



MASISA IN CONCORDIA

Creating Productive, Social, and Environmental
Value in Latin America's Forestry Industry

VIVA Trust Case Studies

VIVA Trust Case Study

A successful business case

The VIVA Trust Case Studies series describes projects in which cooperation among different sectors of society results in especially successful synergism and leads to a more sustainable social development.

The first Case Study of the series documents the noteworthy and thriving cooperation between INCAE Business School and Fundación AVINA. This second case describes a business world success story: MASISA Concordia, part of GrupoNueva, a VIVA Trust-owned group. Cooperation between MASISA management, Fundación AVINA, and other civil society actors, as well as GrupoNueva, whose corporate philosophy is based on the triple bottom line (financial, social, and ecological success) has resulted in a successful organization responsibly occupying its exemplary place in society.

The present case study, like the first, was developed by Dr. Roberto Artavia Loría, former rector of INCAE Business School. The foreword has been written by Dr. Stephan Schmidheiny, the creator of the “eco-efficiency” concept. He sees this case as a true example of his vision.

I trust this case study will prove inspirational.

Dr. Peter Fuchs
President
VIVA Trust

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Foreword

Over 15 years ago, in the opening years of the nineties, the magnitude and apocalyptic potential of the planet's environmental risks finally became evident. Although much information and more accurate scientific knowledge was still missing, the trends clearly indicated that mankind, because of its rapid demographic growth and high consumption patterns, was becoming a burden greater than its habitat was able to bear.

It became necessary to go back to planning and change course.

In June, 1992, heads of state and government met at the Earth Summit in Rio de Janeiro. For the first time ever, world leaders acknowledged the seriousness of the threat and the need to take preventive measures. Sustainable development had to become the basic guideline if civilization was to endure on this planet, and immediate action was required.

In the early years, efforts were focused on conservation, but they gradually evolved to include social, economic, and institutional issues. One of the Earth Summit's concrete results was the United Nations Framework Convention on Climate Change. It went into effect in 1994 with the purpose of reducing gas emissions, and almost all nations embraced it.

The change of direction we had expected did not take place. The world continued to operate as it always has. High-consumption economies, driven by the availability of inexpensive energy, ushered in an era of unprecedented bonanza. Easily and enthusiastically, China and other leading emerging nations joined the quick pace of globalization, increasing the pressure on a clearly unsustainable pattern of use of resources.

Thus, during the past 15 years, we did not do what we were supposed to. As a globalized economy, we have advanced rapidly and in the opposite direction. It is clear that those who have been leaders in terms of power, economic growth, and technology, should also have taken the lead in terms of innovations towards a sustainable development. We should have created a model emerging economies could follow. The model, however, has been instead one of boundless and inefficient consumption and the waste of energy and natural resources that we perceive as inexpensive.



The opportunity to take preventive action is passing by. As a result of climate change, today we live in an environment affected by severe damages, whose impact upon present and future life forms seems unavoidable.

We are highly pleased, therefore, when we see how some businesses, notably MASISA Argentina, are making progress more in line with the change of direction we have been avidly anticipating ever since the Rio Summit. This progress is the subject of the present case study.

Eco-efficiency is one of the core principles of sustainable development. It is defined as the ability to make full, responsible, and highly efficient use of raw materials, products, and industrial waste in order to offer goods that, in addition to contributing an increased economic value, reduce and eventually eliminate the waste of resources historically associated with production.

In the case of MASISA Argentina, a forestry industry, eco-efficiency becomes an issue of paramount importance, as it is not only key to optimizing production and reducing all types of waste, but also to seeking the conservation and the integrity of the forest to the full extent possible, within a framework of climate change mitigation and the protection of the habitat of the largest number of species.

MASISA Argentina and, in particular, its production plant in the city of Concordia, have made great progress in eco-efficiency. I hope that as time goes by, these practices become generalized in the corporation, the forestry industry, and in so many other industries in which the growth of eco-efficiency continues to be but a dream.

Dr. Stephan Schmidheiny

Case Study MASISA IN CONCORDIA

Creating Productive, Social, and Environmental Value
In Latin America's Forestry Industry

Dr. Roberto Artavia Loría

Introduction

In November 2006, the Board of Directors of VIVA Trust visited MASISA Argentina's plant in the city of Concordia, Province of Entre Ríos, some 430 kilometers northeast of Buenos Aires. During the visit, Board members had the opportunity to experience and appreciate the significant strategic progress the company has made since it joined GrupoNueva. They also met with the creators of the successful strategy of constant innovations.

VIVA Trust is a private corporation gathering under the same umbrella business investments such as GrupoNueva and MASISA, philanthropic activities, and support for sustainable development. Its philanthropic activities and the work it does in the field of sustainable development are supported by the dividends generated by VIVA Trust's industrial and financial investments. The main distribution channel for its philanthropic activities and investments is the Fundación AVINA (hereinafter AVINA), a not-for-profit private organization that holds a widespread presence throughout Latin America and is devoted to strengthen, assist, and integrate in "to" and whose mission is to strengthen, assist, and integrate into networks. Fundación AVINA (hereinafter AVINA), a not-for-profit private organization that holds a widespread presence throughout Latin America and whose mission is to strengthen, assist, and integrate into networks innovative activities and leaders committed to sustainable development.



Map showing the northeast region of Argentina, and highlighting the city of Concordia

MASISA Argentina, established in 1992, became part of GrupoNueva's portfolio of corporations in July 2002. Headquartered in Chile, GrupoNueva is a business consortium owned by VIVA Trust. Its main productive asset is MASISA, a forestry company with operations in almost all countries in South, Central, and North America.

The Concordia plant, in the Argentine province of Entre Ríos, produces compressed wood fiber panels of different sizes and finishes. Its operations have grown steadily, having reached a total area of 300,000 square meters, a roofed area in excess of 50,000 square meters, and an annual output of more than 455,000 cubic meters of finished boards. The plant is located alongside Mercosur's main commercial highway, providing direct access to markets in Uruguay, Paraguay, and Brazil, as well as to export ports and the major sources of forestry raw materials in Argentina.

As all GrupoNueva companies, MASISA Argentina and its Concordia plant evaluate their performance using the triple bottom line, measuring their results simultaneously through economic, financial, social, and environmental criteria. This case study highlights the company's most significant strategic milestones since its inception from this triple standpoint.



Entrance to the MASISA production plant in Concordia

The Context of Concordia

Concordia is one of the 17 municipalities in the province of Entre Ríos, Argentina, with an estimated population of 164,000, 91.4% of which lives within the city limits. Entre Ríos is an agricultural and forestry province. Its major products are soy beans, cereals, citrus, poultry, dual-purpose cattle, cranberries, and forestry products.

A high proportion of the province's agricultural commerce is still informal. Although it does supply formal marketing systems, it does so without issuing invoices or paying taxes. Most new jobs do not meet Argentine labor law criteria.

Concordia households have, on average, 5.3 members, with family nuclei that include children and other usually dependent relatives.

The province is relatively poor. Deficiencies are manifold: up to 60% of the population lacks medical insurance; 50% does not go beyond elementary school, and about half that number drops out before the sixth grade. A full 60% of households falls below the poverty line, a clear indication of the province's pervasive economic ills. In fact, 39% of the population is below the indigence line, a serious social and economic problem affecting the entire municipality. Wealth distribution is equally problematic: 20% of the population controls up to 54% of the wealth generated in the province.

The unemployment level stands at 18.5% of the economically active population (EAP). In particular, unemployment among women affects 19.9% of the municipality's female EAP. Of those who are employed, only 13.5% works in manufacturing activities, mostly in activities related to forestry and agriculture.

In general terms, Concordia is a municipality and a city with a low-productivity economic structure in both absolute and relative terms. It has to deal with a complex economic situation with high unemployment rates that result in widespread poverty.

Strategic Results Achieved by MASISA Argentina in Concordia

This section discusses the major strategic results achieved by MASISA Argentina in Concordia. Strategic results are those that allow the company to move forward in its corporate mission and vision while enabling it to generate value in accordance with its triple bottom line philosophy.

Creating wealth for the community and its shareholders

As other successful businesses, MASISA Argentina (and MASISA Concordia in particular) has become an important source of wealth creation by adding value to local raw materials, the generation of employment opportunities, the development of innovative production and processing practices, and an intense local and export trade.

MASISA: a development engine creating economic value for Concordia

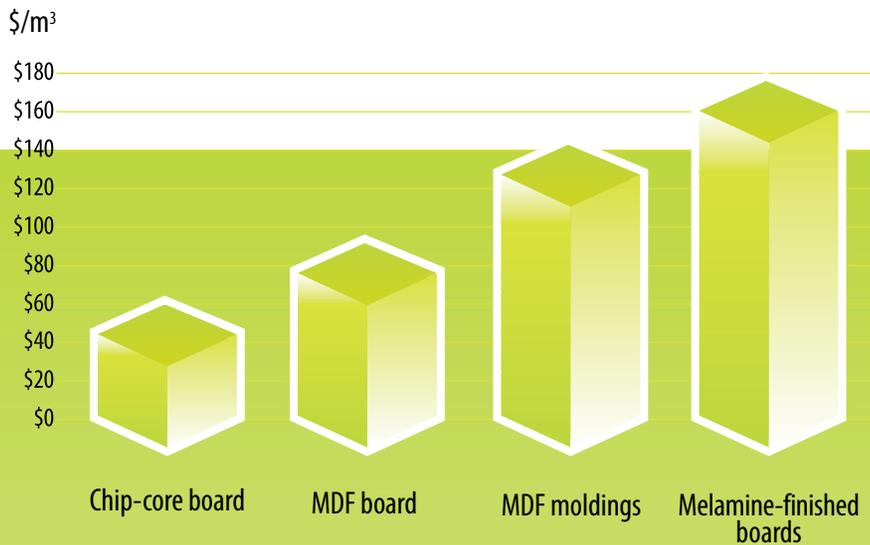
MASISA Argentina (especially its plant in Concordia) has become a true engine of social and economic development for the region. This was achieved through the creation of economic value; more stable sources of employment; increased productivity; the structuring of a value chain that includes a wide diversity of suppliers; and the company's proactive approach to its community.

A first strategic result has been the development of an increasing amount of economic value added. The company produces and markets a product mix more complex and closer to the final users in the furniture, manufacturing, and construction industries in general, especially when compared to the production of low value added boards that has long been typical of the region's forestry industry.

To its original line of particle (or chip-core) boards*, MASISA has added a second; two lines of fiber boards (Medium Density Fiberboard or MDF*), two lines of melamine-finished boards* in a wide variety of colors and textures, and four lines of MDF moldings, including a line of wall paneling for construction finishes. Each value-added level turns the raw material –mostly sawmill waste– into products with a high and growing aggregate value.

As a sample of each line's increasing value, the average margin on each of this products grows with respect to the previous ones, and today stands at approximately US\$30 to US\$45 per cubic meter of chip-core boards; between US\$50 and US\$100 (depending on board thickness) per cubic meter of MDF; and between US\$130 and US\$190 per cubic meter of melamine-finished boards. The price of processed boards is approximately US\$130 per cubic meter in the form of moldings, but it goes as high as US\$350 for some of the company's most successful moldings, especially for wall finishes.

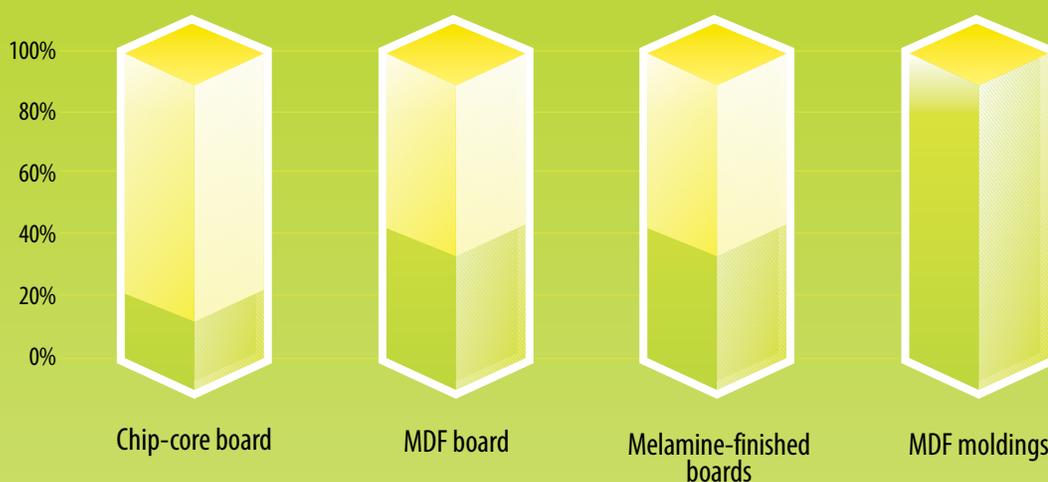
Average margin by type of product



* See glossary at the end of the book

At this time, MASISA Argentina represents a significant share of the country's board manufacturing capacity and value-added projects. The company has become a central component of the value chain of Argentina's forestry industry. MASISA is thus helping the national economy by generating economic value added, exports, and jobs with higher productivity per unit of forestry weight and per time unit.

Production of MASISA as percentage of the national production



In addition to the economic value generated by the company's processes and products, MASISA has created more than 780 direct jobs and has become one of the largest employer in the province, second to the municipal government. Nerina Ross, a consultant retained by the Casa de la Paz Foundation to evaluate MASISA's relations with the community, states that:

"The company is one of the most important businesses for the region of Concordia, as each direct job has a multiplying effect on the economy through the generation of a growing number of suppliers, distributors, or simply companies that benefit from the increased economic volume generated by the company."



Photograph of the board manufacturing process

Creation of a formal value and high environmental value chain

Until a few years ago, the raw materials used at MASISA's Concordia plant were considered waste by the region's sawmills and forestry industry. They had traditionally been burned to dispose of them. Now, waste chips, sawdust, and fibers from the sawmills are used to manufacture particle boards and MDF boards. Also used is the wood obtained from the thinning and pruning processes of pine and eucalyptus plantations and material from the recycling of defective boards produced at the plant. This makes the MASISA plant a generator of environmental value by using raw materials that would otherwise be dumped or burnt, polluting the air.

Historically, these raw materials have been provided by sawmills or informal woodcutters (informal to the extent that they do not pay taxes or for the most part comply with existing labor laws). Because of the certifications it holds and its good control practices, MASISA Concordia requires official invoices and suppliers who meet certification requirements and practices. Thanks to the requirements of MASISA to these suppliers, better business practices in labor, environmental, and fiscal areas have resulted throughout the system. The company has succeeded in having this value chain, formerly made up of informal enterprises, become one of formal businesses.

This value chain thus creates social and economic value, in addition to the environmental impact implicit in the productive, value-added reuse of sawmill waste. There were some initial doubts as to the need to follow more formal standards, but with MASISA's insistence on demanding official invoices, it was possible to bring about a conversion in the old-fashioned enterprises, to the point where most of them have now become a part of the province's formal economy. As a result of the invoices filed by MASISA, one of its major suppliers in the area, initially very reluctant to convert to formal business methods, received a visit by tax inspectors, had to pay fines, and finally formalized its situation.



Raw material from sawmill waste and the recycling of the plant's own defective products, awaiting use in the yard

Although it is a significant contribution by MASISA to the development of the area, this value chain implied the possibility that the company could face a challenging future. Prices for raw materials, both wood and resins, trended higher as energy costs increased. At the same time the Argentine government maintained semi-controlled prices in the board market, a pincer that threatened the company's overall margins. Faced with this situation, the company answered with the implementation of programs aimed at increasing its overall productivity and its eco-efficiency in particular.

Ongoing innovation

Since its inception, MASISA's plant in Concordia has been renowned for its creativity and innovation. Walking through the plant with its managers and supervisors, their pride in the creative ways they have faced all obstacles becomes evident. They have overcome productivity challenges and, at the same time, succeeded in diminishing the environmental footprint an industrial concern of this size inevitably leaves.

There are outstanding examples of creativity applied to production processes and designs, always searching for greater productivity. Creativity has also been applied to the market. We see this in the company's focus on meeting customer and community needs. For instance, long before GrupoNueva implemented its triple bottom line evaluation system, MASISA had already established the area's first conservation preserve in an effort to improve community relations and environmental performance.

A second example, this one more customer-oriented, has to do with the marketing of production "half-packages." As the Argentine economic crisis broke in late 2001 and grew worse during 2002, the company began to market "half-packages" as a way of allowing smaller customers to continue buying its products without having to face a high cash outflow. The "half package," as the name indicates, includes only half of the 56 boards in a standard package. The outcome of this innovative idea was that, in spite of a drop in overall sales as the result of the crisis, most of the country's small distributors remained the company's loyal customers. These examples predate GrupoNueva's acquisition of MASISA and highlight the important role innovation has played in MASISA Argentina, led by managers such as Ignacio González, who at the time was marketing and sales manager for the company in Argentina.



“Half packages” designed to maintain sales flow during the 2001-2002 economic crisis

A third example of innovation aimed at cutting back on costs and materials is the reduction in the quantity of materials and the final thickness of particle boards (both simple and melamine-finished boards) used for drawer bottoms, bookshelves, and other “out of sight” purposes. By bringing final thickness down to 2.7 instead of the usual 3 millimeters, it has been possible to reduce by 10% the material used for production without compromising quality in terms of rigidity, presentation, and perceived value, thus saving on wood, resins, and energy during the production process.

Another significant example of innovation, begun under the previous management of the company, has to do with a process that has developed a virtually homegrown technology for the treatment of wood wastewater. Water accounts for almost 50% of the weight of wood. This water is extracted during the chip and sawdust processing, thus creating the need to treat this water before disposing of it or reusing it in the process. To meet this need, several technologies were combined and efforts continued until the water became potable, even though it was known that it would be used as an

input in the process and turned to vapor during the manufacturing process. Incidentally, water vapor is also processed to remove pollutants before releasing it into the atmosphere.

Innovation, whether applied to industrial processes, to the product line, or to the reduction of environmental impact, is a major feature of MASISA's organizational culture, developed under Jaime Valenzuela and Iván Rubio, acknowledged leaders in these processes. Both executives currently hold important positions at corporate level in GrupoNueva and have largely contributed to the corporate culture many of the innovations developed in MASISA Argentina and, in particular, in its Concordia plant.

Flexibility and product diversification

MASISA Argentina has consistently worked to meet customer needs in different markets, defining product features in terms of thickness, finish designs, and molding profiles until it reached a product line with over 500 different items. Most of these are new profiles for moldings used as finishes in the construction industry, as well as new melamine designs for MDF boards in the construction and furniture-manufacturing industries.

MASISA has developed the capability of designing its own finishes in the melamine, molding, and wall finish lines, becoming even more flexible and responsive to the market. These production lines developed design capabilities and have invested in a section charged with developing, applying, and maintaining the tools necessary to manufacture moldings, thus giving the company even greater flexibility in its value-added strategy. The company presently has more than 500 different profile designs available and is capable of producing a wide diversity of moldings. This allows MASISA to enter highly competitive international markets and become increasingly differentiated from other companies in the Argentine forestry industry. As seen above, flexibility is compensated by the higher margins these products yield. On the other hand, diversification makes the company a "moving target" for its competitors.



Some MDF moldings produced at the MASISA plant



Samples of melamine-covered boards produced at the MASISA plant

Eco-efficiency and environmental management at MASISA Concordia

Before its acquisition by GrupoNueva, the MASISA plant in Concordia had a mixed environmental performance record. Following the acquisition, new initiatives were undertaken over and above existing ones, and many innovations were implemented with the goal of attaining a better environmental performance for the company.

Ecological management at MASISA

Prior to its acquisition by and incorporation into GrupoNueva, MASISA Concordia was a plant with a relatively high productivity in board manufacturing and the development of value-added strategies. It suffered, however, from rather tense relations with its local community. The reasons for these tensions were quite clear: the company, because of its production activities, had a very strong impact on the community. This situation had been very different when the plant was first installed, as the neighboring community was small and rather distant. As often happens in these cases, after the new industry was established, infrastructure began to develop around it, and this attracted low-income families to move into the area to take advantage of the improved circumstances. Soon, these new residents began to notice the noise, smells, dust, and other pollutants that the plant generated.

Although management took steps to reduce and mitigate the new plant's environmental impact, it was only after the change in ownership that it was clearly established that good environmental performance was now an important performance evaluation criterion. This gave management new tools and additional investment capabilities that it immediately took to make an effort to further mitigate the plant's environmental impact and eliminate possible sources of pollution. Beginning in 2003, investment in environmental issues grew steadily. MASISA Concordia began to improve its environmental performance and, as it did so, its relations with the community took a turn for the better. Over the next four years, a total of US\$ 1,869,000 was invested in environmental initiatives that provided financing for the following projects:

2003

- Expansion of the liquid effluent plant
- Construction of rain water drains
- Closing of the sawdust storage facility
- Crushing and recycling of waste boards
- Planting of "green curtains" to reduce dust and noise pollution
- Relocation of unprocessed raw material inventories

2004

- Ventilation system in production warehouses

2005

- Installation of gas washers
- Installation of additional capacity to process sawmill waste
- Conversion of the laminating boiler to wood dust

2006

- Conversion of the particle boiler to wood dust
- Installation of more gas washers
- Construction of a molding dust silo
- Wet aspiration and elimination of formaldehyde from company emissions



Installation cleaning the steam that is emitted into the atmosphere

As a result of these investments, coupled with those already made by the previous administration, noise pollution has been drastically reduced, as have dust, gas, and effluent emissions. Today, it can be said that the plant does not generate any liquid effluents. All water extracted from wood is processed to make it drinkable and is then used as an industrial input, not only eliminating pollution but doing away with the need to use well water for production processes, thus preserving the area's sources of drinkable water.

Eco-efficiency in MASISA Concordia

In addition to mitigating or eliminating sources of pollution, the company has made significant investments in improving its productive eco-efficiency and achieving greater value added with the same or even a smaller amount of raw materials.

The most noteworthy projects in this field are:

2003

Development of a waste management system with origin segregation, recovery, and recycling capabilities that has resulted in US\$440,000 annual savings by eliminating 90% of the final disposition of lumber or recycled board residue

2004

Consolidation of the MDF lines' thermal oil systems resulting in annual natural gas savings of US\$108,000 and the reduction of CO₂ emissions into the atmosphere

2005

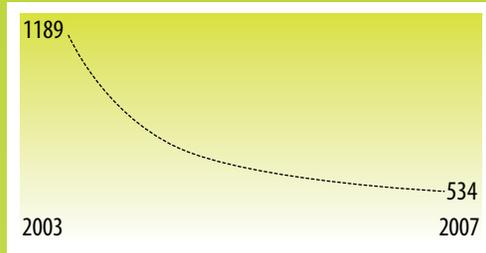
An 80% change from natural gas to wood dust as fuel, with annual savings of US\$100,000 and the elimination of CO₂ emissions into the atmosphere

As a result of the above, impressive results were obtained in 2003-2007 in three areas: water use per cubic meter of board production was cut by more than half; the use of natural gas per cubic meter of board production was reduced; and solid waste was drastically decreased by recycling a high percentage of waste, thus reducing final waste generation to less than 20% of its original volume.

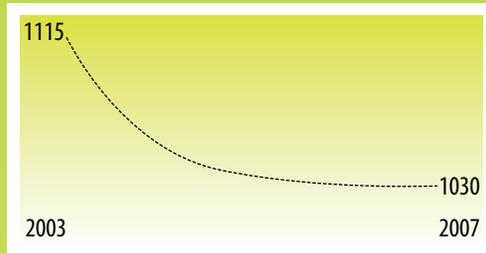
When company executives are asked what are the main factors driving eco-efficiency, they agree that attitude is possibly the most important one. Despite investments in high technology that generate significant results, this positive outcome would not have been possible without the active involvement of all actors in the process: executives, supervisors, and workers. The creation of a culture of eco-efficiency is triggered by the team evaluation implied by the triple bottom line.

The availability of measurements and linking the executives' personal performance with environmental and social results have created an environment that allows company executives to address themselves to the identification of opportunities in the financial, social, and environmental fields.

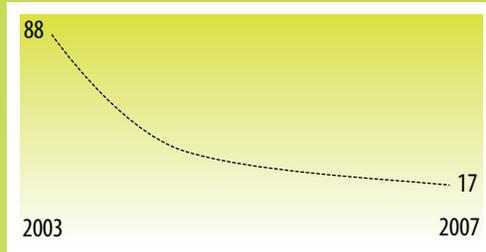
Use of water (litres/m³)



Use of energy (Kwh/m³)



Production of waste (Kg/m³)



Graphs showing use of raw materials and selected services in the production process at MASISA

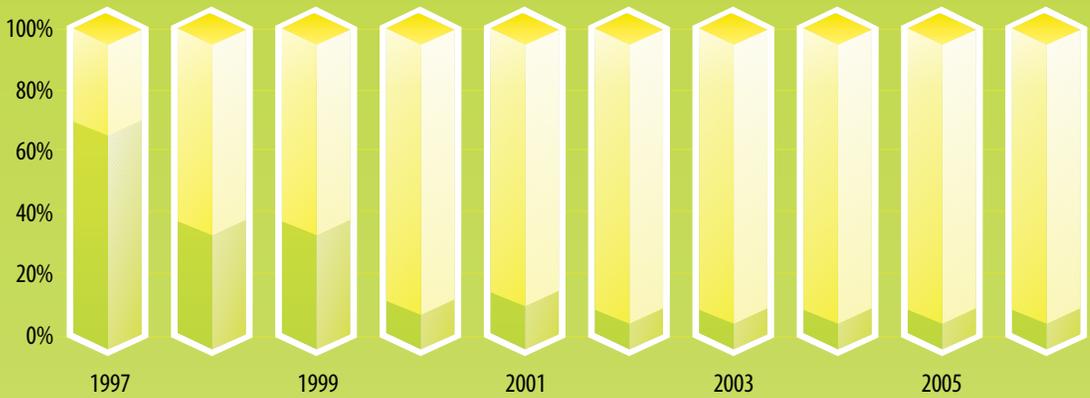
Perhaps the single most important eco-efficiency dimension contributed by MASISA is its intensive use of forest and sawmill by-products and waste as its principal industrial raw material. A full 93% of the 300,000 dry tons of raw materials the company presently uses comes from sources that until recently were considered pollutants: residual sawdust from the sawmills, lateral cuts used to square lumber at the sawmills, the thinning and pruning of forests, the clipping of plantation trees, and the recycling of waste boards. Until recently, all this waste was burnt, generating pollution, waste, and the danger of forest fires.

In the case of Concordia, although costs could increase as the result of the formal use of former waste products, the fact remains that a large portion of the sawmill industry is still untouched, and no lack of raw material is expected for some time. Sawdust and forestry residue prices have not

risen significantly, although it is possible they may do so in the future as their value as raw materials or alternate sources of energy increases.

Beyond a very good environmental performance, MASISA Concordia has become a highly eco-efficient company. In doing so, it has helped raise the eco-efficiency of its suppliers and the community at large.

Use of wood (plainboards) as percentage of total raw material



The development of a culture of eco-efficiency has entailed raising the awareness of the plant's personnel and training and evaluation processes under the new operational criteria. The company engages in an intensive communication of its progress and results, both in-house and externally, in order to keep a degree of positive pressure on the issue. Without these processes and the constant monitoring of performance by management, the culture of eco-efficiency would not have made strides or reached its present level.

Conservation and biological preserves

In addition to its internal environmental management processes, MASISA Concordia, in partnership with Forestal Argentina, S.A. (FASA), has been a catalyst for conservation and biodiversity in the region. Under the leadership of Jaime Valenzuela, of MASISA's executive team, the company has been a leading partner in the establishment of the first conservation preserve in the area in 2000. Since then it has been involved in the establishment and management of nine natural preserves in the provinces of Corrientes and Entre Ríos, covering a total area of 4,800 hectares. These preserves are:

2000

Arroyo Ayuí Grande

2004

Buena Vista II

La Florida II

Tres Cerros

2005

Santo Domingo

La Yunta

Linconia

Yuquerí

El Talar

As part of the work done at these preserves with the help of academic researchers and scientific organizations, numerous projects have been carried out involving forestry variety studies, bird sighting, census of endangered birds and mammals, and research into amphibian species. These preserves have become focal points for research and environmental education programs, a mandatory stop for distinguished visitors, and centers generating ecological and educational value.

The model's third element: relations with significant communities

To satisfy the third element in its triple bottom line, MASISA has undertaken in Concordia a series of investments and initiatives related to the internal and external handling of stakeholders.

Relations with the outside community

Until recently, as formally documented in a study by Casa de la Paz, an AVINA partner NGO from Chile, executed in the field by Nerina Ross, a consultant and AVINA local partner, relations between MASISA Concordia and the local community had been initially tense and difficult. The reasons for these difficult relations were mostly of an environmental nature. The company generated high levels of noise pollution, as well as dust, liquid effluents, and malodorous gas emissions that had a potential impact on the health of the local population.

MASISA has made efforts to satisfactorily manage its relations with the community. Beginning in 2002, with the active support of GrupoNueva, it has succeeded in starting a gradual process of improved relations. Today, residents see the company as a source of wealth for the region, a source of employment for the community, and a socially and environmentally responsible corporate citizen. Getting to this positive state of affairs has required great communication efforts on the part of the company. These efforts have been aimed at its employees, local teachers, the business community, and authorities who now come to the company's defense whenever it is wrongly accused of ills caused by others.

At present, MASISA generates almost 800 direct jobs. Recent hiring cycles have given priority to area residents. MASISA has also become an important multiplier in the community, thanks to its locally based supply and distribution chains. For this reason, it is recognized in Concordia as a model company, highly coveted as an employer by local job seekers. Its impact on formal job creation in the area, outside its own plant, is also highly significant, as shown in the study by Casa de la Paz. This is especially important in a city where unemployment stands at 18.5%.

Two important milestones stand out in the relations between company and community. The first is the change in ownership. Following its acquisition by GrupoNueva, the new corporate focus has fostered a better environmental and social performance and, more specifically, opened new channels of communication with community leaders. The second significant development has been the change in the company's operational management. When Javier Busch, a Concordia-born executive, took over as the plant's operations manager, the community's reaction was one of pride. As Nerina Ross, of Casa de la Paz, writes:

"In MASISA Concordia there is a before and an after in community relations. The first step was taken when GrupoNueva changed its management models and began measuring environmental and social performance. The second –and, for me, more significant– step came when Javier took over as manager, and the community understood that one of their own was now responsible for leading the company. This has done wonders for communication, for credibility. MASISA is no longer perceived as a foreign multinational ..."

In addition to this, the relations that have evolved with leading community organizations have reaffirmed the change in the company's attitude. Possibly the most important relationship is the one with "Brigadier General Pascual Echagüe" Technical School No. 1. This vocational school has provided up to 60% of the company's personnel at all levels. Operations Manager Javier Busch and a high number of process operators are graduates from Technical School No. 1. Its principal, Professor Horacio A. Castagnini, has stated:

"MASISA has become a catalyst that has helped the school grow and modernize. It has contributed valuable teaching materials, computers, and fluid pump models; it has hired its graduates; it has afforded students new growth opportunities, evidenced by the projects we have undertaken for the company in the manufacture of coils or pliers for electric motors' isolation at the plant."

The company also works in close cooperation with the nearby vocational high school. Principal Claudia Vallejo underscores the advantages of this cooperation for the school:

"MASISA is very important for us. On the one hand, it is very generous, giving us materials to repair our furniture and facilities. In addition, it has been the driving force behind our productive relationship with the National Technological Education Institute (INET). Thanks to MASISA, we have built and equipped a modern computer lab in our school. MASISA contributed the initial capital and part of the designs, the equipment, and the necessary labor. These were paid back later through tax credits ... We recently passed an INET audit, and MASISA was there, making sure that everything was as it should be."

Casa de la Paz consultant Nerina Ross adds:

“The true image of the company is generated by word of mouth and, until very recently, it was not very good, in addition to being distorted. Today, however, things are different ... the company is seen as a model because it provides access to information ... In Concordia, being a MASISA employee is a status symbol because of the job stability and security the company affords, because a company job means better opportunities for one’s children. Concordia is a poor place, and MASISA is seen as a way out of poverty.”

For consultant Nerina Ross, in addition to the employment opportunities it offers and its multiplying effect, the fact that MASISA acts as an economic catalyst and fosters formal employment among its suppliers, the fact that there are now clear and continuing relations with the educational sector, and that it has taken specific steps to improve communication with its significant community, has turned the company from an undesirable neighbor a few years ago into a business that has earned the community’s admiration and respect.

MASISA has also made significant contributions to the community by hiring a growing number of women, particularly in its molding line. This opens growth opportunities for women who in the past had very few employment alternatives in the formal job market.

At the level of the business community, Roberto Niez, President of Concordia’s Commerce, Industry, and Service Center, has said:

“Over the past five years, perhaps since Busch’s appointment as manager, relations with the community have been more open. There has been greater presence in the media to deny false reports and information. The company has been very active in different forums. Carina Díaz, in particular, is an excellent corporate ambassador to the community. The company is not very well known to all, but from my standpoint, it is a company Concordia can rightly be proud of. It is possibly the only local company to win international awards and be recognized beyond the borders of the province ... In recent years, the company has worked together with other community organizations, including the Center,

of which it is a full-fledged member ... The company helps the business sector by establishing new performance parameters, being demanding with its suppliers, prompt in honoring its obligations, and respecting contracts ..."

Recently, MASISA has had a growing presence in the national and local media. It has received coverage for the awards and recognitions it has earned in different fields, but it has also squarely addressed wrong information about its performance and its impact on the community. Represented by Javier Busch and Carina Díaz, the company has participated in Corporate Social Responsibility (CSR) forums, provincial development seminars, and other meetings. Because of the strength of its participation, it has become a valuable point of reference for the community and the industry.

Since most of the company's workers come from the city of Concordia and from neighborhoods close to the plant, MASISA's most direct impact on the community is the creation of both direct and indirect jobs for hundreds, even thousands, of families in a community which, as we have seen, suffers from a complex and very difficult social situation.

Finally, it should be added that MASISA Concordia helps its community with donations in kind of boards, materials, furniture, computers, and other items, to local organizations and, particularly, to schools. The goal is to generate a lasting and multiplying effect.

What has been generated in MASISA, in the city of Concordia, is a virtuous circle that begins with the mitigation of negative impact, and continues with the company's tangible presence in the community, its openness to opinion leaders, its investment in its neighbors which pays dividends in the form of loyalty to the company. Technical School No. 1's graduates working in MASISA frequently visit the school, looking after its needs and trying to provide growth opportunities for the students. In turn, the school trains better workers, strengthens the company's image, and, when necessary, takes up its defense. This has been a slow-moving process that gradually began years before GrupoNueva took over MASISA. But with the triple bottom line evaluation system, the company's opening to the community, and the appointment of a local Concordia man to the highest post in the plant, a circle –now virtuous– has been completed in company-community relations.

Worker relations

In addition to job stability and a high productivity that translates into high salaries by local standards, MASISA offers its plant workers a wide array of other benefits, including:

- Meals at work
- Transportation to and from the plant
- Christmas gifts for workers and their children
- Scholarship program
- Job training
- A thirteen-month annual salary
- Life insurance

MASISA worker relations, at the level of both human resources and labor relations, are highly beneficial. The labor union representing company employees maintains excellent relations with management, mindful of the fact that the jobs created by the company are hard to come by in the region and, especially, in Concordia. There are no pressures or antagonistic stances of any kind but rather a quiet acknowledgment of the reality that the company exceeds the union's employment expectations in the province.

Workers claim to be pleased with the financial advantages they receive from the company, both as compensation and other benefits, and, above all, with the opportunity to advance, job stability, and family security.

MASISA requires its direct contractors, as a minimum, to comply with local labor regulations and good management practices, thus ensuring harmony in the plant without the prejudices caused by third-party interference in its internal affairs.

A young company worker relates his personal experience:

"In my previous job, I had to put in a 15-hour workday, doing a dangerous job driving a poorly maintained truck along bad roads. Working for MASISA, I make a little more money, work eight hours a day, and am less than four blocks away from home ... I have an eight-month-old girl. With this job, I feel sure that my family and I will do well."



Javier Busch, winner of the Entre Ríos Exports Award 2006, Masisa Concordia plant

The company has also made great strides in job safety, reducing both the frequency and the seriousness of work-related accidents. Until not too long ago, MASISA's accident rate was 20% of the national average, and it has continued to improve. The next step is to turn this clear trend into a true internal culture, as the company's safety record is still largely dependent upon the execution of management controls. To bring the accident rate down to zero implies a change of attitude on the part of the company's labor force and not necessarily more investment in training, supervision, or external mechanisms.

In-house training has included internal operational issues such as safety and accident probability, but has also dealt with training in new techniques and support for formal education programs. One example of this is a program to assist workers complete their high school education. Around 20 workers are expected to get their high school diploma in late 2008.

Certification and recognition

MASISA Concordia received its ISO 9000 certificate under the previous administration. Since being acquired by GrupoNueva, it has obtained two other major certifications: ISO 14001, in environmental issues, and OHSAS 18001, in safety systems and occupational health. In addition to attesting to the

company's performance and systems in their respective areas, these certifications are expected to create a high level of awareness at all company levels that would otherwise not have been reached.

In addition to the certifications it has attained, MASISA has been frequently recognized in recent years for its performance in strategically important areas such as:

2006

Argentine Exports Prize
Recognition as one of the best companies to work for in Argentina (#17)
The Business and Social Sciences University (UCES)
Award for Business Environmental Excellence
Honorable Mention, Corporate Citizenship Award, U.S.
Argentine Chamber of Commerce

2005

Argentine Exports Prize
First Prize, Casa FOA Exhibition
Entre Ríos Export Prize

2004

Argentine Exports Prize
UCES Award for Business Environmental Excellence
Silver Medal, Casa FOA Exhibition
Entre Ríos Export Prize

2003

Argentine Exports Prize
Second Honorable Mention, Casa FOA Exhibition

These prizes, awards, and recognitions are in addition to the export and design awards the company has won throughout its history as the result of its constant innovation. MASISA's growing presence in exhibitions and forums, as well as the clear improvement of its environmental, social, business, and production performance, have been widely recognized in Argentina. The company has positioned itself as a leading player in the country's forestry industry and a model and trend-setter in the business community, especially in Concordia.

Towards sustainability: leadership and partnerships

As part of its triple bottom line strategy and with the goal of attaining sustainability in its investments and positioning, MASISA established a series of institutional alliances in Concordia, as well as other interactive mechanisms with its community and its industry.

Strategic partnerships

In recent years, and as part of its development and positioning strategy, MASISA Concordia has been moving forward in setting up partnerships with production, social, and environmental organizations in its relevant communities.

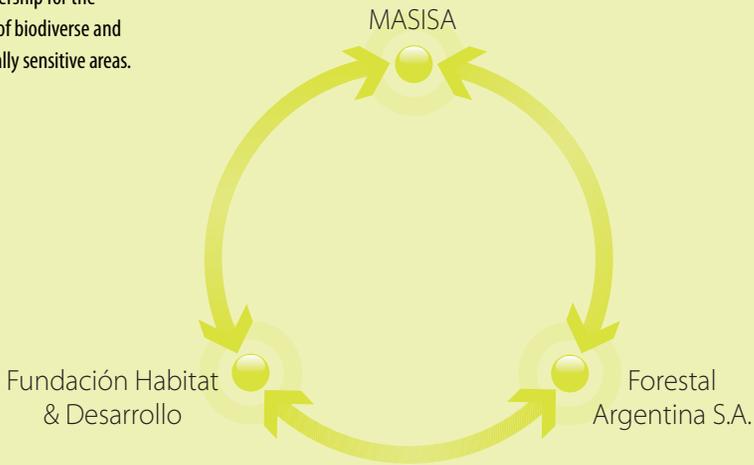
In the area of production, its basic partnership is with Forestal Argentina, S.A. (FASA), a forestry management company. In addition to being a major supplier of lumber, FASA guarantees the long-term supply of raw materials in case of any imbalances in the supply of by-products from area sawmills. FASA can ensure the supply of enough raw materials to complement and, if need be, replace other sources of raw materials in the area.

There are several significant partnerships at the community level, especially with educational institutions that help the company attain its social goals. Possibly the most important of these is, as has been seen, the partnership with Concordia's Technical School No. 1, a major source of qualified personnel for the company, which it already knows, understands, and supports. Also important is MASISA's relationship with the community's vocational school, which provides workers with an opportunity to finish their high school education.

Special mention must be made of MASISA's partnership with AVINA, represented by Enrique Piedra Cueva. Thanks to his relations with civil society, Enrique Piedra can generate opportunities for company executives to participate in forums and meetings on CSR and sustainability issues. The recently established relationship with Casa de la Paz, an NGO and AVINA partner, generated a report on the relations between the company and the community that will help evaluate its performance to date, identify new opportunities for improvement and better understanding of current and potential problems in this relationship.

The establishment of these partnerships has had an important multiplying effect for MASISA. In addition to complementing its skills and capabilities, they contribute knowledge and credibility, and strengthen its image through channels that directly reach audiences other than its usual ones.

A triple partnership for the preservation of biodiverse and environmentally sensitive areas.



Technology transfer

MASISA has become an important technology source for the province of Entre Ríos and its forestry industry. A clear example of this is the acquisition and adaptation of the “new” bacteria water treatment for the industry and the region. Once the process was successfully implemented, the company shared this technology, especially the bacteria involved in the elimination of water-borne residues, with other companies in forestry, thus becoming a channel for receiving and transmitting environmental technology for the region and the industry.

Likewise, through the use of various modifications to its process and products, some of which have already been mentioned in the section that spoke of innovation and creativity, the company has become a source of new technologies and development systems that can then be implemented in other MASISA plants. When new practices are of general interest, such as water treatment, the company becomes a source of technology for the entire industry or even the community.

Leadership

MASISA's leadership, within the company itself, at the community and at industry level, as well as the role played by its key executives on a personal level, has been widely recognized.

The company's leadership in issues such as the expansion and strengthening of the value chain, increased value added, eco-efficiency, corporate social responsibility, exports, and others, has been clearly established in previous sections. It is important, however, to emphasize that the efforts being made by the company to show its leadership are now a conscious undertaking, and an integral part of its positioning strategy vis-à-vis the industry, the competition, and the community.

The leadership provided by MASISA's top executives in the region should also be highlighted. At the personal and professional levels they have become role models of performance and commitment to social and environmental sustainability issues, and have emerged as community and trade leaders.

A review of MASISA's leadership must be divided in two stages. During the first stage, between 1994 and 2002, the company's showcases were its productivity, its constant innovation, and its independent efforts to improve community relations and the environment. Executives Jaime Valenzuela, Ignacio González, and Iván Rubio played a key role in these early years.

During the second stage, under GrupoNueva's corporate leadership, it is common to hear people say on and off the plant "Since Javier became manager..." and add a string of positive comments about community relations, plant innovation, commitment to value added, eco-efficiency management, and other equally significant issues. The same holds true for Carina Díaz, described by community actors as the force behind MASISA's new and improved image in Concordia.

Perhaps the most compelling evidence of their leadership is the effective follow-up on their initiatives by MASISA executives and workers through volunteer work on and off the plant. One example is the re-use of many





old fluid pumps for teaching purposes at Technical School No. 1. Under Javier and Carina's leadership, the Concordia plant seems to be well on its way towards becoming a model of production, environmental, and social management for the corporation, for the Argentine forestry industry, and for the Concordia community.

Corporate Relations: GrupoNueva and AVINA's Influence

Becoming part of the business and philanthropic consortium represented by VIVA Trust has exerted a significant influence on the strategy and leadership styles at MASISA Concordia.

GrupoNueva's influence

GrupoNueva's fundamental influence has been the key to the recent changes that have taken place in MASISA Concordia. The implementation of environmental and social management policies, now consolidated into a corporate triple bottom line evaluation system, has played a determining role in the company's transformation.

The company's track record can be divided into before-and-after GrupoNueva periods. This is true in terms of both productivity, social and environmental performance, and in the creation of a consistent internal culture. Corporate influence has had an impact on all these changes. This section takes a closer look at other examples, not previously discussed in this study, of the specific impact the corporation has had on the Concordia operation through its subsidiary MASISA Argentina.

Aggregate value reaching the final consumer

One of the most important effects of corporate influence that the company in Argentina has been able to profit from is the use of a larger and international retail distribution chain. Although ultimately a third-party operation, this distribution chain, known as the Placacentros, is a basic MASISA channel at the strategic level.

Almost 25% of the total output of MASISA in Argentina is marketed through the Placacentros. This is especially important for MASISA Concordia as, through them, it is gradually positioning itself in the market for products with growing value added. Placacentros become market intelligence gathering centers. Although they are an integral element of the corporation's strategy, because of their variable size, location, and inventory management practices, they elicit valuable information on trends, market segments, changing customer needs, and other equally significant issues.



Forefront of a MASISA Placacetro

The recent opening of a Placacetro in Concordia has further strengthened the company's image as a catalyst for a new business spirit and as a high value-added company.

Two-way know-how transfer

In addition to facilitating technology transfers, the corporation-wide movement of key executives allows for the transfer of know-how at the production and the business levels and, in fact, in all aspects related to the company's operations.

The case of MASISA Concordia is a clear illustration of this. Key executives trained by MASISA in Argentina and at its Concordia plant have gone on to play leading roles at the corporate level. This has been the case with Jaime Valenzuela and Iván Rubio. Inverting the flow, Alfredo Gili, who recently joined MASISA Argentina, will bring to the company and its Concordia plant his knowledge of the market, marketing methods, and other management systems he received in Perú, where he was previously stationed, and Chile, his country of origin.

Export opportunities

The relationship with GrupoNueva through MASISA U.S.A. has opened up a significant export market for MASISA Argentina and its Concordia plant. Many of its products have already been exported to the United States and Canada.

The company's export capabilities strengthen it in its local market. They not only make MASISA less dependent on it but also force it to compete on global terms, demanding increased productivity, quality, and reliability standards.

Also, thanks to MASISA's corporate distribution chain and business capabilities, not to mention its privileged location with respect to the markets in southern Brazil, Uruguay, and Paraguay, the company has been able to successfully export to these markets, significantly diversifying its operational risks and output to better accommodate the changing tastes of consumers from different countries.



Eucalyptus forests in the Argentine Northeast

Secure supply

One of the most important strategic advantages the company receives from the corporate level is a secure long-term supply of lumber or lumber waste to feed the plant's production processes. Thanks to its strategic partnership with FASA and Los Boldos, S.A., a member of International Timber Holdings, LLC, and to its ongoing strategic involvement with forestry companies, GrupoNueva has achieved a privileged position in Argentina that allows it to manage significant forestry assets and guarantees a steady long-term supply of raw materials for its industrial operations.

Access to capital

The company has made significant investments in recent years to expand its production plant, reduce its environmental footprint, and, at the same time, enhance its social footprint. Belonging to a corporate group of GrupoNueva's scale and capabilities gives MASISA in general and its Concordia plant in particular access to capital for strategic investments consistent with the triple bottom line.

Partnership with AVINA

The relationship between MASISA Concordia and AVINA has been an intense one both ways. Enrique Piedra Cueva, AVINA's regional representative, has been the driving force behind an effort that has grown to incorporate AVINA partners in Entre Ríos and generate significant results for both organizations.

The first contact between the two organizations occurred when its partners in Entre Ríos alerted AVINA of public complaints about to be made against MASISA. Initially, these partners called AVINA to let it know that its "partner" MASISA was causing environmental damages in the province. Enrique Piedra Cueva organized a meeting between its partners, Entre Ríos environmental activists, and Javier Busch. Busch opened the plant to a visit by the environmental activists, who asked for information, visited production processes, evaluated environmental performance, and developed a positive relationship with Busch and the company in general. As a result of this initiative, Horacio Enríquez, an AVINA partner through the Eco Urbano Foundation, published an article establishing that MASISA was in compliance with the law and making positive comments about

the company. This article, in addition to being formally published, was widely distributed among AVINA partners and MASISA personnel

CHRONICLE OF A VISIT TO MASISA

Late last year we had an opportunity to visit the MASISA industrial complex, extending over 35 hectares in the Concordia Industrial Park.

Many aspects of our visit impressed us most favorably, from the solicitous hospitality of Operations Manager Javier Busch to the creativity that has been channeled towards a well-defined environmental management policy aimed at minimizing social, environmental, and ecological effects and, at the same time, generating opportunities and improvements within the plant's sphere of influence.

As regards the environment, we were able to see (and to report in our media) the intelligent work being done to make maximum use of waste materials – paper, cardboard, metal, plastic – and, of course, the treatment and reuse of effluents (water) generated basically from lumber itself, and fully (100%) reintroduced into the production cycle (with no need, therefore, to pump it from the water table), and lastly, the use of all of the lumber in the plant's processes, i.e., sawdust and dust from the milling and sandpapering of the lumber, retrieved and taken through a network of tubes, filters, and air extractors to a boiler-and-burner system especially designed to generate energy, thus avoiding the use of fossil fuels. They are showing us that, in addition to meeting all ecological standards, the company is able to generate value and achieve significant savings by responsibly managing all environmental variables.

I was gratified to see the manager's faith and conviction. He has squarely met this challenge, not losing sight of the immediate impact the plant's activities have on its social environment or the problems and needs of area schools and other barrio actors.

As for the opportunities it creates, MASISA manufactures wooden boards from industrial waste with little or no other use. In other words, its raw materials are sawdust, shavings, and bark, and the lumber resulting from the thinning out of two species grown in the forest: pine and eucalyptus. In the Entre Ríos forestry area, any number of small and large sawmills have burned their waste products (thus contributing to global warming). Today, the company has created a valuable market for these waste materials, as well as added value for those sawmill owners and others. MASISA is thus mobilizing and supporting investment (storage silos), strengthening businessmen related to the forestry industry, and a large number of truck drivers within a 150-kilometer radius around the plant.

In conclusion, I must say it was a pleasure to get to know this real experience where one can breathe a business vision and culture intent on doing business for the long term, and giving us an idea of sustainability over time that includes a social and environmental awareness that we need as much as we do jobs and opportunities.

*Horacio Enríquez
ecourbano@ciudad.com.ar*

After this initial experience, a meeting was arranged through AVINA with Sharon Flynn, an expert in corporate social responsibility and consultant to GrupoNueva. This meeting –coordinated by AVINA– generated some interesting ideas that the company adopted. As a direct consequence of this meeting, AVINA partners in Entre Ríos became the core of the CSR stakeholders for the company.

MASISA has also helped position AVINA partners and projects such as the Entre Ríos Business Council (CEER), sponsored by AVINA partner Silvia d'Agostino. Following conversations, and at AVINA's urging, MASISA joined CEER, thus raising the credibility and influence of this business entity working to promote sustainable development in the province.

In a second stage of this project, AVINA and CEER have been conducting a business inclusion project. One of the project's more important groups is a large number of carpenters in the municipality of San José. The relationship with MASISA and the Placacentros, and the coordination with AVINA partners open a whole new world of opportunities to these carpenters. The project is a model of CSR supported and used by AVINA and CEER to promote CSR and business inclusion ideas in the province.

As a result of MASISA executives having joined the Concordia Development Association (ASODECO), AVINA's work has been strengthened and simplified by its association with a small institutional development project. Two AVINA partners, an Argentine woman and an Uruguayan man, worked with ASODECO. MASISA's role, in addition to strengthening membership, has been to serve as a role model and catalytic agent for the CSR concept among businesses in the province, using ASODECO to disseminate this information.

The existing partnership with AVINA made it possible for Casa de la Paz to agree to conduct an evaluation of MASISA's community relations in Concordia. This evaluation should be the core document for the ongoing improvement of community relations. AVINA partner Nerina Ross was selected to conduct this evaluation and submit, together with Casa de la Paz leaders, recommendations for continued progress in the area of CSR and community relations.

Javier Busch and MASISA personnel have also cooperated with AVINA to bring technical forestry know-how to the neighboring province of Misiones, where MASISA and its competitors have a significant presence. The relationship that has been established gives it supply options as well as access to a region that was previously beyond the company's area of influence.

Together with AVINA, MASISA has been involved in the handling of a situation involving criticisms of both AVINA and AMANCO in the province of Paraná in 2006. As part of the handling of this situation, MASISA executives have been involved in a study of the circumstances, have provided information, and shared experiences that will help control the situation. Javier Busch was a member of the team brought together that eventually succeeded in neutralizing this situation.

DERES (Spanish acronym for Development of Corporate Social Responsibility) is an effort being promoted by AVINA. It is undertaken in partnership with MASISA, which acts as a source of information for the Argentine Northeast and Uruguay. Recently, for instance, a group was launched to look into the question of water management from the standpoint of eco-efficiency. MASISA will play a leading role in the seminars to be held in Montevideo and in the visit by Uruguayan businessmen to the Concordia plant.

Finally, a partnership has been made possible between MASISA and the Habitat and Development Foundation of Santa Fe. MASISA has the Foundation's support for the management of its bio-preserves. AVINA partner Javier Alvarez, already mentioned in another section of this study, leads this Foundation.

There clearly has been an intense, growing and mutually beneficial relationship between MASISA and AVINA, both in strategic terms and for the management of specific situations. This relationship underscores the great flexibility and trust of both parties. The relationship with AVINA is a major source of support for the company, and vice versa, generating an ideal synergy between GrupoNueva companies and AVINA partners.

Conclusion

MASISA Argentina and its Concordia plant are an excellent example of how the practical adoption of the triple bottom line changes the ways in which a company creates value.

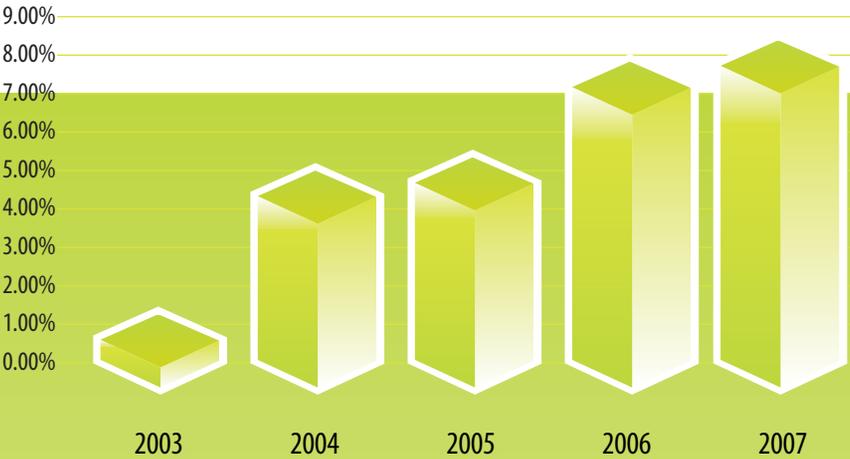
MASISA Concordia has become a catalyst for the sustainable development process in its area of operations, as well as a source for the creation of economic value. It has done so on the basis of respect for nature, proven by its participation in the investment and management of preservation areas, leaving behind a significant footprint in the development of its community through the leadership, innovation, and aspirations it has shared. It has also established partnerships with community organizations to provide sustainability to its efforts in this area.

MASISA Argentina is a success story. Its story tells how a company changed itself to become more internationally competitive and committed to environmental and social sustainability. All it needs now is to reach a level of financial returns consistent with these production, environmental, and social achievements. After the 2002 crisis, the company's return on equity has been growing steadily, approaching its self-imposed goal of 12% per year.

At this time, its competitiveness is supported by a value chain beginning with waste from its own processes and other industries and ending with value-added products and services through its partnership with Placacentros and MASISA corporate sales on the local, regional, and international markets. It has a strong basis in the organization and its own executive team's innovative capacity in terms of processes, products, and services. It grows stronger thanks to great flexibility in supply, processing, and marketing. It is further supported by a strong environmental and social license to operate at a time when forestry industries are being closely scrutinized internationally. It draws additional support from the strength

of its partnerships with environmental and social leaders in the communities where it operates, carrying its value as an organization far beyond its workers. It is supported by workers with high productivity and a strong commitment to the organization, operating at a level of productive eco-efficiency that isolates it, at least partially, from the volatility of energy markets. MASISA Concordia continues to implement a strategy of strong competitiveness within the industry, coupled with the highest production, environmental, and social sustainability.

MASISA Argentina's return on equity



Organizations mentioned in the body of the study

The following organizations are listed in the same order they were mentioned in the body of the study. AVINA partners are listed first, followed by other organizations.

Key partners:

Stephan Schmidheiny	www.stephanschmidheiny.net
VIVA Trust	www.vivatrust.com
MASISA Argentina	www.masisa.com.ar
GrupoNueva	www.gruponueva.com
Fundación AVINA	www.avina.net
Forestal Argentina, S.A. (FASA)	www.argentinaforestal.com
Placacentro	www.placacentro.com

Casa de la Paz Foundation	www.casapaz.cl
“Brigadier General Pascual Echagüe” Technical School No. 1	www.concordia.com.ar/eetn1
National Technological Education Institute	www.inet.edu.ar
Concordia Business, Industry and Service Center	www.centrodecomercio.org.ar
Business and Social Sciences University	www.uces.edu.ar
U.S.-Argentine Chamber of Commerce	www.amchamar.com.ar
Casa FOA	www.casafoa.com
Habitat and Development Foundation	www.habitatydesarrollo.org.ar
Eco Urbano Foundation	www.ecourbano.org.ar
Entre Ríos Business Council	www.ceer.org

Organizations mentioned in the text, but with no webpage available:

International Timber Holdings, LLC
Concordia Development Association

Glossary

Covering: In this context, this term is used to describe slot-type materials that are used to cover unfinished walls. Coverings may be wide moldings or melamine-covered boards.

Eco-efficiency: This concept is based on the overall idea of producing more goods or services using fewer and fewer natural resources and generating less waste and pollution. According to the World Business Council for Sustainable Development, eco-efficiency is attained through the delivery, at competitive prices, of products and services that meet needs and improve the quality of life while gradually reducing environmental impact throughout the entire life cycle of those products and services.

ISO: This is a family of quality and performance standards in selected issues such as the quality of management systems, environmental performance, or corporate social responsibility. The ISO standards, issued by the International Organization for Standardization, are managed by a group of accreditation and certification entities.

MDF (Medium Density Fiberboards): Construction material made from wood fiber. It comes in the form of boards with smooth surfaces on both sides, made from wood fibers glued together by synthetic resins. It is used as a wood substitute in construction and furniture manufacturing.

Melamine: Melamine is a plastifiable organic compound, easily adaptable to consumer needs. It is heat resistant. It can be used as plates to cover boards as finishes of diverse colors, textures, and styles.

Molding: Decorative element use in different art forms, including architecture. It is a relief or protruding piece, mostly lengthwise, with a uniform profile. This profile or cross section defines and distinguishes the different types of moldings.

OHSAS: An international standards system that sets forth the different health and occupational safety systems in any company with the purpose of facilitating effective risk and performance control. The standards required from the different industries are related to the nature of their processes and products.

Particles or chip-core: Construction material produced by compacting wood chips under high pressure and holding them together with adhesive resins. This material is generally marketed as particle boards that are used as wood substitutes in construction and furniture manufacturing.

Silviculture: More commonly known in English as forestry, silviculture takes its name from the Latin words *silva*, meaning forest or wood, and *cultura*, meaning cultivation. Thus, silviculture is the science that studies the cultivation of woods. It encompasses the creation and preservation of forests, the theory and practice of regulating the establishment of a tree mass, its composition and development. It has recourse to geography, ecology, edaphology, and climatology, among other related sciences.

Sustainable development: The attainment of a balance between human development needs and the protection of the environment in order to guarantee the possibility of meeting human needs today and tomorrow. Sustainable development can be divided into five interrelated fields: wealth creation, environmental balance, economic stability, institutional development, and human development.

Triple bottom line: In this context, this concept refers to a corporate performance evaluation system that measures simultaneously financial and economic, environmental and eco-efficiency, and social and corporate social responsibility results.

Trust: In the English legal system, a trust is an arrangement whereby money or assets become the property of an individual (or of several individuals or organizations) to be administered for the benefit of a third party. A trust is administered in accordance with the terms established by its founder in the document that set it up.

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