

## 1. General Information and Overview of Scope of IDB Invest E&S Review

The IDB Invest made a field visit to Cemex in the city of Monterrey, Mexico, between September 20th and 23rd, 2017. In this occasion, the visit included the Monterrey cement plant and the aggregates quarry located next to the plant, as well as the company's corporate offices. Environmental, social, health, safety and labor issues of Cemex were reviewed to identify any gaps with the IDB Invest Environmental and Social Sustainability Policy.

Environmental and Social Categorization and Rationale. According to the IDB Invest Environmental and Social Sustainability Policy, the Project has been classified in Category B (medium risk), since its potential environmental and social risks and impacts are limited, are largely reversible, and can be mitigated via measures that are readily available in the context of the operation.

The IFC Performance Standards triggered in this operation are the following:

- Performance Standard 1: Assessment and Management of E&S Risks and Impacts
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety and Security

## 2. Environmental and Social Context.

Cemex is a multinational cement company that quotes ordinary shares and American Depositary shares in the Mexican and New York stock exchanges, respectively. Incorporated in Mexico in 1906, it currently provides construction related services to clients and communities in more than 50 countries throughout the world and maintains business relations in more than 100 countries throughout the world. As of December 31st, 2016, Cemex operated 15 cement plants, 15 aggregated quarries and 275 premixed concrete plants in Mexico. As of December 31st, 2016, the company employed 41,853 people throughout the world, of which 11,249 were in Mexico.

## 3. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

### 3.1 Assessment and Management of Environmental and Social Risks and Impacts

a. E&S Assessment and Management System. Cemex has certified its cement plants in Mexico under ISO 14001 and OHSAS 18001. The company's Environmental Management System and Health and Safety Management System are based on these international standards. Besides, the company has received other distinctions, such as:

- Environmental Excellency (Excelencia Ambiental) awarded by the Federal Environmental Protection Agency (Procuraduría Federal de Protección al Ambiente) for demonstrating exemplary leadership and commitment in the preservation of the environment.
- Clean Industry (Industria Limpia) awarded by the Federal Environmental Protection Agency for complying with all the legal requirements and going beyond requirements in environmental care.
- Socially Responsible Company (Empresa Socialmente Responsable) awarded by the Mexican Center for Philanthropy (Centro Mexicano para la Filantropía - CEMEFI).
- Ethics and Values in Industry Award (Premio Ética y Valores en la Industria) by the Confederation of Industrial Chambers (Confederación de Cámaras Industriales - CONCAMIN). This year Cemex received a special mention for the number of accumulated years receiving this award.

#### b. Policy.

The Code of Ethics and Conduct of Cemex encompasses several issues of importance to the company, such as the relationship with the community and environmental responsibility, as well as industrial safety and health at work. In addition, Cemex has global policies such as the Environment Policy and the Health and Safety Policy

(<https://www.cemex.com/es/sostenibilidad/posturas-y-politicas/politicas>). At a global level, the Code of Ethics and Conduct seeks to ensure that operations strictly adhere to the laws and the application of the highest standards and principles of corporate social responsibility. To this end, it posits the

following values: guarantee safety, focus on the client, seek excellence, work as a unit and act with integrity. The Code of Ethics and Conduct elaborates on each aspect of the activities grouped in thematic areas:

- i. Relations with stakeholders (workers, clients, suppliers, government and community)
- ii. Operations and activities (free competition, anti-bribery, money laundering, conflicts of interest, environmental responsibility, political activities)
- iii. Health, safety and integrity (industrial safety and occupational health, confidential information, controls and financial records, asset protection)
- iv. Administration of the Code of Ethics and Conduct

**c. Identification of Risks and Impacts.**

Cemex maintains a sustainability focus in its operations. The sustainability approach is based on: (i) the development of its industrial activities in a safe and efficient manner, (ii) provide durable and efficient products and solutions from the energy point of view and in the use of resources, and (iii) produce a social impact that empowers communities. At the operational level, the methodologies implemented to obtain international certifications allow Cemex to develop the mechanisms for identifying risks and impacts that are then reflected in its management programs.

**d. Management Programs.**

The Environmental Management System (EMS) of Cemex is based on the ISO 14001 standard, as its Health and Safety Management System (HSMS) is based on the OHSAS 18001 standard. In 2016, the EMS was incorporated in 98% of Cemex cement plants, in 88% of concrete plants, and in 86% of aggregate plants worldwide. HSMS system of Cemex is based on the risk management system. It is used to support the work centers and business units in Cemex in a global way to implement, document, maintain and continuously improve the health, safety, reliability and efficiency of operations. As part of the HSMS, task risk analysis is performed for non-routine activities, thus defining special procedures and permits.

**e. Organizational Capacity and Competency.**

Each plant has a comprehensive environmental management, which involves a Quality and Environment Coordinator and an analyst (usually an engineer) who supports him on environmental issues. In addition, it receives support from Cemex Mexico's Sustainability Department that directs the environmental strategy and supports the technical-legal needs of each Plant, and the Legal Department to attend the requirements of authorities. There are 3 Regional Quality Managers to support in matters of compliance with ISO 14001 by region.

**f. Emergency Preparedness and Response.**

Each operating unit of Cemex has specific emergency management plans based on the risks that may affect the business and considering the emergency services and the population of the neighborhood. The respective managers are responsible for ensuring that the requirements of each plan are implemented and met, with the necessary personnel, equipment and facilities. Emergency management plans are documented, accessible and communicated clearly. Exercises and checks are carried out to evaluate and improve the management capacity in the face of crisis situations or emergency response, including contacting and participation of external organizations. The plans and procedures for emergency situations are periodically reviewed and incorporate the lessons learned from incidents and previous exercises.

**g. Monitoring and Review.**

As part of the continuous improvement system that Cemex incorporates in its management programs, there is a permanent control and monitoring, followed by an evaluation that determines corrective actions in all operational areas.

**h. Stakeholder Engagement.**

Cemex participates in multiple activities with the community through its area of Corporate Social Responsibility. For this, it works with interest groups such as: universities, governments, NGOs, communities, employees, customers and suppliers through the development of programs that

contribute to economic growth through:

- Promoting the development of sustainable communities.
- Creating inclusive business opportunities.
- Generating empowerment, promoting diversity and capacity development. In particular, capacity building for women and young people and strengthening their role in the productive sector.

Cemex develops alliances with different public and private institutions to channel and strengthen their efforts. The programs it supports are grouped into large categories:

- Housing: contributing to access to decent housing (Yo Construyo, Construyo Contigo, ConstruApoyo, CPA, Franquicia Social, Estufas Ecológicas, Patrimonio Hoy).
- Communities: capacity building for the sustainable development of communities (Centro Comunitarios, Manos a la Obra, Academias Deportivas, Proyectos Productivos, Todas Somos Esperanza, Centro Cemex-Tec, Red Suma RSE, Alianza Educativa, Nuevas Oportunidades de Empleo).
- Environment: caring for the environment as a key factor for sustainable development (Estrategia de Carbono, Planes de Acción de Biodiversidad - PAB, Residuos a Combustible, Viveros y Huertos, Restauración Ambiental Comunitaria, Unidos).

i. External Communication and Grievance Mechanisms. On the company's website ([www.cemex.com](http://www.cemex.com)) there is a free number and an email address where anyone can enter complaints regarding any of the business units. It also has an open and confidential communication channel (Ethos Line) ([www.tnwgrc.com/cemex//Spa/default.htm](http://www.tnwgrc.com/cemex//Spa/default.htm)) for employees, interest groups and the general public to send suggestions, questions or concerns and report any alleged violation of ethics, regulations or corporate governance. The complaints are administered and directed to the corresponding area (quality, environment, social issues, etc.) following a procedure that ensures the attention of the claim. In addition, there is the possibility of making a direct complaint in each of the plants.

### **3.2 Labor and Working Conditions**

a. Working Conditions and Management of Worker Relationships

i. Human Resources Policies and Procedures. Cemex complies with national regulations in relation to labor issues. The working conditions are stipulated in the Internal Work Regulation. The Cemex Mexico Facilities Policy establishes the standards of operation, maintenance, order and cleanliness in the work centers, both for employees, external users, visitors and general users of the facilities.

ii. Working Conditions and Terms of Employment. Cemex offers working conditions in terms of remuneration and benefits that exceed the legal minimums in Mexico.

iii. Workers' Organizations. The workers of Cemex are affiliated to the National Union of Workers of the Cement Industry (Sindicato Nacional de Trabajadores de la Industria Cementera), with which Cemex has agreed the Internal Work Regulation of the company.

iv. Non-discrimination and Equal Opportunity. The Internal Work Regulation establishes the prohibition by employers of any discrimination based on ethnic origin, nationality, gender, age, disability, social condition, health condition, religion, opinion, sexual preference, marital status or any other criteria that could lead to a discriminatory act. As part of its sustainability policy, Cemex supports several programs to promote opportunities for women, both inside and outside the company.

v. Grievance Mechanism. Workers can turn to the human resources department, as well as their respective supervisors for complaints or claims. They also have union representatives to advise them and support them in their claims. Finally, workers can resort to the external complaints and grievances mechanism (Ethos Line).

b. Protecting the Workforce. Cemex does not hire minors in its operations.

c. Occupational Health and Safety. The Company has established programs to address the main health and safety risks and fulfill the objective of avoiding all types of injuries to people, comply with legal requirements and improve health and safety levels in all operations. These programs include

the implementation of the HSMS system, the implementation of good practices in the safety of drivers and contractors and the investigation of the main causes of the incidents. Management is responsible for implementing the system and offering visible leadership in health and safety. Progress is measured through key performance indicators, which are reviewed monthly by the Executive Committee for Sustainability of Cemex. Health and safety specialists from each plant provide management support during implementation and verify effectiveness through audits and other monitoring activities.

d. **Workers Engaged by Third Parties.** Workers hired by third parties who work for Cemex are under the same HSMS as Cemex own workers

e. **Supply Chain.** Cemex has a supplier evaluation and development procedure, which includes issues of environmental management, safety and quality, among others. Suppliers must adhere to a code of conduct that reflects the same principles as the Code of Ethics and Conduct of Cemex. The principles include the commitment to comply with environmental legislation, promote best health and safety practices and support diversity and equal work opportunities. The sustainability program for Cemex suppliers consists of the following stages:

i. Self-assessment questionnaire for suppliers to identify potential innovation actions, development and implementation of sustainability practices.

ii. Communication of the principles and practices of Cemex.

iii. Development and implementation of sustainability practices.

iv. Recognition of supplier sustainability practices.

Cemex includes clauses related to human rights, labor issues, economic competition and sustainability in contracts and purchase orders. The contracts for the purchase of supplies and services have an environmental section (environmental clause) that requires compliance with current environmental legislation. Cemex assumes the commitment to operate its business in a manner that protects the health and safety of all its employees, contractors, visitors, customers and the communities in which it operates.

### **3.3 Resource Efficiency and Pollution Prevention**

a. **Resource Efficiency.** Cemex has advanced technology kilns, with multiple stages, that manufacture the clinker by dry process and with low energy consumption, which is corroborated by comparative reports of independent international publications. It also works on initiatives and programs that mitigate the impacts of emissions and make the use of energy more efficient. It has advanced automatic process control systems to operate in the most efficient conditions possible.

An important part of Cemex strategy for mitigating greenhouse gases is the use of alternative fuels generated from industrial and urban solid waste. These fuels have a lower emission factor compared to fossil fuels in clinker production. In 2016, Cemex managed to replace 23.3% of its fuel consumption with alternative fuels. This strategy mitigates the emission of greenhouse gases since solid waste generates methane due to bacterial decomposition, which is 28 times more powerful than CO<sub>2</sub> as a greenhouse gas. The Basel Convention, the directives of the European Union, various articles in scientific journals, as well as the UNFCCC through the Kyoto Protocol, have promoted and considered the co-processing of waste in cement kilns as an environmentally friendly action.

The water consumed comes 95.2% from wells and the remaining 4.8% is municipal water. All cement plants in Mexico have water recycling systems. The main use of water is for equipment cooling; thus it only comes in contact with steel plates through which heat exchange takes place, without any contamination occurring. The Monterrey cement plant only has discharge of sanitary water coming from offices which comply with the applicable regulations. The water used for equipment cooling is recycled. In 2017 CEMEFI distinguished Cemex as the winning company for Best Practices of Corporate Social Responsibility, under the Promotion and Responsible Consumption category for the "use of reuse water for concrete manufacturing".

b. Pollution Prevention. Cemex complies with all the emissions monitoring requirements established in the Mexican legislation. The Environmental Excellence and Clean Industry awards granted by the Federal Environmental Protection Agency require auditing this compliance. Cemex has installed continuous analyzers to monitor its main emissions in 84% of its production globally, which exceeds what is required by local regulations. This includes 100% of the plants in Mexico, where the Project is developed. All the production lines have emission control systems, by means of bag-house type collectors or electrostatic collectors, having reduced the dust emissions to the atmosphere in a consistent manner in recent years. This ensures compliance with applicable regulations, while avoiding the loss of raw materials in the form of powders emitted into the air providing maximum use of resources.

The handling and management of hazardous waste is carried out in accordance with the General Law for the Integral Prevention and Management of Waste. Through the co-processing of own and third-party waste, in 2016 Planta Monterrey used 142.8 tons of its own by-products and 60,516.1 tons of third-party waste as alternative fuels.

At the request of the IDB Invest, Cemex will report the annual generation of greenhouse gases at its plants in Mexico, both in absolute and specific volumes per unit of product, as well as a comparison showing the evolution compared to previous years. It will also report, at the request of the IDB Invest, on the use of alternative fuels.

### **3.4 Community Health, Safety and Security**

a. Community Health and Safety. The health of the community is assumed in the health and safety policies and procedures that Cemex develops for its operations, including emergency procedures. Due to the presence of Cemex operations throughout the territory, the health and safety of the community is fundamental to the company's management process. Likewise, this commitment is reflected in the Corporate Social Responsibility actions developed by the company.

b. Security Personnel. The asset security personnel at the Cemex facilities do not use weapons. Cemex provides training in human rights issues to its security department.

### **3.5 Land Acquisition and Involuntary Resettlement**

There are no land acquisitions or involuntary resettlements.

### **3.6 Biodiversity Conservation and Natural Habitats**

As part of its commitment to sustainability, Cemex carries out several projects for the protection of biodiversity in several of the countries in which it is present with its operations. The most notable effort is that of the El Carmen natural reserve.

The El Carmen natural reserve is a private transboundary conservation area north of the state of Coahuila, Mexico (95%), and south of the state of Texas in the United States (5%), (next to the Big Bend National Park), which includes five different ecosystems (desert scrub, pastures, oak forest, conifer forest and gallery forest). It has an area of 140,300 hectares, of which 77% was declared a Natural Protected Area by the federal government of Mexico. Restorations of habitats and reinsertion of species, some of which have been absent for decades, have been carried out on more than 20,000 hectares. It is the habitat of 45% of the mammals, 90% of the birds, 35% of the amphibians and reptiles and 40% of the plants that have been recorded in the Chihuahuan Desert ecosystem. For Mexico, El Carmen contributes to the conservation of 26% of registered birds and 16% of registered mammals. It is a habitat for endemic species and provides protection to the largest black bear population in the country. The project has been in existence for more than 15 years. More than 1,500 species of plants, 289 of birds, 80 of amphibians and reptiles, 40 of fish and 78 species of mammals have been identified. El Carmen self-generates 33,000 kWh per year through wind turbines and solar panels and is estimated to capture 11.2 million tons of CO<sub>2</sub> per year. The

reserve serves as a research platform for academics from several prestigious universities in both countries for the development of master's and doctoral theses and for the publication of scientific articles. It has active collaboration agreements with numerous conservation NGOs and has received distinctions from public and private institutions.

Cemex carries out other conservation projects, such as the biodiversity action plan in the Cerrito Blanco quarry, in the Sonora Desert. It is a joint study with Birdlife International and its ally in Mexico, Pronatura Noroeste, for the conservation of the Royal Eagle, the national bird that is threatened in Mexican territory. The next phases of the project include the restoration of Sonoran grassland habitat, focusing mainly on a Saguaro cactus. This cactus is recognized as a key species of the ecosystem, providing support for other life forms such as bats and birds, which use it to nest. Other plans include involving owners of neighboring land to introduce necessary changes in livestock grazing to benefit the entire ecosystem, including the Golden Eagle.

These programs are in addition to others developed in the Dominican Republic and the United States, in partnership with several conservation organizations and universities.

### **3.7 Indigenous Peoples**

There are no indigenous populations affected by Cemex operations. However, before the development of new industrial projects or the exploitation of aggregate quarries, this should be analyzed as part of the environmental and social impact studies.

### **3.8 Cultural Heritage**

There is no impact on the cultural heritage due to Cemex operations. However, as in the previous paragraph, before the development of new industrial projects or the exploitation of aggregate quarries, this is a subject that should be analyzed as part of environmental and social impact studies.

## **Contact Information**

For project inquiries, including environmental and social questions related to an IDB Invest transaction please contact the client (see **Investment Summary** tab), or IDB Invest using the email [requestinformation@idbinvest.org](mailto:requestinformation@idbinvest.org). As a last resort, affected communities have access to the IDB Invest Independent Consultation and Investigation Mechanism by writing to [mecanismo@iadb.org](mailto:mecanismo@iadb.org) or [MIICI@iadb.org](mailto:MIICI@iadb.org), or calling +1(202) 623-3952.