



## CEMEX

# The Santa Maria Ecological Restoration Initiative

### The business case

A company's biodiversity record influences its ability to access land, sea and other natural resources essential for its operations, as well as its ability to obtain both the legal and social right to operate in an area. It also affects a company's access to capital and insurance, particularly given that impact on biodiversity loss is increasingly recognized as a material risk for business by investors, financial institutions and insurance companies. For CEMEX, the protection of ecosystem services is fundamental to its ability to be a real conservation player and ensure the continuity of its business. CEMEX's Santa Maria Ecological Restoration Initiative aims to establish special relationships with key stakeholders, including government, NGOs, educational and research institutions. These relationships allow CEMEX to show its commitment to and respect for ecosystems, ensuring the sustainability of the natural resources needed by the company, ultimately impacting on its image and credibility in terms of environmental activities.

The majority of the Mexico-United States border region is a semi-arid and fragile desert ecosystem. For more than 200 years the primary land use along the border has been ranching, and much of the land has suffered from overgrazing, loss of ecosystem biodiversity, soil erosion and desertification. As the economic viability of traditional ranching has declined due to grassland resource depletion, the land has become more and more fragmented, and in many instances abandoned – worsening problems of poverty and unemployment, and contributing to border security concerns.

CEMEX has been working on habitat restoration models since 1995 as part of its Santa Maria conservation project in the northern region of Mexico. This habitat restoration model has accomplished the restoration of more than 4,000 hectares previously impacted by overgrazing activities and adverse agricultural practices.

In 2003, CEMEX started to transfer its experience to the Federal Government Environmental Ministry, SEMARNAT, and to NGOs like Pronatura. As a result, these agencies have implemented similar restoration models in several ranches and private lands located in northern Mexico, restoring more than 20,000 hectares.

Recovering these sensitive semi-arid ecosystems means bringing back biodiversity through natural vegetation, wildlife and water resources to sites where the restoration model is applied. These practices bring economic benefits allowing landowners to have access to new opportunities to use the land in a sustainable way.

CEMEX is now upgrading and spreading these successful habitat restoration actions to the entire Mexico-USA borderland region. To achieve good results, it is necessary to establish strong alliances between governments, universities, NGOs and companies.

CEMEX is committed to the conservation of ecosystems because the company recognizes their importance as providers of goods and services that it relies on daily. CEMEX also depends on ecosystems to obtain raw materials to produce building



materials and is therefore responsible for their stewardship, focusing on the heritage for the next generations.

Founded in Mexico in 1906 as a local player, CEMEX has grown into one of the top global providers of building materials, with an annual production capacity of more than 96 million metric tons of cement at 67 wholly-owned and 18 minority interest cement plants. It also produces more than 80 million cubic meters of ready-mix concrete annually at some 2,360 facilities and 222 million metric tons of aggregates each year from 564 quarries.

CEMEX produces, distributes and markets cement, ready-mix, concrete, aggregates and related construction materials to customers and communities. CEMEX has operations in more than 50 countries and maintains trade relationships with over 100 nations. The company employs more than 50,000 people in the Americas, Europe, Africa, the Middle East, Asia and Australia.

## Challenges and opportunities

The underlying concerns addressed by the proposed Bi-national Ecological Restoration Initiative include:

- Fulfilling the promise of NAFTA to balance and offset the environmental impacts of commercial growth and development with efforts to reclaim and restore fragile and degraded ecosystems.
- Avoiding needlessly repeating the most destructive environmental side effects of industrial-scale agriculture and commercial development by sharing information, data resources, technology, and the benefit of what has been learned from past mistakes.
- Addressing the most urgent and critical problems of desertification, degradation of watersheds, fragmentation and abandonment of land along the Mexico-US border.
- Increasing awareness in the public and private sectors about the economic, environmental and social value of preserving and restoring biodiversity and ecosystem integrity, protecting and conserving wildlife habitat, and an ethic of land stewardship.
- Identifying and supporting opportunities for collaboration in these efforts among government agencies, NGOs, educational institutions, corporations and private landowners on both sides of the border.

Immediate and near-term goals:

- Recognition and support by the Mexican and US governments at the federal level of ecological restoration work now underway in the border region. Such recognition and support would include taking steps to identify and remove barriers to the cross-border transfer of information, expertise, and materials (including seeds and equipment) related to specified restoration activities.
- The establishment of protocols within existing policy and/or drawing up new agreements to facilitate the free flow of information, expertise and material resources across the US-Mexican border that is specifically in support of conservation, ecological restoration, and research related to sustainable land use in the border region.
- The consolidation and standardization of existing data resources on both sides of the border. Priority is to be given to the types of data required for proper site selection and application of appropriate restoration techniques within trans-boundary ecosystems. Core components for program direction and operating plan include soil inventories, native vegetation inventories and characteristics including invasive/exotic species, and watershed and aquifer information. Making this data available on a bilingual website to be continually updated by participating partners, including research findings and case studies.



- The identification of opportunities and providing initial funding for cross-border training at the field level related to ecosystem restoration – including but not limited to soil analysis and mapping, erosion control, watershed restoration, wildlife corridor preservation, and the reintroduction of native species to degraded and overgrazed land.
- The development of a plan to begin native seed production of the early-successional species required for the most degraded lands. Follow with the development of more productive species.
- The development of long-term land management strategies to ensure that the investment in ecosystem restoration is protected. Set up ongoing criteria and guidelines to measure ecosystem health, and identify whether it is in a state of decline or improvement. An excellent model for this effort is the existing Environmental Site Description (ESD) developed by the Natural Resources Conservation Service, a US government agency.

Long-term benefits and strategic objectives:

- Contribute to the creation of a “green wall” at the Mexico-US border with activities that promote conservation, biodiversity, and productive, environmentally sustainable land use.
- Explore opportunities for applying lessons learned to evolving local, state and federal policy regarding mitigation, carbon sequestration, rural economic development and agriculture in the border region as a whole.
- Create models for transnational cooperation in matters that benefit the entire human and ecological community, as globalization continues into the future.

### A foundation for the future: Models for cross-border collaboration

This initiative is based on a decade of work undertaken by several private sector partners and government agencies. Together with landowners, NGOs and educational institutions on both sides of the Mexico-US border, important contributions by three of the leading partners include the following:

- **CEMEX** - Along with its partners, CEMEX manages Campo Santa Maria and El Carmen, a private trans-boundary conservation and biodiversity protection area of recognized global importance. Since 2000, CEMEX has purchased over 120,000 hectares of land in the region lying south of Big Bend National Park in the Mexican state of Coahuila. Conservation agreements with adjoining landowners have expanded the area by an additional 60,000 hectares. CEMEX continues to expand and support hands-on, field-based operations on both sides of the border to engage in scientific research, habitat restoration, and wildlife management programs.
- **Pronatura**, a Mexican non-profit environmental conservation organization created in 1997 - After many years of work by Pronatura Noreste and its US partners (including the Nature Conservancy, US Fish & Wildlife Service, Texas Parks & Wildlife Department, Environmental Defense, and Texas A&M University), approximately 1.4 million acres of the Laguna Madre de Tamaulipas and its surrounding area was declared a National Protected Area by the Mexican federal government. This acreage forms the southern part of the larger Laguna Madre system, which extends northward along the Texas coast and is one of only five hyper-saline estuary systems in the world. A current major focus for Pronatura is the restoration of native grassland ecosystems that have been damaged from 20 years of drought and severe overgrazing. This effort has been acknowledged as a national priority by SEMARNAT (the Mexican federal agency responsible for environment and natural resources).
- [Cuenca Los Ojos Foundation](#), a private foundation working together with a number of NGOs, landowners and educational institutions on both sides of the border to preserve and restore biodiversity through land protection, habitat restoration and wildlife reintroduction - Principals of the foundation manage land



on both sides of the Arizona-Mexico border, encompassing a rich diversity of landscapes at the junction of the Rocky Mountains from the north, the Sierra Madres from the south and the Chihuahuan and Sonoran deserts. Current efforts are focused on reintroducing native grasses to overgrazed and degraded land, and on restoring important watersheds in the San Bernardino Valley.

## Results

More than 20,000 hectares of land in northern Mexico have been treated and enhanced with the CEMEX, Campo Santa Maria model.

In January 2007 in Weslaco, Texas, representatives from several organizations, their partners and associates, including NRCS-USDA, INIFAP (National Institute of Forestry, Agricultural and Animal Research), Tecnológico de Monterrey, Texas A&M University, PEMEX, Texas Parks and Wildlife, SEMARNAT, Native American Seed (consultants and providers of seed for native grassland restoration) and a number of private landowners and conservationists, gathered to identify a set of preliminary goals and strategies for going forward.

In November 2007 a second meeting was held in Washington, DC. The participants at this meeting were the top directors of both government agencies (SEMARNAT and NCRS), along with representatives from CEMEX, Pronatura, Cuenca Los Ojos and ITESM, in order to tighten the alliance and enforce and ensure its continuity.

A diagnostic study of restoration tools and activities is currently under development and aims to consolidate all the successful habitat restoration practices in the borderland region. The result of this study will help to establish a network with all stakeholders involved in restoration activities, and a database will be generated to manage and share information promoting the restoration activities. This study, which will be finished by the third quarter of 2008, will allow CEMEX to establish the priorities and a mechanism for those depleted areas where the restoration can be applied.

## Lessons learned

Through this initiative, CEMEX and its partners have learned that:

- Shared common watersheds at the border need co-responsibility from all actors and both governments.
- They can demonstrate the ability to reverse desertification, restore watersheds, wildlife and other valuable natural resources. This is the time to build on the experience of these efforts.
- The Bi-National Borderlands Ecological Restoration Program is needed to continue and grow these relationships and processes.
- There is the need to strengthen the official collaboration between both federal governments at the border.
- Mexico, the USA and the local inhabitants will benefit from keeping common ecosystems in a healthy biological/ecological status.

## Addressing needs

An integral model for public-private partnerships such as this one requires parties to:

- Improve conservation legislation and cross-border policy
- Learn & share from experiences
- Exchange technology and training
- Create an umbrella for collaboration on science and education
- Shared funding mechanisms for projects.

All of this needs to happen with direct emphasis on:

- Land protection and restoration



- Rewarding conservation and sustainable land use practices
- Wildlife reintroduction
- Science, education and outreach.

This initiative is very ambitious and is a big challenge, but is made possible through the collaboration of organizations committed to the well-being of natural ecosystems.

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#### About the WBCSD

The World Business Council for Sustainable Development (WBCSD) brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Our members are drawn from more than 30 countries and 20 major industrial sectors. We also benefit from a global network of around 60 national and regional business councils and partner organizations.

Our **mission** is to provide business leadership as a catalyst for change toward sustainable development, and to support the business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

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