, we make it easier to compare our performance with that of other companies. In addition, we take into account requirements of rating and ranking organisations as well as suggestions from stakeholders and media analyses.

## **Editorial notes**

This Sustainability Report is available in German and English. Following the two-year reporting cycle, the next printed Sustainability Report will be published in 2011. We also report continuously on our progress and publish important key figures on our website [www.heidelbergcement.com](http://www.heidelbergcement.com).

# Achievements and challenges

## Achievements

- Successful integration of Hanson
- Stabilisation of independent compliance management
- Further development of our Leadership Principles with special emphasis on our responsibility for sustainability
- Commitment to the ILO core labour standards and the OECD guidelines for multinational enterprises
- Successful implementation of Group-wide succession planning and of a concept for talent management
- Reduction of the accident frequency rate by 58 % and of the accident severity rate by 30 % since 2005
- Introduction of a uniform corporate policy on occupational safety in the use of third-party services in the beginning of 2008
- Introduction of a corporate policy on “Working at heights” in the middle of 2008
- Formation of the corporate department Global Environmental Sustainability in 2008
- Guideline for the promotion of biodiversity introduced for European locations
- Industry leader in the use of alternative fuels
- Reduction of the specific net CO<sub>2</sub> emissions by 18 % since 1990
- Reduction of the clinker content in cement to 75 %
- Reduction of specific emissions of dust by 35 %, of nitrogen oxides by 19 % and of sulphur oxides by 30 % since the year 2000

## Challenges

- 21 fatal incidents in 2008 (involving five internal employees, eleven employees from external companies and five external persons)
- Staff reduction in North America and the United Kingdom
- Antitrust proceedings against companies in the German cement industry still pending; damage claim against six companies in the cement industry, including HeidelbergCement, Germany
- Identification and review of human rights aspects concerning investments could not be achieved by 2008. We intend to implement an appropriate identification and review system over the next years

# Contents

<b>Company portrait</b>	<b>2</b>
Core activities and organisational structure	2
Cement and aggregates – production and use	3
<hr/>	
<b>Strategy and management</b>	<b>4</b>
Responsible corporate governance	4
Sustainability strategy	5
Sustainability management	7
<hr/>	
<b>Company and innovation</b>	<b>9</b>
Markets and market partners	9
Research and innovation	13
<hr/>	
<b>Environment and resources</b>	<b>16</b>
Energy and climate protection	16
Raw materials and fuels	18
Effects on the local environment and biodiversity	20
Emission reduction	22
Sustainable construction	23
<hr/>	
<b>Employees and society</b>	<b>26</b>
Work environment	26
Occupational health and safety	29
Social responsibility	31
Partnerships and dialogue	32
<hr/>	
<b>Data and goals</b>	<b>36</b>
Facts and figures	36
Goals and measures for more sustainability	44
GRI Content Index	46
Glossary	48
Imprint	49







## Core activities and organisational structure

**HeidelbergCement operates on five continents as a fully integrated building materials company and currently employs around 57,000 people. Our core activities include the production and distribution of cement and aggregates, the two essential raw materials for concrete production. We supplement our product range with downstream activities such as the production of ready-mixed concrete, concrete products and concrete elements, as well as other related building materials and services.**

Cement and aggregates form the basis of our dual raw materials and growth strategy. In the cement activities, the focus is on growing markets, while in mature markets we concentrate on expanding vertical integration and securing raw materials for aggregates production.

The company is geographically divided into the three Group areas Europe, North America and Asia-Australia-Africa. HeidelbergCement relies on an integrated management approach. Its success is based on a balance between local responsibility for the business, Group-wide standards and global leadership.

### **Changes since the last Sustainability Report**

- The purchase of the British building materials manufacturer Hanson in August 2007 significantly strengthened HeidelbergCement's positions in the aggregates business. Besides numerous locations in the US and United Kingdom, new aggregates and ready-mixed concrete locations have been added, e.g. in Australia and Spain.
- We have pressed ahead with the construction and expansion of cement plants in China, Turkey, Russia, Kazakhstan and Georgia.
- By investing in the modernisation and expansion of the production facilities, e.g. in Hungary, Romania, the Czech Republic and Georgia, we were able to increase the use of alternative fuels.

# Cement and aggregates – production and use

## Cement

Cement is used as a binder for the production of concrete and mortar. Depending on the area of application, different types of cement, each with its own specific composition, are needed. The properties can also be varied by using additives.

The most important raw materials for the production of cement are limestone, clay and marl. They are extracted and crushed in quarries and transported to the raw material storage halls of the cement plant, where they are stockpiled and homogenised in mixing beds.

After adding silica sand and iron ore, if required, the mixture is ground to a flour-like consistency and dried using the hot exhaust gas from the burning process. The raw meal is then burned at 1,450 °C to form cement clinker, the most important intermediate product. After it has cooled, the clinker is ground into cement, with gypsum, anhydrite and, in some cases, other grinding additives added.

The finished product is transported over land or by water, mainly in bulk. A small proportion of the cement is shipped to the customers in bags.

## Aggregates

Aggregates, i.e. sand and gravel, as well as crushed stone and grit, are among the most commonly used building materials. The raw material for sand and gravel can be found in the vicinity of current or former riverbeds and is extracted using a dry or wet mining process. It is then transported via conveyor belts, pipelines or ships to the river bank, where the raw gravel is stored. The material is washed and separated into particle sizes. Sand and gravel are the primary aggregates used in the production of ready-mixed concrete, precast concrete parts and asphalt. The main starting materials for crushed stone and grit are hard rocks such as granite, basalt or limestone. The raw material is extracted in quarries by means of drilling and blasting and mechanically crushed to different sizes in crushers. The end products are used directly in road and rail construction or in landscaping and gardening, as crushed stone or grit.

The end products – sand, gravel, grit and crushed stone – are shipped to the customer by truck, train or ship. As aggregates are used worldwide but not all countries have the necessary deposits, particularly of hard rock, aggregates are also traded internationally.

---

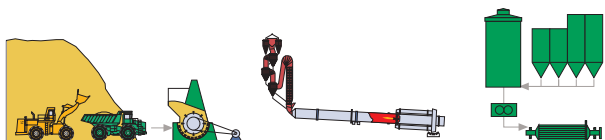
## Raw materials for concrete

### Cement production

Quarry

Burning

Cement grinding



### Extraction of aggregates

Quarry pond

or

Quarry/  
sand and gravel pit







# Strategy and management



## Responsible corporate governance

**The commitment to sustainable development is a pillar of HeidelbergCement's corporate strategy. The creation of economic value, ecological competence and social responsibility secure the company's future viability. This commitment, implemented through guidelines and global standards, unifies our locations around the world. Shared, Group-wide values bring our employees together – even across continents – despite different cultures and backgrounds.**

### **Guidelines for our actions**

The Corporate Governance Principles are the foundation for responsible and transparent corporate governance at HeidelbergCement. With our Group-wide guidelines and requirements, we create clear parameters for all areas of the Group. Our Code of Business Conduct, together with the Leadership Principles, sets standards for the behaviour of all employees and forms the basis for a uniform management culture within the Group.

Following the takeover of Hanson, we adapted the Leadership Principles to reflect both business cultures. As part of the integration process, we ascertained the shared values of both companies and found a high de-

gree of correspondence in the fundamental aspects of management and leadership. The new Principles define the Group management's expectations of leadership and management in the Group. The inclusion of a separate "Sustainable development" chapter means that our duty to ensure health and safety at the workplace and our commitment to environmental protection and accepting our social responsibility at our sites are now also anchored in the Leadership Principles.

All Group guidelines and the values described within them commit us to responsible corporate governance. They safeguard the integrity and transparency of our business activities as well as the personal conduct of our employees.



# Sustainability strategy

**The central parts of our sustainability strategy are derived from our core business and its effects on the environment and society.**

## **Action areas for sustainability**

For us, sustainable development means ensuring a balance between making profit and securing future viability through good corporate governance. We therefore strive to act in a socially and ecologically responsible way, considering the needs of society as a whole. Our sustainability strategy and the main topics it covers are derived from our corporate profile: We take into account the effects of our entrepreneurial activity on society and thereby reduce the risks for our business. We utilise our core competences in such a way that they provide added value for society and generate economic opportunities for us.

The focal areas of our sustainability strategy are defined by our core business: climate protection, use of raw materials and fuels, environmental and social impact at our locations, and occupational health and safety. Other topics are connected with our international presence. The diversity of the cultures and traditions of our approximately 57,000 employees implies individual tasks and challenges at our locations throughout the world.

Our Sustainability Ambitions 2020 clearly define the long-term nature of our commitment. It is the primary instrument that we are using to manage our measures to increase sustainability. We regularly investigate whether we have achieved our goals and which measures have been implemented, and we establish the milestones for the next stage on our way towards sustainability. Regarding the six focal topics, we are taking consistent steps along the path we have mapped out in order to further increase sustainability within our company and thereby secure its future viability.

## **Occupational health and safety**

Our commitment to occupational health and safety has the highest priority and is an integral part of all our business activities. With our guideline on occupational health and safety we establish high standards and management systems Group-wide. We are continuously striving to improve occupational health and safety throughout the whole Group. Our objective is to minimise the risk of accidents and injury, as well as the risks of occupational illness, by means of increased preventive measures.

## **Energy and climate protection**

HeidelbergCement places climate protection, one of the most important global challenges, at the center of its environmental protection activities at its operations. As an energy-intensive industry contributing significantly to emissions of greenhouse gases, we have made a commitment to reducing our CO<sub>2</sub> emissions. We focus on attaining the highest possible efficiency in our production facilities and promote the replacement of primary raw materials and fuels with alternative ones.

## **Biodiversity**

HeidelbergCement is committed to its pioneering role in the preservation of biodiversity at quarries and aggregates pits. In all our quarries we create habitats for animal and plant species that are increasingly being displaced from modern agricultural landscapes.

## **Sustainable construction**

Thanks to targeted research, HeidelbergCement is able to offer innovative building products that have a sustainable positive effect on the wellbeing of society and the environment. We also promote the exchange of experience relating to environmentally friendly and energy-efficient



building and are involved in relevant research activities worldwide. The increased use of recycled materials is a particularly important area of development that preserves primary resources.

#### **Use of alternative raw materials and fuels**

In order to preserve natural resources, we are making increasing use of by-products and waste materials from other industries. The replacement materials are either used as raw materials or replace fossil energy sources in the burning process. We are taking a leading role in our industry in the use of alternative fuels.

Strict observance of specific guidelines guarantees environmental protection, the health and safety of our employees and all other people present at our locations, and the quality of our products.

#### **Reducing other environmental impacts**

We are also aiming to secure a leading position in the reduction of other emissions, such as dust, nitrogen oxides and sulphur oxides. By using modern technologies and optimising our production processes, we reduce the impact on the environment. The results of our measures are quantified, monitored and documented regularly.

### **HeidelbergCement Sustainability Ambitions 2020**

Our Sustainability Ambitions 2020 set the following focal tasks:

- Giving highest priority to occupational health and safety** → HeidelbergCement strives for zero accidents, injuries and occupational illnesses.
- Protecting the climate** → HeidelbergCement works continuously to minimise its greenhouse gas emissions and delivers solutions for adaptation to climate change impacts.
- Delivering a prominent positive contribution to biodiversity** → HeidelbergCement aims to establish a leadership position in the development of biodiversity at its mining and quarrying sites.
- Working for sustainable construction** → HeidelbergCement works to deliver sustainable building materials, which positively contribute to the welfare of our society and to our environment - during and after their lifetime.
- Using waste as a resource** → By viewing waste and by-products as a resource, HeidelbergCement minimises the use of natural resources and offers solutions for sustainable waste management.
- Further reducing other environmental impacts** → HeidelbergCement aims to be best in class in managing and minimising its environmental impacts.



# Sustainability management

**At HeidelbergCement, sustainability is a core task firmly established in all areas of the Group. Group-wide guidelines set the parameters. To allow efficient implementation, we expanded our sustainability management, which encompasses the whole Group, from the Group management to the individual plants at our locations.**

The Sustainability Committee is responsible for overall management of the activities. It is led by the Chairman of the Managing Board. Its members are the Managing Board member responsible for environmental sustainability, the heads of the Human Resources, Finance, Controlling and Reporting, and Group Communication departments, and the head of the cross-Group area function Global Environmental Sustainability.

## **Environmental protection**

The Group Environmental Sustainability Committee is responsible for improving environmental performance across the Group and safeguarding the Group's positioning as a responsible global player in the long term. Under the lead management of the head of the Global Environmental Sustainability function, established in 2008, experts from the different business lines and Group areas define guidelines, goals and measures, and co-ordinate their implementation. In addition, our environmental performance across the Group is recorded and evaluated at the Heidelberg Technology Center. The reporting is based on the guidelines of the Cement Sustainability Initiative (CSI). Indicators that we have developed together with our stakeholders are also used to assess our impact on the environment.

## **Social responsibility**

The head of Group Human Resources implements the Managing Board's personnel strategy together with the human resources managers of the Group areas and countries. Occupational health and safety is also coordinated by the Group Human Resources department. As part of the comprehensive "Safe work – Healthy life" initiative, which we started in 2007, we have greatly increased awareness of occupational health and safety among our employees by means of strategic measures. Measures were defined via two Group guidelines on the topics of contractor safety and working at heights, and these are now being introduced at our locations.

## **Risk management**

HeidelbergCement is exposed to a variety of risks in its entrepreneurial activity; it does not aim to avoid these risks altogether, but to accept them as long as they are balanced by the opportunities they present. Our Group-wide risk management system is co-ordinated by the Group Insurance & Corporate Risk department and ensures that risk developments can be identified and controlled at an early stage. Risk management systematically records and evaluates all risks that could threaten the existence of the Group, including social and eco-





logical risks, in the various plants and regions. For an energy-intensive company such as HeidelbergCement, the rising fuel and electricity prices, with increasing global competition for natural resources, represent a considerable risk, for example. Our risk portfolio also takes into account the risks of climate change and the costs of climate protection.

### **Knowledge management**

Following the purchase of Hanson and the considerable expansion of our core business in the aggregates sector, we have further expanded our knowledge network. The central component is the Group-wide Intranet page “World of Knowledge” (WOK), which makes the Group’s knowledge available to all our employees. Nearly 2,000 employees now use WOK every month. In the Knowledge Management Board, representatives from the Group areas and the Heidelberg Technology Center regulate the internal knowledge management and support our activities in national and international bodies such as the World Business Council for Sustainable Development or the European cement association CEMBUREAU, as well as in national associations.

#### **PROGRESS**

Formation of the corporate department Global Environmental Sustainability

Implementation of environmental management systems in 72% of the cement plants; this equals to 77.8% of the cement produced

Progress regarding sustainability reporting, such as on data concerning the personnel structure

#### **GOALS**

Successful establishment of the department Global Environmental Sustainability

By 2020, all cement plants are supposed to implement an environmental management system

Expansion of our sustainability reporting to include further social and economic data



# Company and innovation

## Markets and market partners

HeidelbergCement is a globally positioned building materials group with leading market positions worldwide in the core business areas of cement and aggregates, as well as in downstream ready-mixed concrete activities. The company's strength is based on consistent cost management, a vertically integrated business model in almost all important markets, a strong raw material base and a high level of technological competence.

### Our Group areas

HeidelbergCement is divided into the three geographical Group areas Europe, North America and Asia-Australia-Africa, as well as the Group Services business unit.

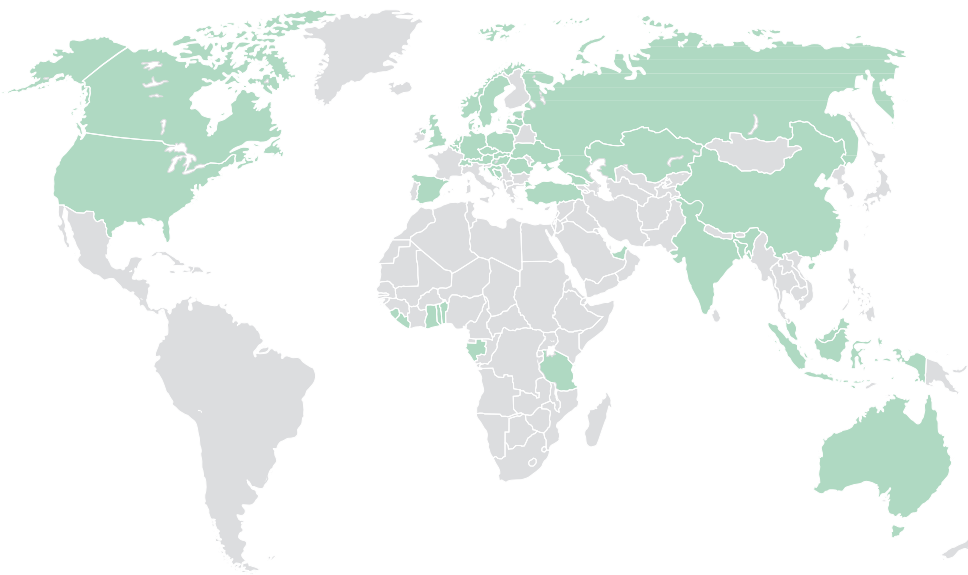
In the Europe Group area, which comprises 23 countries, the integration of Hanson is reflected in the expansion of the aggregates and ready-mixed concrete operating lines in Germany, the Benelux countries and the Czech Republic. The United Kingdom has become considerably more important; it is now the second largest market region in the Group. As a fully integrated building materials company, we manufacture cement, aggregates, asphalt, ready-mixed concrete and various building products there. A new country is Spain. In most of the Group's European countries, HeidelbergCement is the market leader in the cement business.

The United States and Canada form the North America Group area. As a result of the acquisition of Hanson, HeidelbergCement has expanded its market position there considerably and is one of the leading manufacturers of aggregates, ready-mixed concrete, cement, asphalt and building products.

The main addition to the Asia-Australia-Africa Group area as a result of the purchase of Hanson was Australia.

Group Services comprises the activities of HC Trading and HC Fuels. HC Trading primarily trades with cement and clinker and is one of the largest trading companies in the sector. HC Fuels manages worldwide trading in fossil fuels, which are sold to Group-owned and third party companies.





**Good market position thanks to strategic reorientation**

In order to safeguard our market position in the long term, we have reoriented the corporate strategy: Besides the traditional core business of cement, sand and gravel (aggregates) now form a second strategic pillar. By acquiring Hanson, one of the world’s leading manufacturers of aggregates, in August 2007, we improved our position as a globally integrated building materials manufacturer. This

allowed HeidelbergCement to become a global player with a broad geographical positioning and a dual focus on raw materials and products: cement and aggregates.

In 2008, we responded at a very early stage to the economic crisis with capacity adjustments and cost reduction programmes – particularly in the recession markets in North America, the United Kingdom and Spain.

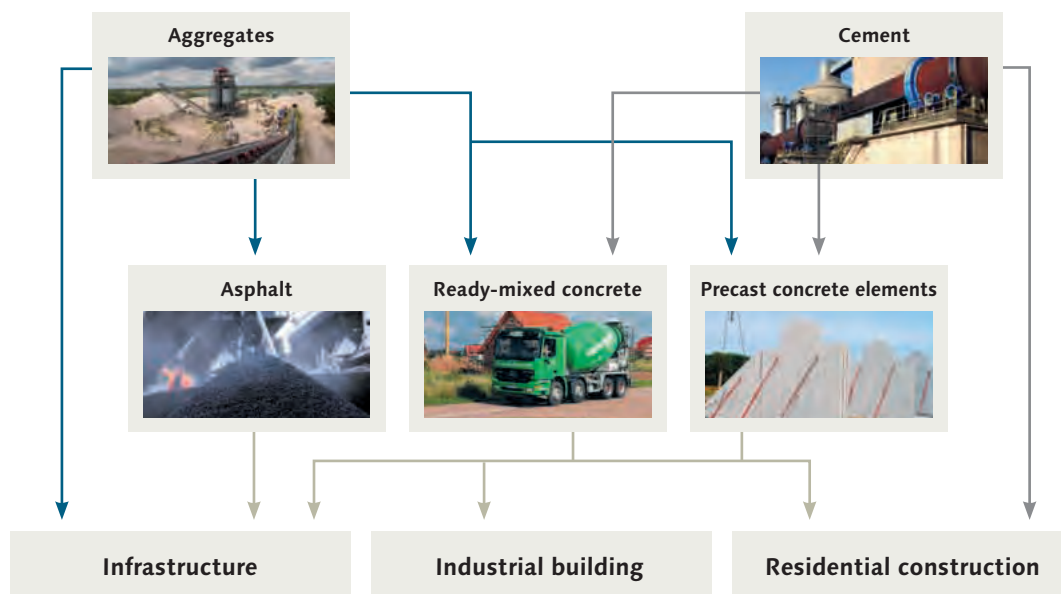
**PROGRESS**

Strategic reorientation as integrated manufacturer of building materials: cement and aggregates  
 Further internationalisation achieved

**GOALS**

Secure our market position in the long term  
 Use investments to modernise our production facilities and to expand their capacity

**Long-term success through vertical integration**







### **Customers**

HeidelbergCement develops, produces and distributes high-quality building materials for customers throughout the world. We are present wherever our customers are, and place a high value on close local co-operation. Long-term customer loyalty is our goal, and we are working continuously to further improve our emphasis on customers. By continually optimising and developing our products and applications, we help to add value, both for our customers and within our Group.

In order to optimise our relationships with our customers, we have developed a new customer survey, standardised across the Group, which we will carry out in pilot countries in 2009 and throughout the Group by the end of 2010. We will use the information from our customers and partners to improve our business processes. The goal is to formulate a country-specific and Group-wide satisfaction barometer that will support the planning process for the marketing and sales strategy and form a basis for internal benchmarking.

### **Suppliers and service providers**

The costs of purchasing goods and services at HeidelbergCement amount to more than 50 % of the total turnover; locally procured goods and services account for around 30 %. The purchasing volume therefore represents a considerable economic factor in many regions.

Group-wide purchasing guidelines give clear instructions regarding the supplier relationships and purchasing activities of HeidelbergCement. As a basic principle, the relationships are based on respect, fairness, ethics and credibility, in line with our Code of Business Conduct. Our sustainable supplier management is centred

on both purchasing costs and the quality and usefulness of the goods and services. Acting responsibly also means taking into account social and ecological criteria.

Each purchasing activity must comply with the relevant laws, particularly the competition laws. Supplier audits are already conducted for certain purchasing regions. As announced in our last Sustainability Report, we have expanded the audits in various regions. These audits are geared towards, but not limited to, certification in accordance with the quality standard ISO 9001, the environmental standard ISO 14001 and the occupational safety standard ISO 18001. Through consistent regional expansion of the corresponding supplier audit, we aim to guarantee the selection of suppliers, on the basis of the same internal and standardised external criteria (ISO 9001, ISO 14001, ISO 18001), on a worldwide scale.

We intend to include ecological and social aspects in our standard contracts, in order to integrate them systematically into our procurement processes. HeidelbergCement's clear strategy of establishing the same standards and rules for collaboration with suppliers throughout the world also applies to sustainability aspects.

### **Compliance programme**

Traditionally, competition in the building materials industry involves only a few large companies with strong market positions in individual regions. In order to counteract the accusations of antitrust law violations that arise time and again, we have considerably tightened our Group-wide guidelines to avoid violations of competition rules and set up an independent compliance management system.



Since the beginning of 2007, the Compliance Group function has co-ordinated the Group-wide efforts to conduct all business activities in accordance with the applicable laws at all times and at all locations. There is also a compliance manager for each country unit. The fundamental elements of our compliance programme are a Code of Business Conduct, conduct guidelines for important compliance areas such as anticorruption and competition, information and training measures, consistent accounting and disciplinary action for compliance violations, a compliance hotline, compliance reporting, and a specific compliance audit integrated into the Group Internal Audit.

In 2008, the e-learning course “Code of Business Conduct/Compliance Principles” was developed for use throughout the Group. To date, it has been used in Germany and in English-speaking countries, and has met with a good response. Over the course of this and next year, the course will be translated into other languages and used in the corresponding countries. The content of this course focuses on anticorruption law. Courses on other compliance topics will follow – initially on antitrust law – and will complement classroom training.

### Ongoing proceedings

The cartel proceedings initiated in 2002 against German cement companies, including HeidelbergCement, are still pending. We appealed against the initial court decision in the middle of 2009. Likewise, no decision has yet been made regarding the action for damages brought by the Belgian company Cartel Damage Claims SA, which is based on allegedly inflated cement prices as the result of a cartel between 1993 and 2002. HeidelbergCement believes that it has a good chance of defending itself successfully against the action. In November 2008, HeidelbergCement was confronted with additional cartel allegations, with reviews conducted by the European Commission at locations in Germany, Belgium, the Netherlands and the United Kingdom. The results of these reviews are not known to HeidelbergCement and are not expected until the second half of 2009 at the earliest. HeidelbergCement’s own investigations into the circumstances have not confirmed the alleged antitrust violations. These and other proceedings motivate us to continuously review and develop intensive internal precautions, particularly regular training measures, in order to avoid cartel law violations.

#### PROGRESS

- Design of a standardised customer survey and implementation in pilot countries
- Purchasing policy with Group-wide validity is being implemented with success
- Review system for our suppliers launched according to social and ecological criteria
- Expansion of the compliance programme

#### GOALS

- Conduct the customer survey throughout the Group by 2010 and develop a customer satisfaction barometer
- Include ecological and social aspects in supplier contracts
- Implementation of the review system across the Group
- Consistent development of the compliance programme



## Research and innovation

The Heidelberg Technology Center (HTC), with locations in North America, Europe and Asia, supports the cement plants in all issues relating to securing raw materials, facility planning, production technology and product quality.

Following the example of this successful model, the Competence Center Materials (CCM) with locations in the Group areas was set up in 2008 for the aggregates, ready-mixed concrete and asphalt activities. Besides providing technological support to the plants, HTC and CCM initiate a continuous improvement process by means of targeted benchmarking as well as process and quality audits. The systematic networking of our experts and an integrated knowledge platform for all research and technology activities ensure that the expertise available worldwide is used effectively.

The research and development activities for cement and concrete are brought together centrally in the HTC Europe. The research requirements and improvement potential are identified and priorities are set, in close consultation with the operating companies. In the area of research, we cooperate with numerous European and American universities. Central to these activities is Nanocem, the best-known research network worldwide in the area of building materials, of which Heidelberg-Cement is a founding member.

One of the main focuses of our research and improvement work is the substitution of alternative raw materials and fuels for energy-intensive clinker and fossil fuels. The increased use of recycled aggregates in concrete production is also an area of development that reduces costs and protects the environment.

### Product innovation for the environment and sustainability

Besides environmentally friendly production, the improvement of binders and applications that contribute positively to environmental protection are a second focal area of research. Our photocatalytically active cement TioCem® breaks down air pollutants, such as nitrogen oxides (NO<sub>x</sub>) and organic substances, under the influence of light.

In the building products sector, we have introduced paving blocks with a drainage function onto the market in Germany and the United Kingdom. These allow rainwater to trickle away quickly, reducing the burden on the sewage system. A new special binder was developed for the use of geothermal probes: With its extremely high thermal conductivity, ThermoCem® ensures the best possible use of the energy from the earth's interior.

#### PROGRESS

Setup of a Technology Center for the field of aggregates  
Solutions for the use of recycled aggregates in the production of concrete

#### GOALS

Intensify research in the area of building materials recycling



“As energy-intensive company, we are challenged in particular to make processes more efficient in order to preserve resources.”

Dr. Wolfgang Dienemann,  
Managing Director of HTC Europe



**Operational strength, the willingness to change and innovative ability form the foundation of every sustainable company. In an interview with **Foundations**, Dr. Wolfgang Dienemann, Managing Director of the Heidelberg Technology Center (HTC) in Europe, talks about the interplay between innovation, growth and sustainability.**

**Foundations:** *Dr. Dienemann, what does sustainability mean to you?*

**W. Dienemann:** For me, it's important to understand the topic of sustainability in a really comprehensive way. The three elements of sustainability – ecology, economy and social responsibility – should be given equal treatment. As a company that relies heavily on raw materials and energy, preserving resources and reducing emissions are of course particularly important issues for HeidelbergCement. We are continuously striving to make improvements in all three aspects of sustainability.

**F:** *HeidelbergCement has integrated the principles of sustainable development into its company strategy. Does this also help to create value?*

**WD:** Yes, of course sustainability helps to create value. In particular, we are challenged to make processes more efficient in order to preserve resources. Ecology and economy go hand in hand: If we succeed in using less energy and primary raw materials and fuels in cement production, then we improve both our economic and our ecological performance.

In addition, concrete, the end product, is an extremely sustainable building material. It has a long lifetime and leads to low maintenance costs, while its thermal mass reduces the building's energy consumption. Our special concretes are also a good example of creating value through sustainability. For example, we develop and market ultra high-strength concretes that permanently withstand the most adverse conditions, e.g. at offshore wind farms.

**F:** *Forward-looking research and development lay the foundation for the future viability of any company. What do you think is needed for the combination of sustainable development, innovation and growth to succeed?*

**WD:** Economic growth is largely a question of the market environment. So for us it's important to make the best possible use of any growth opportunities that present themselves. This also involves having the ability to innovate and to adapt quickly to changing conditions, such as a shortage of resources or emissions trading. In order to lay the foundations for this in the long term, we need, above all, continuous research and development and efficient knowledge management. We're well-positioned to do this: The systematic networking of our experts and the integrated knowledge platform "World of Knowledge" ensure that the expertise available worldwide is used effectively. The platform is used intensively by our employees, and allows them to make use of knowledge and experience from within the Group wherever it is needed for the development of new products and processes.

**F:** *As the Managing Director of the HTC in Europe, you are responsible for the research and development activities in the concrete and cement areas. What milestones did HeidelbergCement achieve in this area during the past two years?*

**WD:** One of the main focuses of our work was, and still is, reducing the proportion of clinker in cement and developing new cement types. In these composite cements, a proportion of the clinker is replaced with alternative raw materials, usually by-products from other industries, such as blast furnace slag or fly ash. There are also new products satisfying an increasing market need in the area of sustainability. Our photocatalytic cement TioCem®, which is suitable for use in paving blocks, roof tiles and other applications, helps to break down air pollutants. Other special cements allow roads or runways to be repaired much more quickly, for example, significantly increasing operational cost-effectiveness.

We also achieved considerable progress in the use of alternative fuels. At numerous locations, the average use

of alternative fuels is already over 60 %, which puts us in a leading international position.

**F:** *Are there trends and challenges that open up new market and sales opportunities for the Group?*

**WD:** The enormous importance of preserving resources and reducing emissions, for cost and environmental reasons, will continue to shape the research and development activities at HeidelbergCement in the coming years. Besides this, I am not aware of any principally new trends. But we will certainly continue to develop new special products and sophisticated formulations for individual areas of application – in the precast concrete parts sector, where a fast turnaround is needed, or for heavy repair requirements, as I've already mentioned. We will see progress in this area in the coming years. There will also be new areas of application placing massive demands on the products.

**F:** *At the beginning of the interview, you spoke about the comprehensive significance of sustainability. In your opinion, what does this encompass, besides the product and process innovations you've mentioned?*

**WD:** Of course, the focus is on innovative products and efficient processes. But in the last years we've broadened the spectrum of our research activities. For example, when planning our quarrying activities, we consider the options for subsequent use of our quarrying sites, aiming to maintain a high level of species diversity, or even increase it where possible. We also do our utmost to prevent waste and, as far as possible, use all materials in the production cycle. In the future, we will deal even more intensively with the issue of recycling building materials. We also see material cycles in which waste is used as a raw material as a symbol of comprehensive sustainability, through which we not only protect the environment but also take responsibility for future generations.



# Environment and resources



## Energy and climate protection

**Climate protection is one of the central goals of our sustainability strategy. For many years, HeidelbergCement has placed particular emphasis on the continuous reduction of CO<sub>2</sub> emissions. Through our products, we can also help to reduce energy consumption in buildings and related CO<sub>2</sub> emissions.**

### **Reduction of carbon dioxide emissions**

In 2003, HeidelbergCement made a voluntary commitment to reducing its specific net CO<sub>2</sub> emissions by 15 % by 2010, compared with 1990. By improving our energy efficiency, reducing the proportion of clinker in the final products and increasing the use of alternative fuels such as biomass, we achieved this goal already in 2007. The data are collected in accordance with the CO<sub>2</sub> Protocol of the World Business Council for Sustainable Development, which has been implemented in all plants.

We were able to continue this positive development in 2008. Our specific net CO<sub>2</sub> emissions have dropped from 783 kg CO<sub>2</sub>/tonne cement in 1990 to 640 kg CO<sub>2</sub>/tonne cement. This corresponds to a reduction of more than 18 %.

We have thus already exceeded our goal by a considerable margin. As announced in the sustainability programme in our last Sustainability Report, we have had our CO<sub>2</sub> emissions data verified externally and will continue to fulfil this obligation regularly in the future.

The measures to reduce CO<sub>2</sub> in clinker production have been optimised to such an extent according to the latest technology that, in this subprocess of cement production, it is no longer possible to achieve such a large reduction in CO<sub>2</sub> emissions as we have done in the last 20 years. HeidelbergCement is therefore concentrating on the development of cement types containing a smaller proportion of clinker and on an increasing use of climate-neutral biomass as fuel.



In addition, we are working intensively on the development and implementation of innovative solutions for reducing CO<sub>2</sub> emissions. In some countries we are the leader in terms of our low clinker/cement ratios. In our Norwegian plant in Brevik, we are promoting a forward-looking research project for CO<sub>2</sub> sequestration and storage, which involves separating and subsequently storing the combustion product CO<sub>2</sub> so that it is not released directly into the atmosphere.

### European emissions trading

The ambitious goals of the European Parliament and the European Commission concerning climate protection have been formalised with the adoption of the European climate package to reduce greenhouse gas emissions in December 2008. The cement industry is not to be affected by the full auction of emission rights. This means that up to 2020 emission rights will continue to be issued free-of-charge – although the quantity available will be reduced by 21 % compared with 2005.

In the long term, this will create additional burdens in Europe as a result of higher manufacturing costs and therefore clear competitive disadvantages in comparison with producers from countries not involved in emissions trading.

In order to support the development of legal measures to reduce CO<sub>2</sub> emissions, HeidelbergCement is a member of numerous international organisations: these include, for example, the relevant national cement associations in the European Union. At European level, we are active in the cement association CEMBUREAU, which represents the interests of the cement industry in all EU institutions in Brussels. Worldwide, we are involved in the Cement Sustainability Initiative of the World Business Council for Sustainable Development. Together with our partners in the Cement Sustainability Initiative, we strive to develop a worldwide industry-specific approach as a new concept for reducing CO<sub>2</sub> emissions in the most effective way in our industry.

#### PROGRESS

Reduction of direct net specific CO<sub>2</sub> emissions per tonne of cement by 18 % since 1990

Reduction of the clinker percentage in cement to 75 % (2006: 76 %)

#### GOALS

Further reduction of direct net specific CO<sub>2</sub> emissions; measures in this regard:

- decrease of the clinker proportion in cement
- increase of the proportion of alternative fuels
- reduction of the specific energy consumption

Consistent decrease of the clinker proportion in cement to 70 % by 2020



## Raw materials and fuels

**HeidelbergCement regards waste materials and by-products from other industries as valuable raw materials and fuels, which we use in manufacturing new products. By doing so, we are making an active contribution to the preservation of resources as well as to waste management and recycling. Alternative raw materials and fuels are either used as raw materials or replace fossil energy sources in the burning process.**

### **Group strategy for alternative raw materials and fuels**

Our new Group strategy for alternative raw materials and fuels focuses initially on three globally available waste streams (sorted household waste, sewage sludge and hazardous waste), taking into account differences between the individual countries and their market conditions. This strategy allows us to achieve positive cost effects in the short term and safeguard the availability of alternative raw materials and fuels in the long term. In addition, we are strengthening the sustainability of the activities at our locations by making an important contribution to local waste management. In order to evaluate the efficiency of each individual plant, we have developed a new indicator for measuring fuel savings. Expert teams at Group and country level support the plants in their efforts to achieve our ambitious reduction targets.

Regarding the use of alternative materials, the quality of our products, the health and safety of our employees, neighbours and customers as well as the protection of the environment are of top priority. The basic requirements and criteria for the safe handling of alternative raw materials and fuels are, therefore, embedded in a Group-wide guideline. In addition, our experts for alternative materials support our plants in every introduction of a new alternative material. Another instrument is an internal guideline that determines the safe, ecological

and economical use of these materials. Twice a year, training is provided that also focuses on waste materials requiring a particularly high degree of monitoring. An extensive knowledge and information platform on the Intranet offers our employees an additional opportunity to share their ideas on the topic and to gain further information.

### **Replacing raw materials**

Alternative raw materials are used both in the production of clinker, the most important intermediate product in cement production, and as a grinding additive in cement grinding, in order to preserve natural raw material resources and to reduce the proportion of clinker in the end product. For this purpose, we mainly use fly ash, a by-product of electricity generation in coal-fired power plants, or blast furnace slag from steel production. In 2008, the proportion of alternative raw materials was 10.2 %. Over the year, we used a total of 12.9 million tonnes of alternative raw materials in our cement and clinker production.

### **Using alternative fuels**

In 2008, the proportion of alternative fuels in the fuel mix was 17.5 %. HeidelbergCement thus remains the frontrunner among the largest cement manufacturers in the co-processing of waste.



We are also increasingly using biomass, from rice husks to sewage sludge, as an alternative fuel. In 2008, this accounted for around one third of the total alternative fuel rate.

Our goal is to increase the use of alternative fuels even further. For example, in our Fieni cement plant in Romania, we are constructing a facility to process alternative fuels, which will allow us to increase the use of hazardous waste. In other European countries such as Poland, the Czech Republic and Sweden, we promote co-processing of plastics, sorted household waste and used tires. While we have achieved progress in North America with the use of sewage sludge, we are constantly increasing the use of hazardous waste in Indonesia.

**Water consumption**

Our aim is to optimise our water use. In accordance with our 2007 sustainability programme, we have identified practical examples of more efficient use of water and communicated them throughout the company.

In cement production, water is used to cool machinery and for exhaust gas conditioning, as well as for processing slurries in wet kilns. Our newly constructed Maroochydore ready-mixed concrete plant in Australia is one of our examples for efficient water management. Wastewater and rainwater are systematically collected, processed and used in concrete mixing as well as for washing out concrete mixers.

In the processing of aggregates, water is used to sift and separate individual aggregates and to clean the raw material. The required process water is then channelled into a sedimentation tank with the elutriable particles, so that it can be used again. We are striving to significantly reduce water consumption at our locations by means of modern water treatment systems. For example, in the past year, systems of this kind were fitted in the Zadworzany, Okmiany and Pawłów plants in Poland.

**PROGRESS**

- Introduction of a new Group strategy for alternative raw materials and fuels
- Increase of the proportion of alternative fuels to 17.5%
- Increase of the share of biomass in alternative fuels to 5.4%
- The share of alternative raw materials is at 10.2%
- Identification of examples of best practice with regard to water consumption

**GOALS**

- Successful implementation of the Group strategy at the locations
- Increase of the proportion of alternative fuels to 22% by 2012
- Increase of the biomass share to 6% by 2012
- Increase of the share of alternative raw materials to 11% by 2012





## Effects on the local environment and biodiversity

**Our rock quarrying activities encroach upon the landscape and use mineral resources that have formed over millions of years. Nevertheless, the quarries and sand and gravel pits where we extract our raw materials are valuable habitats for many animal and plant species. Our quarrying sites are therefore properly renatured or recultivated after the end of quarrying, i.e. returned to nature or put to agricultural or forestry use. For a long time, we have relied increasingly on natural succession, in which renaturation occurs by itself, without being initiated or directly controlled by man. This specifically promotes the development of areas containing a diverse array of life, adapted to the natural surroundings.**

### **Promoting biodiversity**

Together with project partners and in dialogue with various stakeholders, we have, over several years, developed indicators for measuring biodiversity, in order to make the ecological value of quarrying sites and the effects of nature conservation measures both measurable and predictable. We regularly collect data on biodiversity at the quarrying sites. Also in 2008, we counted the animal and plant species at numerous quarries in Europe, both in the quarrying area and in the immediate surroundings, and mapped their locations. The analysis of the data clearly confirms that, because of their species richness, the quarrying areas are very important for biodiversity. We have also introduced programmes to promote species diversity in aggregate quarries.

Our new Group guideline to promote biodiversity at our quarrying sites was developed on the basis of the findings of the aforementioned study and numerous international pilot projects.

HeidelbergCement is the first company in the world in its industry to introduce a Group guideline of this kind and thus define standards for the renaturation and recultivation of its raw material quarries. The aim of the guideline, which was adopted in February 2009, is to promote dialogue with all parties involved, increase biodiversity during and after quarrying, and protect nature and the landscape. The guideline will initially apply to Europe. In the North America and Asia-Australia-Africa Group areas, the guideline serves as a handbook of recommendations for action, taking into account specific regional circumstances.



### Species conservation programme "sand martin"

The sand martin is a regularly encountered breeding bird in our gravel and sand pits. Since the sand martin is threatened with extinction, we implement the species protection programme "sand martin" at 42 locations in Germany. The aim of this programme is to identify possible conflicts between quarrying interests and species and nature conservation in advance, and prevent these conflicts by means of management and maintenance measures. As a result of the great success achieved in Germany, the "sand martin" species conservation programme has also been implemented since the beginning of 2009, at various locations in Poland, the Czech Republic, Hungary, Belgium, Norway and Latvia.

### Stakeholder dialogue

Quarries and aggregate pits are part of the cultural landscape and, as such, can be used by man. We therefore strive to develop the recultivation and renaturation goals in dialogue with the communities, authorities and other stakeholders; an open exchange of views with all parties involved is both useful and necessary. Through lectures and publications, HeidelbergCement plays an active part in environmental education and provides information on the value of biodiversity, for example. The close collaborations between industry and schools already initiated at numerous plants are particularly forward-looking.

### PROGRESS

- Subsequent use plans for 88 % of the locations in the cement business
- Subsequent use plans for 81 % of the locations in the aggregates business
- Introduction of a guideline for the European locations to promote biodiversity
- Mapping of the protected Natura 2000 areas in Sweden, Poland, the Czech Republic and Hungary
- Proportion of biodiversity action plans for quarries in areas with high biodiversity value (e.g. Natura 2000) currently amounts to 26 %

### GOALS

- Subsequent use plans for 92 % of the locations in the cement business by 2012
- Subsequent use plans for 88 % of the locations in the aggregates business by 2012
- Implementation of the guideline in North America and Asia-Australia-Africa in the form of a manual
- Mapping of the protected Natura 2000 areas in the United Kingdom, the Benelux countries and Spain by 2011
- Increase the development of biodiversity action plans in areas with high biodiversity value (e.g. Natura 2000) to 35 % by 2012





## Emission reduction

Besides carbon dioxide, the main emissions resulting from cement production are dust, nitrogen oxides and sulphur dioxide. An emission-free quarrying site or an emission-free plant does not exist. However, because we continuously monitor and document the emissions produced, we know where we can reduce them.

### Modern equipment for lower emissions

In the past two years, we were once again able to reduce the adverse impact on people and the environment by means of innovative processes, modern filter technologies and process-integrated environmental protection. In 2008, we made significant investments to decrease dust emissions by installing modern, high-performance filters in the cement plants in Leimen and Schelklingen, Germany, Radotin and Mokra, Czech Republic, and the three plants in Georgia.

We reduce nitrogen oxide emissions by using the SNCR (selective non-catalytic reduction) technology. In 2008, SNCR systems were installed in the Mokra plant in the Czech Republic and the Leeds plant in the US. The Waco and Evansville plants in the US will follow soon.

### PROGRESS

Monitoring system and continuous measuring of emissions

Decrease of emissions per tonne of clinker (basis: 2000)

- Dust: 35% by 2008
- Nitrogen oxides: 19% by 2008
- Sulphur oxides: 30% by 2008

### GOALS

Measuring of heavy metals, volatile organic compounds (VOC) and dioxins/furans at all locations

Decrease of emissions per tonne of clinker (basis: 2008)

- Dust: 35% by 2020
- Nitrogen oxides: 10% by 2020
- Sulphur oxides: 10% by 2020





# Sustainable construction

**Sustainable construction aims to minimise the impact of a building on the environment, while ensuring that it meets the needs of its users. As a building materials manufacturer, we believe it is our responsibility to ensure that our products are used in such a way that their potential to improve the environmental performance of a building is fully utilised.**

## **Our responsibility**

We are convinced that it is not only the task of architects or construction engineers, but also our responsibility as a building materials supplier, to find solutions for the optimal use of our products. Thanks to targeted research, HeidelbergCement offers building products that make a contribution to protecting the environment. Buildings made of concrete have a long lifetime as well as low maintenance costs and energy consumption.

Furthermore, we promote the exchange of experience relating to environmentally friendly and energy-efficient building and are involved in relevant research activities worldwide.

## **Recycling and material cycles**

At the end of their lifetime, products are often recycled back into the manufacturing process. In the Netherlands, we have launched a groundbreaking pilot project implementing the “Cradle to Cradle” concept. This concept involves using materials in such a way that their value is preserved for subsequent generations of products and can be used time and again. Together with the sustainability expert Professor Michael Braungart, we are investigating the current cement and concrete production process in order to develop innovative ideas for maximising the positive properties and effects of our products in the long term.

## **Energy efficiency and sustainable construction**

In view of the rising energy prices and the worldwide effects of climate change, increasing the energy efficiency of buildings offers great potential for saving energy and reducing CO<sub>2</sub> emissions. Sustainable building denotes a more comprehensive approach that aims to increase the resource efficiency of buildings in terms of energy, water and materials. At the same time, the harmful effects on health and the environment are reduced.

HeidelbergCement is involved with Green Building Councils in the US, United Kingdom, Canada and Germany, among other countries.

### **PROGRESS**

Involvement in national Green Building Councils in five countries  
Sustainable construction is a new component of our sustainability programme

### **GOALS**

Involvement in Green Building Councils in all countries in which HeidelbergCement is active  
Promote sustainable construction and extend research activities accordingly

**“I believe that sustainable activities are the main guarantees of entrepreneurial success and value creation.”**

**Bernard Mathieu,  
Director Global Environmental  
Sustainability**



**At HeidelbergCement, sustainable development and environmental precaution play an important role, as the resources of nature are the basis of our company’s business. Speaking to Foundations, Bernard Mathieu, Director Global Environmental Sustainability, explains the opportunities and challenges that the topic of environmental protection and nature conservation brings for HeidelbergCement.**

**Foundations:** *Mr Mathieu, what does sustainability mean to you?*

**B. Mathieu:** We’re all inhabitants of a single planet with limited carrying capacity and limited natural resources available. This awareness requires all of us, and all industrial companies, to deal responsibly with the valuable resources in order to preserve them as best we can for present and future generations. We have to develop positive contributions from our activities and likewise minimise our negative impacts on the environment.

The current economic crisis shows that companies cannot afford to pursue only short-term profit. More than ever, economic success requires a long-term approach and will, in the future, be largely shaped by an ambitious focus on sustainability. I believe that sustainable

activities – which reconcile ecological, economic and social aspects – are the main guarantees of entrepreneurial success and value creation.

**F:** *In the past year, HeidelbergCement created the new Global Environmental Sustainability department, which you are responsible for. What was the thinking behind this?*

**BM:** The newly created Group-wide department comprises a team of sustainability experts. Our mandate is to define Group guidelines, identify priorities and opportunities, and initiate and co-ordinate the necessary measures within the Group. We work closely with the technical experts and other specialist departments within the Group. Our goal is to take the Group further towards sustainability.

**F:** *Could you briefly outline the most important measures*

*and developments that HeidelbergCement initiated in the past two years to protect the environment and resources?*

**BM:** The Group has achieved considerable success, of which we can be proud of. HeidelbergCement is a leader in the use of alternative raw materials and fuels, thanks to the efficient transfer of expertise throughout the Group. The use of sewage sludge as an alternative fuel in our plants in China is a perfect example of sustainability. So the plants are not only reducing the consumption of natural resources and their impact on the environment, but also offering local authorities an indispensable and responsible means of waste treatment. There are similar projects, for example, in Indonesia or Romania. In many municipalities, we contribute to solve the problem of waste management and use fractions from household waste as an alternative fuel in cement production. Of course, high environmental, safety and health standards are observed in order to protect our employees and the neighbours at our locations.

Maintaining biodiversity is another important topic for our Group. A large number of pilot projects have been initiated in our quarries and sand and gravel pits. The information gained from these projects was incorporated into a Group guideline to promote biodiversity at the beginning of this year. The guideline is intended to ensure that uniform measures for subsequent use, that promote biodiversity, are taken throughout the world. We are currently introducing the guideline in Europe and are preparing for Group-wide implementation, taking local circumstances into account.

*F: What do you see as the biggest challenges in terms of environmental protection and sustainable development that the industry has to face?*

**BM:** Dealing with climate change remains a big challenge for our industry. On the one hand, it is our direct responsibility to further reduce greenhouse gas emissions by improving our energy efficiency, reducing the proportion of clinker in our end products and intensifying our use of biomass as a fuel. On the other hand, our final product concrete is an essential building material

for a low carbon economy – and this should further be promoted.

Our industry, and all other industrial sectors, need to consistently improve its energy and resource efficiency in the coming years. It's about implementing a concrete eco-industrial concept and developing creative ideas that reduce consumption of raw materials in all our business lines. As an example, the topic of recycling, which involves recycling building rubble or demolition waste, is meeting with increasingly strong interest worldwide and offers great opportunities for us both now and in the future.

*F: What does HeidelbergCement see as its tasks and its potential? What does the Group want to achieve in the future in terms of environmental sustainability?*

**BM:** HeidelbergCement will continue to build on its strengths in the future, and has therefore identified three major action areas: firstly, as the global market leader in aggregates and with a leading position in cement, we want to continue to expand our leading role in biodiversity management at our quarrying sites. Secondly, sustainable building is an important area of activity at HeidelbergCement. We take responsibility for our products during and after their lifetime. This is why improving the eco-balance and developing new products with a positive impact on the environment and society also play an important role for us. Thirdly, we will further expand the use of waste as a raw material and fuel. We will especially focus on globally available waste streams such as household waste and sewage sludge in selected countries.

In parallel with these three action areas, we will of course continue to work ambitiously on consistently reducing our CO<sub>2</sub> emissions.





# Employees and society

## Work environment

Following the purchase of Hanson, the integration of more than 20,000 employees in 15 countries was a central issue in 2007 and 2008. In recent years, HeidelbergCement has standardised its personnel management and created the necessary conditions for a uniform management culture by means of Group-wide guidelines. On the basis of this we were able to organise the integration process in the area of personnel in a transparent and consistent manner.

### Focus on integration

We analysed Hanson's organisational structure thoroughly on the basis of our Group standards. In the most important countries, such as the United Kingdom and North America, we also collected details of the areas of activity of all employees who could be assigned to the staff functions (for example Finance, Personnel, Purchasing). The results of the two subprojects provided a high level of transparency, a basic prerequisite for the reorganisation in the United Kingdom and North America, which was implemented after just a few months.

### Shared corporate culture

In connection with the Hanson integration, we have intensively dealt with the topic of corporate culture.

The corporate cultures of HeidelbergCement and Hanson complemented each other ideally, as we established through a survey conducted among our managers. As part of the integration process, these shared values were incorporated into our Leadership Principles, which we adapted accordingly in 2008 in connection with the integration. The main objectives are integrated efficiency, sustainable profitability, a strong focus on customers and employees and result-oriented growth. The core elements of our commitment to sustainability are occupational health and safety, high standards in environmental protection and the Group's social responsibility at all locations.

### **Number of employees**

The change in the number of employees in 2007/2008 was affected by exceptional events. Following the acquisition of Hanson, the number increased to around 68,000 at the end of 2007.

HeidelbergCement responded to the severe global economic crisis at an early stage with capacity adjustments in the particularly affected markets of North America and the United Kingdom. This reduced the number of employees across the Group in 2008 to just under 61,000. We endeavoured to make the job cuts socially acceptable and prevent social hardship as much as possible. Workable solutions were formulated for all locations in cooperation with the works council.

### **Respecting international standards and norms**

As a matter of course, HeidelbergCement endeavours to respect and observe the relevant laws and provisions in all countries where we operate as a legal foundation for our business activity. We also take into account the broadly accepted recommendations and standards of recognised national and international organisations. As a globally active Group, we feel bound by such global values and standards. HeidelbergCement is committed to the ILO core labour standards and the OECD guidelines for multinational enterprises. We expect our employees and business partners worldwide to comply with these central guidelines and recommendations.

### **Intercultural competence**

The internationalisation of our Group, which is characterised by fast growth and rapid geographical expansion, requires the integration of many different cultures. By introducing Group-wide Leadership Principles, we have laid the foundation for a common management culture, which shows that leadership and management at HeidelbergCement are based on firm, shared principles.

Through intercultural training and language lessons, we prepare our employees for deployment and assignments abroad. In 2008, there were 112 (previous year: 110) assignments abroad across the Group. Our trainee programmes focusing on technology, sales and finance,



which also include periods spent abroad, prepare highly qualified graduates from all over the world for international duties.

### **Diversity and antidiscrimination**

HeidelbergCement's efforts to ensure outstanding business performance and to achieve a leading position among the best in our industry also require us to firmly establish legally and ethically correct conduct. The Group-wide Code of Business Conduct describes our ideals, which correspond to high ethical and legal standards and apply to all business activities. Integrity, openness, honesty and predictability form the basis of our actions. We take into account the cultural diversity within our Group and do not tolerate any discrimination on the basis of nationality, gender, religion or other personal characteristics.

### **Management training and advancement of future executives**

All training programmes at HeidelbergCement are tailored to the specific needs of our Group. The integration of Hanson was at the forefront of our activities in 2007 and 2008. Managers and experts from HeidelbergCement and Hanson were prepared for this task by means of training. Besides business-specific topics, a focal point of the training was dealing professionally with one another in international teams.

The advancement of future executives and management training were consistently continued. The focal points of the training were cost management, managing effectively, project management and dealing professionally with processes of change. These training sessions were also an important instrument for bringing managers together in connection with the Hanson integration.



In 2008, another focal area was updating our Executive Development Program at Group level. Customer Value Added and global sourcing were added to the traditional topics of strategy, leadership and management, the method of capital expenditure budgeting and so forth.

### **Succession planning**

We are consciously pursuing the approach of filling management positions from among the existing employees as far as possible. To guarantee future growth, we rely on young executives, whom we train specifically for assignments in Group countries. We have expanded our university and college marketing worldwide for the recruitment of managers with a focus on growth markets. In order to give interested applicants an authentic view of HeidelbergCement and the people who work there, we deliberately bring them together not only with experienced managers but also with employees who have only belonged to the Group for a short time.

The purchase of Hanson opened up additional outstanding potential, which we are incorporating into our talent management: operationally experienced managers, who know our business, with strong cost awareness and a focus on performance and results.

### **Attractive remuneration systems and pension scheme arrangements**

Our management culture is characterised by a strong focus on performance and results. Our remuneration systems also follow this approach. For top management in particular, we have introduced a uniform remuneration system with a large variable component. We hope to strengthen entrepreneurship at HeidelbergCement substantially with a high level of profit sharing.

As life expectancy is constantly rising and we do not want to burden future generations of employees with the task of fulfilling present commitments, we have introduced a sustainable provision concept for new employees in Germany. We now rely more heavily on our employees taking individual responsibility, and specifically promote this type of company pension scheme with attractive offers. By doing so, we safeguard the existence of our company pension scheme in the long term. In 2008, the voluntary pension plans amounted to EUR 434.8 million (previous year: 433.4).

#### **PROGRESS**

Integration of Hanson successfully completed  
Recognition of the ILO core labour standards and the OECD guidelines for multinational enterprises  
Group-wide collection of data on the personnel structure

#### **GOALS**

Continuation of the Talent Management Concept  
Worldwide extension of partnerships with universities  
Improvement of the Group-wide data collection on the personnel structure





## Occupational health and safety

**For a long time, our commitment to occupational health and safety has been an integral part of our business activities and a focus of our sustainability strategy. We are working continuously to improve occupational health and safety throughout the Group, to minimise the risk of accidents and injury, as well as the risks of occupational illness, by means of increased preventive measures, and have therefore set ourselves ambitious goals for the near future.**

### **Initiative for occupational health and safety**

Through the “Safe work – Healthy life” initiative, which we started in 2007, we are increasing awareness of occupational health and safety among our employees by means of a wide variety of individual measures. However, these measures are in addition aimed at our contractors commissioned by us. Only when each person is aware of the risks of his own actions and those of his colleagues can we tackle the prevention of accidents and occupational illness in a targeted manner.

Occupational health and safety at HeidelbergCement is a management task and is therefore firmly established in the revised version of the Leadership Principles. Many of our subsidiaries already incorporate occupational safety goals into their managers’ goal agreements.

In order to be able to implement measures initiated by the Group efficiently and effectively, clear structures are essential. We have therefore harmonised the occupational health and safety responsibilities across the Group and adjusted the organisational structure where necessary. In the course of the Hanson integration, this led to far-reaching changes in North America and the United Kingdom, which mean that we are now able to support all operational units across the business lines.

We have also harmonised our reporting, a prerequisite for producing analyses and planning measures, for all business lines. This applies to both the quantitative gathering of key figures and the qualitative analysis of accidents.

### **Development until 2008**

Our efforts are showing signs of success. Since 2005, we have reduced the accident frequency rate across the Group by 58 % and the accident severity rate by 30 %. In some business lines, these figures are even higher (e.g. cement: reductions of 68 % and 43 % respectively).

Unfortunately, this positive development is overshadowed by fatalities. Despite all our efforts, it is with great regret that we report the deaths of 5 internal employees, 11 contractor employees and 5 third parties. Fatalities are unacceptable and strengthen our resolve to prevent accidents.

We are also devoting more attention to occupational health, and are therefore conducting health checks and taking workplace measurements in many countries on a regular basis. The aim is to prevent occupational illnesses, some of which have long latency periods. For 2008, the rate of recognised cases of occupational illness was 16.1 per 10,000 employees, with most cases relating to occupational deafness and repetitive strain injuries.

### Targeted measures

In particular, the large number of fatalities among contractor employees, which we became aware of in 2007, prompted us to establish a Group guideline regarding contractor safety at the beginning of 2008. In this guideline, we defined the requirements we intended to place on contractors as well as on our own organisation, which must be considered in the case of both large projects and routine work with local firms. In the medium term, they will lead to an improvement in occupational safety among our contractors.

We have identified working at height as another common cause of accidents, which sometimes result in serious injury or death. For this reason, we dealt with this topic in another Group guideline in mid-2008 and are in the process of implementing the necessary measures locally.

Further campaigns are planned as part of our “Safe work – Healthy life” initiative from 2007 to 2011. In 2009/2010, we will focus on safe working on and with machines. In order to facilitate the implementation of the new guidelines, they will be accompanied by training materials. The risk assessment and specific training of employees and contractors always play a decisive role in increasing risk awareness.

In order to make people more sensitive to this issue in day-to-day danger situations, we are currently producing a short film that illustrates various dangerous situations. This short film has been designed in such a way that it can be used across the Group, regardless of the language spoken. We expect it to be completed by late summer 2009.

Beyond the measures taken at Group level, there are a variety of local campaigns and initiatives, all with the clear aim of providing safe working conditions for Group employees as well as for contractors. Further efforts will be needed in order to ultimately reach this goal.

### Communication and information

An important factor for the success of our initiative is communication. Occupational health and safety topics are tackled time and again in the local employee magazines, on the intranet and at meetings. The topic is also dealt with at the regular meetings with employee representatives and trade unions, in which the interests of more than 98 % of our employees are represented.

#### PROGRESS

Launch of the Health and Safety Initiative in 2007

Group-wide reduction of the accident frequency rate by 58 %

Group-wide decrease of the accident severity indicator by 30 %

Group policy on “Working at heights” established in 2008

Controlling for employee qualification in the area of occupational health and safety prepared

Examination of the locations according to uniform occupational safety guidelines

#### GOALS

Further development of the Health and Safety Initiative by 2011

Reduction of the accident frequency rate and accident severity indicator for internal employees by 50 % by 2012

Reduce the fatality rate for internal employees to zero until 2012

Implementation and expansion of the controlling for employee qualification in the area of occupational health and safety

Further corporate policies for occupational health and safety



## Social responsibility

**The cement and aggregates business is geared towards regional markets. We contribute to creating value locally. As a good corporate citizen, we foster our relationships with the people in the areas surrounding our plants and have strong links to our locations.**

### **Local management and economic impetus**

Our principle is to fill local management positions with local employees as much as possible. Managers from other countries are only appointed in particular cases. The average proportion of local employees is about 95 %.

By employing local people and using local suppliers and service providers, we contribute to creating value at our locations. Each of our plants collaborates closely with local suppliers and service providers. We invest around 30 % of our procurement volume in the areas immediately surrounding our plants. With wages, investments, purchasing and taxes, we promote economic development at our locations.

### **Corporate Citizenship**

Beyond our economic activities, we also give impetus to our locations by means of targeted social commitment. Our Corporate Citizenship Guidelines are geared towards our core business. We are involved in three areas in which we have expertise and can achieve the best results for society:

- **Building, architecture and infrastructure:** We provide practical help in the construction of buildings and infrastructure by making products, time, financial means and expertise available.

- **Environment, climate and biodiversity:** We promote initiatives that deal with the most significant environmental effects of our economic activity.
- **Education, training and culture:** We are guided by the needs of our locations.

In order to ensure transparent and effective co-ordination of our voluntary activities, we have established clear evaluation criteria since the last Sustainability Report: We support projects, initiatives and organisations that operate at our locations or with which we have a direct link. It is also very important to us that the guidelines and principles of these organisations align with those of HeidelbergCement.

The Group Communication & Investor Relations department regularly collects information about all the Group's corporate citizenship activities and reports on them as part of HeidelbergCement's sustainability communication. Decisions about sponsorship activities in individual countries and at our locations are made decentrally, within the budgetary framework. The country managers are responsible for examining and implementing the projects, as well as for reporting.



### Promoting education: an important task worldwide

We place special value on promoting education in all countries. Employees get involved personally in numerous activities through collaborations with schools, for example in Germany. Students and teachers gain first-hand, practical insight into different Group departments, and obtain information about important social topics as globalisation, sustainable development and environmental protection. Another focal point is our collaboration with universities and colleges. In Georgia, for example,

we developed a practice-oriented three-year engineering course in collaboration with Shota Rustaveli University; students enrolled in this course are able to gain continuous practical experience at our plants.

Support for numerous projects through donations of building materials as well as for environmental initiatives, such as the protection of ecologically valuable coastlines in Australia, is another core element of our social commitment.

#### PROGRESS

Process for the selection of Corporate Citizenship projects implemented

#### GOALS

Implement a process for assessing the success of Corporate Citizenship projects by 2010

Spur cooperation for the promotion of education internationally

## Partnerships and dialogue

**We see ourselves as a partner in the community. The basis for good relationships is open communication. We therefore maintain a transparent information policy and endeavour to provide accurate information in a responsible manner. We strive for lively and constructive debate, both internationally and at a local level.**

### Competent partner at an international level

HeidelbergCement is a member of the World Business Council for Sustainable Development (WBCSD) and is committed to sustainable cement production. For this reason, we have drawn up guidelines at an international level, together with other cement companies, for the areas of climate protection, raw materials and fuels, occupational health and safety, emissions and the impact on the environment at our production locations. They were published by the “Cement Sustainability Initiative” (WBCSD/CSI) in June 2005 and are now in use at the companies involved. Under the lead management of HeidelbergCement, the Initiative is working

with the International Energy Agency to develop a “technology roadmap” for the cement industry. Scenarios for the cement industry until 2030 and 2050 are being developed with the goal of further reducing CO<sub>2</sub> emissions.

### Commitment at a national level: econsense

At the national level, we are involved in econsense – the Forum for Sustainable Development of German Business at the Federation of German Industries (Bundesverband der Deutschen Industrie – BDI). Here, 25 member companies from various industries work together to promote political conditions that allow sustainable innovations.



econsense aims to bring the interests of industry into the sustainable development debate through open, constructive dialogue.

Through econsense, we were involved in the creation of the “Klimatech-Atlas” (climate technology atlas) in 2008. The “Klimatech-Atlas”, designed in the form of an online reference book, outlines the most important technologies for climate protection in the areas of industry, energy, transport and building. Numerous application examples from the member companies show how these technologies are implemented in practice.

### **Business and Biodiversity Initiative**

At the United Nations Conference on Environment and Development in 1992, the “Convention on Biological Diversity” was adopted. Biodiversity and its protection are linked in many ways to companies’ economic activities. Therefore, as a partner of the Business and Biodiversity Initiative of the German Federal Environment Ministry founded in 2008, we made a commitment, together with 36 other internationally active companies from Germany, Japan and Brazil, to integrate the protection and promotion of biodiversity into our operational management system. HeidelbergCement is thus taking a pioneering role within the industry.

The Initiative co-operates with external partners such as nature conservation organisations and scientific institutions in order to deepen specialist knowledge and develop management systems further through dialogue. A handbook on action areas, methods and instruments of business biodiversity management is currently being developed together with the Centre for Sustainable Management of the University of Lüneburg, Germany.

### **Open dialogue with neighbours**

The continuous dialogue between plants and neighbours is important for both parties. While monitoring committees act as a link between the Group, residents and the authorities at the Harmignies, Lixhe and Antoing locations in Belgium, for example, dialogue takes place at other locations via the plant management and the public relations officer. This enables us to strengthen trust in our Group through transparency, open communication and co-operation. At many other plants and quarrying sites worldwide, we hold regular open days that allow residents and other interested parties to gain insight into our Group and the working processes that take place at our locations.



World Business Council for Sustainable Development

[www.wbcsdcement.org](http://www.wbcsdcement.org)

**econsense**  
Forum Nachhaltige Entwicklung

[www.econsense.de](http://www.econsense.de)



[www.business-and-biodiversity.de](http://www.business-and-biodiversity.de)

**“We have established focal topics of our social commitment in the areas surrounding our locations.”**

**Dr. Brigitte Fickel,  
Director Group Communication**



**Social responsibility is consistent with the principle of sustainability. Foundations spoke to Dr. Brigitte Fickel, Director Group Communication, and Andreas Schnurr, Director Group Human Resources, about the corporate culture and the social commitment of HeidelbergCement.**

**Foundations:** *Dr. Fickel, what motivates companies like HeidelbergCement to follow the guiding principle of sustainability?*

**B. Fickel:** Our goal is to achieve further growth while creating added value for our customers, employees, investors and locations. The success of our business and our future viability are directly linked to our ability to operate in harmony with society, i.e. sustainably. Openness and dialogue, fairness towards economic partners, responsibility for employees and locations, and honest and fair partnership with employee representatives have a positive impact on our reputation as well as our ability to attract and retain employees. The preservation of resources and climate protection are also part of the guidelines for our economic activities, and not just because they reduce risks.

**F:** *Is sustainability also an important part of the corporate culture at HeidelbergCement?*

**BF:** The focal points of our corporate culture are integrated efficiency, sustainable profitability, a strong focus on customers and employees, and result-oriented growth. Dealing responsibly with employees and our locations is another core element of our sustainability strategy and a prerequisite for long-term corporate success.

**A. Schnurr:** Because of our industrial background, the occupational health and safety of our employees is particularly important, of course. We have further increased our commitment in this area. Another focal area is the advancement of future executives and management training. It is important that our workforce is competitive in the long term. This requires a high level of training as well as outstanding managers and the willingness to see change as an opportunity.



Important structures have also been developed in other areas, such as our worldwide compliance management, which we are currently expanding in a targeted way.

**F:** *The purchase of Hanson in August 2007 strengthened HeidelbergCement's market positions worldwide. During the takeover, it was often stressed that the two companies were a perfect match. How, and using what measures, did you make this integration easier for the employees?*

**AS:** When two companies are a perfect match, that does not necessarily mean that their values are completely identical. However, in the core areas, there was clearly basic common ground between the two companies, and of course that made the integration easier. We conducted a manager survey to ascertain the understanding of both companies' basic values in detail. Everyone surveyed mentioned, for example, a focus on performance and results, an emphasis on customers and employee development as important basic values. This shared understanding of values was incorporated into the revision of the Leadership Principles as part of the integration process. On the basis of employee surveys, called "pulse checks", we identified outstanding issues or points of friction in the integration process at an early stage and were able to respond to these quickly.

**BF:** As regards communication, we supported the whole integration process in a variety of ways. Besides regular information on the intranet and letters from the Chairman of the Managing Board to the management, there was also a monthly newsletter, which reported on the status of the integration and current developments at the locations. Information events at the individual locations also gave employees the opportunity for dialogue with the management. In hindsight, it is clear that the level of approval for the takeover among our employees was very high – also because of the fair and open communication before and during the integration process.

**F:** *In which areas has the merger affected the employees in a concrete way?*

**AS:** Above all, we felt it was important to harmonise the core processes in human resources after the takeover of Hanson, such as performance management, remuneration, training and development. The advancement of future executives and management training were therefore continued consistently, forming an important instrument for the merger. In this way, we ensure that a harmonised understanding of strategy, integrated management approach and leadership is developed everywhere.

**F:** *As a global player, HeidelbergCement is represented at 2,600 locations in around 50 countries. How do you embrace social responsibility at these locations?*

**AS:** We have strong links to our locations and contribute to creating value locally, by employing local people, for example. This applies equally to management positions, which we usually only fill temporarily – if at all – with managers from other countries. The proportion of local employees in management is just under 95 % on average.

**BF:** We are also committed to the community in the areas surrounding our locations in a variety of ways. We have established focal areas that are in line with our core business. Throughout the world, we support projects, initiatives and organisations that are based at our locations or with which we have a direct link, in the areas of building, environment, education and culture. HeidelbergCement benefits from its locations, and we want the locations to benefit from the Group.

# Data and goals

## Facts and figures

### Portrait of the Group

#### The Group

	2006 <sup>1)</sup>	2007 <sup>2)</sup>	2008
Turnover (in EUR million)	7,997	10,862	14,187
Operating income (in EUR million)	1,329	1,850	2,147
Employees	40,983	67,916	60,841

<sup>1)</sup> excluding Hanson <sup>2)</sup> including Hanson, as of 24 August 2007

Between 2006 and 2008, HeidelbergCement was able to increase turnover by 77.4 % and to raise operating income by 61.6 %; this was largely due to the acquisition of the Hanson Group and the healthy operational development in Asia and Africa as well as in the majority of European countries. Due to the global economic crisis, personnel cuts could not be avoided. By the end of 2008 the headcount was still 48.5 % above the level of 2006.

in EUR million	Turnover		Operating income	
Group area	2007 <sup>1)</sup>	2008	2007 <sup>1)</sup>	2008
Europe	5,732	7,190	1,063	1,223
North America	3,205	3,958	466	406
Asia-Australia-Africa	1,909	2,943	306	497
Group Services	680	701	15	21
Total	10,862	14,187	1,850	2,147

<sup>1)</sup> including Hanson, as of 24 August 2007

The largest share of turnover was generated by HeidelbergCement in Europe, followed by North America. The Group area Asia-Australia-Africa attained the highest percentage turnover growth. 57 % of operating income resulted from the Group area Europe, followed by 23 % from Asia-Australia-Africa. The highest growth of 62.4 % is again attributable to the Group area Asia-Australia-Africa.

## The products cement and aggregates

in million tonnes	Cement and clinker sales volumes		Aggregates sales volumes	
	2007	2008	2007	2008
Group area				
Europe	42.2	43.2	88.0	125.1
North America	14.9	13.6	78.0	134.6
Asia-Australia-Africa	30.8	32.2	13.6	39.8
Total	87.9	89.0	179.6	299.5

The cement and clinker sales volumes slightly improved in 2008. The decline of the US-markets was offset by consolidation effects. Due to the consolidation of Hanson our aggregates position enlarged significantly; 45 % of the volumes were achieved in the US. The turnover share of cement amounted to 41%. The share of the combined turnover of aggregates, asphalt and concrete amounted to 44 % in 2008.

## Added value

in EUR million	2007	2008
Turnover	10,862	14,187
Suppliers (material costs)	4,114	5,693
Other operating expenses <sup>1)</sup>	2,824	3,719
Employees (personnel costs)	1,671	2,298
Creditors	522	868
Shareholders (dividend)	163	15
State (taxes on income)	369	327

<sup>1)</sup> e.g. for administration and sales, freight, third-party repairs and services, rents and leasing

If we succeed to be economically successful, we create added value for many partners: Employees, suppliers, the local communities at our locations and our shareholders. Less material costs and other operating expenses we spent the largest share of the value added for personnel costs. The financial requirements for the Hanson acquisition are reflected in the increasing share for the creditors. Due to the global financial and economic crisis, which also had adverse effects on our company, the dividend was reduced remarkably.



# Environment and resources

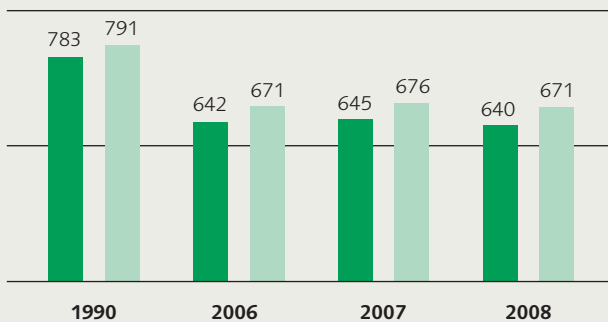
## Energy and climate protection

With regard to climate protection, the reduction of carbon dioxide (CO<sub>2</sub>) is at the centre of our focus. We have committed ourselves to reduce our specific net CO<sub>2</sub> emissions – the direct emissions per tonne of cement, without taking into account the climate-neutral biomass – by 15 % until 2010 in comparison to the year 1990. We have already exceeded this goal by far: Since 1990, we have reduced our specific emissions by more than 18 %.

In addition, the specific heat consumption for the clinker production – after an increase in 2007 – decreased slightly: from 3,820 kilojoules per kilogramme of clinker in 2007 to 3,810 kilojoules per kilogramme of clinker in 2008.

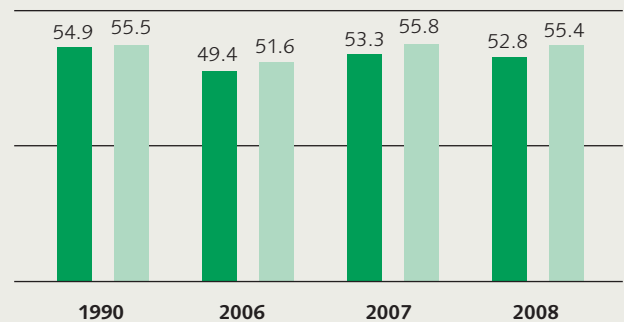
### Specific CO<sub>2</sub> emissions

(kg CO<sub>2</sub> per tonne of cement)



### Absolute CO<sub>2</sub> emissions

(million tonnes CO<sub>2</sub>)

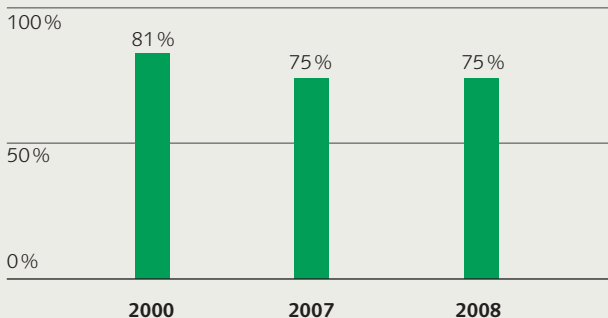


■ Net emissions  
■ Gross emissions

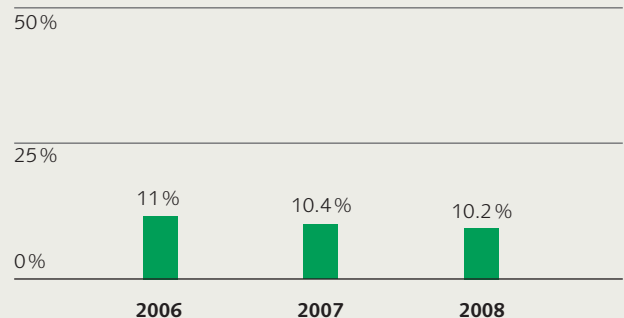
## Raw materials

We lower the proportion of natural raw materials in cement by decreasing the clinker percentage and using alternative raw materials. We were able to achieve our goal to continuously decrease the clinker percentage: In the meantime, its proportion amounts to 75 %.

### Clinker content in cement



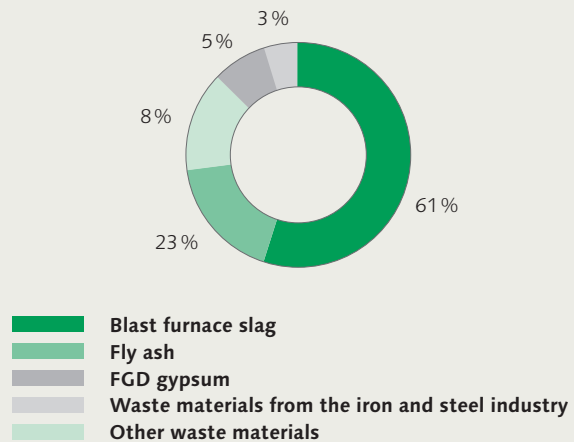
### Percentage of alternative raw materials



The percentage of alternative raw materials in the production of clinker and cement has slightly decreased to 10.2 % in the year 2008 as compared to 2006. This is particularly due to the limited market availability of blast furnace slag and fly ash. Furthermore, we substitute clinker itself with kiln dusts, for instance – but they are not regarded as alternative raw materials. We thus have not been able to reach our goal from the Sustainability Programme 2006/2007, to constantly reduce the percentage. We will continue to pursue our goal.

We primarily use blast furnace slag as an alternative raw material, a fine-grained by-product obtained in the manufacture of pig iron in the blast furnace. It is followed by fly ash, a residue generated by incineration in thermal power plants or waste incineration plants. In addition, we use FGD gypsum from flue gas desulphurisation plants and waste materials from the iron and steel industry.

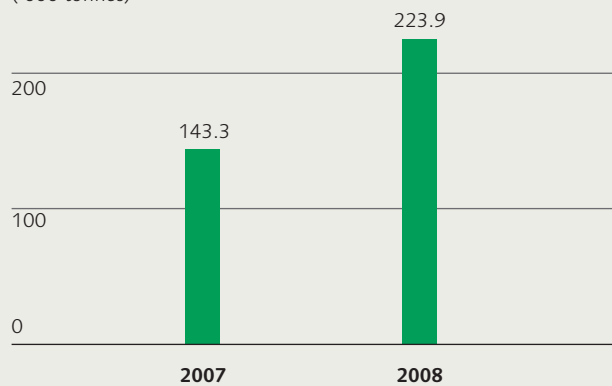
**Distribution of alternative raw materials in 2008**



**Waste**

A substantial part of the waste produced consists of kiln dusts. The amount of disposed kiln dusts has increased from 143,273 tonnes in 2007 to 223,925 tonnes in 2008. This increase is attributable to the inclusion of newly acquired plants and to an improved data collection.

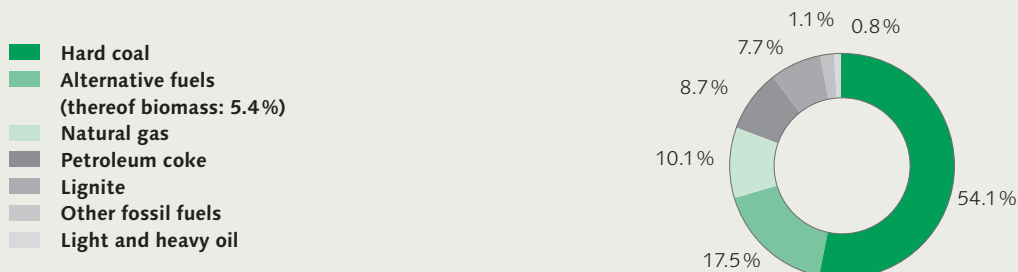
**Disposed kiln dusts**  
(‘000 tonnes)



## Fuels

Hard coal is primarily used during the clinker burning process, followed by alternative fuels and natural gas. Our goal is to substitute the proportion of fossil fuels such as coal or gas with alternative fuels. By the year 2008 we have been able to increase their proportion in the fuel mix by a further 0.5 % to 17.5 %, as compared with the year 2006. This makes us the industry leader in the use of alternative fuels.

### Fuel mix in the clinker burning process in 2008



The most commonly used alternative fuels are plastics with 5.8 %, often mixed with production waste from paper, cardboard or textiles. With a share of 5.4 %, biomass such as meat and bone meal, wood, nutshells and rice husks or other locally available materials are increasingly gaining interest. Used tires and rubber, traditionally important alternative fuels, account for a share of 4.2 %. In addition, we also use sewage sludge energetically. The general conditions and criteria for the safe handling of alternative raw materials and fuels are established in a Group-wide guideline.

## Emissions

In our Sustainability Programme 2006/2007 we have set forth various goals aiming at a reduction of the specific emissions per tonne of clinker. Since 2000, we were able to reduce sulphur dioxide emissions by 30%, and as for nitrogen oxides, we attained a reduction of 19 %. We were able to reduce dust emissions by 35 %.

Emissions	Formation/release
Dust	accumulates during quarrying, grinding, burning, loading and transportation.
Nitrogen oxides (NO <sub>x</sub> )	are generated during the clinker burning process, particularly at high temperatures. Preliminary substances of low-level ozone, which is damaging to health.
Sulphur oxides (SO <sub>x</sub> )	can be generated by sulphur compounds in the raw material during the clinker burning process; main cause of acid rain.
Dioxins and furans	are undesired toxic by-products, generated e.g. during burning of chlorinated organic compounds.
Heavy metals	are contained in raw materials and fuels; they are released to an extremely low extent depending on content and volatility, as well as the separation efficiency of the dedusting filters.
Noise	is caused by heavy equipment, machinery and means of transport.



## Emissions from dust, nitrogen oxides and sulphur oxides

	Specific emissions (g/t clinker)		Absolute emissions (t/year)	Progress <sup>1)</sup> 2000-2008
	2007	2008	2008	
Dust	273	284	19,003	- 35 %
Nitrogen oxides	1,394	1,355	90,588	- 19 %
Sulphur oxides	494	514	34,390	- 30 %

We will continue to reduce our emissions and have set new reduction goals.

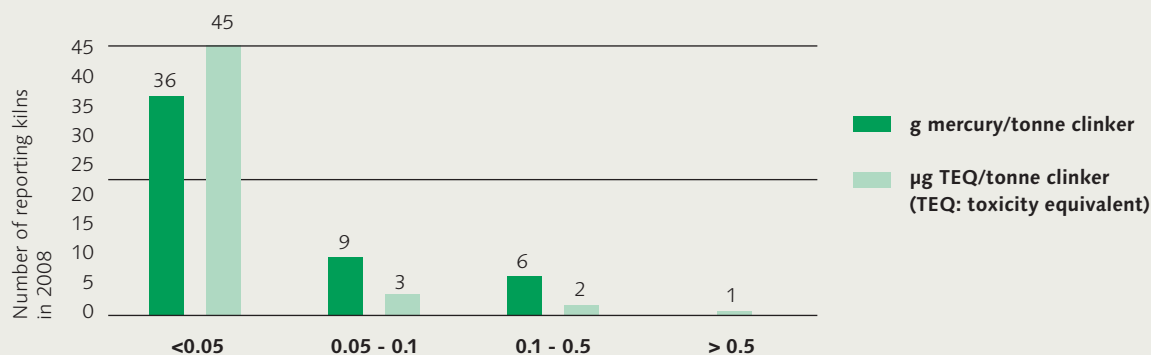
Decrease of emissions per tonne of clinker (basis: 2008):

- Dust: -35% by 2020
- Nitrogen oxides: -10% by 2020
- Sulphur oxides: -10% by 2020

<sup>1)</sup> Reduction of emissions per tonne of clinker

We intend to measure heavy metals such as mercury, dioxins or furans at all locations by 2010. We have not yet come essentially closer to this goal.

### Emission measurement for mercury and dioxins/furans in 2008:



### Effects on the local environment and biodiversity

In order to systematically advance the management of local environmental effects, we set out in our Sustainability Programme 2006/2007 that subsequent use plans shall be developed for 80 % of our plants by 2009 and plans for the promotion of biodiversity for 25 locations by 2010. We have already been able to exceed both goals.

	Goal	Progress by 2008
Subsequent use plans for plant locations	80 % by 2009	88 %
Plans for the promotion of biodiversity at locations	25 by 2010	26

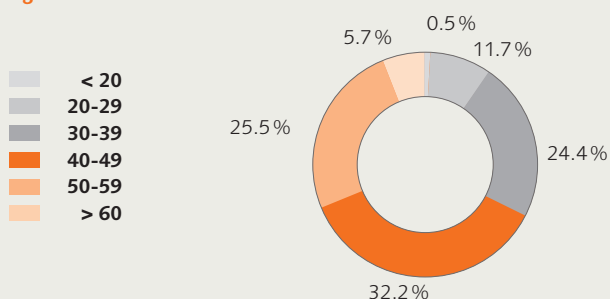
We assess the effects of our activities on the local biodiversity and initially investigate which locations are located in or near Natura 2000 areas, a coherent network of special protected areas in Europe. In the Sustainability Programme 2006/2007 we had made it our aim to examine the locations in Sweden, Poland, the Czech Republic and Hungary: By the end of 2008, we examined all locations in these countries; 31 % of them are located in or near protected Natura 2000 areas.

In addition, we intend to map the value of our premises in terms of nature conservation on the basis of biodiversity indicators and to document the impacts of our activities. Our goal is to apply the indicators at all locations in Germany until 2010; by the end of 2008, we had already introduced them at 7 locations.

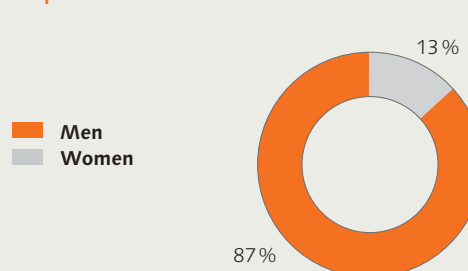
# Employees and society

## Personnel structure in 2008

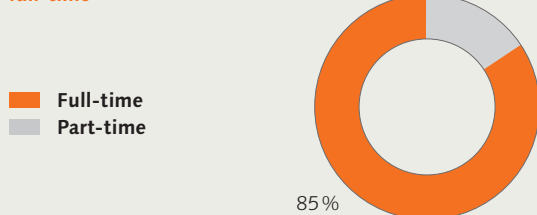
### Age structure



### Proportion of men/women



### Proportion part-time/full-time



### Women in leading positions

Top positions: 2 %  
Senior positions: 10 %

Number of security personnel: 442

In the reporting years 2007 and 2008, we have significantly developed our reporting system in the area of social key figures and are now for the first time able to provide information about our personnel structure with regard to age structure, women in leading positions and employment relationships

## Number of employees

	2007 <sup>1)</sup>	2008
Europe	30,597	27,035
North America	19,267	15,739
Asia-Australia-Africa	17,999	18,015
Group Services	52	52
HeidelbergCement total (at 31 December)	67,916	60,841

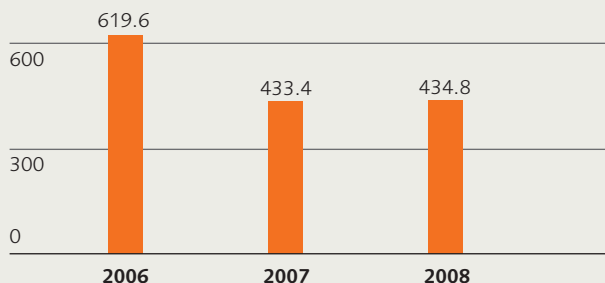
<sup>1)</sup> including Hanson, as of 24 August 2007

The decrease in the number of employees results essentially from the location optimisations and capacity adjustments in North America and the United Kingdom.

## Social benefits

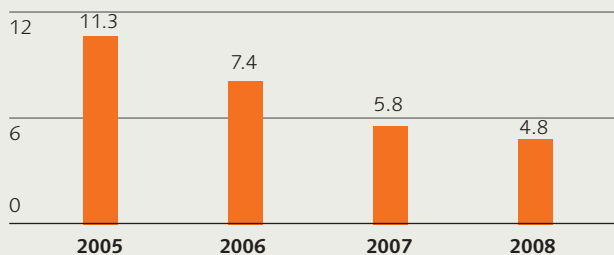
In 2008, expenditure on salaries, social security contributions, pension scheme contributions and social aid rose by 37.5 % in comparison with the previous year to EUR 2,298 million (previous year: 1,671 EUR million). As regards pension scheme arrangements, we rely more heavily on our employees taking individual responsibility, and specifically promote this type of company pension scheme with attractive offers. In 2008, the voluntary pension plans amounted to EUR 434.8 million (previous year: 433.4).

## Voluntary pension schemes in EUR million

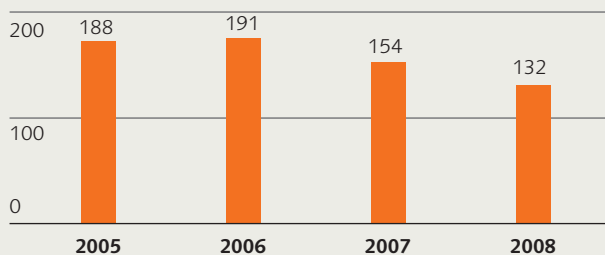


## Occupational health and safety

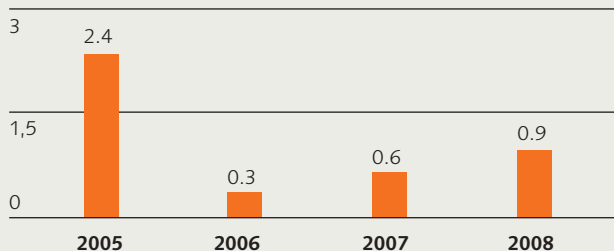
### Accident frequency rate <sup>1), 4)</sup>



### Accident severity indicator <sup>2), 4)</sup>



### Fatality rate <sup>3), 4)</sup>



- <sup>1)</sup> Number of accidents (with at least one lost working day) suffered by Group employees per 1,000,000 working hours
- <sup>2)</sup> Number of lost working days resulting from accidents suffered by Group employees per 1,000,000 working hours
- <sup>3)</sup> Number of fatalities of Group employees per 10,000 Group employees
- <sup>4)</sup> Data are not comparable to average industry values inasmuch as HeidelbergCement also records concrete and aggregates, while the average industry values solely refer to cement.

In 2007 and 2008, we were able to further reduce both frequency rate and severity of accidents. Unfortunately, there were five fatalities in 2008, which led to an increase in the fatality rate. According measures, at both local and Group level, will follow in order to effectively prevent accidents.



# Goals and measures for more sustainability

On the preceding pages of this report we have listed our achievements item by item. We will now describe in detail which goals we intend to achieve in the next years and by means of which measures. We have set up the Sustainability Ambitions 2020 that comprises our long-term core objectives with the time horizon until 2020. The goals and measures in this section indicate milestones and sub-ordinate targets in order to successively realise the Sustainability Ambitions 2020.

Subject area	Goals and measures	Status	Deadline	Sustainability Ambitions 2020
<b>Sustainability strategy and management</b>				
Sustainability criteria	Integration of sustainability criteria in decision-making processes based upon the WBCSD Cement Sustainability Initiative (CSI)	↗	ongoing	
Environmental management	All cement plants shall implement a certified environmental management system	new <sup>+</sup>		Goal by 2020
Occupational safety management	Examine all locations according to uniform occupational safety criteria	↗	2011	
Internal reporting	Expansion of our internal sustainability reporting to include social and economic information	↗	ongoing	
	Implementation and expansion of the controlling for employee qualification in the area of occupational health and safety	→	ongoing	
External reporting	Continuation of external reporting on our sustainability goals and achievements	↗	ongoing	
Stakeholders	Involvement of stakeholders at the locations	↗	ongoing	
<b>Company and innovation</b>				
Competitiveness	Promote cost leadership	↗	ongoing	
	Development of a review system for our suppliers according to ecological and social criteria	→	2009	
Investments	Identification and review of aspects relevant to human rights in connection with investments	→	2009	
Customers	Customer survey and development of a customer satisfaction barometer in pilot countries	new	2009	
Research and innovation	Extended research in the areas of building materials recycling and special concretes	new	ongoing	
<b>Employees and society</b>				
Personnel responsibility	Responsible conduct with employees in the event of job reductions or relocations through socially acceptable solutions and reintegration support	↗	ongoing	
Occupational health and safety	Improvement of reporting	↗	ongoing	
	Further implementation of the Health and Safety Initiative	↗	2011	
	Reduction of the accident frequency rate and the accident severity indicator for internal employees to 50 %	new <sup>+</sup>	2012	Reduction to zero
	Reduce the fatality rate for internal employees to zero	new <sup>+</sup>	2012	Zero fatalities
Internationality	International staffing of management programmes	↗	ongoing	
Social responsibility	Group-wide process for measuring the success of fundraising and cooperation projects	→	2011	

## Environment and resources

CSI guidelines	Implementation of the guidelines developed by the WBCSD Cement Sustainability Initiative (CSI)	↗	ongoing	
	Continuation of the reporting on the implementation of the CSI guidelines	↗	ongoing	
Climate protection	Reduction of the specific net CO <sub>2</sub> emissions	↗	ongoing	Goal is currently being defined
	Decrease of the clinker proportion in cement to 75 %	new <sup>+</sup>	2012	Clinker proportion: 70 %
Raw materials and fuels	Increase of the proportion of alternative fuels to 22 %	new <sup>+</sup>	2012	Proportion of alternative fuels: 30 %
	Increase of the biomass proportion to 6 %	new <sup>+</sup>	2012	Biomass proportion: 9 %
	Increase of the proportion of alternative raw materials to 11 %	new <sup>+</sup>	2012	Proportion of alternative raw materials: 12 %
	Identify examples of best practice with regard to water consumption	↗	2009	
Emissions	Measuring of heavy metals, volatile organic compounds (VOC) and dioxins/furans at all locations	→	2010	
	Decrease of emissions per tonne of clinker (basis: 2008)	new <sup>+</sup>	-	Goal by 2020
	• Dust: by 35 %	new <sup>+</sup>	-	Goal by 2020
	• Nitrogen oxides: by 10 %	new <sup>+</sup>	-	Goal by 2020
	• Sulphur oxides: by 10 %	new <sup>+</sup>	-	Goal by 2020
	Intensified exchange of best practices on noise protection	↗	ongoing	
Effects on the local environment and biodiversity	Subsequent use plans for 92 % of the locations in the cement business and for 88 % of the locations in the aggregates business	new <sup>+</sup>	2012	Subsequent use plans for 100 % of the locations
	Implementation of the guideline for the promotion of biodiversity in the form of a manual in Asia-Australia-Africa and North America	new	2009/2010	
	Mapping of the protected Natura 2000 areas in the United Kingdom, the Benelux countries and Spain	new	2011	
	Expansion of biodiversity management plans: Develop biodiversity management plans for 35 % of the stone quarries located in areas of high biological value	new <sup>+</sup>	2012	Biodiversity management plans for 50 % of the stone quarries
	Apply biodiversity indicators to all locations in Germany	↗	2010	
Sustainable construction	Involvement in Green Building Councils in all countries in which HeidelbergCement is active	new <sup>+</sup>		Goal by 2020

### Underline:

**new:** newly set goal in 2009

**new<sup>+</sup>:** newly set, raised goal in 2009

**↗:** improvement

**→:** no/little change

# GRI Content Index

Similarly to the Sustainability Reports 2005 and 2007, our third Sustainability Report follows the internationally recognised Guidelines of the Global Reporting Initiative (GRI). As the basis of reporting, we use the third generation of the Guidelines (G3) as of October 2006.

## The GRI Guidelines

The GRI strives towards the worldwide standardisation of sustainability reports across industries in order to achieve a higher degree of comparability. We have adapted the contents of our report to the set of indicators recommended by the GRI and point out in a transparent manner which of these GRI Indicators we report on and where our readers may find them. A detailed version of the GRI Reporting Index with explanations can be found on our homepage.

[www.globalreporting.org](http://www.globalreporting.org) > Reporting Framework > G3 Online  
[www.heidelbergcement.com](http://www.heidelbergcement.com) > Sustainability

## Scope of reporting and data collection

The Sustainability Report 2009 covers our largest business line, cement, as well as parts of the aggregates business. The concrete business activities are not taken into consideration. Only the economic and social data refer to the Group as a whole.

In our calculation of the indicators we rely on the consolidation rules that are also applicable for our Annual Report. For the environmental data we apply the calculation methods of the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD).

GRI Name of Indicator		Page
<b>1. Strategy and analysis</b>		
1.1	Statement	F4, www, AR (p. 3-4)
1.2	Risks and opportunities	F3, 5-8, www, AR (p. 36-40, p. 49)
<b>2. Organisation profile</b>		
2.1	Name	F1, www, AR (F1)
2.2	Products	2, 3, 9, 37, www, AR (p. 18)
2.3	Group structure	2, 9, www, AR (p. 18)
2.4	Headquarters	9, 49, www, AR (p. 74)
2.5	Countries and locations	2, 9-10, www, AR (p. 52-61)
2.6	Ownership structure	2, www, AR (p. 14)
2.7	Markets	9-10, www, AR (p. 52-61)
2.8	Group profile	2, 9-10, www, AR (p. 18)
2.9	Changes	2, 9, www, AR (p. 14, p. 18)
2.10	Prizes	www, AR (p. 42, p. 47)

GRI Name of Indicator		Page
<b>3. Reporting parameters</b>		
3.1	Reporting period	F2, F4
3.2-3	Report	F2, F4, 46-49
3.4	Contact	49, www
3.5-7	Report content and limitation	F2, F4, 5-7, 46
3.8	Joint Ventures	2, 9-10, www
3.9	Measurement techniques	F2, 16, 46
3.10-11	Restatements	F2, 2, 8-10, 42, 43
3.12	GRI Content Index	46-47, www
<b>4. Governance, commitments and engagement</b>		
4.1	Governance structure	4, 7, www, AR (S. 10, p. 142-143)
4.2-3	Managing Board	www, AR (p. 10, S. 12, p. 135-138)
4.4	Recommendations	30, www
4.5	Management remuneration	28, AR (p. 33-34)
4.6	Conflicts of interest	4, AR (p. 33-36)



4.7	Management expertise	28
4.8	Code of conduct	4, 11-12, 20, 30, www, AR (p. 33)
4.9	Monitoring	5, 7-8, www, AR (p. 36-45)
4.10	Evaluation	AR (p. 33-34, p. 134-135)
4.11	Precaution	4, 5-8, 44-45
4.12-13	Initiatives, associations	F2, 7, 8, 17, 23, 32-33, www
4.14-17	Stakeholders	F2, 5-6, 11, 18, 21, 27, 32-33, www

#### Economic performance

	Management approach	4-8, 11, 31-32, www
EC1	Value generated	11, 37, www, AR (F1, p. 95-103)
EC2	Implications of climate change	8
EC3	Social benefits	28
EC4	Government aid	www, AR (p. 5, p. 23)
EC6-7	Local suppliers, personnel	11, 31, 35, www
EC8	Investments	31-32, www, AR (p. 45)

#### Environmental performance

	Management approach	4, 5-8, 16-18, 20-26, 44-45, www
EN1-2	Materials	18-19, 23, 25, 38-39, www
EN3-6	Energy consumption	6, 16-19, 23, 25, 38, www, AR (p. 45)
EN8	Water consumption	19
EN10	Water recycling	19
EN11	Land ownership	21, 41, www
EN12-14	Biodiversity	5, 7, 20-21, 25, 41, www, AR (p. 3, p. 43, p. 146)
EN16-18	Ozone-depleting substances	16-17, 22, 25, 38, www, AR (p. 40, p. 44)
EN20	NO <sub>x</sub> , SO <sub>x</sub> and others	22, 40-41, www
EN22	Waste	18, 39
EN26	Product management	16-25, 31-32, www, AR (p. 43-47, p. 49)

#### Social performance: work environment

	Management approach	4-8, 26-31, www
LA1-2	Workforce	27, 42, AR (p. 41, p. 97)
LA6-8	Occupational health and safety	29-30, 43, www, AR (p. 44-45)
LA10	Employee training	6, 27-28, 44, www, AR (p. 41-42)
LA11	Knowledge management	8, 15, 27-28, www, AR (p. 45-46)
LA12	Career development	7, 28, 44, www, AR (p. 49)
LA13	Diversity	27, 31, 42, www, AR (p. 10)

#### Social performance: human rights

	Management approach	4-8, 11-12, 27-29, 31
HR1	Human rights	44
HR2	Suppliers	11-12
HR4	Non-discrimination	27
HR5	Freedom of association	27

#### Social performance: society

	Management approach	4-8, 11-12, 31-32, www
SO1	Community	6, 11, 18, 31-32, 35, www
SO2-4	Corruption	11-12, AR (p. 36)
SO5	Public policy	17, 32-33, www
SO6	Donations	31, AR (p. 34)
SO7	Claims	12, AR (p. 40)
SO8	Fines, sanctions	12, AR (p. 40)

#### Social performance: product responsibility

	Management approach	4-8, 13, 14, 23
PR1	Methods	23, 29-30, www
PR3	Information requirements	3, www
PR5	Customer satisfaction	11-12, www
PR6	Marketing	11-12, www, GB (S. 6, S. 36)
PR7	Unfair competition	11-12, GB (S. 6, 36)
PR9	Fines	12, GB (S. 40)

Not relevant: EN19, EN21, EN27, HR6, HR7

Not reported on for lack of relevant events: 3.13, EN23, EN28

Not reported on because reporting system is not yet installed: LA4, LA5, LA14

www: [www: www.heidelbergcement.com](http://www.heidelbergcement.com)

AR: Annual Report 2008

F: Front flap

# Glossary

**Alternative fuels:**

Combustible substances and materials used in place of fossil fuels.

**Alternative raw materials:**

Substances and materials mixed as additives to the clinker, thus reducing the proportion of energy-intensive produced clinker in the cement. See also **blast furnace slag** or **fly ash**.

**Biodiversity:**

According to the Convention on Biological Diversity, biodiversity encompasses the diversity of species on earth, genetic diversity, diversity of habitats.

**Blast furnace slag:**

Fine-grained, glassy waste product from pig iron production in the blast furnace. Additive for blast furnace slag cements.

**Cement Sustainability Initiative (CSI):**

Association of 18 leading cement manufacturers worldwide to promote sustainable development under the auspices of the **WBCSD**.

**Clinker:**

Intermediate product in cement production and main component of most types of cement. Is formed from limestone, clay, marl and aggregates by burning at about 1450 °C, using large amounts of energy.

**Composite cement:**

Cement that contains alternative materials such as **blast furnace slag** or **fly ash** in addition to clinker.

**Dioxins and furans:**

Halogenated aromatic hydrocarbons. Undesired, toxic and carcinogenic by-products of combustion and production of chlorinated organic compounds.

**Fly ash:**

Solid, particulate combustion residue from thermal power plants or waste incineration plants, for example. Because of its fineness (between 1 µm and 1 mm), it passes out along with the flue gases and must be eliminated by filters. Additive for fly ash cements.

**Nitrogen oxides:**

Released during combustion processes at high temperatures and converted into harmful low-level ozone through photochemical reactions caused by the sun's rays.

**Volatile organic compounds (VOCs):**

Compounds that can sometimes have a directly damaging effect on humans and the environment (e.g. benzene). Like **nitrogen oxides**, they are also preliminary substances for low level ozone.

**WBCSD – World Business Council for Sustainable Development:**

Cooperation of around 200 international companies who have made a commitment to the idea of sustainable development on the basis of sustainable growth, ecological equilibrium and social progress.

# Imprint

## **Copyright © 2009**

HeidelbergCement AG  
Berliner Strasse 6  
69120 Heidelberg, Germany

## **Concept and realisation**

HeidelbergCement Group Communication  
IFOK GmbH, Bensheim, Germany  
ServiceDesign Werbeagentur GmbH, Heidelberg, Germany  
abcdruck GmbH, Heidelberg, Germany

Printed on environmentally friendly paper,  
bleached without chlorine.

## **Photographs**

HeidelbergCement photo archives

This Sustainability Report is also available in German.

We would be happy to send you further information.  
You can also find this Sustainability Report and  
further information on the internet at  
[www.heidelbergcement.com](http://www.heidelbergcement.com)

## **Contact:**

Group Communication  
Dr. Brigitte Fickel  
Phone: +49 6221/481-227  
Fax: +49 6221/481-217  
E-Mail: [info@heidelbergcement.com](mailto:info@heidelbergcement.com)

Last updated: August 2009

The Sustainability Report is published every two years.  
The last report was published in August 2007, the next  
is planned for 2011.



for better building

**HeidelbergCement AG**  
Berliner Strasse 6  
69120 Heidelberg, Germany  
[www.heidelbergcement.com](http://www.heidelbergcement.com)

**HEIDELBERGCEMENT**