



Toward a sustainable  
**cement**  
industry



# Sustainable cement

Sustainable development is generally defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.<sup>(1)</sup> But how does this apply to the cement industry? What should industry do? That is what the ‘Toward a sustainable cement industry’ project aims to find out.

(1) ‘Our common future’, report by the Brundtland commission from the United Nations, 1987

## What is the sustainable cement project?

Started in February 2000, this two-year initiative under the lead of the World Business Council for Sustainable Development (WBCSD) aims to define how the cement industry can become more sustainable. Initiated by a group of cement companies, the project will solicit the views of a large number of stakeholders as part of an independent investigation into the specific challenges, barriers and opportunities facing the industry in its drive toward greater sustainability. Ultimately, the project aims to pave the way for positive changes over an extended period that will make the cement industry a leading participant in a globally sustainable future.

## How is cement produced?

Cement is made by crushing and blending limestone (calcium carbonate) and other materials containing silicon, aluminum and iron oxides. The blended material is heated at extremely high temperatures in a kiln where the compounds react. Products leave the kiln as a nodular material called clinker, which is then cooled and ground with small portions of gypsum and other additives to produce cement. Finally, cement is combined with sand, gravel and water to form concrete—the product most of us see in our daily lives.

## Why are these companies undertaking the project?

Cement industry leaders realize both the opportunities and the need to properly address sustainable development issues to continue their ‘license to operate’. By engaging with a wide community of interested parties at an early stage, they hope to encourage discussion of the issues in ways which are balanced, interactive and constructive.

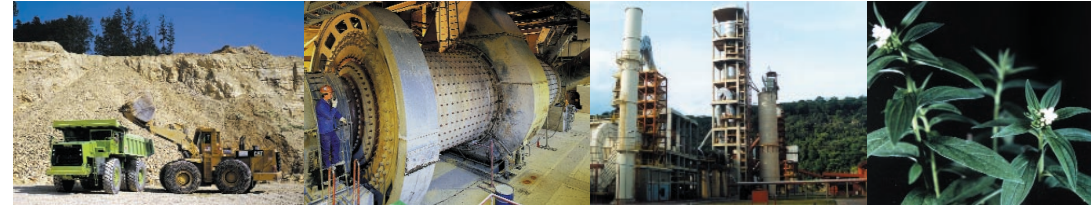
## Why is the industry concerned about sustainability?

The industry produces 1.5 billion tons of cement annually—a ‘glue’ which holds together much of our modern global infrastructure; from roads to houses, from dams to water treatment systems, from schools to hospitals. It is hard to envision a society without cement. However, the industry must deal successfully with a number of concerns, among them: restoring exhausted limestone quarries, minimizing wastes and carbon dioxide in its manufacturing processes. Of course, there are also opportunities, such as recycling and reusing the waste of other industries in an environmentally responsible way.

## What is the work program?

A scoping or pre-study to determine the critical sustainability issues was completed in May 2000 as a first step in the work. Stakeholders were interviewed on a one-to-one basis as part of the research. The key issues pinpointed include the cement industry’s impact on a global and local level, the role of technology, innovation and public policy instruments in spurring progress toward sustainability, ways to mitigate climate change, efficient resource utilization, land use, and product/process management concerns. These and other critical issues will be explored through in-depth sub-studies over the next year.

The main study is being led by Battelle (USA) who will also commission a number of sub-studies, each addressing a particular aspect relating to sustainable development, from respected research institutes and specialized consultants. The findings will be integrated into a final report that will lay down specific recommendations on actions for change in industry behavior and public policy.



## To whom will we speak?

To compile part of our research and gauge opinions on critical issues, we will organize stakeholder dialogues in developed and developing countries. The study will solicit opinions from a wide range of stakeholders, including representatives from government, academia, labor, science, consumers, suppliers, and non-governmental organizations such as conservation and environmental groups.

## Why is the project carried out under the auspices of the WBCSD?

The WBCSD has a track record of involvement in sectoral initiatives and its impartiality is key. As a diversified forum bringing together leading companies in their fields, the organization lends experience and a forum for interchange to such industry-led projects. ‘Toward a sustainable cement industry’ is one of several member-led industry sector initiatives underway within the WBCSD. Others include work on forestry, mining, mobility and electric utilities.

## How will the results be used?

The main study results with measurable action targets directed at both manufacturers and stakeholders will be circulated among a wide audience. That is just the beginning. Once producers know where the problems and opportunities lie, and stakeholders are better informed about the challenges which sustainability poses, all parties can start to mobilize resources and adapt planning policy to meet objective goals. The process for change will almost certainly be a gradual one. For example, even if environmentally friendlier processes for producing cement are found, there needs to be a supporting legal framework that allows such alternatives to be used.

## Who is involved?

The chief executive officers of Portugal’s Cimpor, Swiss-based Holderbank and France’s Lafarge are co-chairing the project. Eleven cement companies in total, including CEMEX (Mexico), Heidelberger Zement (Germany), Italcementi (Italy), RMC (United Kingdom), Siam Cement Industry (Thailand), Ssangyong Cement (South Korea), Taiheiyō Cement (Japan) and Votorantim (Brazil) form the industry **working group** for the project.

**Third-party sponsors**, both within and outside the industry, are expected to be involved as associated partners to help shape the content of the work program, add a broader perspective and highlight local concerns and priorities.

A small, independent **assurance group** will check that the project has the correct focus and processes, critique quality and balance, and act as a referee in case of disagreements. Members are drawn from several different geographic regions. Dr. Mostafa Tolba, former director of the United Nations Environment Program (UNEP), chairs the assurance group.

The **lead consultant** will manage the main study and sub-studies, as well as any subcontractors involved.

The **WBCSD** is the overall coordinator of the project and will help organize stakeholder dialogues.

## What is the timetable?

The project started in February 2000. In May, the scoping paper was delivered and outreach to prospective sponsors started. The main study got underway at the beginning of July with a mid-term progress report scheduled for January 2001 and completion by October of that year.

## What will it cost?

The preliminary budget is USD3.5 million. Each working group company is to contribute USD250,000 for the two-year life of the project while approximately USD1 million will be sought from private and public sector sponsors.



## What is the World Business Council for Sustainable Development ?

The World Business Council for Sustainable Development (WBCSD) is a coalition of some 150 leading international companies that are dedicated to making a difference in corporate governance through the adoption of sustainable development management thinking. These companies share a belief that there is a sustainable way forward for successful business growth that should benefit all stakeholders.

As such, the WBCSD is the leading business advocate on environmental and sustainable development issues. We build strategic alliances with key stakeholders including governments, NGOs and pressure groups to anticipate rather than react to their agendas. By being consulted early in the process, we can influence priorities and thinking, and so help to shape policy.

Membership covers 30 countries and more than 20 major industrial sectors. In addition, we have formed a thriving network of 30 national and regional business councils and partner organizations, located mainly in developing and transitional countries and including over 700 business leaders.

## Who to contact ?

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