

## Fact Sheet - Environment

### Introduction

Our world is precious. Natural resources are finite. The notion that we must tread lightly on the planet, and minimize our environmental footprint for the benefit of all - now and into the future - cannot be questioned as an important responsibility for today's business. In fact, it is at the heart of the concept of sustainable development - 'to meet the needs of the present without compromising the ability of future generations to meet their own needs'.

It has been more than 40 years since environmental issues were first thrust into the headlines by NGOs - soon to be followed by attention from more mainstream institutions. The UN's 1972 conference in Stockholm was instrumental in highlighting the importance of our natural capital. Twenty years later, at the Rio Earth Summit in 1992, a strong link was made between the environment and development - and business was invited to the table to discuss its role. Then, in 2002 in Johannesburg, a global summit looked at all three pillars of sustainable development in an integrated way - and business, in cooperation with others in society, was seen as part of the solution to environmental degradation, not just part of the problem.

### Why this issue is important

When one considers that concrete is second only to water as the most consumed substance on earth - accounting for a staggering two to three tonnes of product for each person on the planet - and that cement is the chief ingredient in concrete, it is clear that minimizing the environmental impacts of cement production must be a high priority for a company committed to sustainable development.

However, reducing impacts is only one part of the picture. Environmental factors are no longer seen as risk factors, but also as opportunities - sources of efficiency improvement and competitive advantage. The term 'eco-efficiency' which describes the process of 'making more with less' is central to this idea. Businesses which embrace the concept find that they can reduce their environmental footprint while at the same time improving their financial bottom line.

### Challenges for Holcim

As the main ingredient in concrete, cement is a key requirement of modern society but its manufacture is a resource and energy-intensive process. Cement production causes

emissions of dust, sulfur oxides, nitrogen oxides and other substances to the atmosphere and is a significant contributor to global man-made CO<sub>2</sub> emissions. Cement plants, quarries and transport operations may also have adverse impacts on local ecology, water quality and local communities.

Our challenge is to minimize these impacts - by reducing emissions and applying the principles of eco-efficiency. For example, several wastes and by-products of industrial and human society can be used as fuel or alternative mineral material to make cement, thus reducing our reliance on finite natural resources. Many combustible wastes, such as waste oil, solvents, used tires, plastics, paint sludge, waste wood and paper sludge can be used to substitute fossil fuels. Slag from the steel industry and fly ash from coal-fired power stations can be used to partially replace clinker in composite cements. Furthermore, introduction of new technology to the cement-making process has led to significant reductions in energy consumption, raw material consumption as well as some emissions to the air.

We have other challenges which must be met, however. In order to use the cited methods to minimize our impacts, we need to engage our stakeholders. Customers, for example, must be assured that cement quality is not compromised by alternative methods of production. Communities around our plants must be assured that their health and well-being remains unaffected; and authorities in various countries must be engaged to ensure regulations are of a high standard and take account of the cement industry's ability to provide environmental benefits to society.

## **Our commitment**

At Holcim, our goal is to continually demonstrate our commitment to sustainable environmental performance, actively working to improve our performance and to increase our understanding of the challenges that we - and our industry - face in this area. We aim to understand our current performance through consistent measurement and reporting techniques, as well as the implementation of management systems to monitor progress toward our goals. To work effectively, these systems are integrated into overall business processes and supported by appropriate training.

We are committed to the implementation of ISO 14001-compatible management systems at all Group cement plants, grinding stations and AFR-pretreatment platforms. Although a moving target because of ongoing acquisitions by the Group, 93% of our facilities had achieved the target by year-end 2007. In addition, we have developed a global emissions monitoring and reporting (EMR) standard and set emission reduction targets for key substances – NO<sub>x</sub>, SO<sub>2</sub> and dust.

To support our commitment to 'produce more with less', we measure the efficiency of our process against four key performance indicators - clinker factor, specific heat consumption, thermal substitution rate, and cement kiln dust (CKD) rate. We must improve our performance on each of these parameters in order to achieve our objective of a 20% reduction in CO<sub>2</sub> emissions by 2010.

As part of our engagement with the Cement Sustainability Initiative (CSI), we are actively involved in the key environmental commitment areas of its Agenda for Action - such as climate protection, fuels and raw materials, emissions reduction and local impacts.

### **Related publicly available information**

Holcim publishes Corporate Sustainable Development Reports (CSDRs) each second year, with performance information and data updated annually on our website. Together with additional fact sheets and other SD-related information, this can be found at:

[www.holcim.com/sustainable/](http://www.holcim.com/sustainable/)

More information on the CSI is available at: [www.wbcscement.org/](http://www.wbcscement.org/)