

COMPANY: CONCRETOS ETERNA S.A. (CONETSA)
COUNTRY: Honduras
PROJECT: Program TMF: Poverty reduction and environmental improvement.
An integral, sustainable development strategy.
YEAR: 2005

THE COMPANY

Concretos Eterna S.A. (CONETSA), founded in 1997, is located in San Pedro Sula, Honduras. It is part of the IESSA Group where CONETSA provides concrete, piping and construction blocks – as a supplier for the Eterna Group.

Currently, the company operates with a permanent staff of 300 employees.



PURPOSE

To be the leading company in making and commercializing of products for the construction industry in Honduras, mainly in concrete products, and with a positioned leadership in:

- *Products quality and trustworthiness*
- *Customer service with an emphasis on timely deliveries*

Our major commitments are:

- *Social responsibility*
- *Continuous improvement in our performance*
- *Clients' requirements satisfaction*
- *Compliance with legal requirements and technical rules*

Our Human Resources are our strength. Our values are: honesty and respect to our fellow people.

PRODUCTS

The main company products are:



- Pre-mixed concrete
- Blocks
- Concrete piping
- Concrete pre-made products

Furthermore, commercializing of ceramics started to increase products diversity and becoming a new opportunity for the company.

PROJECT DESCRIPTION

The methodology to implement the Sustainability Strategy in the company started with the conceptualizing of the sustainable development system –at which stage an internal and external organizational analysis took place to determine its sustainability profile, as well as its options for improvement in the environmental, economic and social dimensions.





Later on, a sustainability strategic work frame was established; it comprises the organization's strategy – which includes Mission, Vision, organizational values, strategic objectives in the three mentioned dimensions, and the company's commitment to sustainable development.

Based on the strategic work frame, the action plans were defined in each dimension; and the monitoring mechanisms and indicators were established to guarantee the fulfillment of the established strategic objectives.

Later on, training and technical assistance were provided to support the company in implementing the action plans. This way, it was intended to fulfill the transfer of knowledge to the organization; also, the follow up oriented towards the achievement of the expected results was developed.

MAIN OBTAINED RESULTS

Starting diagnosis	Achieved Improvements
ECONOMIC DIMENSION	
<p>In the case that the company implements the recommended improvements, it has been estimated that an annual saving of USD \$17,400.00 could be achieved. Activities were developed at the piping factory. The detail of each of the following proposals, and their estimation of savings will be explained as follows:</p>	
<ul style="list-style-type: none"> - Need to establish a plan which allows monitoring of the different strategic company's plan in social and environmental terms. - Need to identify options to improve the production process flow. <div data-bbox="332 1031 646 1346" style="text-align: center;">  </div> <div data-bbox="261 1440 677 1755" style="text-align: center;">  </div> <ul style="list-style-type: none"> - Need to define a strategy for each of the company's business units in terms of their productive efficiency. 	<ul style="list-style-type: none"> - Strategic objectives in social and environmental terms were set up as to allow the establishment of indicators for results monitoring. - Training was provided for some of the operational personnel on concepts and tools in Process Engineering. - A revision of the pipes distribution plant was done, and some adjustments were made. - The bottlenecks within the process were identified – specifically analyzed – and actions to improve them set up as to save on the following items: <ul style="list-style-type: none"> - An analysis was made to assess the man-machine mixing process, and it was determined that the company could save up to USD \$1,600.00 per/year if the suggestions regarding labour and process efficiency were implemented. - An improvement plan – based on the problems diagnosed – was designed to lead the company to achieve annual savings and production improvements of up to USD \$ 4,000 in the folding process and the metal plates welding, as well as USD \$11,900 in the filling operation. - A company's portfolio analysis was made, and their products were identified using the BCG (Boston Consulting Group) classification.

ENVIRONMENTAL DIMENSION

If the amount of money saved in the first five months since the application of the environmental measures is calculated yearly, it is estimated that the company will save **USD \$4,500**. Activities were developed in the concrete making process. The detail of each of the following proposals, and their estimation of savings will be explained as follows:

1. Aggregates Management

- Important losses in the aggregates in the carrying process, and vibrations in the transporting belt.



- Lack of indicators to monitor aggregates losses.



- Jamming and splashing of materials in ten of the mixing trucks due to the hopper's size.






- Adequate haulage practices were established and operators were instructed in the proper handling of the aggregates to avoid leakage.
- Guidelines were given for the design of a Maintenance Program, both for the loader and the aggregates transporting system.






- It was estimated that 53.4 m³ of aggregates/24 days are lost. This becomes annual losses of USD \$3,700.
- From the implemented measures to decrease aggregates losses, and accumulated saving of USD \$875 was achieved between October and February 2004. Therefore, an average of 60% of the monthly base line register ceased being wasted – producing savings for USD \$2,300 with these measures.

- The hoppers in two trucks were modified – producing annual savings of USD \$580. by reducing the waiting time for filling (from 0.97 min/m³ in December to 0.70 min/m³ in January).



2. Cement Management	
<ul style="list-style-type: none"> - Ignorance regarding the actual weight of cement delivered by the supplier. - Cement loss due to wind when loading the trucks. - Cement losses due to the silo's filling system. 	<ul style="list-style-type: none"> - Monthly scale calibration certificates will be requested to the suppliers. - A search for technologies was made in order to avoid cement loss during truck filling, as well as retain small particles before they escape into the atmosphere. They now have quotes from some suppliers. - A check system was implemented as to advise when the silo is filled – eliminating the loss of cement due to overflow. This will generate an economic saving, and will result in a working environment less loaded of cement particles.
3. Water and Electricity Consumption by Pumping	
<ul style="list-style-type: none"> - Lack of indicators to monitor water consumption to fill the trucks. - The closing devise for the hose used to wash the trucks during the filling is not near the operator resulting in water waste. - High electricity expenditure due to the water pumping system from the well. - Need to search for an alternative to using sprinklers to control the temperature of sun exposed gravel. These sprinklers are used 80% of the time during the day shift. 	<ul style="list-style-type: none"> - It was possible to estimate that water expenditure per trip, per truck is 0.79 m³. - Rapid hose closing devices were implemented, and adequate practices by the operator were established; such as: closing hoses which are not being used, and not letting water tanks overflow. - With these measures, water consumption was decreased to 0.33 m³/trip resulting in a saving of 60% of the registered base line consumption. - With implemented measures to save water and the good practices for its use, it is estimated that the company may reach annual savings of close to USD \$1,400 in electrical expenditure for water pumping. - A sheltered structure was built to protect the gravel. This avoids excessive water use to lower the material's temperature. 

4. Production of Residual Materials	
<ul style="list-style-type: none"> - Lack of data and tools to estimate the cost of production of residual materials 	<ul style="list-style-type: none"> - An analysis of production of residual materials cost was done estimating the following annual cost data: <ul style="list-style-type: none"> ✓ Wastewaters: USD \$1,908 ✓ Solid waste: USD \$3,738 ✓ Emissions: USD \$856 ✓ Others (Hours of mixers use, rental of an additional loader, opportunity to sell aggregates) : USD \$9,383 ✓ Production of Residual Materials total cost: US\$ 15,885
5. Fuel Consumption	
<ul style="list-style-type: none"> - Significant expenditure of fuel (diesel) during the filling of the mixing trucks (they have to be running). 	<ul style="list-style-type: none"> - By reducing the waiting time for trucks while being filled, an annual saving of USD \$195,00 in fuel was achieved. <div style="text-align: center;">  </div>
SOCIAL DIMENTION	
Health and Occupational Safety	
<ul style="list-style-type: none"> - There is no adequate risks and accidents monitoring. <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> - A tool to identify risks in the work area was designed. The tool was validated in the pre-mixed concrete plant. Situations, which may cause harm to the personnel's health or the company's assets, were identified. Moreover, it details the place where the danger originates, the equipment, tools and materials involved in the activity. Hazards were ranked based on their risk level taking into account their occurrence rate, their severity, and exposition. - An implementing Health Actions and Occupational Safety plan was designed as to eliminate or diminish accident risks. The plan details requirements to perform improvement actions, the personnel responsible for it, and the implementation date.
Internal and External Social Projection	
<ul style="list-style-type: none"> - Low process systematization to guarantee high performance and identification with the company. Internal communication within the company is weak and so is the sense of belonging of the employees towards company's objectives. 	<ul style="list-style-type: none"> - A designed Communication Plan was set up to verify implementation and actions control with a double purpose: disclose proposed actions and their implementation, and facilitate the follow up by employees and the managerial staff. This will reinforce employees' identification with the company. - An action plan was designed to comprehend the following: <ul style="list-style-type: none"> ✓ Develop a methodology to assess performance ✓ Prepare and develop technical training programs for key personnel

 <ul style="list-style-type: none"> - Little control on contracts for suppliers and subcontractors. - The company's social projection is not taken advantage of as a shaping element for internal and external image. 	<ul style="list-style-type: none"> ✓ Internally disclose the organization's central values. ✓ Develop a personal motivation and incentive policy as well as benefits for personnel. ✓ Disclose activities which benefit personnel. <ul style="list-style-type: none"> - Guidelines were established to prevent operational risks in the frame of contracts and demands for compliance with legal requirements by suppliers. - A group of employees was trained on topics of Social Responsibility, Social Management and Change Management. - Guidelines were established to set up a donations plan for non-profit organizations. - Policies for human resources hiring were set up. These intend to favor people from the community. - The accomplished results regarding the scholarships for employees plan were disclosed.
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PHRASE BY DAVID DOMÍNGUEZ
Production Manager

"At CONETSA we believe in Sustainable Development as a tool which enables us to be more competitive, and which makes us more responsible and opened in a globalized world. This has allowed us to decrease costs, and benefit our employees and community. We have decreased: emissions into the air, process by-products, and we have implemented improvements to save water. Everything learnt will be implemented on the other plants we have - since we believe in Sustainable Development."

