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## MESSAGE OF THE MANAGING DIRECTOR



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NOTAS

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In Mexico, 4.2 million families live crowded in small rooms or in houses of spoilable materials 1. Twenty five million inhabitants or nearly a fifth part of the Mexican population lack decent housing. Based on family incomes reported by the Mexico's National Institute of Statistics, Geography and Informatics, 2 monthly incomes of families from this socioeconomic sector range between 1 and 5 minimum wages a month.

This sector of the population spends up to 30% of their incomes in self-construction of their own house. However, such amount does not contribute to the patrimony of the family because it is used primarily for maintenance and repair purposes, for example to change corrugated roof covers, repair leaks, compact floors, etc3. When a family aims some resources to build or expand its house, it becomes a self-constructor, which results in a poor quality, unplanned, high cost process, with high levels of waste, performed throughout long periods of time, usually from 10 to 15 years4.

The final product offered by the ¡Échale! A tu casa program is a decent house according to the guidelines of the United Nations Organization (UNO), and to the Mexican housing authorities (validated by SHF, INFONAVIT and IMCyC).

Additionally, this house is sustainable in three ambits:

**Environmental.** It is a green house with eco-thermal walls and added solutions like a biodigestor, biomass, rain water collection systems, grey water filtration, a solar heater and a wood saving stove (Onil or Patsari).

**Social.** One house does not fit all. The house to be built depends on the customs and habits of the community; therefore the house is designed jointly with the families of the community in question. Although the houses may not be customized to each family, we offer a model house that meets their needs. Likewise, the house is built with the community creating a social network, which benefit goes beyond the construction period.

**Economic.** In the aided self-construction process there is not production for inventories. This allows adapting the financial structure to the incomes of the family, whose members receive a salary for the self-production of the material and for their participation in the construction of the house

The vision of ¡Échale! A tu casa is to offer people the opportunity to build a patrimonial green dwelling. For that purpose, it is necessary to capitalize the company in the short-term to have access to funds to provide financing to the families of the communities. In the mid-term, it is necessary to create a savings fund to minimize the cost of money. Our long-term challenge is to provide an integral solution, to offer 20 thousand families in Mexico the chance to build a decent, green, sustainable house, while exporting the program to the rest of the world. A green housing world.

## **INDUSTRY CONTEXT**

Housing is a basic right, internationally and nationally recognized by constitutions, laws, and standards. According to the Commission on Human Settlements (ONU-Hábitat) and the Worldwide Housing Strategy, a decent house has to do with the availability of a place to stay, a suitable space and security, appropriate illumination and ventilation including basic services, all of the above at a reasonable cost. In other words, invasion to people's right to housing implies denying a decent life. This has been outlined internationally in the Universal Declaration of Human Rights and the International Covenant of Economic, Social and Cultural Rights.

The Millennium Development Goals agreed by country members of the United Nations Organization (ONU) in 2000, outline the idea of housing as a basic objective to improve significantly the lives of 100 million inhabitants located in irregular settlements by the year 2020. On the other hand, they agree that housing is directly related to the wellbeing of the population; it is part of the family patrimony and is the core of urban development because its design and technology determine the type of city and its conditions of sustainability.

The world is experiencing a global crisis that affects the housing sector as well. The UNO estimates that 1.1 billion people live in deficient houses and 100 million lack a roof over their heads. Every week, over one million people are born in or move to cities of underdeveloped countries. Therefore, urgent measures are required to counteract the accelerated increase of the population in emergent cities characterized by having limited and scarce resources. In addition, the UNO estimates that the figures of people living under poor conditions will increase in the next 30 years up to nearly 2 billion. This organization, together with Habitat for Humanity, state that women who live under disadvantageous conditions are more likely to experience health issues, such as disease transmission. Likewise, children may live less due to respiratory illnesses o contact with contaminated resources. For instance, in Mexico there are 6.5 million families living in houses with some type of shortfall. Furthermore, inequality of incomes in Mexico has increased significantly in recent years due to liberalization policies and rapid economic development. Not only in Mexico, families with low incomes

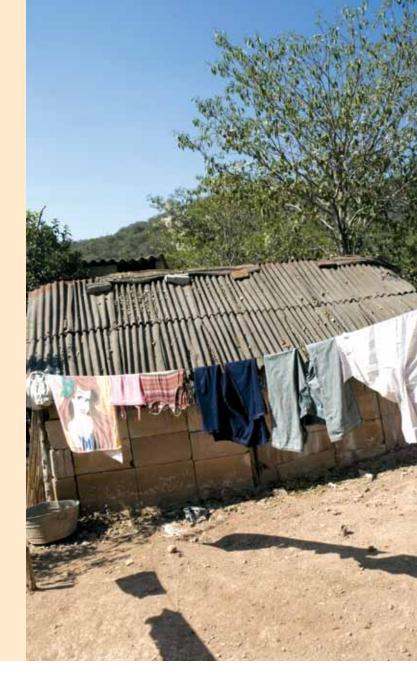
have no access to mortgages or bank loans to build or buy a house because they lack fix incomes or similar supports to obtain such credits. About 550 thousand families in Mexico require mortgage financing. If we compare the penetration of mortgage credits in Mexico vs. the United States, we will see clearly that housing credit rates over the GDP, in Mexico are only 14%, while in the United States they are over 70%. This results in families settling for unsuitable houses, prone to suffer from important diseases for lack of public services.

However, it is important to point out that the construction process carries some environmental problems, such as the use of land, materials, power systems, and the use of resources. To prevent these problems, we must implement sustainable processes that protect the ecosystems, dispose solid waste appropriately, and preserve our natural resources. With respect to construction materials, conventional materials are more harmful on the environment. For example cement, the material most commonly used for construction purposes releases PM10, sulphur oxide, nitrous oxide, and volatile compounds that are toxic on the environment. In addition, factories that produce cement are one of the most important sources of Hg contamination and carbon dioxide emissions.



In Mexico, between 1940 and 1970, several measures were implemented to promote the creation of housing-related entities, policies, and programs with public funds and contributions from urban and rural workers.

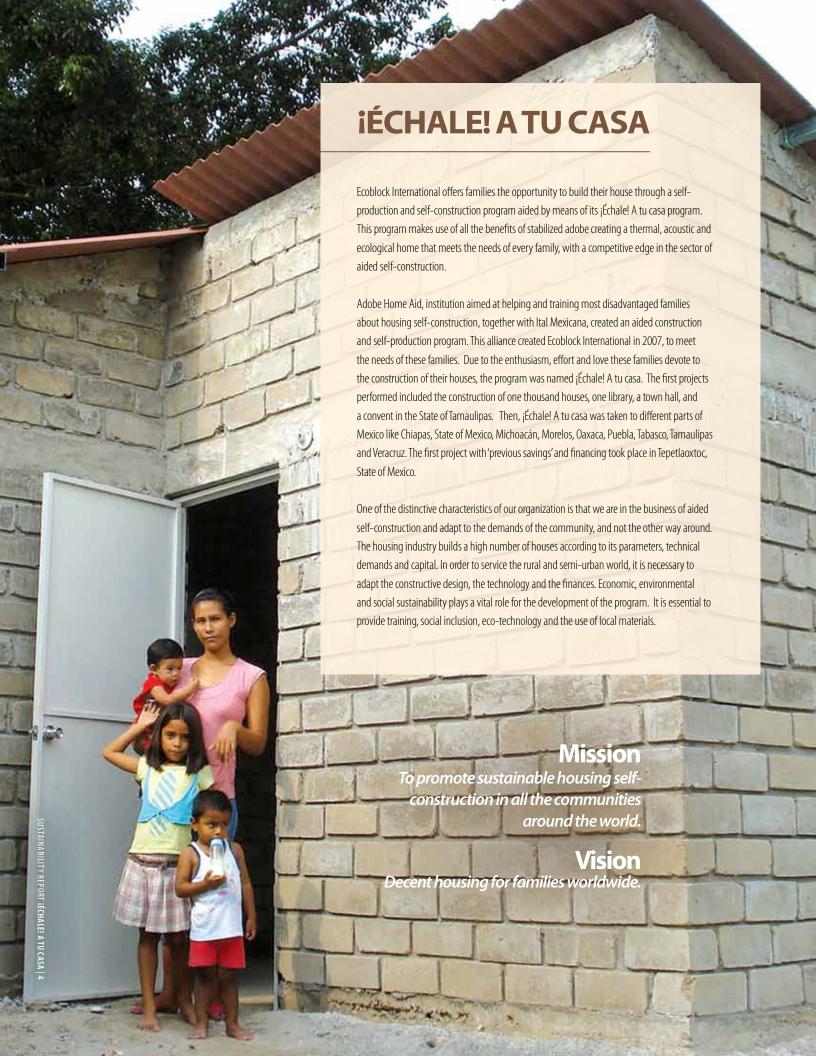
- In 1943 the Social Security Mexican Institute (IMSS) was created.
   It developed housing programs for its members throughout the country.
- In 1947, Banco Nacional Hipotecario Urbano y de Obras Públicas developed several housing programs aimed to the low income population.
- In 1954, the National Institute for Community Development and Popular Housing (INDECO) was created.
- In 1963, due to the increased housing demand, FOVI (Housing Operation and Bank Financing Fund) and FOGA (Fund for the Guarantee and Support of Housing Credit) were created.
- During the decade of the 70's, INFONAVIT (National Workers'
  Housing Fund Institute) was created to face the expansion of
  the economic, demographic and migratory growth. FOVISSSTE
  (Housing Fund of the Institute of Social Security and Services for
  State Workers) and FOVIMI (Military Housing Fund of the Mexican
  Social Security Institute for the Mexican Army) were created as
  part of a housing-provision policy implemented by the federal
  government. With the creation of INFONAVIT and FOVISSTE the right
  of the working class to decent housing was recognized.
- In 1981, the National Popular Housing Trust Fund (FONHAPO) was established to meet the requirements of low income families.



It has been estimated that the population of Mexico and the demand for houses will continue growing. The Mexican government is striving to meet the new housing demands expected for the 2007–2012 period, and to eliminate the deficit of previous years. For the 2006–2012 period, Mexico will require 4.5 million new houses and nearly 3 million home improvements.

In this sense, the government of President Felipe Calderón promotes the federal subsides program "Ésta es tu casa" (This is your home) that supports the purchase houses and premises with services, home improvement and self-production. This program is comprised by savings form the beneficiary, government subsides, and mortgage credits, and has an important social impact because it offers low income families the opportunity to own a decent home.

With respect to the housing market in Mexico, in was by the end of 2008, after the real state crisis extended to the entire financial sector, when the deterioration of the real state market in Mexico worsened and generalized. Several factors were triggered: a more cautious attitude of financial institutions to assign credits, scarce financing for construction purposes (bridging credits) resulting from financing restrictions faced by SOFOLES, lower sales expectation, costs increase (11%) over the price increase of houses, (7%), lower job creation and gradual deterioration of national production to stop housing construction. Financing improved along 2009, both by public entities and financing institutions from the private sector. Housing construction started showing some signs of stabilization indicating that the worst part of the crisis was being gradually left behind and that in spite of housing credit restrictions, housing demand will be always significant.



# Strategic objectives

- To create a sustainable self-construction financing fund. This fund minimizes the cost of money (family credits), and offers an attractive interest rate to the parties involved.
- To develop a social franchise structure. It is necessary to create a social franchise to maximize the sustainable self-construction process in Mexico and around the world.



# Our products and services

The main product of ¡Échale! A tu casa is technified adobe that is the construction material with patented technology, together with technical support services to perform the self-construction, and financial services to develop the housing project. Adobe is made up by soil, cement, cal and/or sand. The design of the house varies according to the needs of each family (proposed dimensions: 35m2, 37m2 and 43m2) focused on families with incomes from 4 to 5 minimum wages, and "floor + wall + ceiling = decent house" for families with incomes below three minimum wages.

Another product is home improvement, which provides financing to people that wish to expand, improve, or remodel their homes, to purchase materials and includes technical support. It is focused on families with incomes from 2 to 5 minimum wages.

Finally, Social Interest Housing is characterized by having 100 m2 with all the services. It includes two bedrooms, kitchen, living room, dining room, TV room, study and 1 1/2 bathroom.

#### Adoblock

This is the most ecological material available. It is made up by 90% soil with a 60 kg./cm2 minimum resistance. This allows building a solid house with other benefits like thermal properties (protects people from cold and heat). It is also an excellent acoustic isolator. The components of adoblock, mixed with water, become more fluid and allow us to cast it with different dimensions. Another benefit of adoblock is power savings in transportation because the supplier may be "local" creating jobs in the zone where it is required.

#### Adopress machine

This is the technology used for the production and construction of adoblock. It was developed together with the Institute CRATerre of the University of Grenoble, France. With this machine, the community may produce 1,000 pieces per shift or more. It operates with an electric, three phase motor, and uses gasoline or diesel to be used in any region. Families are trained by company technicians about the operation of adopress, with great participation both, from women and youngsters.

#### Sustainable Housing

The houses offered by ¡Échale! A tu casa may grow vertically or horizontally. These houses are designed to grow according to the requirements of the family. They are efficient and do not contaminate in terms of power use and resource management. The houses from ¡Échale!, are ecological, and are equipped with:

- Biodigestor
- Rain water collection system
- Grey waters filtration
- Solar heater
- Patsari stove (awarded by the InterAmerican Development Bank)
- Ecomass
- Photovoltaic cell (agreement with the Trust for Electric Power Savings)





#### **Bricks: an ancestral evil**

The brick manufacturing industry has existed since many centuries ago and has not reported any changes in its operation process or regulation. Most brick manufacturers (ladrilleras) lack the necessary permits by the respective authorities and have no appropriate safety measures. Materials used in the productive process are highly contaminant fuels like tires, oils, and industrial waste, among others. This industry is one of the main sources of sulphates, nitrous oxides, suspended particles, carbon monoxide and hydrocarbon emissions that in addition to the environmental consequences, cause serious public health problems.

Another important characteristic of this industry is that it is associated to disadvantageous sectors of the population under the 'informal economy' structure and its development is based on local demand. In average, the production of one baked brick costs \$1 MXN. However, due to market competition, lack of quality standards, economic needs of the workers and substitute materials it is sold for less than \$0.80 MXN / brick. Due to the above, this activity causes significant damage on the environment, in addition to economic and social problems for the workers of 'ladrilleras' and for nearby communities.

#### **Awards**

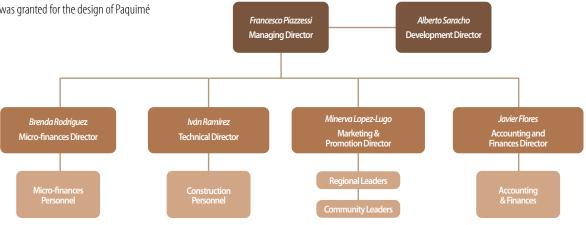
**CLARES Award** Centro Latinoamericano de Responsabilidad Social, 2008

2008 National Housing Award: Category, **Sustainable Housing** 

This award was granted for the design of Paquimé houses.

## **Operative structure**

At present Ecoblock International is constituted by six directors and 12 full time employees. The chart below shows our operative structure:







## **Corporate governance**

Name	Participates as:	Title
Francesco Piazzesi	Shareholder	Managing Director
Mario Piazzesi	Shareholder	Technological development
Paolo Piazzesi	Shareholder	Administration
Alberto Saracho	Partner	Strategic Direction
Minerva López Lugo	Partner	Marketing and promotion
Ivan Ramírez	Partner	Architecture Direction
Javier Flores	Partner	Accounting Direction
David Joachin	Partner	Financial Analysis and Projection
Brenda Rodríguez	Independent	Micro-finances
Ariadna Urbina	Independent	Social Harmony

# Communication mechanisms

**Immediate.** Communications take place via Internet. All the partners have an account in the ¡Échale! A tu casa server and the communication flows at all levels, in such way that all colleagues are informed.

**Bimonthly meetings.** All the team meets every two months to adjust the strategies being implemented.

#### **Our stakeholders**

All companies generate certain impacts —whether positive or negative—to their environment. Similarly, the environment affects the processes, development and direction of companies. Creating and maintaining a reciprocal relationship between the organization and the environment is vital for their existence and harmony. Stakeholders are those entities that interrelate in this web knitted responsibly by each company.

Our stakeholders are constituted by all the entities that develop a task and/ or have some influence in our business.

**Communities.** Our objectives are aimed to achieving our mission, to be a company that promotes sustainable housing self-construction in the communities of the world. The communities are an essential stakeholder of the productive chain of ¡Échale! A tu casa. Our actions would be purposeless without the collaboration and work of the community because communities, aided by the tools provided by the company, make our ¡Echale! A tu casa project a reality.

#### Federal Mortgage Association (SHF)

This institution invites company workers to courses related to the subject or to actions to complete this project with many families. Likewise, we meet consistently with directors of this institution to learn about the problematic around housing shortages in Mexico. Another benefit received by this institution is the promotion of relationships between our company and institutes and communities that wish to participate in aided self-construction programs. Moreover, through SHF, we can contact financial intermediaries to get credits for the families that participate in the program.

#### **National Housing Commission**

(CONAVI). ¡Échale! A tu casa is an executor entity with access to the subside program. An important benefit provided by this institution is our contact and relationships with housing institutes or communities that are interested in the program.

Organizations (mainly non-governmental organizations). Have provided the company resources to build houses aimed at socioeconomic levels with the lowest incomes.



## **Testimony**

Nancy (participant of ¡Échale! A tu casa) Tlaltizapán, Morelos

# How old are you and what do you do for a living currently?

I am 21 years old. I am married and have a daughter. I work in a tortillería.

# Where did you live before having your own house?

Before I knew about Échale project, I rented a place near Tlaltizapán and paid \$600 a month.

# How did you find out about the ¡Échale! A tu casa project?

I first found out about Échale, through the regional DIF. They talked to the community about the possibility to have our own house and all related benefits. One of the conditions to participate in the project was to have a piece of land and I did.

In this way, I just accepted to participate in the project and gathered the necessary documents. Then the team of Échale started working in my land.

# When did you realize that the project was real?

When the machine to manufacture ecoblock arrived to the land where my house would be built. Other companies or organizations come to the region, make promises, give false illusions, but they never meet their promises. On the contrary, the technicians and architects of Échale arrived a few days later to start our training to build my house. Members of my family and neighbors of the community participated in the elaboration of ecoblocks. Nevertheless, I was the leader in the constitution of our housing committee and organized people of the community to work every day with a specific schedule and trying to be efficient in our work. At the beginning of the construction we built an average of 700 ecoblocks a day, afterwards we were able to make up to 1,500 daily.

#### How long did it take to build your house?

The construction process lasted approximately one month and a half. At present I enjoy my house together with my husband and my daughter. In addition I have skills and certain power to organize the community to collaborate in similar projects in the zone.

# SUSTAINABILITY PRACTICES

¡Échale! A tu casa changed radically the housing construction industry because it applies aided self-construction to meet the requirements of the community. On the contrary, the traditional housing construction model builds a big number of houses according to its parameters, technical demands, and capital, without considering the requirements of the consumers. In addition, these huge construction companies have very high fixed costs and may not focus on little towns with only 20 houses. These high fix costs make it impossible to build this type of houses in many communities. Their model is structured to build many houses with no variations and in the same premises. They do not have any contact with the community and their process does not consider the community to build the houses.

With these differences in mind, ¡Échale! A tu casa provides services to the rural and semi-urban world adapting the design, technology and finances to each community and family.

Furthermore, ¡Échale! A tu casa is sustainable because the construction of houses with Adoblock creates green houses with material mainly made of soil from the region where the project is being performed. Furthermore, the product is friendly and does not contaminate the construction process, creating decent houses that improve the living conditions of the families.

# PERFORMANCE INDICATORS

#### **Economic**

#### EC4

#### Significant financial assistance received by the government.

The company has received assistance from the government through subsides. These subsides are granted by the National Housing Commission (CONAVI), and since Ecoblock International is an executor entity for CONAVI, the transactions to obtain this federal fund are performed by Ecoblock. Subsides granted to a family may be up to \$40,176 for house construction, and it is determined as a contribution by the customer, which lowers the amount to be paid. Subsides for home improvement projects may be up to \$13,665.98. Subsides are granted by CONAVI once a year and are applied by Ecoblock to sustainable projects along the year.



#### EC6

# Policies, practices and percentage of expenditure in local suppliers, in places where significant operations are performed.

The policy in the procurement department of ¡Échale! A tu casa consists in purchasing materials for the construction of the house at the lowest price possible to benefit the people that participate in the project, selling the materials at the same cost without profits. In addition, such materials are purchased in the local businesses to support the economy of the community.

The materials purchased are soil, sand, gravel and stones, because their prices are more economic. On the other hand, with this dynamics we support local suppliers and avoid transportation expenditures.

Materials purchased with national suppliers are cement, and steel. Since we buy big volumes the cost decreases. The resources aimed to the purchase of materials range between 20% and 25% of the budget.

2008-2009 Expenditure in Materials					
Project Region	Expenditure in national suppliers	Expenditure in local suppliers			
Chiapas	\$774,447.35	\$693.824.02			
Villa Hermosa	\$1, 205,884.66	\$610,487.53			
Morelos	\$1,563,706.26	\$1,344,767.65			

The company performs analysis about suppliers' costs regularly, with at least three quotations to choose the best option. Important factors that are considered to make this decision are:

- Cost
- Delivery times to the site

#### **Environmental**

#### **EN12**

Description of the most significant impacts resulting from the activities, products and services of the organization, in natural protected areas and in high biodiversity nonprotected areas.

The activities of ¡Échale! a tu casa, like the housing construction process with Adoblock, have no impact on the environment because it is an ecological product. The environment is not damaged or deteriorated; the product is friendly with human beings and the environment.

#### **EN26**

Initiatives to lower the environmental impact of the products and services.

The company is working currently in an initiative to change the materials for the stabilization process of Adoblock. At present, the soil is mixed with cement and cal to produce Adoblock. The project consists in eliminating

the cement of the mixture because its production process is extremely contaminant. It would be ideal to use cal as the only stabilizer of the process because it is a 100% natural and ecological product. This project is being performed jointly with Instituto Politécnico Nacional (IPN), Universidad Autónoma Metropolitana (UAM) and the National Association of Cal Producers.

#### **EN27**

#### Percentage of products and packages recovered.

Throughout the production of Adoblock some pieces may break. These pieces are recycled, that is, they are reused in the production process. The production of Adoblock generates no wastes therefore there is not cost increase for wasted materials.

#### **EN28**

Cost of most significant fines and number of non-monetary penalties for failure to comply with environmental laws and regulations.

Ecoblock International has never been fined for failure to comply with environmental laws and regulations.

## **Work-related practices and ethics**

#### IA1

Breakdown of workers per post, contract and region

Type of employee	Type of job	Total number	Number of men	Number of women	Type of contract	Workdays
Payroll	Administrative	6	3	3	Written	Full time
Temporary	Bricklayer auxiliary	3	3	0	Written	Full time
	Floor auxiliary	7	7	0	Written	Full time
Independent	Micro-finances and social harmony	5	4	1	Written	Full time

#### **LA10**

Average training hours a year per employee, itemized by employee category.

Training consists in three meetings a year with all 25 employees. Training topics vary according to ongoing processes of the company, and may be related to economic, social and

Category	Number of employees	Training hours	Average (training hrs./ employee)
Fixed	11	198	6
Temporary	10	252	6

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environmental subjects. The company invests about 15 thousand pesos in each meeting.

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# **Society**

#### **SO1**

Nature, scope and effectiveness of programs and practices to assess impacts caused in the communities due to the operations of the organization including, arrivals, operations and departures.

**Type of house.** We conduct studies on customs and habits per geographic zone to adapt the type of house to the zone and to the requirements of the population. Therefore the house is designed jointly with the participation of the community.

**Community integration.** We provide collaboration workshops to encourage families to participate. We organize Housing Committees as community managers and to report the progress of the project.

**Creation of employment.** We offer to the community the possibility to get a job in the site and to get experience in the field of construction for a period of time.

**Economic spill.** We create temporary jobs by hiring local workers for construction purposes such as bricklayers, plumbers, carpenters, electricians, etc. We promote the development of the community purchasing the construction materials in the same site.

*Micro-financing counseling*. By means of a credit, families may pay for their house little by little, while they enjoy a totally finished house.

**Professional technical support.** We train the community on self-production of adoblock and on self-construction of decent housing. In terms of home improvement, we perform a diagnostic of the conditions of the house, submit a proposal for optimum improvement and advise them in the amount of material and workmanship to be used.

## **Product responsibility**

#### PR1

Stages of the shelf life of products and services where their impact on the health and safety of the customers is assessed to be improved accordingly, indicating the percentage of product and service categories subject to such assessment procedures.

**Phase 1:** The program is introduced including the machine. It has a high impact in the people because they realize they can make the material. They touch the material and get involved. The resistance test of ecoblock is made with an 80 - 90 kg person standing on fresh adobe to prove its resistance.

Phase 2: Gathering of files, integrating the necessary documentation to check which families may be enrolled in the program and to know the socioeconomic level of the beneficiaries to find out if they qualify for the credit and subside. A housing committee is created to organize the community. A technical visit is made to estimate the real price of the house. The credit is pre-approved.

**Phase 3:** Elaboration of savings personal cards. This Phase has a high impact because it gives credibility to the program, and the families learn where to deposit their money. They start saving.

**Phase 4:** End of the saving stage, credit approval and distribution of subsides. This Phase has a high impact because many people require subsides to have access to the project.

**Phase 5:** Beginning of workshops to learn about customs and habits of the region and their families. The house is co-designed. This Phase has great impact because each beneficiary draws his/her own home.

**Phase 6**: Self-construction divided in the production of adobe and the construction of the house.

**Phase 7:** House opening day and delivery of participation certificates. This Phase has an important environmental impact because the traditional discharges of latrines are performed through a biodigestor. In addition, rain water is collected and grey waters are filtered. Finally, the use of the Patsari (sustainable kitchen) reduces the use of wood by 80% and prevents smoke from the oven to be inhaled by the family.

#### PR5

# Customer satisfaction related practices, including results of studies conducted to learn about the subject

After the houses have been delivered and once the families live in their homes, we measure our own performance directly with the use of the following tools:

- Housing Institute of the State or Municipality. The studies are conducted in coordination with them.
- 2. State Universities. Habitat satisfaction or improvement studies are conducted through these entities. ■



# **About the Report**

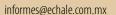
This report includes information of the 2008–2009 (October) period. This is the first sustainability report published by Ecoblock International, S.A. de C.V. After the publication of this report, the company will present company reports every year.

The content of this report was chosen internally, always considering key aspects of interest for the company. It is important to point out that in our next reports, in addition to the interests of the company, we will take into account the interests of our stakeholders. This process was carried out to put into practice the methodology of the Global Reporting Initiative (GRI) and to learn more about us as a company in order to submit better reports in the future.

The information contained herein includes all filial and operative entities of Ecoblock International, S.A. de C.V. There were no limitations in its internal scope or coverage.

This report was elaborated by Ecoblock International, with the support and technical supervision of New Ventures Mexico. It is a type C report according to the GRI classification, and it is based on the latest version of G3 quidelines.

Should you wish additional information about the content of this document please contact:





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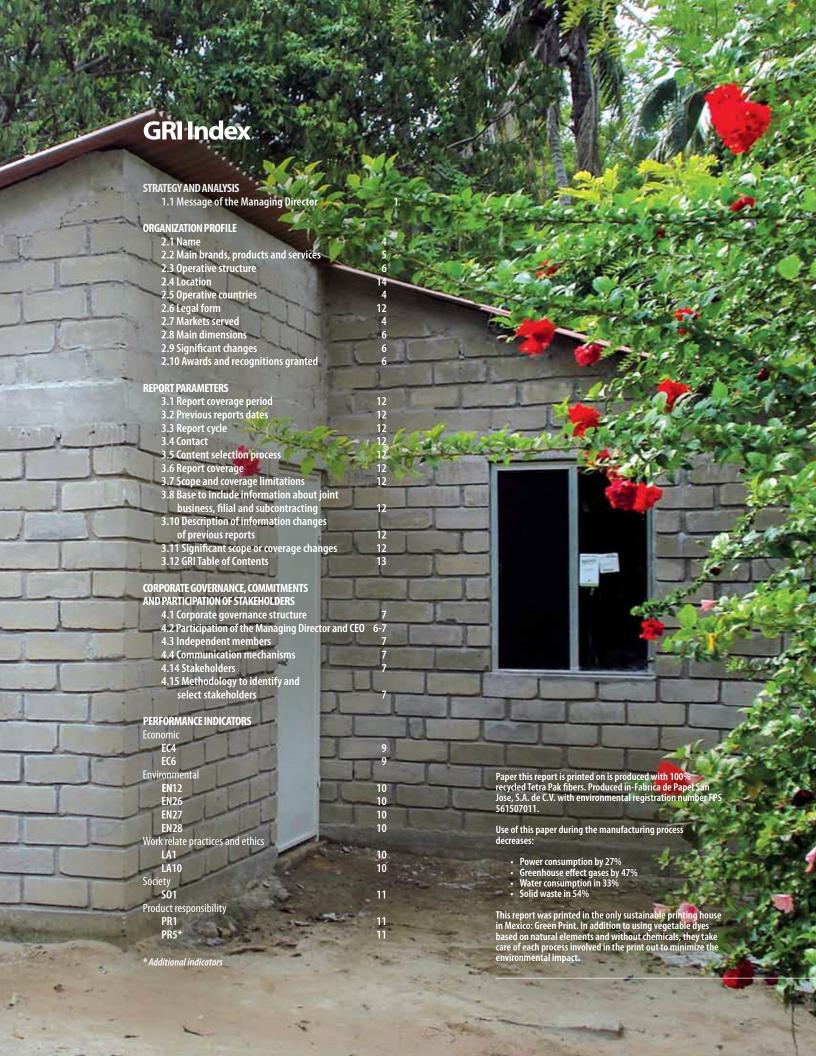
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