The roots of change

Imaflora and the socio-environmental developments in forest and land management

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INSTITUTO DE MANEJO E CERTIFICAÇÃO FLORESTAL E AGRÍCOLA

Imaflora (Instituto de Manejo e Certificação Florestal e Agrícola) is a Brazilian, non-profit organization that was established in 1995 to promote the conservation and sustainable use of natural resources and to generate social benefits in forestry and agriculture.

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Preface

A history of change

The route to sustainable development has been built while mankind continues to live with poverty, hunger, wars and the depletion of our natural resources.

It is becoming ever clearer that there is a need to change our planet and civilization. However, during the last few decades, we have come to realize there are no magic solutions to overcome these socio-environmental problems.

While it is necessary to think of global strategies, changes must be local to each individual and group. Each situation is unique, and it is only by considering the interests and commitments of each party involved in a situation that we can bring about lasting change. Sustainable development therefore presupposes plurality, dialog, negotiation, agreements, innovation, entrepreneurship and a willingness to take risks.

These are some of the premises that led to the creation of Imaflora in 1995, and that continue to guide our strategy and actions. This book aims to explain our institutional rationale and how we act. It is based on real cases that are explained in an informal, journalistic tone. This is to give you, the reader, a better understanding of the changes and how solutions are constructed. I hope these stories, that are still so fresh in our minds, that are so limited and imperfect, inspire you and provoke your curiosity. I hope you go on to take part and take us forward in our mission. Enjoy this book!

Luís Fernando Guedes Pinto
Executive Director
July, 1st, 2009

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The beginning of a learning process

Imaflora's pre-history and first steps in promoting the responsible use of natural resources

Number 185 on the Chico Mendes road. We are in the Sertãozinho neighborhood of Piracicaba, in the interior of São Paulo state. Our attention is drawn to the architectural details of this building on the road named after the leader of the rubber-tappers and icon of forest protection and social justice in the Amazon. Built from 145 m^3 of timber extracted from nature by Amazonian communities using low-impact methods aimed at keeping the forest standing, this building is the center of operations for changes in forestry and agricultural production. It has a rainwater catchment system to irrigate the gardens planted with native species; a dry toilet and compost system to turn waste into fertilizer – the installations are ecologically correct. They are also painstakingly put together and technologically well equipped, housing 38 staff members who are the protagonists in a story, a battle where the trenches are represented by the rainforest, the countryside. In the offices, training rooms and corridors, with their few doors and windowless walls, three words ring out as a motto: experiment, learn and transform. There is just one aim: to promote, in the 21st century, a new culture for land use and the economic exploitation of natural resources.

The scenario involves producing timber, oils and other treasures of the forest, growing foodstuffs, generating clean energy and carbon capture to reduce global warming. From the social-economic alignment of forestry and agricultural projects to qualification of communities and family smallholdings, the outlook points to a fairer and more sustainable future. The aim is to contribute to the conservation of natural resources, guarantee basic workers' rights and generate social benefits. The main driving force is socio-environmental certification – the changes implicit in the seal that guarantees the origin of services and products for a market that is increasingly aware and mobilized toward doing its part for the health of our planet.

This is a modern vision of a concept that was born more than two decades ago, based on a historic document: the report entitled "Our Common Future," the first of its kind issued by the United Nations dedicated to studying ways of reconciling development and the environment.

> *"The connections between poverty, inequality and environmental degradation were the main focus of our analyses and recommendations (...) Together, we had to take a close look at the world to deal with global issues and our common future (...) major changes were needed, both in attitude and in the way our societies are organized (...) I decided to accept the challenge of looking to the future and protecting the interests of the coming generations (...) If we are not able to transmit our message of urgency to the parents and administrators of today, we run the risk of compromising the basic right of our children to a healthy and life-giving environment. If we are not able to translate our words into a language capable of touching the hearts and minds of our youths and elderly, we will not be able to implement the broad social changes needed to correct the course of development"*

(Gro Harlem Brundtland, president of the World Commission on Environment and Development – Oslo, Norway, March 20, 1987).

This statement, contained in the preface to the report, is emblematic. The words sum up a global concern that gained new force in the XXI century in the light of the environmental and social urgencies faced

by our planet. "The notion of sustainable development is an invitation to revise existing models, both of production and of consumption. Companies are discovering that sustainability helps them to be more competitive and that it represents the future of their businesses," the former Norwegian prime minister said, upon analyzing, years later, the effects of the ground-breaking concepts introduced in the world by the so-called Brundtland Commission, between 1983 and 1987.

This model mobilized governments and also inspired companies and non-governmental organizations, such as Imaflora, created in 1995 with the task of encouraging changes in the forestry and agricultural sectors aimed at the conservation and sustainable use of natural resources, coupled with the promotion of social benefits. Within this perspective, the institution formed its own model of action, a Brazilian symbol of the search for ways to correct the destructive tendencies of the planet and begin to practice development considered from a new point of view. This story involves breaking away from standards, innovating and articulating partnerships and civil society and using the abilities that have represented this institution's differentiating factor since its early days.

A challenge arose to stand against the wave of devastation

The roots of the story go back to the 1980s. In the so-called "Decade of Fire," there was a rise in international pressure for the conservation of forestry resources. The Amazon gained visibility in the press because of the reports that Brazil was wiping out the largest tropical rainforest on the planet at an average rate varying between 1.2 million and 2.5 million hectares per year. In Indonesia, the smoke caused by major forest fires related to the clearing of land for agriculture denounced the deforestation of around 1.7 million hectares per year. Cutting down the tropical rainforest in the Congo, the second largest on Earth, destroyed the food supply, shelter and sustenance of the traditional native populations. Throughout the world, images of tractors using chains to drag hundred-year old trees, logs piled high on the trucks and in the yards of the sawmills or being transported down-river on barges, impacted the world's population. They shocked environmentalist organizations, who came together against the background of criticism aimed at industrial society and of damages to the environment and quality of life caused by the unbounded exploitation of our natural resources.

It made sense, within this context, to reduce the demand for forestry products and, thereby, the pressures on the tropical ecosystems. In that same period, campaigns were also carried out against the clear-cutting of vast tracts of temperate and boreal forests. Among the focuses of the actions, special attention was given to the extensive segments of temperate woodlands in Canada and the remaining areas of native vegetation in the Northwestern United States, exploited to supply the needs of industries. In Europe, especially in Scandinavia, there was also growing criticism of the conventional production systems for forestry goods, which caused environmental and social impacts, threatening the sustainability of that wellhead of resources.

As a result, following the mobilization of a number of major environmentalist agencies, Europe began to boycott products extracted from tropical rainforests. By 1992, more than 30 town councils in England, around 200 towns in Germany and more than half of the municipalities in Holland had banned the use of tropical woods. But the boycott did little to slow the pace of deforestation. It soon became evident that actions of this type devalued the rainforest as an option for productivity and provided incentive for its replacement with other potentially damaging economic activities, such as agriculture and animal husbandry. Also, the boycott made no distinction

between illegal and destructive exploitation and the serious enterprises that aimed to achieve sustainability in their forestry operations. Reducing the external consumption would have also failed to produce the desired effect because, in the Brazilian case, most of the timber extracted from the Amazon was consumed internally. The negative effects would have had the hardest impact on the wood cutting communities, since they were dependent on the economic use of forestry products for their survival.

This issue came into the public light following the murder of the rubber tapper Chico Mendes, in 1988, which had major international repercussions. The extraction reserve movement (movimento extrativista) fought against farmers, lumber companies and prospectors who occupied land to deforest. The episode involving the death of the rubber-tappers' leader made it clear to the world that the untouched, virgin Amazon rainforest was a myth, a belief that gave way to a view that the rainforest could be preserved through the appropriate use of its resources, provided that it was subjected to good stewardship practices. This question was underlined by the pressing need to ally economic growth, quality of life and environmental conservation, made public a year before the Our Common Future report.

The market rewards the efforts in favor of nature and of human wellbeing

In 1992, the United Nations Conference on Environment and Development (Rio-92), held in Rio de Janeiro, gave rise to Agenda 21, where the concept of sustainable development took the form of a commitment assumed by almost all of the countries represented. There came a need to develop policies, technologies and instruments – including for the market – so that the intention could become a practical reality. To implement the new principles within the private sector, the World Business Council for Sustainable Development introduced the term "eco-efficiency," according to which the administrative model could help companies achieve sustainability in their businesses, uniting economy with ecology.

This concept was endorsed by the Rio-92 event, but at that meeting of heads of state and their delegations, the lack of a consensus made it impossible to obtain a forestry convention within the molds of the one approved at that time for biodiversity. What was obtained, in its place, was a Declaration of Principles on Forests, which consecrated the need to promote systems and methods for use according to social and environmental principles. Despite not having the strength of a convention, there was a favorable political climate for the environmentalist movement – instead of the boycott – to present safe and suitable solutions for the development of a newly emerging practice: forest stewardship. A model was emerging for the exploitation of lumber and other natural resources without exhausting them, using methods that reduce the impact on biodiversity and guarantee the well-being and sustenance of the populations.

Certification came as an alternative to the boycott against tropical timber. Identifying conscientious producers began to be the logic model for preserving the rainforests

Soon, the concept of certification was introduced, as an instrument for attesting to suitable production practices and promoting good forest stewardship – an endorsement that guaranteed the social and environmental origins of the merchandise. The embryo of this idea was conceived at the end of the 1980's, in the New England region of the United States, when craft-workers, importers and exporters were afraid of losing a part of their market following the initial proposal for a boycott. At the same time, they had no wish to be accomplices in the

destruction of the Amazon. This led to a search for alternatives. The association that untied them, called WARP (Woodworkers Alliance for Rainforest Protection), formed a partnership with the North American non-governmental organization called Rainforest Alliance to promote the first discussions aimed at the creation of a universal certification system, based on well-founded techniques for identifying good and bad producers. This led to the creation of the Good Wood List, an initiative aimed at defining criteria for guaranteeing product sources.

Brazil played a major role in the creation of the principles and norms of the FSC, the foremost social and environmental certification system in the world

This movement gave rise to the Smart Wood program, developed by the Rainforest Alliance, bringing together the first practical standards for the verification of forest stewardship. It was not long before a series of self-certification seals for wood were launched on the world, most of which followed no reliable criteria, until the international organizations initiated a dialogue for the creation of a single system, with strength and credibility on the global market, based on clear principles and that could be audited and monitored by independent institutions. This being so, in 1990, the entity that would come to be the FSC began to take shape (Forest Stewardship Council). Today it is the foremost forestry certification system in the world, incorporating, on equal terms, the interests of social, environmental and economic groups and now boasting more than 600 affiliated members in 44 countries.

One first-hand witness to this process of articulation was a Brazilian: Professor Virgílio Viana, a researcher from Esalq/USP who, at that time, was doing his Masters degree at Harvard, in the United States. Known and respected in scientific circles, he had frequent contact with the well-known group of specialists that conceived the new institution. As a basis for preparation and to establish the principles that were to guide it, consultations and studies were carried out in a number of different countries, among non-governmental organizations, foundations, trade unions, industries and retail outlet chains for forestry products. Mr. Viana was recommended to conduct the discussions in Brazil, within the ambit of the NGO Working Group for Forest Policy. The work of public consultation was carried out with the support of Tasso Azevedo who, at the time, was a young, newly-graduated forestry engineer. In Asia, he had the opportunity to visit some of the world's pioneer forest stewardship programs. Along with lectures in São Paulo, Piracicaba, Belo Horizonte and Belém, the consultation consisted of sending questionnaires to more than 300 institutions and representatives of the different segments within the forestry sector, such as pulp and paper, charcoal fueled metallurgy, sawmills and lumber industries.

"It was a difficult dialogue, since the majority of the ONGs and academic institutions did not accept the participation of the commercial enterprises, with their economic interests, as well as being critical of forest stewardship and having no belief in its benefits. The preferred idea was to maintain the trees untouched until science could come up with more conclusive results regarding the new practices," says Mr. Viana. On the other side of the argument, he adds, "the private sector was criticizing the environmentalists' meddling in market issues."

Economic advantages in being ethical and using nature without destroying it

It was not common at that time for environmentalist organizations and commercial enterprises to sit at the same table, not even to discuss points of mutual interest, such as the sustainable develop-

ment of the planet. Barriers had to be broken down for a consensus to be reached and to present Brazilian proposals that could make a difference at the general meeting for the founding of the FSC. This historic meeting took place in 1993, in Toronto, Canada. "During those icy days, the discussions were tense, because there were countless conflicting interests involved," recalls Mr. Viana. He tells us that he spent many long nights in negotiations to approve the proposal as a formula to guarantee the equal sharing of power between first and third world nations in running the institution – which was considered to be essential to its independence.

The practice of certification, granted according to strict social and environmental criteria carefully applied in the field, stands against a backdrop of market logic: the economic reward for the efforts and investments of those who use the rainforest responsibly. With this, the concept of "good forest stewardship" took on a global dimension and aggregated value to the products obtained based on these internationally recognized rules. Being ethical became a condition for profitability, gaining sales strength and obtaining long-term competitive advantages. The model also included the certification of the production chain, guaranteeing the tracking of the certified product from the moment of its extraction from the rainforest, passing through all of the manufacturing processes, up until the moment of sale to the end consumer.

The standards were constructed on the basis of ten general principles, approved at the meeting to found the FSC, involving 57 more specific criteria dealing with legal issues, indigenous and labor related rights, environmental impact, community relations and the preservation of biodiversity, among other points. The work to carry out prior diagnostics and auditing to assess the application of the norms by the forestry enterprises that were candidates for the seal was left up to the accredited and independent certifying institutions.

Imaflora is born, giving rise to the challenge of adapting the rules to the Brazilian reality

Following the creation of the FSC, international institutions immediately stepped forward to carry out this task. "But it didn't make sense for us to be evaluated by foreigners who are not always aware of our reality," states Mr. Viana, remembering how he acted for Brazil to develop its own know-how. Making use of his experience and prestige within the international scientific community, the researcher proposed a partnership to create a Brazilian non-governmental organization designed to carry out certification in the country, under the "umbrella" of the Rainforest Alliance, which had been accredited by the FSC as one of the entities responsible for the application of the seal around the world. On that occasion, ways were sought to train technicians and develop socio-environmental certification in emerging nations, where most of the tropical rainforests on the planet are found.

In Brazil, deforestation in the Amazon was reaching record levels. It was March 1995. Imaflora came onto the scene, having the city of Piracicaba, in the São Paulo state interior, as its stage. This same city is also home to Esalq – a store-house of talent in the field of forestry research. "I shared the project with the students from the university laboratory and managed to get US$10,000 from the WARP to create the institution," says Mr. Viana, who was chairman of the board of directors, composed of individuals with recognized experience on the socio-environmental scene, such as André Villas-Boas and Rubens Mendonça. The offices were initially in the basement of Tasso Azevedo's home. Mr. Azevedo is one of the founders and first executive secretary of Imaflora.

The institution began to gain stature. The first staff member was hired in July of that first year of activities, the secretary Margarete Bertochi. "We needed to grease the machine and set up starter projects, through which we could also receive funding to invest in our infrastructure," says Mr. Viana. Besides the initial financial support of the Ford Foundation, Imaflora was

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The work of Imaflora was groundbreaking in the production of logs bearing the socio-environmental seal in the Amazon **(1)**, in accordance with criteria designed to preserve biodiversity **(3)**. The current headquarters of the institution in Piracicaba, state of São Paulo were built using certified and planted native wood **(2)**

In forest stewardship, tree felling is carried out according to a pre-approved plan, based on a vegetation inventory. This method preserves trees as a seed bank, guaranteeing the growth of the forest at healthy levels

hired by the World Bank to provide consulting services aimed at creating the Pro-Stewardship Program (Programa Pró-Manejo) to fund the activity in the Amazon. One of the first field experiments took the form of participative mapping for the sustainable use of part of the Tapajós national forest. "The boldness that has allowed us to develop ground-breaking processes has been a part of the Imaflora story since the beginning," states Mr. Viana.

One of the first highlights of the innovations, according to him, was the creation of rules for the economic use of the trumpet-tree, a native species found in the Atlantic Forest, used at that time to make pencils and handicrafts. It was the first regional standard in the world for native species. The project, later replicated for the harvest of nuts in the Amazon, served as a test balloon for what was to become one of Imaflora's most important differentiating factors: dominion over technology for the creation of socio-environmental norms, based on the convergence of the views of the various interested parties. Grounded in technical knowledge of forest stewardship and the experience of articulating this dialogue, Imaflora was the pivot in the Work Group created by the FSC to adapt international norms to Brazilian reality. The process, which included the participation of the social, environmental and business segments, focused on the two most important activities for this market: the exploitation of native woods from the Amazon and the planting of commercial woodlands, especially in the South and Southeast. The standards were compared with those of other countries to guarantee their quality and credibility, finally being approved as international regulations under the ruling jurisdiction of the FSC.

The construction of a judicious and participative work method

Throughout its history, the policy of working in such a way as to guarantee transparency, credibility and efficiency has been of special importance to the Imaflora action strategy. Methods of working in and off the field were constructed during the evolution of the learning curve. To support the socio-environmental message related to the products and services, the certification needs to be independent, technically consistent, non-discriminatory and voluntary. It requires a modus operandi that emphasizes strict compliance with the law and with the participative process, based on public consultations carried out before the auditing processes. Every effort is made so that the certified enterprises are able to correct mistakes and modify behavior to comply with the norms, with progressive and continuous improvements. If the shortcomings persist, the seal is revoked. During its history, more than two dozen enterprises have lost their certification. To guarantee the transparency of the processes, it is compulsory to make public summaries of certified projects available for examination. This measure is the result of a motion presented by Imaflora at the FSC meeting and it is now effective throughout the world.

The Imaflora model involves values that go beyond mere numbers. The credibility of the institution helps certification to fulfill its purposes

More than just a collection of results, today the institution has a wealth of knowledge to guide it in the work of promoting the sustainable use of natural resources. "Creativity and seriousness round off these attributes," states Mr. Viana, while remembering that pragmatism is also a strong characteristic of the work. It is often impossible to eliminate all of the impacts caused by a forestry activity. "One needs to apply the common sense of a pragmatic outlook to good stewardship, one that may not be sustainable in absolutely every way, but which promotes the sharing of benefits, uses

less agro-toxins, protects biodiversity corridors and seeks the safety and wellbeing of the workers," explains Mr. Viana.

Imaflora took on an unusual role for a non-governmental institution at that time, one capable of overcoming differences, with high technical qualification and freedom of movement within the business, social and environmental sectors. It thought of certification as a catalyst for social and environmental changes and a way of inducing public policies – and not just as a simple check list of indicators to be audited. "We have been successful because, today, forest stewardship has proved to be viable on a commercial and community scale," emphasizes Mr. Viana. Moreover: "It has become a matter of survival in the business world." Nowadays, businesses with international operations are held accountable for their performance in terms of sustainability and the compliance of their products with criteria recognized around the world. It is an evaluation that goes beyond equity and financial balance sheets. The generation of value has taken on a broader meaning, coming to involve shareholders, suppliers and customers in general in something more than mere monetary figures. In doing business, social and environmental certification it is an instrument of transformation, because it is based on values and not solely on procedures.

The transformational legacy of the first experiments in forestry certification led to new practices that today are recognized throughout the world

Besides its contribution to improving business management and results, the Imaflora work method includes in-house technology that has given birth to a new culture for forest use. It has promoted agreements, equity of influence and new attitudes in the productive sector. At the same time, by demanding the socio-environmental seal, the market has exalted the value of well preserved woodlands, with benefits for biodiversity.

"The dream has become reality," says Mr.Viana, looking back to the time when practically nothing was known about the responsible use of woodlands. "Forest stewardship and certification were seen as being the invention of environmentalists and now they are part of government programs," says Mr. Azevedo, using the concession of federal woodlands to companies for sustainable economic use as an example.

The development of forestry stewardship took place in the wake of the first programs in social and environmental certification in Brazil, in 1997, carried out by Imaflora. These were emblematic examples. They involved two major forestry companies that were keen to establish a differentiating factor, increasing their commercial strength and gaining space on the overseas market. In the native rainforest of the Amazon, the pioneering work was done by the Madeireira Mil logging company, a subsidiary of the Swiss multi-national Precious Wood, installed in Itacoatiara, in the state of Amazonas, to extract and process tropical wood. In the case of forestry plantations, the Klabin company, in Telêmaco Borba, state of Paraná, has taken the lead, obtaining the certificate for planting pinewood, Paraná pine and eucalyptus as the raw material for wood pulp to be used in the paper industry.

"Both these companies have introduced important changes; it was an excellent testing ground for Imaflora, which set up highly-qualified, multi-disciplinary teams to carry out the initial evaluations and the first certification auditing jobs," Mr. Azevedo recalls. These were initiatives with excellent chances of success because of the seriousness of the companies involved, with the potential to serve as a referential for the rest of the market. Imaflora was aware of the major challenge involved, at a time when projects in the native Amazonian rainforest and the commercial planting of eucalyptus were still surrounded by doubts regarding their impacts. "Nothing could go wrong," says Mr. Azevedo.

The Mil Madeireira company came to the Amazon in 1994 to practice low-impact forestry in the tropics – this Project was driven by the relationship in other countries between the company's head offices and the Rainforest Alliance. Following a careful process of pre-assessment, carried out by Imaflora in 1996, the enterprise received a list of modifications needed to obtain certification. Whereas before wood scraps were wasted and dumped inappropriately in a permanent conservation area, they are now used to feed a thermal power plant for generating electricity for the town of Itacoatiara, proving that it is possible to transform a problem into a solution and a new business opportunity.

In social terms, the auditors demanded the regularization of lands, a measure that has reduced the conflicts common in the region since the time when the company arrived and the technical staff were almost driven off by riverside dwellers who feared losing their lands. In the certification process, following an agreement made with the Amazon Land Institute (Instituto de Terras do Amazonas), the logging company acknowledged the ownership of areas to regularize the situation of 10 communities. Among the efforts to reduce impacts on the ecosystem, the work went beyond the measures required by the auditors. The company applied alternative stewardship technologies, such as the "cellus system," whereby the tractors use a steel cable to tow the tree trunks to the hauling area. In this way, the machines have no need to come close to the base of the trees and thereby avoid destroying the surrounding undergrowth. These and other experiments that have taken place in the certification projects have contributed to a better understanding and improved implementation of forest stewardship. The results so far have demonstrated viability in preserving the rainforests and generating social benefits. However, ongoing studies are necessary. A more complete and conclusive assessment of the effects on biodiversity will be possible when the first trials have completed the full stewardship cycle, in around 30 years.

Forestry planting projects commit to the practices of respect for the environment and for workers

In the state of Paraná, the work carried out by Imaflora at Klabin constituted a historic milestone for social and environmental certification in Brazil and the rest of the world. The way in which the work was carried out made the decisive difference in conflict conciliation and the presentation of sustainable means for a forestry activity – the homogenous planting of pinewood and eucalyptus – considered to be a villain of nature by environmentalist sectors and social movements. The strong connection between the researchers from Esalq, a scientific point of reference for the sector, was decisive in the company's choice of certifying institute. "In the preliminary assessment, carried out in 1996, for a period of two weeks a robust team of 11 trained professionals produced reports that were veritable scientific treatises," says Lineu Siqueira, certification manager and assistant executive secretary at Imaflora.

"We believed in this model and we had to take as much care as possible, because the continuity of the process depended on its initial success." He says the "desire to get it right was huge," but there was a natural difficulty inherent in the interpretation of the general rules stipulated by the FSC, which had to be translated into viable practices for application in the field. Reaching a consensus, for both technical and conceptual matters, was not easy. "Those were the longest days of my life; the debates went on into the wee hours of the night," recalls Mr. Siqueira. He remembers humorous details from this clash of ideologies, such as the enthusiasm of an American specialist with regard to the rapid growth of pinewood in the Brazilian

tropics. Invited to join the team because of his experience in forestry, he proved to be a fierce defender of planting. "In the final assessment of the undertaking, most of the group had reservations, but the American euphorically attributed top marks to what he had seen in the field," says Mr. Siqueira. "We did not want to assess the project as being state-of-the-art, because that would have meant there was no need for changes." In the consensus, the prevailing assessment was intermediary, given the need for adjustments to align the company with social and environmental norms (see chapter 4).

In this initial experience, Imaflora was faced with a challenge that came to be one of its trademarks: the articulation of all of the actors connected to the causes of certification, including rural worker unions and social projects. Criticism and conflicts died down after the audit. All those involved – companies, workers, social entities – perceived the benefits of the changes, thereby making it possible to obtain a favorable environment for new advances. Following the preliminary assessment by Imaflora, Klabin was subjected to a strict audit process before finally, in 1998, being awarded the FSC Seal for its forest stewardship. Years later, in 2005, the company also obtained certification for its industrial units, involving the full range of wood pulp derived products through to the manufacture of paper. At the same time, a center of certified logging industries, supplied with raw materials from those woodlands was developing in Telêmaco Borba.

In those days, there was growing pressure from global buyers for the supply of wood and paper obtained according to social and environmental criteria. "More than just a dream, certification came to represent a market tool, capable of aggregating value for gaining sales space," says Mr. Siqueira. The work at Klabin became a model, national and international recognition of Imaflora increased and led to its accreditation as an institution qualified to enforce the precepts of the certification. This success stimulated the market, motivating other industries to adopt new practices and obtain the socio-environmental seal.

Socio-environmental care reaches agricultural enterprises

The initial experience highlighted the work carried out by the institution in the years that followed – action driven by a new challenge: to promote changes in agriculture. Throughout the world, social and environmental concerns, until then restricted to the forestry sector, began to reach agriculture, which was breaching frontiers to meet the demands for food and was coming up against the dilemmas regarding the sustainability of the planet. Imaflora was ten years ahead of its time. The unbounded expansion of crop plantations increased deforestation and threatened biodiversity and quality of life in the field. It became essential to produce more and better, with less impact on the soil and water resources, to maintain the environment in good conditions for feeding the global population in the future.

> "More than a dream, the seal for wood pulp and paper changed behavior, mobilized industries and gained force as a market instrument"

The social and environmental principles for agriculture and the standards that guarantee their practice were developed as of 1991. The initial process involved important actors in Latin America, culminating in the certification of the first banana plantations in 1994. Today, the Chiquita Banana is produced by 119 farms bearing the Rainforest Alliance Certified seal, with a major reduction in the use of agrochemicals and with social benefits for more than 20,000 workers. It is a landmark in the history of agricultural certification, which began with the creation of the Sustainable Agriculture Network (Rede de Agricultura

Sustentável), or SAN. The organization is maintained by non-profit entities from eight Latin American Countries and has Imaflora as one of its founding partners. Aimed at the promotion of social and environmental changes in tropical agriculture, the network gained new structure and strength in 2005. That year witnessed the conclusion of a process of public consultations in the different countries aimed at reviewing, unifying and expanding the norms, including new principles on health and safety at work and the fair and correct treatment of the workforce.

In Brazil, Imaflora took the first steps in the agricultural area in 1996. After two years of public consultations, workshops and field tests, a standard of norms was developed for the sugarcane-alcohol sector. The perspectives for sugar-cane were growing in the light of a government project to resume the Pro-Alcohol program – which in the end did not happen. More recently, with the promise of biofuels, the work for certification of the sugarcane plantations has been resumed by the institution, with the expansion of the SAN norms to cover this and other agricultural areas (see chapter 7).

Although sugarcane was the initial inspiration for the work of Imaflora relating to agricultural certification, the practical application of this model took place in the coffee plantations. Planted for centuries with no concern for the environment and in an undignified work regime, the Brazilian product had to undergo transformations to gain high-profile space in market that is increasingly demanding with regard to the socio-environmental origins of this which is one of the most widely appreciated and consumed products in the world.

The example of the transformations in the Brazilian coffee plantations

The historic milestone was the pioneering attitude of the DaTerra company, located in the scrublands of Minas Gerais State, in the district of Patrocínio. "The chairman of the D'Pascoal Group, who owns the farm, wanted the differentiating factor represented by the seal for Brazilian coffee and he visited, in New York, the institution responsible for certifying the product in other countries", says Leopoldo Santana, of DaTerra. Based on this initiative, Imaflora began a process for implantation of the model in Brazil's coffee plantations. There was a need for adaptations, since the prevailing norms overseas had been created for coffee planted in the shade of trees, as is the case in Central America. In Brazil, the coffee is grown in direct sunlight.

Driven by the work of Imaflora, the rules were adapted for the plantations in Brazil. In 2003, the DaTerra farm became the first in the country to obtain the seal, opening up the way toward more responsible coffee planting culture in Brazil. This process represented a change in practices. Besides reinforcing the measures for the preservation of the native scrubland vegetation, the rules contributed to reducing the use of agrochemicals and raising the value of the human resources, treating the workers and surrounding communities with dignity and respect. These results are largely dependant on the experience, ability to articulate and efficiency of the methods used by the certifying institution, which is also attentive to the issue of preserving biodiversity.

DaTerra protects half of its 6,500 hectares as a legal scrubland reserve. In the remaining area, it maintains the plantations that produce approximately 75,000 sacks of coffee per year – 95% for export. The certification aggregated value and opened up room for growth within the market for specialty coffees, which today is an important niche being disputed by the different farms. "It all began with our voluntary quest to establish a differentiating factor that as yet did not exist in this country and we opened up the door as a field for testing," says Mr. Santana. The concept multiplied into other prop-

erties. "We never imagined this huge tend," states the agronomist. He concludes: "Certification contributed to better management and enriching the company and its vision of sustainability."

In the years that followed, Imaflora joined the drive to guarantee the social and environmental sourcing of coffee throughout the chain of production, from the plantation to the cup. In this way, the seal came to adorn the beverages served in the mostly highly esteemed chains of coffee shops in the world. The tendency is for continuous growth, with reflections for the development of certification for other widely consumed foodstuffs, such as cocoa beans for chocolate, orange juice and tea (see chapter 5).

Professional training guarantees the efficiency of the auditing for the application of the norms and more benefits for nature and the workforce

Agriculture has become a promising field for the application of the social and environmental principles in Brazil, the fruit of learning initially acquired by Imaflora in forestry. Also in crop plantations, the institution maintains its characteristic methodology which guarantees seriousness and credibility, within a transparent and participative model, along with a path that generates reflections in favor of dignified living and a healthy planet. It is about a standard of quality, guaranteed by a professional training program that provides the institution's technicians with a recognized differentiating factor in the market. It is a young team, diversified, gifted with a holistic vision, acting under the guidance of an orchestrating and strategic board of directors.

The technicians view certification not as a goal, but rather as a means of social promotion and the sustainable use of natural resources. It is an instrument of transformations with the power to influence practices in the field and in the woodlands, the behavior of the market, the decisions of the government, as well as the culture and living conditions of the population. It does not stand alone. To increase the scale of application and make it better known, valued and perfected, the tool needs to work alongside supporting actions. In the aim of creating a favorable environment for forestry stewardship and certification, Imaflora carries out activities to subsidize government policies – be it in the creation of incentive programs and credit for forestry exploitation, or in the creation of new conservation units for sustainable use. In this task, the institution holds the trump card of practice in the field, first-hand experience of community reality and the vision of an entity that deals with the productive sector.

The collective experience provides a basis for its traditionally critical positioning. "This work is different because of social and environmental sensitivity," says Kátia Maia, of Oxfam, an international organization that is Imaflora's partner in social causes. According to her, these elements are not conventional among environmental organizations, and they make an important contribution to the debate on Brazilian forestry policies. This subject is complex. "It must be dealt with appropriately, in such a way that the concept of certification as a market instrument rises above the criticisms of the social movement," emphasizes Ms. Maia, a former board member of Imaflora, who participated in a number of certification processes and is familiar with the challenge it represents. According to her, the social and environmental liabilities of the certified enterprises – in other words, the impacts caused by them in the past – represent grounds for doubts and questioning. "There is a need to listen to opposing points of view and maintain the capacity for dialogue with all of the sectors," states Ms. Maia, remembering that the certification is voluntary and that it supports, rather than replaces, public policies.

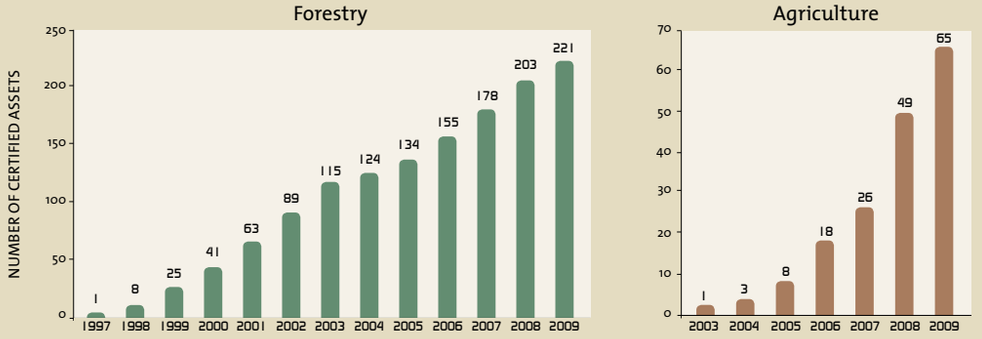
Learning from mistakes is part of Imaflora's story and the expansion of its activities. In 1996, a year after it was created, the backbone of the institution consisted of four programs: certification of stewardship in native vegetation and forestry plantations, agricultural certification, professional training and support for public policies. There was still a need for a fifth initiative, that of uniting the different ends of the production chain involving the certified goods, making them known and promoting their preferential use among consumers in their day-to-day living. The initial highlight was the partnership with the Institute for the People and Environment of the Amazon (Instituto do Homem e do Meio Ambiente da Amazônia), or Imazon, and Friends of the Earth – Brazilian Amazon, in 1998, to constitute the Sustainable Consumption Alliance. The aim was to promote the market and the consumption of forestry products from socio-environmental sources. "We wanted to cover the entire chain of beneficiation for the products and broaden the scope of the seal, which was previously restricted to forestry production," says Roberto Smeraldi, chairman of Friends of the Earth – Brazilian Amazon.

One year later, to provide technical support for the program, the institutions within the alliance produced a historic study: the report entitled Hitting the Target, demonstrating that 86% of the lumber extracted from the Amazon was consumed internally by Brazil. Only the remaining 14% was exported. As a result, the pressures for responsible consumption, previously concentrated on the overseas market, changed their perspective and focused on Brazil. In 2000, a national group of buyers was formed, with a strong representation in the furniture and building industries. The seeds of a new forestry economy sprouted, with their potential for creating jobs and income, while preserving natural resources. In the following year, a new report – Hitting the Target II – concluded that São Paulo, especially the building industry, was the foremost consumer of native Brazilian wood. This diagnosis led to changes: in 2003, hundreds of logging companies, non-governmental organizations, governments and financial institutions Drew up the Declaration of Belém – an agreement on new directions for exploitation of the rainforest.

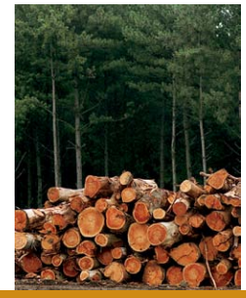
> "Without the experience of Imaflora, there would probably not be a trade in sustainable forestry products like the one we see today"

At the turn of the 21st century, the concept of sustainable consumption, involving the purchase of natural products obtained through processes that do not harm the environment, the reduction of waste and energy efficiency burst forth on the world. Treated as a strategy for adding value to the rainforest and keeping it preserved, extracting resources within the limits that nature is able to replenish, the subject came to be included in the agendas of the

The growth of stewardship and productive chain certification at Imaflora



The timeline for change



1993

One year after the eCo 92, a meeting is held in Canada for the creation of the FSC – Forest Stewardship Council.
The concept of certification gains an internationally recognized model

1995

Imaflora is born in Piracicaba, state of São Paulo, with the task of promoting socio-environmental transformations in the use of natural resources

1996

Drawing up of the participative mapping for part of the Tapajós national forest, in the state of Pará. First training program for FSC forestry certification

1997

First certification for forest stewardship in the Amazon, for the madeireira mil logging company

1998

The Klabin company in Paraná receives the FSC seal for planting woodlands. Conclusion of the first national standard for evaluation, monitoring and certification of agriculture, developed for the sugarcane-alcohol sector. Participative planning for the use of land in the district of Boa Vista do ramos/am

1999

Founding of the sustainable agriculture network

2000

Launch of the Hitting the Target report, a fruit of the partnership with imazon and Friends of the Earth – Brazilian Amazon in the constitution of the Sustainable Consumption Alliance

2009

The addendum to the SAN standard of norms for sugar cane certification comes into effect, developed on the basis of the public consultation work carried out by imaflora. The institution carries out its first carbon project verification. Publication of one of the world's first studies of independent evaluation of the impact of socio-environmental certification

2008

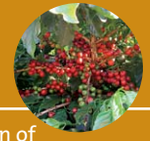
Certification of groups of family and commercial tea producers in Argentina

2006

First project for south-south cooperation in the work of social and environmental certification in Cameroon, Africa. The organization of public consultations for the creation of State Forests in the North of Pará

2004

The 1st Certified Brazilian Fair is held, with liaison between the producers and buyers of forestry products



2003

Conclusion of agenda 21 at vila manaus, in Boa Vista do Ramos, Amazonas. Agricultural certification begins in Brazil, with the awarding of the Seal to the daterra coffee company

2002

Seringal Cachoeira and Porto Dias, in the state of Acre, are the first certified Amazonian communities.
Holding of the Non-Wood Forestry Product (PFnm's) in the Cosmetics and Phtyotherapic industry, in the town of alter do Chão, Pará. Construction of the imaflora head office, a house built from certified timber

2001

Creation of FaCes do Brasil

major global environmentalist organizations. Based on these, the issue reached the government spheres, leading to the adoption of policies to provide incentive for responsible trading.

International pressure also placed fair and conscientious trading within the policies of the business corporations. There was a need to promote the market, bring together producers and buyers and publicize the forestry products extracted according to social and environmental criteria. One result of this fact is the Certified Brazil Fair, which took place for the third time in 2008, proving the solidity of the new market. "Without the experience of Imaflora, it is unlikely that there would be a trade in sustainable products like the one we see today," says Mr. Smeraldi. An important factor in this journey was the interim standard of social and environmental norms for non-wood forestry products, created by the Brazilian entity. "More than an embassy of the FSC, the institution achieved the autonomy and prestige required to make changes, making the foreign rules applicable to the Brazilian reality."

Deforestation has brought the subject of certification into the spotlight. Now there is a need to face emerging issues, such as global warming

Self-criticism is a strong point in governance model at Imaflora, perfected over the course of the years via the strategic plans and ongoing institutional evaluations. Since the outset, Imaflora has represented an institution dedicated to producing transformations, with its main source of funding coming from the certification work. "It is recognized, not because of the seal, but because of the Milestones in an ever evolving story package of services and benefits that go with it," emphasizes Rubens Born, director of Vitae Civilis, a non-governmental organization created in 1989 to support civil society in actions aimed at sustainable development. He has a long-standing relationship with Imaflora, where he was a member of the board for ten years, as well as having participated in the work group for the creation of the Brazilian FSC and the first initiatives to train Amazonian communities for social and environmental certification.

"The translation of principles into field-practices is a rare specialty," says Mr. Born, remembering that it is essential to show "what" and "how" things are done, in a way that everyone can understand, since the certification is a public activity. "Imaflora has a very clear perception of its role as an auditing certifier – rather than a consultant – and this is a science," says Mr. Born, who is also the coordinator of the Climatic Change Working Group of the National Forum of ONGs. In his opinion, it is an apprenticeship that has matured and brought the matter of certification into the light. The partnerships are strategic, because on this path toward change one cannot walk alone. During its first 14 years, Imaflora put together a large database resulting from the significant number and diversity of the forestry and agricultural enterprises subjected to the auditing processes, not to mention the productive chain for the certified products. "It is a process of permanent development, in which new challenges are about to appear," he explains. One of these is to ally social and environmental certification with emerging issues, such as climate change, carbon capture and the production of biofuels within a new world energy framework (see chapter 7). These and other aspects, such as expanding sustainable practices in rural settlements and smallholdings, indicate the future for Imaflora. This will be a path it will take with its experience and pioneering spirit – a story of hits and misses, adjustments, changes of route and achievements.

Managing native forests

The value of fieldwork for logging based on socio-environmental criteria

From Rio Branco, in Acre, we traveled 102 Km on the BR 364 highway until crossing the Ramal de Fátima, a secondary mud road that weaves through a dense forest. The route passes through rural settlements in typically Amazon landscapes in the municipal region of Sena Madureira. After 22 km, a sign informs us of the work being conducted there: "Sustainable forestry plan – Property: Fazenda São Jorge I. Owner: Laminados Triunfo Ltda". We pull up in front of a warehouse, which is also used for the workers' canteen. The notes on the blackboard and the maps on the wall seem to point the way to a treasure trove. It is there that Imaflora auditors, with farm technicians, outline a strategy to move into logging areas. Helmets are picked up, knives are sharpened. We board a four-wheel drive vehicle and move into the jungle. Our objective: to inspect the logging, check how the workers fell the trees and inspect timber storage and transportation, as well as other activities required of a forestry company that has received the FSC socio-environmental seal.

Our plan was to experience the routine of people who live off and look after the forests – the everyday fieldwork procedures involved in certification. We focused on this location to find out more about the activities which are becoming more commonplace on other Amazon properties that want to benefit from the advantages of the international market. Looking after nature and personnel is also a strategy for ensuring future business sustainability. In May 2009, Imaflora had a portfolio of 14 developments with the socio-environmental seal in natural forests in the Amazon, Atlantic Forest and the Cerrado.

In the State of Acre, we accompanied Imaflora's audit team to find out how certification activities can reduce deforestation and its global impacts, improving Brazil's standing in terms of environmental conservation. We are lucky enough to be home to the world's largest natural forest, but between 2000 and 2005 Brazil was responsible for 42% of the world's deforestation, according to FAO data. We bore these figures in mind when we began our trip into the forests of Acre. We also wanted to answer a question: to what extent could the Brazilian experience in obtaining the certification seal help change this situation?

Rain or shine; working to guarantee that socio-environmental rules are applied

Certified by Imaflora in 2005, Fazenda São Jorge I is subject to annual audits to check the principles and criteria involved in protecting the environment and local populations on site. Under a scorching sun, we move out with the team of auditors. Along the strips of land, roadside yards store recently cut wood which will be collected by trucks. To find the exact logging location, we follow clues like tractor tracks. We soon hear the sound of chainsaws. We reach a worker just as he brings down a gigantic jequitibá, carrying metal tag no. 5309. In seconds, the tree tips over and falls to the ground. Two clearings into the forest which lead in the opposite direction to the falling tree, serve as the escape route to avoid accidents. This shows that the logging rules to minimize impacts are being complied with. These are some of the details in a long list of procedures which are checked on site by the auditors, who are used to exhausting hikes, nights spent in improvised lodgings, mosquitoes and more mosquitoes. At another point in the forest, we hike down a steep slope covered with dense vegetation until we arrive close to a stream and confirm whether logging is being carried out according to the rules, at least 30 m from the water, leaving the Permanent Preservation Area (PPA) untouched.

In addition to knives, axes, chainsaws and other items used by the workers at Fazenda São Jorge I, they also employ another piece

of equipment which is increasingly commonplace and important in forest management: global positioning system, or GPS, to find the trees which have been designated for logging. The device contains satellite geo-referencing information on the forest obtained from a database of commercial tree species. A computer system processes data such as the number and measurement of logs, stocks and trees preserved for future harvesting. This is a way of providing greater control over the process, planning logging to allow the forest to regenerate. Additionally, the method identifies exactly where the timber comes from – in other words, it facilitates tracking throughout the entire supply chain, from logging up to industrial processing. For example, when we click on any of the trees in the digital map, the system opens a window with a database of information on that specific tree: the identification tag numbers, the log measurements, location, species and the volume of wood it contains.

"The technology may vary from company to company: the most important aspect is ensuring that logging is carried out according to certain environmental and social criteria, with planning and approval from the environmental agencies", explains forestry engineer Leonardo Sobral, the Imaflora auditor responsible for the work carried out in Acre. His team evaluates other certification issues, such as the use of individual protection equipment, whether the timber is dragged by forestry tractors to the storage yards without damaging other trees and methods employed to avoid waste. These auditors are not inspectors who look for evidence of illegal activities so they can fine companies; they are professionals on a mission to promote sustainable development, trained to ensure that FSC criteria and principles are abided by. But they also do much more, because they believe in this model as a way of bringing about socio-environmental change, based on good practices undertaken voluntarily by companies which want to differentiate their forestry products based on the socio-environmental certification seal.

Corrective measures and adjustments balance environmental protection and economic gain

At Fazenda São Jorge I, almost all of its 3,800 ha are used for logging within a forestry management plan involving a 25-year logging cycle. Of this area, 5%, or 700 ha, is set aside as a protected reserve or permanent preservation area. In the logging area, the inventory has identified 22,000 trees of 150 species, of which 2,200 (33 species), have been authorized for logging. By July 2008, around 60% of these trees had been cut down following FSC principles that are audited every year by Imaflora. This is a process of continuous improvement focused on reducing environmental impacts to balance socio-environmental measures and economic viability.

Finding this balance while remaining faithful to the certification principles is a science. Imaflora's know extends beyond following every word of a manual, because this is work which changes lives; it creates a new forestry culture. The field audits, like the one carried out at Fazenda São Jorge I, reflect this knowledge. The work involves a series of procedures. At the kickoff meeting, the auditors present company managers or their representatives with the goals of the inspection. The on-site visits include routine activities like reviewing forestry planning documents that authorize logging, detecting environmental damage in PPAs, evaluating general forest conditions and analyzing production controls. The auditors also check compliance with the corrective measures recommended in previous visits and the changes they have brought about – this involves both in-depth corrections as well as the less serious ones. The final stage is a wrap-up meeting with the company, where the auditors summarize their inspection

and any changes required – information which will subsequently be included in the official closing report.

Social advances and better forest working conditions

The steps which companies must take also involve the safety and well-being of workers. Imaflora farm inspections also look at accommodation structure and hygiene, water treatment and fuel depots. "A lot has changed", says farm technician Walteir Costa de Oliveira, who coordinates the employees at São Jorge I. He remembers when laissez-faire was the norm. "We lived in unsuitable camps under canvas tents with no sanitation" he says. Originally from Belo Horizonte he moved to Rondônia with his parents in search of plentiful and cheap land during the 1980s. While he was in the region, Walteir witnessed forest clearing for new agriculture and livestock. But Walteir is now following a different plan after taking courses on low-impact logging. "My father never dreamed that one day we would work like this", he says. Paid overtime, personal loans and quality food and water are some of the achievements. "A lot of this is the result of certification and the changes brought about by the auditors", explains Walteir using a teacher-like tone. "This is the path that companies have chosen to survive in the market". He believes the challenge is now to expand this approach throughout the Amazon region: "There has been visible improvement, but many people who have been trained in forestry management are unemployed". Walteir was luckier. He lives comfortably in Acre's state capital where he has built a four bedroom house. He proudly mentions that he owns a car and a smallholding - the results of his work in sustainable logging.

Certification requirements also cover social issues, such as good relations with the local community. At Fazenda São Jorge I, for example, the audits lead to corrective measures that encourage methods of interacting with local settlements and populations. A survey carried out by sociologists around the development has revealed the importance of informing the population of the origin of legal timber and its benefits. "We used to look at them as outsiders taking away our forest", says Irene Batista da Hora, who lives in the Joaquim de Matos Agricultural Settlement Project, which is home to 160 families. The school is a key component in the awareness process. "The students say that we need to cut down the forest to create pasture, although there is something practical happening nearby which shows that we have alternatives", adds Everlin Lemos, a teacher and director of the school's community association, referring to sustainable forestry.

Auditors check the quality of the food, water and accommodation for workers as well as health and security issues

"I believe in the potential that these changes represent", says businessman Jandir Santim, from Laminados Triunfo, which owns Fazenda São Jorge I. His family has a long tradition in logging, and he admits it was wrong to have cut down Paraná pine trees in southern Brazil. After destroying the forests in that region, he started looking for alternatives and moved to Campo Grande (MS), where he set up a hardwood company supplied with raw material from Mato Grosso. "Initially, all of the wood was illegally logged", he admits, saying that he later chose to purchase his own forest so that he could plan his logging activities and work legally. However, he stopped when he came up against the barriers imposed by environmental agencies. One day he found out about the project for export corridors to the Pacific and was attracted by incentives offered by the Acre govern-

1

2

At Fazenda São Jorge I **(1)**, in Sena Madureira (AC), Laminados Triunfo conducts logging according to FSC certification criteria, audited on-site by Imaflora. The wood is used to make products for the construction industry at the plant in Rio Branco **(2)**

The audits inspect a variety of items, including personal safety equipment for workers and logs stocked in the yards for transportation. At Fazenda São Jorge I, and other Amazon properties, Imaflora has brought about sweeping changes

ment. The state began to gain a reputation for promoting logging policies based on socio-environmental certification. "I decided to set up a hardwood factory in Rio Branco and the government said: you've come to the right place provided you take the same approach as us", said Jandir. This was the push he needed to start understanding the concept of FSC certified logging, after he attended a talk given by the Acre Forestry Department.

"I didn't even know what a PPA was", says the businessman. "I could finally restart my business career on a legal footing and I'm now proud to be involved in the logging industry". With an eye on the future, Jandir purchased three new properties and decided to certify one of them, Fazenda São Jorge I – which immediately opened up a range of new markets abroad. "It is a magic seal, it generates trust and is worth its weight in gold", he said. Now, his goal is to open up the domestic market and by 2010 use certified timber for 80% of production. Based on this objective, the company is planning to open a flooring plant in Xapuri and develop the Antimary State Forest under government concession. The area has already been certified by the FSC based on work carried out by Imaflora, and it is hoped will become a model for sustainable forestry in the Amazon.

"Taking from the forest only what it can offer without risking the future is a cultural change", explains Jandir, pointing out that he learned this at the right time because "you can't teach an old dog new tricks". He is starting to lay the groundwork for his son, Jandir Junior, to continue the business using the forest he has helped maintain. "Based on the forestry management plan, I look after the forest as if it were the goose that lays the golden eggs, as a stock for future logging", the businessman explained, aware of the importance of the audits.

"Initially, I was shocked by the changes they required, but later on I came to understand the benefits", he explains. He lists the results: "higher quality usage of the trees which are cut down, better labor, higher productivity, employee satisfaction and based on all of this, better financial returns". These results are encouraging further progress, "a force that shows confidence in the certified product and a lifetime commitment: I don't want what happened to the Paraná pine trees in southern Brazil to be repeated in the Amazon".

The experience in Acre shows that Imaflora socio-environmental certification leads to changes in the way the Amazon forest, currently the focus of worldwide attention, is managed. This is a strategic region for the planet's climate, and sustainable use of its natural resources while providing economic returns may be a deciding factor in its conservation. Covering 4.1 million km², the Amazon biome is the largest tropical rain forest in the world, but almost 20% smaller than it used to be. Seen as a massive and empty area ripe for occupation, the Amazon forest is continually under pressure as development advances. In this case, the villains are those who convert the forest into pasture, high-input agriculture without any measures taken to avoid further damage and illegal logging. Additionally, the government struggles to maintain a local presence to combat illegal logging. According to the forestry code in the Amazon, landowners can cut down up to 20% of the forest for economic activities. But the deforestation exceeds this limit – not only on private land (which is often not properly documented), but also on public land (deforestation based on land grabbing – where people occupy the land illegally to then claim adverse possession and hence title documents).

> I was able to restart my business career on a legal footing and I'm now proud to be involved in the logging industry. I achieved a seal which is worth its weight in gold"

Solutions take various routes. In addition to supporting the state, planning for land-use and fighting corruption and illegal logging activities, control measures also create the largest number of national parks, extraction reserve and other protected areas as shields against deforestation. Between 2003 and 2008, more than 19,000,000 ha of Amazon land – more than twice the size of Portugal – have been declared federal conservation units. That is in addition to land protected by the states, and the indigenous territories that occupy 20% of the Amazon region.

The forest hides trillions of dollars in timber and other natural riches awaiting projects that employ sustainable management

Although not immune to invasion and destruction, this mosaic of protected areas protects against predatory activities. However, this alone is not enough. To reduce deforestation we need sustainable development policies that take into account the region's environmental and social characteristics, to reduce poverty and increase value throughout the entire forestry production chain up to major urban consumer regions in Brazil and abroad. The battle against illegal logging, with stricter inspections and market restrictions, creates fertile ground for sustainable activities. Socio-environmental certification is an important tool in this approach because of its potential to create change. By increasing the value of forestry reserves which are obtained on more socially and ecologically sound approaches, the seal accords greater value to those who are dedicated to conservation and want to help stop the prevalence of destructive activities that in contrast offer quick financial returns.

Hope now lies with sustainable forestry management and its ability to support logging on a planned basis and with less impact. This is an important market differential which increases the economic value of the Amazon's natural resources and scale – while also conserving existing forests for future use, maintaining their environmental benefits for the entire planet. The remaining Amazon forest, around 3.3 million km^2, contains an enormous stock of accessible timber. If use of this area is planned in advance, it could provide financial returns capable of stopping illegal deforestation, with annual revenues of around $36 billion, according to estimates from the Amazon Research Institute (Instituto de Pesquisas da Amazônia), or INPA.

However, 80% of the wood taken from the forest is illegal, according to reports from another major regional research center, Amazon Institute of Man and the Environment , (Instituto do Homem e Meio Ambiente da Amazônia) or Imazon, an Imaflora partner in forestry research. Almost all of this timber is sold on the domestic market and used by the construction industry, furniture manufacturers and steel plants, which buys charcoal to produce pig iron. The timber is often taken from the forest without planning and using inefficient methods that waste 70% of the wood.

If forestry management grows and modernizes, the logging industry will have a tremendous window of opportunity. As tropical rain forests dwindle in Malaysia and Indonesia, the world's biggest suppliers, lumber prices are set to rise on the global market from 2010. If Brazil chooses the right path it could dominate world production. There is also potential for non-lumber products, like essential oils for cosmetics, active ingredients for new drugs, tropical fruits, nuts and seeds. There are trillions of dollars hidden in the forest waiting for a suitable and economically sustainable approach to appear. Equally promising is the role played by the Amazon in combating climate change. This expands the carbon credit market and mechanisms for voluntary donations to remunerate forestry conservation and reforestation projects (see Chapter 7). This also creates a new opportunity for forestry

management to be used as a tool for economic development.

There is strong international pressure to change the economic balance in the forest: pressure to give greater value to living trees so that they can generate profits. Financial institutions, traders, consumer groups and environmental and human rights organizations are joining forces to create rigorous social and environmental criteria for doing business in the Amazon. Even in remote areas, farmers are being encouraged to comply with environmental laws and good land usage practices and integrate with local populations if they want to sell their products and attract new customers. Market forces are integrating with the need to preserve the forest as a source of future wealth. As a result, there is growing interest in certification as a method of guaranteeing the socio-environmental origins of the products.

The certification institution is responsible for implementing the rules that apply to each seal – this means that these institutions have a key role to play in conserving biodiversity and improving social conditions in the forest. For FSC certification, one of Imaflora's main products as an institute promoting sustainable development, is the audits carried out on Brazilian forestry projects. One detail makes all the difference: all of this fieldwork, planning, technical training, discussions and conversations to put into effect the socio-environmental principles, creates something greater than just seals, diplomas or stamps. They lead to transformations and extremely importantly, a wealth of working methods which are continuously refined through a constant learning process.

Knowledge bank to support forestry concessions

Imaflora has the biggest number and largest area of FSC certified projects of any Brazilian organization, covering a wide range of environments. It is vastly experienced in forestry management and is a benchmark for the future of a forest, and is under the international spotlight. This is a solid basis for building a different Amazon – a challenge which is linked to government policies to expand forestry management. One of the most important initiatives is the Public Forest Management Law (Law 11,284, enacted in March 2006), which governs federal and state government forestry concessions for sustainable use. This initiative could increase the scope of the forest-based economy, capable of generating investments and increasing the use of non-wood products – like resins, oils and fruit – and reducing some of the main problems associated with deforestation. These include unreliable land ownership, bureaucracy and the delays in approving forestry management projects, the rural settlements without environmental licenses, unqualified labor and inappropriate business projects. These barriers led to a drop in forest certification after 2004, compared with preceding years, when the FSC seal for Amazon business management was highly sought after. The plan, based on a policy of public forestry concessions, is to reignite this growth. The goal of the Department of the Environment is to double the concession areas in national forests and APAs from 2,000,000 to 4,000,000 ha – which, according to calculations from the Brazilian Forestry Service, could result in R$700 million being invested annually in the forestry economy. However, to achieve this goal, the government must adopt measures to speed up the creation and approval of management projects which are a mandatory requirement for working in these areas. In technical terms, based on advances in forestry certification, Brazil is ready for this growth based on internationally recognized standards.

Brazilian advances are visible and over the decades eliminate uncertainties. Sustainable management is based on extracting

products from the forest at the same rate that nature can replace them. In terms of lumber, the number of trees cut varies according to how strict the plan is. For FSC certification, over a 30 year period, only five to six older trees are extracted from the 500 + trees in a single hectare. Logging uses low-impact techniques to protect biodiversity.

Based on this work, methods have been developed to measure damage, evaluate forest growth and compare uncertified areas with others that use good forestry management techniques. The FSC seal includes social criteria such as steps to reduce workplace accidents at sawmills and to comply with labor legislation. The detailed work on certification helps to evaluate the effectiveness of forestry management, producing new technical knowledge that advances the entire process. "It's like a big laboratory, where we become more involved with the day-to-day work of these companies and test what we have imagined on an experimental basis at the University in a production situation", says forestry engineer Edson Vidal, from the Luiz de Queiroz Higher School of Agriculture, Esalq, from the University of São Paulo in Piracicaba (SP). The researcher attended the first technical training courses on certification held by Imaflora. He was also involved in work to adapt FSC standards for the Amazon, in 1995.

What are safe levels for commercial logging while maintaining a forest which is healthy and capable of regenerating itself? Will biodiversity definitely be protected? Is this method economically practical? Issues like these are still being examined by scientists, although today – more than a decade after the first experiences in certified management of native forests in the Amazon – the answers are clearer. They should be conclusive after the 30 year logging cycle in the first management plans. "We know that management makes a difference because it reduces impacts and maintains forest coverage", says Vidal, who is also an Imazon researcher. "But we still need more focused studies to understand how the forest regenerates, how to avoid depletion and to identify which species manage to recover", explains Vidal. It is this forest growth which will dictate how management plans develop in the future, in other words the time that nature needs to replenish its stocks.

Vidal believes that Imaflora's experience inspecting forestry management projects helps fill in the gaps, reduces differences and answers important questions. They are like different pieces of a jigsaw puzzle which, when put together, allow us to reach conclusions on forest recovery and fauna equilibrium. The auditors use several tools when measuring the success or failure of forestry management. These include analyzing permanent areas of the forest and evaluating how the trees are logged, and the statistical tables on tree mortality. Of equal importance are the botanical inventories required for socio-environmental certification. They are evaluated periodically during certification audits and are essential when selecting trees for logging, maintaining the correct distance between them to ensure pollination and maintain appropriate genetic diversity.

Certification work contributes to measuring impacts and improving forestry management. It ensures greater security for biodiversity

The art of creating new conduct rules that benefit the environment and local populations

"Supported by scientific results, Imaflora can recommend changes and submit proposals for adjustments to indices that represent FSC criteria and principles, making forestry management more sustainable", explains Vidal. This shows that the cer-

tification institute's work goes beyond simply applying forestry management legislation. The rules frequently need adjusting and adding to so that management methods can be applied in different local situations and effectively help reduce impacts and create situations for sustainable forest use.

Advances and changes in direction appear naturally – a responsibility that Imaflora takes on willingly, based on the knowledge and skills it has accumulated after years of involvement in the certification process. Its professionals implement recommendations which often come from the university. This is a two-way street; mutual collaboration leads to improvements, transparency, technical rigor and reliable certification. "This work leads to big jumps from both an environmental and social standpoint", says Vera Lex Engel, from the Paulista State University (Universidade Estadual Paulista), or Unesp, who assists Imaflora auditors when issuing the FSC seal. Researchers are hired to analyze the audit reports, checking that the evidence collected in the field is in line with certification criteria. Among other tasks, they check to see whether the observations on which the companies' final standing is based are in line with the different socio-environmental indicators that need to be complied with. "The aim is to avoid discrepancies between the reports".

"The audits are based on methods and procedures which are highly organized, from economic spreadsheets to social reports, which guarantee end quality and help certification to achieve its objectives", says Vera, who has also been invited to give talks on ecology at auditor training workshops. Imaflora believes that continuous professional development is key to achieving good results. This type of approach generates differentials: "With high-quality training, auditors go out into the field organized into teams with a wide-ranging view of the various areas of environmental concern." This means that they are not restricted to detecting what is right and wrong; they also look for solutions.

Aware of the social, economic, environmental and cultural reality in context in the different regions where these projects are located, the certification process tries to strike a perfect balance between strict application of the rules and common sense. Sometimes flexibility is needed so that the rules to improve living conditions can be applied in practice so they can lead to lasting change. Fieldwork experience has created a process which is recognized by companies, governments, universities and socio-environmental organizations.

3

New life in the communities

How to create a new production standard for loggers, family farmers and rural settlements

We continue on the AC 040 highway to Xapuri, in Acre, passing through countryside which reveals the extent to which cattle farming is responsible for tearing down the tropical rainforest. It is 158 km from Rio Branco, the state capital. Extensive pastures punctuated by solitary chestnut trees reveal the size of the challenge in conserving an area for sustainable use of the forest and other resources it contains: the land used by the community. Surprises await en route. Seen from afar, the generous tones of green look positive; there is hope that we can turn around all of this destruction. Our final destination is Seringal Cachoeira, the location of one of the first logging experiences based on certified management in the Brazilian Amazon. The wood produced by the community is different because it has the FSC seal – a significant and difficult achievement. This involved dialogue and change, social organization, changes to commercial procedures, better business practices and economic gains which had an effect on other regions of the forest. When we arrive at the settlement, a charming guesthouse integrated with the surrounding jungle attracts our attention. It receives visitors, including foreigners, who come to find out about the new developments in the forest. What could be so special about a place like this?

We soon meet the people who will tell the story. Everything began with Chico Mendes' battle against the farmers who wanted to throw us off the land and cut down the forest for cattle farming", says Antônio Teixeira Mendes, or Duda, cousin of the rubber farmer who became an icon for the Amazon forest conservation movement. "He said that we should find a way to survive in the forest and he would be very happy with what we have built", says Duda. He recalls how important progress was; it changed life on the rubber plantation, at the Projeto Agroextrativista Chico Mendes. But there is a lot of work to do to make the forest economically viable without cutting it down, according to the farmer who fears the predatory threats in the surrounding area. We need to extend management practices to make logging activities more attractive so that they can compete with cattle farming. This is a fairly old idea, which is based on an event which is a landmark in Amazon history.

December 22, 1988. Facing death threats, Chico Mendes was playing dominoes in his kitchen at home in Xapuri with two policemen who were protecting him, when his wife called him in to have a shower and dinner. When he went outside to get a towel off the washing line, he was shot in the chest with a 12 gauge shotgun by a man who was hiding nearby – farmhand Darcy Alves, who was acting under orders from his father, Darly Alves, a farmer. The crime had global repercussions and dragged the Amazon rainforest into the spotlight. Responding to international pressure, the first Brazilian logging reserves were created as a strategy to cut down on deforestation and benefit communities which depend on the forest for their survival. There was a growing debate on sustainable use of the forests and fair use of their resources and solutions started to include forestry management as a means of reducing impacts.

Seringal Cachoeira, which was marked out in 1989, was the first legal initiative to protect logging communities after the rubber farmer's death. A year later, the federal government created the Chico Mendes Logging Reserve, still the largest in the country, covering 1,000,000 ha and also located in Acre. "After the initial gains, new challenges arose", says Duda. After dropping the model of the old "bosses" who bought the rubber farm's production, the colonists needed to make their own way and they created a cooperative to sell forest products – at the time a major innovation in the region. No one was interested in wood – only nuts and rubber. The trees which

were pulled down to create pastures and farmland were burned, unused. However, this approach changed. To sustain itself, the community broke with tradition and realized that the logs could also be traded. "We won the forest and we needed to use it for production, without destroying it", points out Duda. By his calculation: "If our 85 families cut down 1 ha per year of native forest without worrying about conservation, nothing would be left in 20 years".

At the beginning of the 90s, the rubber farmer traveled to Mexico, Costa Rica and Malaysia to learn about the techniques involved in a new activity: forestry management. This was the path towards safer deforestation, but there were still questions: How and at what speed do trees grow after they have been cut down? How many trees could they take? Initially, the community was divided. "Many people did not understand the importance of planning, but the situation changed when they realized what they could gain and saw that they could preserve the forests for their children and grandchildren".

The path to certification to conserve a treasure and guarantee an inheritance

"I was born in the forest, but I only came to truly know it when I began working with certified management, discovering its economic value", says Duda. After the first conversations with Imaflora on the benefits and potential of the FSC seal, the community took a step forward. "In addition to providing better prices, the seal would help us find new buyers and help conserve and use the forest better", says Duda. And so it was: In 2001, after preparing to meet the FSC criteria, a group of farmers living on the rubber plantation received the diploma that guaranteed the social and environmental origins of their products extracted from 9,400 out of a total 24,000 ha. The project began with nine farmers. In 2008, they were 30 producers. Duda remembers that getting the community to adapt to the new requirements was a tough process. It meant changing practices and cultures. Problems controlling production accounting, delays correcting outstanding audit problems, sales difficulties and internal conflicts were just some of the barriers. When they made these changes, the farmers organized themselves better in order to divide and use the plots of land. In 2004, they created a new cooperative – Cooperfloresta to process the certified lumber in Xapuri.

"I was born in the forest, but I only came to truly understand it when I began working with certified management, discovering its economic value"

There is still a lot to do to win over buyers and change the scale of forestry production, but the results are clear. After certification, the value of the wood sold by the community more than tripled with forestry management, also including other products, meaning that families now receive an average of more than three minimum salaries every month. As a result of certification, logging helped strengthen the industrial center set up in Xapuri to add value to forestry products. The certified wood is not only sold to the construction industry but is also transformed into furniture, utensils and decorative items. These products leave Acre and arrive in shop windows in other state capitals. Most of the latex is sent to a contraceptive factory on the main highway into the city. Its products are sold to the Department of Health and distributed nationwide in campaigns against sexually transmitted diseases. After the factory was inaugurated, latex prices tripled and each farmer in Seringal Cachoeira now receives a monthly income of R$400. The project rescued rubber production: today, 80% of local

inhabitants are rubber farmers, compared to only 20% not so long ago. Brazil nuts, which are now the second biggest source of local income, generate family incomes of R$10,000 during the annual three-month harvest. There is also income from açaí and sometimes seeds used for jewelry.

The business plan preserves traditional cultures. At the community health center, Artemildo Ribeiro da Silva produces and prescribes phytotherapeutic remedies - bottled remedies against several diseases made from cedar, copaiba, cherry tree, pitch, oak and ipê-roxo trees which have been preserved in the managed logging areas. "The changes may take a long time, but the important thing is that this work provides a sustainable future for our descendents", says Raimundo Monteiro de Moraes, president of the Residents Association at the Projeto Agroextrativista Chico Mendes. Before this experience, certification had benefited the Porto Dias settlements, which received the seal in 2001 to provide end products made of wood with greater added value. Most lumber production is sent to the cooperative. Aware of the benefits of certification provided by Imaflora fieldwork, other logging associations are preparing to receive the seal. Since 1964, 3,200 agricultural reform settlements have been created in the Amazon region, covering a total 68 million ha, equivalent to 10% of Amazon territory. There is a long way to go, because most of these areas do not have the environmental licensing required to implement sustainable management plans, either autonomously or based on forestry company contracts.

In the meantime, Seringual Cachoeira is also making non-financial gains: Quality of life. "Everything here has improved recently", says Emília Campos Barbosa, Duda's wife. They now have electricity and a water pump, which means that families no longer have to carry cans of water on their heads. They supply sweets and other delicacies to the charming guesthouse built on the settlement by the state government. The guesthouse has generated alternative sources of income and is a source of pride and self-esteem for the local community which is also involved in its management. "Our bank is the forest", says Sebastião Teixeira Mendes, or Bastião, another cousin of the famous rubber farmer leader. "He advised us to preserve the forest because only here can we live properly", says Bastião, currently a tourist guide who is used to accompanying outsiders along the tracks in the rubber farm.

Social and environmental certification ensures that the sustainable development reserves fulfill their functions.

Focus on small farmers, who are key for the scale of sustainable farming!

Making certification and its benefits accessible to communities and smaller farmers, attracting them towards a model that involves using the forests sustainably, has been a priority task for Imaflora since it started work. This issue has deserved and continues to deserve special attention, because this labor force has specific characteristics – and has an important role to play in changing the economic, social and environmental situation in the Amazon. How do you prepare loggers to achieve the seal? How do you unify social and environmental rules with traditional farming cultures? How do you break down barriers, guarantee access to buyers and economic gains to people who preserve the forest? In the search for answers, there was one big challenge: adapting FSC principles and criteria to the reality in the community and small-scale production in the native forest. It made no sense to apply the same strict rules initially created for developments run by companies in the developed world to isolated farmers in the Amazon.

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Audit work in certified communities **(1)** resulted in better control and organized production. In Xapuri (AC), in addition to chestnut processing **(2)**, the sawmill processes wood from Cooperfloresta, which is sold around the country **(3)**

In Seringal Cachoeira, in Xapuri (AC), Sebastião taps rubber to show visitors the community way of life, where logging is certified. Chico Mendes' cousin, the farmer is helping to make the former community leader's dream a reality

The changes which currently benefit Amazon communities, like the Seringal Cachoeira, are the result of an international process which was implemented to adapt application of the rules to small farmers in various countries. These communities are different for various reasons: they conduct logging in small areas with less impact and normally have little capital, compared with companies. They also face barriers like difficulties accessing information. Based on its experience and information collected in the field, Imaflora took the lead globally in finding new ways forward. In 2002, with major technical involvement from the Brazilian institution, the FSC incorporated a new, simplified audit model with lower costs – the SLIMF (Small and Low Intensity Managed Forests), which was applied internationally for forestry management in small areas that are not intensively farmed.

Imaflora work resulted in social and environmental rules for non-timber forestry products, resulting in gains for the communities

Imaflora's application of the new model in Brazil reduced certification costs by up to 40%, but the organization decided to go even further in expanding the seal to non-lumber forestry resources. In 1996, its first year of activity, it created the Social Fund, a mechanism which sets aside 5% of the revenues it receives from business projects to financially support certification for settlements, farmers and small Brazilian landowners. That view was that smaller farmers might be excluded from certification for technical reasons, but not for lack of money. In parallel, forest communities, the private sector and NGOs receive training and information on the potential of the social and environmental seal. One example was the seminar "Non-Lumber Forestry Products and the Cosmetic and Phytotherapeutic Industry", held in 2002 in the small city of Alter do Chão, in Pará - a historic event which revealed the efforts made to bring together logging companies and industrial customers, under a certification umbrella.

Based on this experience, Imaflora continued its work adapting international rules to apply them to specific Brazilian scenarios. It already had the experience and know-how of having created the first Brazilian agricultural certification standard in 1998, for the sugar and alcohol industry. Previously, it had made a decisive contribution to creating a Brazilian framework of principles and criteria for logging in native forest on dry land – in the Amazon region – incorporated by the FSC for worldwide application. The latest advances came in 2006, when Imaflora developed a temporary standard for non-lumber products applicable in Brazil. This achievement represented advances on another two versions of the temporary standard, created in 1999 and 2002.

The FSC allows certification institutions in different countries to establish a temporary standard based on local indices, if there is no internationally approved model. Initially, specific certification criteria were created for each of the non-lumber forestry products, like Brazil nuts and cork from the Atlantic Forest. Later, this strategy changed: a decision was made to go even further, creating a single community standard which was valid for all products. For this task, Imaflora used its knowledge of the forest and the local situation which it had acquired over many years of diagnostic work, audits and involvement with communities. The project was developed with a major objective in mind: to submit it for final FSC approval for use in other countries, including community logging. Brazilian standards are expected to become the first international model for community forestry certification.

Imaflora has strengthened its position as not only being capable of auditing and applying the standards but also supporting the standards creation process. Development involved a wide-ranging public consultation process which included multi-sector workshops, proposals and comments sent in by mail, e-mail and by other virtual channels. The aim was to enrich and refine the contents of the standards under discussion and ensure transparency and credibility by involving the largest possible number of different agents, such as union representatives, cooperatives, governments, universities, companies, non-governmental organizations and the communities themselves. The debate involved important issues like reconciling traditional community practices and approaches with the new universe of standards, guidelines, rules, contracts, signatures and commitments. This work created specific indices which were used, for example, to evaluate the transparency of community management, the level of farmers' involvement in compliance with association statutes. Other indices were prepared to check labor relations, knowledge transfer to future generations and protection of local culture. Simpler field work methods, like visual records of forest conditions, traditionally used by these communities, were incorporated as a monitoring tool.

Items required for socio-environmental certification in major business projects were adapted to small farmers based on Imaflora mediation. Common sense, coherence and a long history of dealing with communities were decisive issues in this process - in addition of course, to the main differential: the power to involve society and its various segments within a participative model. Based on these discussions, logging communities became aware of the importance of economic feasibility, cost controls and community governance.

However, there are limits to life in the forest. How can you insist on legally enforceable employment contracts for loggers who work as self-employed contractors? How can you impose strict deadlines if the idea of time in the Amazon forest is different to that in state capitals and many farmers live in isolated locations, days from the nearest city by boat? How can you force them to build observation towers in the forest to detect and control fires? Finally, how can we offset the requirement for scientific research on biodiversity and recovering the forest in their areas, which are mandatory items for company forestry management plan certification?

Bringing together the ends of the chain to sell forest products

Adaptation of these and other complex issues helped encourage communities to apply for the seal and achieve better results using it, such as new markets and higher income. At the end of the day, it means that the socio-environmental seal actually fulfills its transforming functions of environmental preservation and improving quality of life. By 2008, 12 communities had been certified by Imaflora within FSC standards – eight of them still have the seal. There is enormous potential for expansion, but this depends on market trends and expanding the view of how important this processes throughout the production chain – from logging to industry and the end consumer. It also depends on increased production capacity and encouragement through public policies.

Imazon figures reveal that there are at least 1,500 community management experiences in the Amazon involving a wide variety of forestry products. And there are 466,000 km² of forest, not including indigenous land, available for Brazil nut, fruit, oil and rubber production alongside other non-lumber resources. In relation to logging, communities could double their current log production capac-

ity in the region. "There is a lot of diversity, but we need to register this wealth, evaluate the ability to replace these natural resources and improve forestry techniques", says Paulo Amaral, from Imazon in Belém. By encouraging responsible forestry production and facilitating access to buyers, the socio-environmental seal is a decisive aspect of this project – an issue which was used as a basis for the seminar on "Innovation and Biodiversity: The Outlook for Certification. A Dialogue between Companies and Communities", held by Imaflora and partners in November 2008 at the Fundação Getúlio Vargas, in São Paulo. Community leaders, company executives, auditors and representatives from Imaflora and non-governmental organizations, among others, all sat at the same table to debate how the market was developing, to evaluate potential, identify deadlocks and seek solutions.

Certification has reduced barriers limiting logging in communities, such as a lack of public policies and difficulty creating relationships with emerging – and demanding – markets. The problems involve the standardization and quality of forestry products, the frequency of supplies, community organization, their relationship with intermediaries and dependence on government activities and companyImazon says that on average, income earned by small farmers in the forest is around R$15,000 annually, but these amounts do not always result in better living conditions. Prices often fail to cover production costs. Because of legislation that needs further refinement, bureaucracy, a lack of oversight and little information and guidance on how to improve results, management plans lack sufficient support. Illegal and predatory activities increase pressure on the forest – resulting in piecemeal destruction which is not detected on satellite imagery. "For management plans, we need to find out more about the ecology of species with economic value, low cost activities that can be understood and used by traditional populations and more staff to work with non-lumber products", says Paulo Amaral.

Most of this knowledge is still being collected – and the socio-environmental seal, achieved through Imaflora's work, could be the key to these changes. "We started paying attention to things which didn't previously seem that important", says Eudimar Viana, management and certification coordinator at Comaru – a farming cooperative in the Sustainable Development Reserve on the Iratapuru River in the south of the state of Amapá. Certified in 2004, the community went through several transformations until it reached its current level as a model of sustainable forest usage.

Before the 90s, local inhabitants did not see Brazil nuts as a business. They survived on small-scale coffee and manioc farming, which they bartered for other goods with the boats that traveled on the Jari river. "Today, life is different, because of demand from customers who want products that come with the seal", says Viana, who is comfortable using socio-environmental jargon he picks up at events in Brazil and abroad. His business card, a source of great pride, carries the FSC symbol. He opens his notebook to show the beautiful landscape where he lives and the production figures, boosted by new opportunities that came with community certification.

Brazil nuts, sold either fresh or processed on-site to extract oil for the cosmetics industry, are the main source of income. In addition to production control, there are other important gains. "We have started taking care of the waste and younger farmers are more interested in education", says the community leader. Connected to the Internet, they download MP3s, giving a more modern feel to the traditional culture. They also take steps to remain certified. "We need to improve the commercial relationships with large companies and better understand market demand", says Viana,

who points out that better community organization, which was achieved after they implemented corrections required by certification auditors, helps in this process.

Auditors' adventures in the caiapó territory in Mato Grosso

"It is exciting to see communities inventing terms, building phrases and concepts in the socio-environmental area", says forestry engineer Patricia Gomes, coordinator for Community Certification at Imaflora. She remembers the first certification contact with the indigenous community. "It was a big problem for us", says Patricia, asking: "How could we demand so many accounts and controls when time in these places is spent planting and making sure you have something to eat next week?". In light of the community's lifestyle, the certification process requires innumerable preparatory meetings. Standards had to be reviewed in order to adapt them to indigenous lifestyles. This work involves a certain amount of trial and error and continuous advances. "It also requires an awareness of what the culture is like and the implications of decisions taken in the forest", explains Patricia. She reveals the biggest discovery: "Certification standards are only recognized by communities if they feel that they own them".

Through this close contact, not only is a lot learned, but there are also many stories to tell. One example is the adventures of the auditors traveling to the Baú Indigenous Territory, the only indigenous reserve in Brazil currently holding the FSC seal, which was granted in October 2006 based on work carried out by Imaflora. This is the biggest certified area in the world, covering 1.5 million hectares, owned by the caiapós. Access to the village depends on the weather. During the rainy season, the solution is to go through Cuiabá (MT) and from there take an airplane to Novo Progresso, a mining region. From there, a single-engine plane, like the ones used to transport miners, is used to get to the village landing strip. When it doesn't rain, the best route is a normal flight to Alta Floresta in Mato Grosso and traveling for a day by car along the BR 163 to the Baú river. You need to sound your horn so that the Indians take the visitor to the other side of the river, where the village is located. Only the younger residents speak Portuguese. "We painted our bodies like they do, we slept in hammocks in their hut and we bathed only in the river", says Patricia. For a week, the auditors inspected indigenous production based on Brazil nuts and products for cosmetics, to check whether it complied with the socio-environmental seal requirements. And what if they detect problems in the way the forest is used that require corrective measures? "I don't even like being reminded about it", says the forestry engineer. Once, at the final meeting after the audit, held at the House of Man (Casa do Homem), where the community meets to take important decisions, Patricia praised the indigenous people's work but then had to penalize them because corrections from the previous audit had not been implemented. She said that the yellow card had changed to red. One of the leaders reacted by beating his stick on the ground, and asking, in his indigenous accent: *"If Indian did everything right why does certification give red card?"*. The atmosphere soon improved and the elders understood how the certification tool operates. They talked about the benefits from the audits and started telling stories about the village while they cracked Bra-

"As well as an awareness of what the culture is like and the implications of decisions taken in the forest. Certification works if the community feels like it owns it"

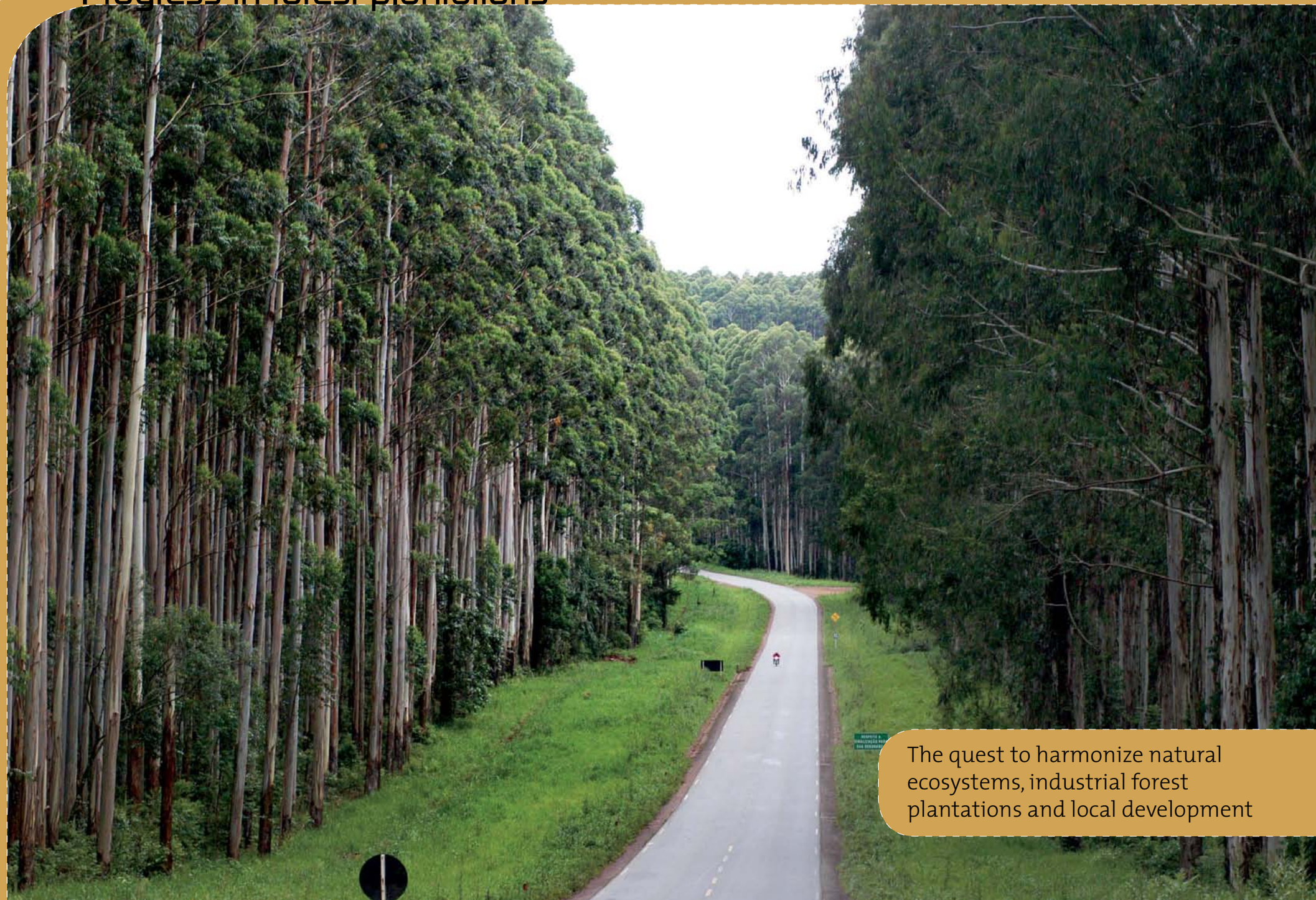
zil nuts. “The yellow, and red card analogy is important to generate improvements”, explains Patricia.

She explains that: “This case illustrates the pressures involved in field work to ensure standards are complied with”. In addition to technical knowledge, personal relationship skills are indispensable when mediating conflicts, pushing for results and expanding certification in other biomes outside the Amazon. In Rio Grande do Sul, Ervateira Putinguense’s tea plantations is a typical case of a small family farmers’ property which is investing in socio-environmental differentials. It was the first farm in Brazil to obtain FSC certification in the Atlantic Forest, in 2003, guaranteeing supplies of a traditional tea-making herbs while causing less impact.

In Minas Gerais, the trees on the Mantiquera and Espinhaço mountains are an important source of raw materials for the global cosmetics industry: they provide alpha-bisabolol, an anti-inflammatory extracted from candeia, a species native to the Atlantic Forest. The plant is grown on certified plantations and in native areas belonging to the company Atina, which also receive visits from Imaflora auditors. In addition to more industrial processes which guarantee high-quality extracts, production follows internationally recognized standards for sustainable use of biodiversity. This is a major differential to change attitudes in a market still supplied using raw materials produced illegally. “We need more government oversight and awareness among major buyers so they give greater value to and demand environmentally sound products”, says Eduardo Roxo, an Atina director. Concerns stretch beyond the edge of the forest and into regions that are beginning to adopt the concept of socio-environmental certification, such as the Caatinga, in the northeast of Brazil where the countryside is organized into associations that use the native vegetation without harming the highly sensitive, threatened, semi-arid ecosystems. Trees are cut down to make charcoal, which is used by the plaster, limestone and steel industries. These are species with a natural ability to cope with a lack of water, turning green at the first drops of rain and are now symbols of courage in search of a better life.

4

Progress in forest plantations



The quest to harmonize natural ecosystems, industrial forest plantations and local development

The landscape is cut by the Tibagi River, in the state of Paraná, and the hills are quilted by a mosaic in varying shades of green. It is the green of eucalyptus and pine plantations in different stages of growth, interspersed by large chunks of Atlantic Forest, some of it old growth, some of it second growth or area that has been replanted with native species. We are on Highway BR 346, 280 km from Curitiba. The loaded logging trucks that come and go indicate the area's main economic activity. Welcome to the eucalyptus capital of Brazil. The city of Telêmaco Borba, Paraná, has 64,000 inhabitants, a school, hospital, church, public buildings, row houses, a cultural center, squares, a bike path and even an aerial tramway, which, together with all the other urban infrastructure, came about based on a single industry. Everything started on the Monte Alegre Farm in the 1940s. In the early postwar period, Brazil, under the leadership of Getúlio Vargas, was making an effort to reduce its dependence on the importation of strategic products. This led the businessman Horácio Klabin to establish a major enterprise to plant trees, produce cellulose and manufacture paper in this geographic depression in the state of Paraná.

It was necessary to build a village to operate the manufacturing center. This village later became a city, which was named after Telêmaco Borba, a famous settler and "pacifier" of the native Indians. Paper production in Telêmaco Borba changed the map of the state of Paraná and the destiny of an old region that had been an area for prospecting and a base for cowboys driving their cattle through the scrubland. This new frontier was changed by a hydroelectric plant, a dam to provide water to industry and residents, an airport with regular flights to major Brazilian cities and other infrastructure projects, and today it is the site of an experiment in sustainable development.

It is also the scene of activity by Imaflora and its auditors. It is the result of a trajectory that has involved environmental and social responsibility and, mainly, new conduct and transformation. On the highway that leads to Telêmaco Borba, we see the impact on the region that, like many in Brazil, has not been immune from the pressures of economic development, such as rapid urbanization, the growth of farm and pastureland and predatory timber cutting. When we reach the city, we understand how this situation, in a process that is not yet complete, has been turned around. An industrial center, with dozens of plants that process wood from the plantations for furniture and construction, provides evidence of the new times. This new development is reflected beyond cellulose and paper. How can one reconcile forestry production with the conservation of the last vestiges of the Atlantic Forest?

We soon find the answer. In the urban area, we drive along the main street to reach the Monte Alegre Farm, where one of Klabin's main offices in Brazil is. Klabin is a paper and packaging producer. Monte Alegre Farm is an island of forest, a green neighborhood surrounded by others that grew up in the city in the wake of eucalyptus farming. The area run by the company includes office buildings and factories, laboratories, living quarters, restaurants, well-cared for homes and comfortable hotels. Extensive plantations totaling 135,000 ha are integrated into the native forest. The Forestry Operations Center, which is run by Carlos Mendes, is in the neighborhood of Lagoa. Mr. Mendes explains how the region suffered less from the destruction that has been visited on the Atlantic Forest since the colonial era.

Mr. Mendes says conservation is connected with a landmark event for the company and for the eucalyptus industry in Brazil: receiving the socio-environmental seal in 1998 for the forests planted in Telêmaco Borba after making the changes and adaptations rec-

ommended by Imaflora's review and audit. "This certification was a huge leap forward," Mendes says. The achievement was propelled by the business's commitment to differentiate itself and test the innovative FSC system in Brazil. After seven years, in 2005, a new strategic step was taken: in addition to the forests, the industrial units also received the seal, which now goes on products manufactured with raw material from the plantations.

Socio-environmental changes signal a new era for the paper industry

The chain of certified products has lengthened to reach the consumer. For example: paper produced in Telêmaco Borba is made into boxes for pizza, frozen food and candy, and these boxes bear the socio-environmental seal. Major manufacturers buy this packaging so they will be associated with environmental protection and thereby make themselves stand out in the marketplace. José Valmir Calori, Klabin's sales and marketing manager, says "The certification has meant a great deal for Telêmaco Borba." The achievement is the fruit of a trajectory planned to be a point of reference, with visibility and influence in the market. That is why the work involved in achieving certification required a high level of responsibility from the very beginning, in 1996, when Imaflora began the socio-environmental diagnosis in which the changes were recommended.

"We were a young group of engineers and excited to be doing something different," Mr. Calori remembers. In general terms, the audit required that care be taken to reduce impact on the forests, remediate erosion and damaged areas, implement measures for safety and social assistance for the workers and avoid waste, among other things. The company acted on the requirements. "It was necessary, for example, to adopt methods that avoided cutting eucalyptus and dragging the trees through conservation areas, even though this meant new ways of harvesting wood, higher costs and more labor, in addition to more appropriate machinery," Mr. Calori recalls.

Adjustments to make progress in forestry production with socio-environmental criteria became necessary for the expansion of the business abroad. They also had the potential to contribute to a promising and sustainable future for Telêmaco Borba, the town whose birth and growth among the eucalyptus trees is owed to the industry. Efforts were made to change procedures and comply with Imaflora's initial recommendations to obtain certification. Klabin was determined to earn the FSC's socio-environmental seal – a commitment coming from the company's highest authorities. Emblematic of this decision was an event in which the company resolved a land ownership conflict in an area of ecological importance, meeting a requirement for certification. In two years of preparation, many small issues were resolved. "One of the results was greater internal control of good practices and procedures, which came to be documented and standardized," Mr. Calori added.

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From an environmental perspective, in addition to the standard efforts to reduce impact, maintain legally-required green spaces and protect springs, one of the main advances was the conservation of the Paraná Pine forest. On Imaflora's recommendation, Klabin reformulated its plan to replace these trees, which are now rare in the Atlantic Forest and that had been cultivated in this region with an incentive from the Brazilian government since the 1960s. They were

going to be cut down to plant pine commercially. However, after studies revealed the importance of keeping them, areas with Paraná Pine trees were saved as a genetic bank to help conserve the species. Additionally, these planted areas play an important role in providing food for wild animals.

In the case of Klabin's plantations in Telêmaco Borba, the demarcation of areas that require special care in forest management was also important to protect a severely endangered amphibian: the *perereca-zebra* tree frog. This tree frog only exists in that one area of the world in the breaks between commercial plantations. The presence of rare animals is possible because the native forest is preserved within a mosaic of forest with corridors for wild animals to move about in. It is like a jigsaw puzzle in which the different types of plants are the pieces. A jigsaw in which the pieces are put together to allow the Atlantic Forest and the homogenous pine and eucalyptus tree plantations to coexist with minimum environmental impact. "In 2005 in 2006, we found *onça-parda* cougar lairs within the plantations," the Klabin biologist Vladimir Rocha reveals.

The region has the greatest biodiversity in the state of Paraná. It is particularly important because three plant formations meet there: the *ombrófila mista* forest, where the Paraná Pine trees are; the natural fields and the seasonal semi-deciduous forest. The forests that make up Klabin's certified area shelter 40 species of amphibians, 38 species of reptiles, 403 species of birds and 84 species of mammals, including the *onça-parda* cougar and maned wolf, whose tracks are frequently seen in the Ecological Park – a 11,100 ha area of native growth maintained by Klabin. It has a visitor center, museum and a scientific animal raising area with parrots, grey brocket deer and other animals. The first Brazilian tapir raised in captivity and successfully introduced into nature was raised there.

"The park is a living laboratory for university research," Mr. Rocha says. Part of this research is the continuous monitoring of wild animals required by the certification. Heat-sensing cameras photograph animals when they move through the plantations and native forest at night. Tufted capuchin are studied to find ways to avoid damage to the commercial trees. They have changed from being victims to being felons. On the other hand, the region's 12 species of bees – also under study – have adapted well to the eucalyptus plantations and continue pollinating the Atlantic Forest. Bats use the planted areas as corridors to reach the native forest. "In the Legal Forest (*Mata Legal*) Program, the biodiversity studies provide support for the neighboring properties to maintain conservation areas," Mr. Rocha says.

Relations with workers and communities have become fairer

"Klabin's experience has helped the market better understand the seal and its advantages," says the consultant Antônio Carlos Antiqueira. "Just a few years ago, most forestry companies were afraid of certification. It was seen as a list of requirements and a synonym for cost, but now it is seen differently," Mr. Antiqueira explains. He concludes: "Besides a better place in the market, the gains in employment relations and social gains are visible advantages."

Mr. Antiqueira is right. Workers have received training and skills and safety equipment, as well as health insurance, social benefits and better work conditions. Imaflora's socio-environmental certification changed workers' attitudes in the field. "We used to be resistant, but we soon discovered the advantages of all those rules," says João Ernesto, president of the Telêmaco Borba Rural Workers Union, who has twice been elected city councilman on the basis of the benefits received by these workers. To learn how the certifi-

cation functions, the union official participated in courses in Brazil and even in Canada. "We saw seriousness and transparency in Imaflora's ideas," Mr. Ernesto says, noting that the union's requests always received an answer. "We are active participants and not simple bit players in the certification and the improvements it has brought," he emphasizes.

The progress was important. "Where before we stayed for two weeks in the forest to cut trees, now we have transportation to return home every day, the work is shorter, the meals we are fed has improved and we are more highly skilled workers." Salaries increased and payments for production were included in the salary payments. In regard to safety, the union official recalls, "It was not easy to change the way the workers think to mandatorily use safety equipment." Now it is a routine to use hard hats, boots and other gear – "It is different from the way things are done on uncertified farms." Mr. Ernesto remembers that each worker owned his own chainsaw, practically the only material good the worker had. Certification changed that, requiring that only company-owned equipment be used. The workers slowly got used to this new rule. "Certification served not only to educate management, but also the workers; we are partners to make the transformations occur."

There is no turning back as the project is pushed forward by strategic leaps. One of the most important points was Klabin's decision to increase the spectrum of uses for the trees from its plantations. In addition to being used for cellulose paper, the eucalyptus and pine forests came to be used to supply the construction and furniture industries as well – all with the blessing of the socio-environmental certification. As a result, Telêmaco Borba became a magnet for sawmills and factories producing plywood, lamination, flooring, panel, door, window frame and high value-added wood products. It is a home to companies that produce high-quality raw materials, which are sold to important buyers – especially foreign buyers – who require the FSC seal to meet the requirements of an ever more demanding market.

This opened up a new stage in the economic development of the city Klabin had helped create. In the past, the region has seen clearcutting of Paraná Pine forests. Today its attention is focused on planted eucalyptus and pine forests. This is a promising alternative to supply industry in light of the restrictions on cutting native trees in the Amazon. In its search for new markets, Klabin decided to diversify. Its certification in forest management was an advantage – market recognition that is also valid for the use of lumber. Under Imaflora's guidance, the activity expanded, forming a chain of new businesses that flowered after a multi-use forest was implemented.

Certification created a domino effect that has transformed the city of Telêmaco Borba into a vigorous center for wood-product businesses focused on exports

"Initially we began to develop technologies to process quality eucalyptus wood," says the forest engineer Jesuíno de Oliveira, who worked for Klabin for 30 years and now owns Tecnomade. Certified in 1999, it provides raw material to major manufacturers, such as Butzke, which produces lawn furniture with wood from reforested areas. "We destroyed myths about the quality of eucalyptus, which used to be used only for railroad and firewood", Mr. Oliveira recalls, with pride in the pioneering effort.

As is the case in the other certified factories in the city, each year an Imaflora team visits Mr. Oliveira to audit the wood productive process, as required by the FSC. The habit of prioritizing socio-environmental quality standards – valued by large chain stores – has

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Using the saplings from its nursery in Telêmaco Borba, Paraná, **[1]**, Klabin maintains extensive commercial plantations **[2]** to produce cellulose and paper, as well as lumber. The certification, which was achieved through the work of Imaflora, served as a model for companies in this sector.

Forest plantations energize a vigorous woodworking industry in Telêmaco Borba, which uses the socio-environmental seal as an instrument to gain a share of the international market, which is ever more stringent regarding the origin of products sold to consumers.

been created. "It is only by continuously improving that we'll be able to progress in the market," says Mr. Oliveira "It is an organized job, focused on well-defined standards."

Nearby, Natalino Menegassi, who is also a former Klabin employee, has taken a similar route. Ten years ago he founded a lumber mill with six employees, and today he has 54. His mill supplies wood to a multinational company that has strategically located in Telêmaco Borba to send quality Brazilian raw material to be used to make furniture in Vietnam. "Certification protects from the unscrupulous and attracts more stable customers," Mr. Menegassi explains. He plans to expand into making eucalyptus doorposts and ceilings for the Brazilian construction market. "There is already greater awareness in Brazil to value these products with better prices," he says.

From broomsticks to organic matter to cultivate saplings; the forest offers numerous certified products

There are many other stories like this. There are companies that began from nothing and now export to various parts of the world. The company Paledson Madeiras, which was the first wood product company audited by Imaflora in Telêmaco Borba, began operation 20 years ago in an old warehouse. It made fruit boxes for the farmers market, using scraps (log scraps) from lumber mills. Later, it improved its technology for processing and standardizing eucalyptus and began to produce top-quality broomsticks that were exported with the well-known FSC seal. Today, 80% of its window frame, table top, door and pool deck production is destined for the European market. "Our business's future depends on how we treat our employees," according to Edemilson Silva, who is director of Paledson. He has a long relationship with Imaflora. "To gain the certification, you must put your heart into it," Mr. Silva says, pointing out a differentiating factor in this work that also leads to innovations.

All, or almost all, of the eucalyptus tree is used. Pine trees also have 1001 uses in Telêmaco Borba. Their waste products are turned into organic matter for cultivating saplings. This is the niche the businessman Leonardo Klabin found to innovate, achieve excellent financial results and also reduce the environmental impact of producing cellulose. The raw material for this is the tree bark that is left over in his family's paper manufacturing, which used to be thrown away in landfills. "I was raised to be Klabin's forestry officer, but destiny changed my life," says the businessman, who today employs 180 people and produces 100,000 tons of organic matter a year. Mr. Klabin had the idea while he was living on kibbutzes in Israel for three years. There he learned to cultivate tree saplings on trays in plastic tubes. When he returned to Brazil he opened a factory in Rio de Janeiro producing 20 million units a year for eucalyptus and Barbados nut plantations and tobacco farms. Later, he also began producing saplings. In 1997 he took the step of investing in the organic matter factory near Klabin in Telêmaco Borba. "Certification is a natural process of which we are proud. It is also advantageous because it helps reduce bureaucracy and barriers we face when we sell to large companies."

The new uses for eucalyptus trees opened up a promising market for rural producers with plantations near Klabin. In addition to providing the raw material to produce paper, the farmers also provide logs to the woodworking factories that have developed in the municipality. And they have gradually begun earning the socio-environmental certification, integrating themselves into the chain of production. Today there are 6,900 rural producers who participate

in Klabin's forest supply programs in 16 municipalities in the region. "The effort we are making now is to break cultural barriers, resolve cost problems and transmit the same socio-environmental criteria and care represented by the seal to small producers," says Paulo Vicente Ângelo, who is in charge of Klabin's forest supply division.

To reduce barriers and make certification more accessible, Imaflora has developed an innovative tool for the benefit of the rural settlers and small producers in the group. The first program in Brazil in this field was carried out in Telêmaco Borba. "The certification has turned me into an ecologist", says the producer Raul Speltz. He worked as Klabin's forestry officer while the adjustments and preparations were being made to adopt the socio-environmental standards. Afterwards, he became a rural landowner and immediately sought certification for his eucalyptus plantations, which he received after Imaflora audits. He has a total of 10,000 ha certified in a group of properties that belong to seven producers. Mr. Speltz says that, after certification "we were closer to Germany than to Uzbekistan." But more progress is necessary: "The factories still need to become more conscientious to separate the wheat from the chaff; we are just starting."

Certification, as a result of Imaflora's way of operating, gave new value to eucalyptus trees. It allowed their true effects on nature to be better understood. Compliance with strict ecological and social criteria opened up the prospect of harmonious coexistence between the plantations and the natural environment, creating minimum impact. This is a vital issue in the Atlantic Forest, which has been reduced to 8% of its original area. In addition to the high risk to biodiversity, this biome contains important water resources and Brazil's most populous cities. More than 80% of the land is privately owned – only a tiny percentage is protected in parks and conservation areas. This characterizes a delicate reality that requires control and monitoring measures like those applied by Imaflora in its work in certifying commercial plantations. Conservation practices have multiplied as other forest product companies have sought the seal after the implementation of the program in Telêmaco Borba. In the years following certification, Klabin itself expanded the policy to its industrial units in other states. Companies such as Suzano Papel and Celulose (in the states of Bahia and São Paulo), Satipel Florestal, Arauco Florests [sic – "Forests"?] Brasil and Celulose Irani, among others, have followed the same path. As of May 2009, Imaflora had certified 22 plantations totaling 1 million ha, with 35% of the areas allocated for conservation.

There is still much progress to be made in making the relationship between eucalyptus trees and environmental conservation completely healthy, but recent scientific studies have shown that the work is on the right path. A study concluded in 2008 by Esalq/University of São Paulo for Imaflora compared seven certified enterprises with seven uncertified ones in the South of Brazil. After evaluating items such as work conditions and natural forest conservation, the researchers found gains with socio-environmental certification. Certified properties provide their workers better salaries, meals and benefits. There was also less use of toxic chemicals. Additionally, the certified enterprises allocated 42% of their land for conservation, which is greater than the 20% required by law in this region. The companies recognize the benefits in managing their business and greater ease in exporting their production.

At Klabin, in Telêmaco Borba, the gains are made possible by the diversification of the use of the forest. The use of medicinal plants with the certification seal stands out. This project began as a differentiating factor for the employee's health plan, within a self-management model. "The goal of producing medicine from the forest

was to improve the company's health plan and reduce costs in treating illnesses and work lost to sick days, says the industrial pharmacist Loana Johansson, who is operations manager at Klabin's herbal unit. This benefit reaches 15,000 people, between workers and their families, leading to a reduction of 35% in medical costs. According to Ms. Johansson, natural medicines can cut the healing time for workplace injuries by half.

Plants with therapeutic properties are harvested in Klabin's sustainable management native growth area, which makes up 30% of its 85,000 ha of conserved natural forests. Thirty ha of commercial eucalyptus trees are also used for the production of syrups and antiseptics. Klabin's laboratories currently produce medicine from 60 plant species, from among the 130 species that can be used in the region, such as the *maytenus ilicifolia* for the digestive tract and *stryphnodendron barbatimam mart* for treating cuts. The plants make up an herbal line for treating five illnesses that are responsible for 49.7% of all the health problems suffered by Klabin's workers and their families, from flu to hypertension. In the beauty line, moisturizers and aftershave creams containing comfrey extract, are produced, among other things. The plan now is to invest in products to be used during work that focus on worker health, such as sunscreen, repellent and deodorant from sage.

In addition to improving the workers' quality of life, natural medicines and cosmetics have taken on commercial importance with the socio-environmental seal. "They have the potential to be a separate line of business for the company," Ms. Johansson explains. She points out that Imaflora's evaluations have standardized conduct and improved production, which is currently an international benchmark in herbal treatments. It all began with the work of gaining certification for Klabin's commercial plantations in 1998, when the recommendation to include a package of standards and criteria for managing non-wood species was made. The list included native plants with the potential to supply the company's natural pharmaceutical products. To make their use viable within the rules and limits, the workers' most frequent illnesses were examined and then the forest plants with the power to cure them. The inventory required for certification measured the stock of plants, the diameter, the biomass, the degree of regeneration and the quantity that could be used to maintain the forest's health and productivity.

The work of certification extends to the production of herbal medicines using herbs harvested from the native forest among the eucalyptus

Another economically viable alternative is honey production by native, non-stinging bees that pollinate the forest. From the perspective of certification, this is also a viable economic alternative and has been subject to research conducted in partnership with universities. This creates know-how that is shared and thereby adds to the income of cooperatives and rural producers. This is evidence that a well-used forest is viable for various purposes.

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Changes on the farm

A pioneering spirit in agriculture opens up new prospects after the success of the good coffee practices

The habit of drinking that indispensable little cup of coffee is becoming more sophisticated. It is gaining value, both in the delicacies prepared by baristas and in the care taken in the countryside to reduce the impacts that for many centuries, had been part of raising coffee in Brazil. The new model, provided by Imaflora's experience with certification, is a requirement imposed by coffee traders in light of the dilemmas in the planet's future. Strict rules for respecting the environment and workers, compliance with which is monitored through field audits, is required. The practices go beyond the boundaries of the farms: they guarantee the origin of the coffee beans through all steps of production until they reach the cup.

An example of this work can be found in the municipality of Pedregulho in the state of São Paulo. The municipality is 455 km away from the city of São Paulo, and it is where Octavio Café's Nossa Senhora Aparecida Farm is located. "Much has changed around there," says the receptionist at the city's main hotel as she explains how to get to the farm. The entry gateway to the farm has a suggestive sign: "Welcome to the world of special coffees." We come to the building where they do the roasting – the machinery is under a glass roof in a white environment illuminated by natural light. The care taken in building the structure attracts our attention. In the laboratory next door, espresso machines test the flavor and aroma of the final product – it is difficult to resist the temptation to try it. "This is the result of 119 different processes, from choosing the seeds through the correct preparation of the drink," says Mr. João Guilherme Martins, executive director of the farm, as he fills the first cup.

We soon begin to understand the extent of the care necessary to produce a quality coffee. On the wall of the main office there is a poster with 10 principles of conduct with the famous "little frog" trademark – the Rain Forest Alliance Certified socio-environmental seal, which is granted in Brazil to the work of Imaflora. This differentiating factor in production, which the farm obtained in 2007, provided impetus for improvements. "The area planted in coffee jumped from 100 ha to 1,150 ha and, in just 11 months, we built 150,000 m² of improvements in a former pasture area, including warehouses for machinery and a space for washing workers' safety equipment," says Mr. Martins.

In regard to the environment, 30% of the farm is protected as legal conservation areas and permanent conservation areas, along the banks of rivers. They make up forest mosaics connected by corridors to allow wild animals to move about: maned wolves, *onça-parda* cougars, foxes , pacas, capybaras and raptors. These animal species were almost extinct in the region because of previous environmental impacts, but have returned in greater numbers after reforestation with 80,000 saplings and the execution of a management plan to preserve them.

Socio-environmental coffee is tracked from harvest to the cup

For some things, certification reinforced earlier company practices, such as reducing agrochemicals. At other points, it led to innovations. Something that stands out is the rational use of water, which includes protection for springs. "Before they irrigated pastures; now they are conserved as a relic," says Mr. Martins. All the water used to produce and wash the coffee beans is recycled to return to the streams. Consumption has been reduced to one-fourth of the national average for these activities. "This control is important since the entire process to produce a single cup of coffee takes between 30,000 and 50,000 liters of water," Mr. Martins says, adding that following rules has become a routine, a question of survival on the market.

One of the certification's main guarantees is called "traceability." This means being certain the coffee sold in supermarkets or enjoyed in cafés comes from farms following strict socio-environmental standards. In this way Octavio Café improved the systems that allow it to trace the product along the entire route – from the fields to the final roasting, and including the mills where the beans are sorted, dried, aged in wooden silos, cleaned, and blended to give the coffee its identity. "We need a seal to tell the market what we do," explains Mr. Martins. "More than price, we seek to offer a coffee that people are loyal to, and this is a lasting competitive advantage."

Ensuring the correct application of the standards to the crops means conserving the remaining forest and improving life in the countryside

The model is replicated beyond the boundary of the farm to the training of technicians. To reinforce sustainable production, a pioneering effort has been made in the creation of UniOctavio, which is a coffee university with facilities in São Paulo and in the roasting building on the farm. It offers courses in various subjects, ranging from planting coffee beans to coffee preparation and consumption. The project also opens up the farm to visits by tourists, which helps publicize and emphasize the importance of the new, responsible practices and their benefits. With the socio-environmental standards, the workers have become better trained. They have formal employment contracts, work in a clean environment without waste, use safety equipment and have adequate food and shelter. "Scenes of malnourished farmworkers raising dust as they handle sieves between the areas planted with coffee is a thing of the past," says Mr. Martins.

This progress is part of a story that began in the countryside in 1999 with the creation of the Sustainable Agriculture Network (*Rede de Agricultura Sustentável*), or SAN. The Sustainable Agriculture Network now includes 12 countries and provides socio-environmental certification for agricultural crops. The system of standards this organization has prepared is broadly recognized internationally. In Brazil, Imaflora, which is a founding member of the Sustainable Agriculture Network, applies these standards in the countryside. Imaflora is responsible for conducting diagnostic reviews and audits on farms and carrying out other measures to ensure that certification fulfills its primary objective: promoting economic development in a way that ensures well-being, quality of life and natural resources for future generations.

Agriculture that has received the Sustainable Agriculture Network stamp of approval, through Imaflora, is based on three pillars: the environment, for the protection of natural habitats, water resources and forest life; the economy, for improvements to production systems and business management; society, for measures that ensure good work and housing conditions for employees, health insurance and education and benefits for the surrounding community. Based on these general principles, there are specific indicators that are inspected in the field. These include forest management, proper storage of agrochemicals, waste disposal, efforts to limit waste, soil protection, the manner in which the surrounding communities are treated and the comfort and hygiene of employee housing.

Taking this kind of care is important for the sustainable, large-scale production of food and other agricultural products, such as biofuels. According to the FAO, in the coming years it will be necessary to reduce sufficient food for the more than 2 billion people who currently suffer from hunger. And this will need to be done in a way that protects and improves the natural resource base necessary for this production and improves living conditions in the countryside.

The UN goal conflicts with the predominant model for agricultural expansion, which does not have standards to reduce impact. From 1960 to 1970, the use of agro-toxics, mechanization and genetic improvements, which are associated with the agricultural industry, culminated in the so-called "Green Revolution." Its moving force was an increase in productivity, replacing traditional production methods with monocultures requiring fertilizers and chemical defense against pests. In 30 years, worldwide food production doubled. But the model, which continues to be used today, is unsustainable. Worldwide, farmers use 10 times more chemical fertilizer than in 1950.

When care is not taken, the consequences are soil and water pollution, deforestation, erosion, decreased land fertility and the dilapidation of the genetic inheritance and biodiversity. There is also the impact on work and quality of life in the countryside. Of the 1.2 billion people who live on one dollar a day or less, 75% live in rural areas. The exodus to the cities in search of work and income is a worrying reality. Half the world population already lives in an urban environment, but there has not been adequate government investment in housing, sewer, water, transportation and other services.

Brazil's potential as a point of reference for responsible agriculture

The search for sustainable practices that is inherent in socio-environmental certification opens up the prospect for change. The concept that is emerging, which is a continuous process of refinement and improvement, has contributed to establishing a new culture. In this environment, Brazil is fertile ground for making a difference on a global scale. It has major potential to meet the demand for food as a reference in sustainable agriculture. Brazil is truly currently one of the largest sources of agricultural products in the world. It contains 47.4 million ha of cultivated land – almost the surface area of France. And, differently than in other parts of the world, it still has large areas that can be put into cultivation. The challenge is incorporating them without causing deforestation and depleting water resources or affecting biodiversity and human life.

Agriculture-related business accounts for 35% of all the wealth in Brazil, and the largest share of this comes from agriculture itself. Agriculture accounts for one-quarter of Brazil's exports. In addition to sugarcane, soy, orange juice, paper and cellulose, coffee stands out among exports. These products are the result of a model based on the horizontal expansion of agricultural monocultures to generate income and open up new frontiers. This has been going on for a long time. In his letter to King Manuel relating the discovery of Brazil, the scribe Pero Vaz de Caminha described what was then known as Terra de Santa Cruz as a place in which anything could be planted. In principle, this is true. However, after centuries of interventions, both Brazilian farmers and large buyers abroad are discovering that the continuation of the old model could make crops unviable.

A willingness to combine a social and environmental commitment with market opportunities could change a situation that has gone on for a very long time. Worldwide there are approximately 250,000 ha of rural land that is Rainforest Alliance Certified, with more than 600 farms (as of March 2009). Of this total, approximately 65,000 ha are in Brazil, and demand for the seal here is continuously growing. In 2008 there were 72 certified farms in Brazil employing 9,000 workers, and the total certified area had increased 87% from the previous year. The main crop is coffee, which is the first Brazilian agricultural product that received the socio-environmental seal through Imaflora's work. This historic achievement is tied to the pioneering work of Daterra Atividades Rurais in the *cerrado* region of

the state of Minas Gerais. It was in that region that tests were conducted to adapt the rules initially created for coffee in other parts of the Americas to adapt the characteristics of Brazilian crops (as described in chapter 1).

Since then, the international market has matured, becoming more demanding and paying more for products with socio-environmental guarantees. Producers are attracted to this. At the beginning of 2009, thanks to Imaflora's work in applying the standards, there were 35 certified coffee enterprises in Brazil spread throughout the main coffee producing regions. In the *cerrado* region of the states of Minas Gerais and Bahia, the farms are larger and use heavy machinery, mechanized harvest techniques, more agricultural inputs and have a larger processing structure. In the south of the state of Minas Gerais and in the states of São Paulo, Paraná and Espírito Santo, on the other hand, the farms tend to be small to medium-sized. This led Imaflora to find solutions that would work in these different regions.

"It all began when we met Imaflora technicians at the headquarters of Café Bom Dia, which was looking for qualified suppliers and which now buys from us," says Glória Collares, the owner of the Itaoca Farm in the municipality of Conceição do Rio Verde in the state of Minas Gerais. This meeting began a relationship that continues today. "We wanted to evolve and add value to the coffee and we had a good chance of being certified because we used small amounts of agrochemicals," Ms. Collares says. The farm spent a year preparing for the arrival of Imaflora's audit team. "We hired a consultant and had a meeting with the employees at the farm's chapel to explain what the certification is and what we would gain from it," remembers Ms. Collares. The farm has just 213 ha of coffee, but adjustments were necessary. Among these, the farm formally registered 30% of its area as a legal conservation area, adapted its machinery, made improvements in the workers' housing and built a sewage treatment plant. "In December 2007 we were certified with an excellent grade of 89% compliance with the standards," says Ms. Collares. "After reforesting three permanent preservation areas, we have now achieved the highest score possible," she adds.

Ipanema Coffees, in the municipality of Alfenas in the state of Minas Gerais was one of the first large farms to adopt good agricultural practices recognized by international standards. This farm took this strategic step in 2004 and after a strict Imaflora audit it received the socio-environmental seal. "We contributed to changing the course of coffee growing in Brazil and its image worldwide," says Edgard Bressani, Ipamena's [sic – Ipanema?] director of institutional and international relations. In addition, the certification brought environmental and social advances. In the Ipê Amarelo project, the farm developed projects to efficiently track coffee through the production process, reuse water, reduce impacts and conserve ecosystems where 170 species of birds and 15 species of mammals live. In addition, the farm conducts 24,000 hours of employee training a year and continuously evaluates risks to worker safety. Market gains were incisive. "Today we are the largest producer of Rainforest Alliance Certified coffee in the world," says Mr. Bressani. A large part of its production is exported Japan and the United States and, according to Mr. Bressani, demand is greater than supply.

Audits lead to new routines on the coffee farms that result in better treatment of workers, give the product competitive advantages and help it enter new market niches

Expanding the planted area and consumption of certified coffee worldwide is the goal of the Coffee and Biodiversity Project, which is an international initiative conducted by Imaflora in Brazil to train

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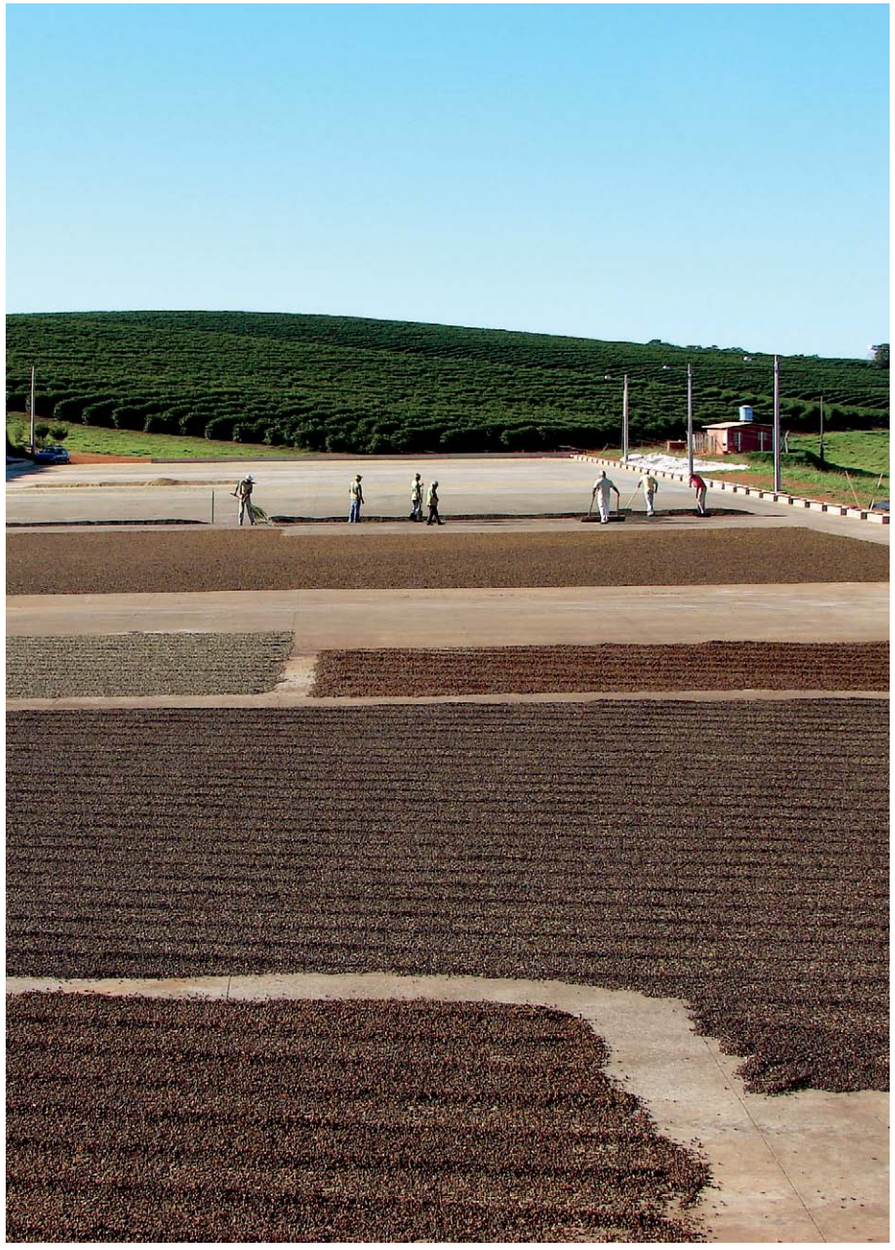
Certified cacao **[1]** is bringing back the traditional cultural crop of the southern part of the state of Bahia. It is a landmark in a story that begins with the certification of coffee **[2]**, changing the reality in a rural area. Native ecosystem conservation areas are maintained on properties certified by SAN **[3]**.



The companies follow standards to guarantee good labor conditions while drying the certified coffee, as well as during all the other production processes. Certification requires that employment laws be complied with, adequate housing be provided and worker safety be maintained.

technicians and consultants, develop new markets and make socio-environmental certification more accessible to farmers. The program receives funds from the Global Environment Facility and support from the United Nations Development Program and is active in six countries: Brazil, Peru, Bolivia, Guatemala, Honduras and El Salvador. Its goal is to create the conditions for certification of 10% of world-wide coffee production by 2013.

The plan in Brazil is to have 6% of production certified by 2013. In terms of area, this translates to 130,000 ha. To achieve this, Imaflora is going beyond conducting audits in the field and is pursuing activities to promote certified coffee in new markets. The goal is to bring it to the end consumer, both abroad and in Brazilian supermarkets and cafés, along a chain of production that is certified. This is the way to guarantee that the products reach the retail level, carrying with them the idea of conserving biodiversity and quality of life that comes from where they were originally planted.

Informing consumers about the differentiating factors and benefits that lie behind the choice of their cup of coffee is essential to develop the market. This is being done in other countries. Internationally, the socio-environmental seal is stamped on coffee cups in major chains, such as McDonald's, and on the products of other famous brands, for example Kraft's Yuban line, Lavazza coffee and Passo Presso ice cream shops in Japan. And there are other major companies that seek certified products, including Cargill, Wal-Mart, KLM, Gloria Jean's and Whole Foods.

Imaflora's strategy in the Brazilian market to increase the scale of certification and its benefits includes the adoption of more efficient and viable models. One of the solutions is to certify small producers in a group. This results in lower costs and greater access to information. "Training cooperatives and their managers to provide guidance to small-scale farmers in implementing certification is the easiest way to eliminate barriers and disseminate socio-environmental practices," explains Eduardo Trevisan Gonçalves, of Imaflora.

The challenge of integrating small producers into the new system

At the Monte Carmelo Region Coffee Growers' Association in the state of Minas Gerais, 10 farmers joined together to form the first Brazilian project to certify coffee in a group. After three years, the changes are visible. "The creation of legal conservation areas was stepped up and we now sell to customers we never before imagined we could reach," says the manager Oséias Mendes da Costa, who coordinates the cooperative and was hired specifically to manage the expansion of this model in the region. Daterra Atividades Rurais encouraged this project because it needed more certified raw material suppliers to meet customer demand on the international market. "As a result of the certification, farm workers began to be treated with respect," notes Mr. Costa.

The farmer Francisco Sérgio de Assis, who owns the Água Limpa Farm and is president of the cooperative, agrees: "Nobody bothered to formally register employees or maintain legal conservation areas." In the opinion of Mr. Assis, who owns 850 certified ha, one of the most important gains was "better business management, which is positively reflected in the bottom line."

"It is not so much a question of price, as of culture, and those who do not have the seal will have difficulties in the market; as is already happening with lumber," says Edson Teramoto. Mr. Teramoto is coordinator of agricultural certification at Imaflora, and made his prediction during a lecture in the municipality of Franca, in the state of São Paulo, before a group of farmers, union leaders, associations,

forest engineers, consultants and state and local government representatives. The Alta Mogiana region, where this event was held, includes 15 municipalities and is one of the main specialty coffee producing regions in Brazil. There are five certified farms in the region. Periodically, Imaflora holds regional meetings open to a varied public to explain the certification message, the advantages certification brings and what it requires in terms of adjustments and changes. Those who attend these meetings learn in more detail about Imaflora's mission, the types of certification, team structure and the steps involved in the certification process, from preliminary evaluation of the property to periodic audits to verify adjustments and solutions.

In addition to presenting the principles and standards that govern the process for receiving the seal, Imaflora provides a forum for discussing how to overcome barriers to adapting to the socio-environmental standards. These include cost, landownership conflicts, employment law questions and the maintenance of legal conservation areas. "After certification, employment law claims were drastically reduced," says Sônia Aparecida de Paula, director of the Franca Rural Workers Union. "The old day laborers are in extinction. There are no more illiterate workers because the employees have started studying to become qualified."

"There is no going back, because the globalized world wants quality food on its table and is willing to pay more for it," adds the farmer Luiza Pucci, from the Alta Mogiana Specialty Coffee Producers Association. The socio-environmental certification has given a boost to these high-quality products that have a turnover in Brazil of R$200 million a year (10% of worldwide production).

Complete, clear and well-written standards, such as those for the Rainforests Alliance Certified certification, are vital to achieving good results. But it is also essential that they be applied well. This success depends on the actions and competence of the certifying institution, which does more than simply conduct audits. In Imaflora's case, experience has allowed it to modify the standards to make them broader, more efficient and applicable to a greater number of crops in Brazil. It's a challenge that involves skills, such as being able to conduct dialogs, and occurs within a broad, transparent process of public hearings and approval by international committees. A recent example is the broadening of the standards to allow the certification of sugarcane, corn, soy and other annual crops. This is a Brazilian initiative that has been approved on an international level to apply to these crops around the world. (see Chapter 7).

Sugar cane and cacao expand the frontiers of socio-environmental conduct in Brazil

Sugarcane for biofuels promises to change the scale and profile of socio-environmental crop certification in Brazil. This is already happened with cocoa within the Atlantic Forest. This fruit, which is of historic importance in the state of Bahia and inspired the novels of Jorge Amado, coexisted for three centuries with the native forest, suffered from the effects of pests, went through a prolonged period of decline, and is now being reborn with new vigor. It is being encouraged by modern agricultural practices and the care of socio-environmental certification.

From the city of Ilhéus, on the coast in the state of Bahia, we followed Highway BR 101 on the route of the old cocoa farms and saw the transformations that have taken place. The green landscape contains what is left of what was once a rich agricultural crop that began its development in the 18th century under the protection of the fronds of native trees, but which was devastated in the 1990s because of the *moniliophthora perniciosa* pest. In the old agricultural

and forestry system known as *cabruca*, which was traditionally practiced in the region, the cocoa plant needs the forest shade to bear fruit and, because of this, it helped to preserve biodiversity. As we drove along, we saw cedar, *cariniana ianeirensis* and Brazilwood that escaped the chainsaw thanks to the fruit of the cocoa tree, which is used to produce one of the world's favorite foods – chocolate.

At various points along the way, we also saw mountains that had been stripped to raise cattle, raise crops and illegally harvest logs. These are the economic alternatives that replaced the ruined cocoa crop. But there is a new chance for the Atlantic Forest and for the cocoa crop, which is so deeply ingrained in the state of Bahia's culture, and that has supported generations. Farther along the highway, 160 km to the north of Ilhéus, in the municipality of Igrapiúna, people are turning back to cocoa as a model of sustainable development. The farmers have buried dogmas and modernized. Referring to the nickname given to the old landowners who held political and economic power in the region, the director of the Vale do Juliana Farm, Paulo Sérgio Santos says, "Colonels turned themselves into executives."

The farm replaced all the old cocoa trees with clones of new varieties immune to *moniliophthora perniciosa* pest. They are protected by the native forest canopy that covers 70% of the area, using the *cabruca* system. The farm also has areas planted in banana trees, rubber trees to produce latex and *bactris gasipaes* palm trees for palm heart. This last crop is originally from the Amazon, but it has adapted very well to the new environment. It has become routine that legal forest conservation areas are maintained, natural springs are restored, garbage is correctly disposed of and care is taken with the health and safety of the workers and those who live around the farm. Production has come to be strictly controlled according to standards and procedures that take cocoa production to a new level.

These practices have gained new impetus since 2008, when the Vale do Juliana Farm received the Rainforest Alliance Certified certification for cocoa after Imaflora evaluations and audits. It was the beginning of a new era for cocoa production. "The process helped us become more disciplined and efficient, with higher productivity," says Mr. Santos. The farm workers work on a sharecropping system in which each family receives a place to live, technical assistance and a planted area equal to eight soccer fields to take care of. In return for their work, they receive 50% of the production. "We are standing on our own feet now," says the small producer Egnaldo de Jesus, who left work in a rubber tree plantation to work with cocoa, which gives him an income of R$1,000 a month. Approximately 1,200 students from the municipalities of Igrapiúna and Ituberá benefit respectively from the municipal and state schools Casa Jovem I and Casa Jovem II, created by a partnership between the Odebrecht Foundation and the government.

Measures taken on the farms contribute to chocolate consumption without any guilt over the devastation of the Atlantic Forest

With the seal as evidence that it is grown according to socio-environmental standards, cocoa has become more valuable, fetching prices up to 30% higher than uncertified cocoa. With this, it has won over demanding international customers. "The seal is a promising niche on the international market and is important in seeking higher quality cocoa," says Patrícia Moles, who was manager of Delfi Cacau Brasil in Itabuna, in the state of Bahia. Her company processes certified cocoa, turning the fruit into a cocoa paste for export. Imaflora is also working to develop certification for the entire production chain, all the way to where the cocoa is turned into chocolate. This will guar-

antee its traceability. In the end, this work allows consumers to enjoy chocolates without feeling guilty over destroying the Atlantic Forest.

The technology for this exists. "When we eat chocolate, we can know from what region and what Brazilian state, from what farm and even from what tree the cocoa made to use it came from," explains Eimar Sampaio, director of the M. Libânio Farm in the municipality of Guandu, in the state of Bahia. This farm, which received certification after an Imaflora audit, has 800,000 cocoa trees registered in its database. "We want to expand the crop, with a focus on special fruits for fine chocolates, which require total control and a higher standard," says Mr. Sampaio.

Cocoa farms in Bahia recover the strength they had in the past to compete with destructive activities, such as cattle raising and illegal logging

The socio-environmental seal is a serious form of recognition to help capture this expanding market in the world. And the desire for this differentiating factor is spreading throughout the south of the state of Bahia. "Cocoa can regain the strength it had in the past," says Jair Macedo, director of the Cantagalo Group, which owns farms near Itabuna, in the state of Bahia. The strategy is to invest in quality. "In the times of the colonels, profit was used to buy more land and increase status and power instead of caring for the farms," says Mr. Macedo.

The care now being taken involves conserving the environment. In the region in which Ilhéus and Itabuna are located, which is called the Lower South of Bahia, cocoa farms are found in rural areas and around the Pratigi Environmental Protection Area. The area of the Atlantic Forest was reduced by half during the cocoa crises and illegal logging. Today it is a model of sustainable use. Income is generated without destroying the forest through a set of activities that are complementary to cocoa: fish farming, *piassava* and palm heart harvesting and even power generation with micro-hydroelectric plants. With funds from the Odebrecht Foundation and the Inter-American Development Bank, the Pratigi Environmental Protection Area has an enviable infrastructure: a 45 km park highway crosses the entire mosaic of the conservation area and connects rural communities, avoiding impacts. The strategy involves farmers and communities producing in balance with the Atlantic Forest. Recent studies have proven that cocoa contributes to preserving approximately 19 million trees in this area of Bahia. Altogether there are 200 species of trees there, including 80% of all the Brazilwood that remains along the coast in Brazil. The *cabruca* agricultural system, which allows this conservation, is used on 70% of the 560,000 ha of cocoa currently being grown in the region. The rest of the cocoa is grown in homogenous plantations of trees brought from other regions, such as the coral tree, which is from Australia and which has not proven appropriate for the area and is therefore being replaced by rubber tree plants with incentives from the Brazilian government.

There is a Brazilian government project to expand cocoa production with funds from the Economic Acceleration Program. Researchers warn that growth cannot be predatory. "The properties need to comply with the law that requires them to maintain legal conservation areas," according to the forest engineer Dan Èrico Lobão, who works for the Cocoa Study Center. He says it is also necessary to care for the *cabruca* areas that have been abandoned and that run the risk of becoming pastureland, create biodiversity corridors and re-forest riverbanks. In this way Brazilian cocoa is following the path set out by coffee in adopting sustainable practices. By obtaining certification through Imaflora, the fruit from which chocolate is made is regaining the force it had in the past. And it is doing so with a modern vision, creating benefits for the forest and the people who live around it.

Much more than certification

The strategy includes support for the creation of protected areas and trade in certified products

From Santarém, in the state of Pará, where the team spent the night, it was a 45-minute flight to the village of Porto Trombetas, with its bauxite mines in the middle of the jungle. From there, it was another eight long hours of travel by boat along the river to Cachoeira Porteira, a village in the municipality of Oriximiná, in the state of Pará, where the descendents of escaped slaves live. There we docked our main boat and took aluminum boats with outboard motors up small rivers to reach more distant and isolated communities. Our mission there was to learn about the lifestyle of those who live there, their history and how they support themselves. We were also there to find out where the villages are, evaluate their social organization and identify conflicts and threats to the forest. These visits are part of a broad socioeconomic evaluation carried out by Imazon, in partnership with Imaflora and the Pará state government. The goal of the project is to support management plans with rules for the use of Pará's state forests, which were created in 2006 in the Brazil's Amazon boarder area. This region is strategic because it contains the largest mosaic of protected tropical forest on the planet.

The skills learned in the certification process have allowed Imaflora to develop a new line of work supporting public policies for the creation and management of protected areas, with a view to sustainable use. In the northern part of the state of Pará, this task required optimism and a spirit of adventure because there are waterfalls along the rivers, as is typical in an area with a rugged landscape. To get around them, the teams had to make portages, unloading the boats and dragging them on wooden planks along old trails built by Indians or escaped slaves and then putting them back in the water above the waterfalls. At night they built improvised shelters in the forest, stringing their hammocks between two trees and putting a tarp over the top to protect them from rain. They drank water from the river, after treating it with chlorine. There was no shortage of mosquitoes, and despite the precautions taken, one member of the team came down with malaria. "Our fieldwork was decisive for the results of the Pará expedition," says Roberto Palmieri, from Imaflora, who is used to working in the forest.

The adventure was just beginning. Using smaller and faster boats, the researchers reached inhospitable places that were difficult to get to. On one of these trips, Daniel Santos, from Imazon, encountered (and photographed) an *onça pintada* cougar crossing a river. The group met prospectors and visited five native villages, such as the *Katxuyana* and the *Wayway*, who told their people's stories and showed what remained of their ancestors' way of life.

"To collect the study data, our goal was to go everywhere there were people." It was necessary to travel by river for two days in this region, which is one of the least populated on the planet – its population density is lower than Siberia's. It is also one of the least known areas and includes an enormous 7.3 million ha of state forests: Trombetas State Forest (3.2 million ha), Faro State Forest (600,000 ha) and Paru State Forest (3.6 million ha). It is the largest sustainable use tropical forest unit in the world. These state forests where Imaflora and its partners were working, border two federal conservation units: the Rio Trombetas Biological Reserve and the Saracá-Taquera National Forest, which was [sic = were? If "criada" in the singular, which was created – the first or the second?] created to protect strategic mineral reserves. Together, these now form a shield against the advance of predatory activities, such as illegal timber harvesting and forest clearing for pastures. "The lack of highways and the difficult topography of the region saved it," explains Mr. Palmieri. He adds that the organization of the communities, which follow their own rules, also contributed to forest conservation in an area where the government's presence is only now – with the preparatory steps for a management plan – being felt.

The closest settlement is Cachoeira Porteira. It appeared on the map in the 1970s, attracting the descendents of slaves to work on a hydroelectric project that, in the end, was never built. The current inhabitants lived in what is left of the old workers village, which is partly in ruins. The old club swimming pool has become a thicket. The population of 120 families makes a living mainly by harvesting Brazil nuts. From February through May, the residents work at the harvest, going up rivers full of rapids on trips up to six days long to reach the harvest areas. "It was also our job to explain the importance of the public forests to the communities and how they work to conserve biodiversity and the means of subsistence," says Mr. Palmieri. The next step is for Imaflora to help set up consulting councils for these conservation units, as is required by law, and to train council members to participate in the development and implementation of the management plans. Socioeconomic issues are part of a broader evaluation that uses data collected by other institutions regarding land ownership, biodiversity, topography and deforestation.

Providing technical support for public policies is an example of how Imaflora establishes dialogues and reaches agreements for the multiple and sustainable use of natural resources. Society's participation is a determining factor in guaranteeing the conservation and proper use of the forest. In 2004 Imaflora prepared a reference work that provides guidelines for receiving public comments, encouraging participative management and mediating conflicts for the creation of conservation units. In preparing this work, technicians did fieldwork to learn about cases of success and failure and participated in various programs in the states of Acre, Amazonas, Pará and Amapá. This know how helped achieve good results in the state forests in Pará, where work began in 2006, at which time Imaflora provided guidance in receiving public comments for the creation of these protected areas.

The state government intended the process to do more than merely meet a legal requirement – it wanted it to ensure community participation and lead to transformation. As a result of the public comment process, the initial boundary of the state forests was redrawn to exclude the settlements of descendents of escaped slaves that had been erroneously included. This helped avoid conflicts it would have been difficult to resolve after the conservation units were created.

The adventure in the jungle to reach the isolated villages and guarantee the participation of the descendents of escaped slaves in the Pará state forest management plan

To the present, nine expeditions for socioeconomic evaluations have been conducted in the region. The first of these was in 2007, along the Nhamundá River, on the border between the states of Pará and Amazonas. The most recent, in December 2008, was along the Jarí River, between the states of Pará and Amapá. The goal was to reach settlements of prospectors using single-engine airplanes. To take off and land on precarious landing strips in the forest, all the seats had to be taken out of the airplane and the amount of cargo reduced to a minimum. After landing, the technicians had to walk nearly an entire day along forest trails until they reached their final destination, where they were received by the leaders of the prospecting settlements. The prospectors agreed to participate in the evaluation because they want to hold discussions with the government and be able to stop prospecting clandestinely. "One of the main challenges is reconciling prospecting with the objectives of a state forest," says Mr. Palmieri. Both prospectors and the government have shown themselves willing to talk and look for solutions.

One of the first Imaflora initiatives to support public policies took place in the municipality of Boa Vista do Ramos in the state of Amazo-

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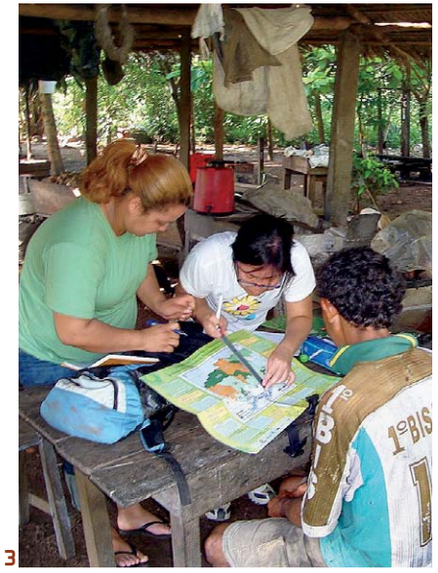

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At the Certified Brazil Fair **[1]**, Imaflora promotes the market for products that bear the socio-environmental seal, such as baskets from the city of Santarém, Pará **[2]**. Another area in which Imaflora is active is supporting public policies for protected areas, consulting with interested parties.

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Expeditions arrive at isolated communities in the Amazon, such as indigenous villages **[4]** in the region of Oriximiná, in the state of Pará, were the descendents of escaped slaves live **[5]**. The goal is to conduct a socio-environmental diagnosis for the state forest management plan.

nas. In partnership with the Federal Agro-Technical School of Manaus, Imaflora sought to implement the principles of Agenda 21, which was signed at Rio-92 by more than 170 countries, in the region. In so doing, it sought to create a model for government action in other municipalities within the Amazon. The project began with the participative mapping of land use in rural communities, and based on this, local capacity for community forest management was developed. Over time, other institutions became involved with the project, such as the School for Luthiers Workshop of the Amazon, promoting the manufacture of musical instruments from native wood. The Rural Family House opened its first branch in the Amazon and the Iara Institute prepared agreements to organize fishing. Finally, the Iraquara Institute worked on responsibly raising non-stinging bees. As a result, the success achieved in Boa Vista do Ramos inspired other municipalities, such as Maués and Parintins. In addition, the program served as a point of reference for the policies of the state of Amazonas, combining economic development with forest conservation.

Training the technical team is essential to hold dialogs, make forest management a reality and promote change

The project demonstrates the breadth of Imaflora's contribution. It includes structural points, which are key to the strategy of harmonizing economic development, environmental conservation and quality of life. Socio-environmental certification is the main tool in achieving this goal. It becomes more powerful and efficient in promoting change by the continuous training of the people involved. Complementary professional training activities guarantee the quality of the services and minimize the lack of knowledge about forest and agricultural certification in Brazil. It is an essential factor for the effective implementation of good forest management and responsible agricultural production. Trained technicians are necessary to evaluate enterprises for the purpose of certification. And more than this, they have the skills to translate the values, mechanisms, opportunities and benefits of the socio-environmental seal, which is one of the main challenges for those promoting sustainable practices. Among these skills is the ability to engage the various actors – communities, companies, NGOs and the government.

Besides the field audits and other technical certification procedures, Imaflora encourages conscientious consumption and market development for responsible forest and agricultural products. From its inception, Imaflora has pursued the challenge of bringing producers and consumers together to find joint solutions. The higher goal is to cause the market to recognize the value of wood used in furniture, nuts, essences used in cosmetics, paper used to make books and notebooks, coffee, cocoa, tea and other natural riches when they are produced according to socio-environmental criteria. The goal is to bring these products to the end of the chain: stores and supermarkets and finally, at consumers' homes.

In this way, the new culture of sustainable production will gain scale and have a more visible effect on the life of the planet. Responsible purchasing decisions reduce the garbage that litters the streets and goes to landfills, decrease the emission of greenhouse gases, avoid deforestation and promote the economical use of vital natural resources such as water. They also help replace nonrenewable fossil fuels with renewable alternatives and encourage the rational and efficient use of energy. Finally, responsible purchasing decisions help eliminate slave labor, preserve traditional cultures and values and improve the income and life of communities and groups that have been excluded from the economy until now. In the 21st century, the

act of making a purchase has truly an important environmental and social role that is beginning to be measured in economic calculations.

This is a process that began in the period after World War II in the United States. At the beginning, the focus was different – it was led by social groups demanding quality products. This gave rise to the first consumer defense organizations. The initial concern was knowing that the products contained what the manufacturers said they did and that they would not be harmful to health. This movement began to take on an environmental focus in the 1960s, when rapid population growth worldwide and a throwaway culture made a new challenge clear. The advance of production and consumption beyond limits threatened to exhaust natural resources and energy sources for future generations. In 1962, the book "Silent Spring" by Rachel Carson (1907-1964) caused a good deal of debate by describing the dangers of pollution and eloquently questioning humanity's blind faith in technological progress.

A certified products fair shows the force of socio-environmental measures. It brings the ends of the production and consumption chain closer together and introduces a new idea to shop windows

Ten years later, at the Stockholm Conference, for the first time the rich world's production was questioned as a cause of environmental degradation. Improved living conditions for the world's poor and efficient productive processes alone would not be sufficient to guarantee environmental equilibrium. Scientific studies showed that, under the standards then in effect, the sources of natural resources would not be capable of supplying the population's needs. It was necessary to produce and consume in a rational way, looking toward the future. The concept of sustainable consumption was therefore developed in the 1990s. It was a signal of change, intimately connected to market questions, such as the logic of socio-environmental certification, which guarantees the origin of products based on rigid criteria of respect toward nature and people.

A survey conducted in June 2008 by WWF-Brazil and the Ibope public opinion survey company to mark Earth Day, showed a worrying reality: if the entire world adopted the same standard of living as the Brazilian upper and upper middle classes, three planet earths would be necessary to replace the natural resources used. In a comparison with developed countries, the need for more earths would be even greater. It is currently estimated that the world population consumes an average of 25% more than nature is capable of replacing. This has negative effects on biodiversity, crops and human welfare.

The planet is in checkmate. Greater awareness when shopping has gained force to improve the dark outlook for the future. Consumers can now influence the production and supply chain, the environmental policy of which will decide the planet's future. This subject has become important in marketing, and now various products found on supermarket shelves show environmental awareness. This is true of bread produced with organic grains, coffee filters made from recycled paper, toothpaste that finances conservation of the Atlantic Forest, candy made with products from communities that collect raw materials in the Amazon, and many others.

In this new productive environment, where it is obviously necessary to separate the wheat from the chaff, transformational initiatives that go beyond mere fashion have developed. Conscientious consumption has made environmental problems with global impact, such as the emission of greenhouse gases or tropical deforestation, into market mechanisms that result in new standards of production. In forests, on farms and in industrial plants, producers who follow socio-environmental standards gain recognition that leads to better

products, more sales opportunities and healthier environment and social conditions for the development of their business.

Throughout its existence, Imaflora has believed this is one of the main ways to implant these new concepts and promote the sustainable use of the planet's natural resources and environmental services. Based on unprecedented reports on the use and allocation of wood harvested in Brazil (see Chapter 1), Imaflora created partnerships with other nongovernmental organizations to change the path of predatory use and provide incentives for sustainable consumption practices. The Certified Brazil fair is an important milestone in this process. This fair is promoted by Imaflora, Imazon, Friends of the Earth-Brazilian Amazon and the Brazilian Forest Management Council (FSC Brazil). The fair has been held once every two years since 2004. Its purpose is to publicize products and the socio-environmental seal, reduce the distance between producers and buyers, encourage new business and, by so doing, a forest industry committed to sustainability.

Imaflora evaluates socio-environmental measures in the productive chain of businesses that wish to become part of the international network of ethical commerce

The event shows the increasing diversity of certified products – from furniture and panels to decorative objects, promotional gifts, food and cosmetics that are widely used and originate in the forest. This demonstrates the developments of a market that is solidifying and is no longer just an environmentalist's dream. The third edition of the fair, held from May 16-18, 2008, brought together 39 participants and 3,000 visitors at the São Luis Convention Center in São Paulo. Innovative market support products were launched at events held in conjunction with the fair. These included the Sustainable Products and Services Catalog, which can be accessed online and which was developed by the Getúlio Vargas Foundation's Sustainability Studies Center, and the Ecologically Correct Products and Services Guide, which is the first of its kind in Brazil and which presents a list of stores and suppliers who sell certified products.

Based on its experience with forest and agricultural certification, Imaflora has broadened its areas of activity. One of its initiatives is the Biotrade program, which verifies socio-environmental principles not only at the source, but throughout the entire processing chain of products from biodiversity until they reach the consumer. Businesses that are approved in this evaluation, which is voluntary, become eligible to participate in the Ethical Biotrade Union, which is an international organization that operates as a select club of responsible businesses. The verification system, which was created with Imaflora's participation, was field-tested in the Reca Project, involving communities in the city of Porto Velho, state of Rondônia. The principles make a priority of issues such as management to conserve plants and animals, putting a value on traditional knowledge and the sharing of economic benefits in the paths products take to a business.

Products that incorporate the socio-environmental concept can be seen in fashionable shop windows. Our expectation is that this is not an ephemeral trend, but rather a wave of change with sufficient force to change habits and attitudes. The list is varied. It includes jewelry with seeds from the Amazon, chairs designed by famous designers, doors and windows with wood from managed forests, books printed by printers who use paper from certified plantations and even hammocks made from fiber and wood with a socio-environmental origin. Encouraging the productive chain of these products and reinforcing their benefits is an Imaflora strategy to see the results of its work reach the final consumer.

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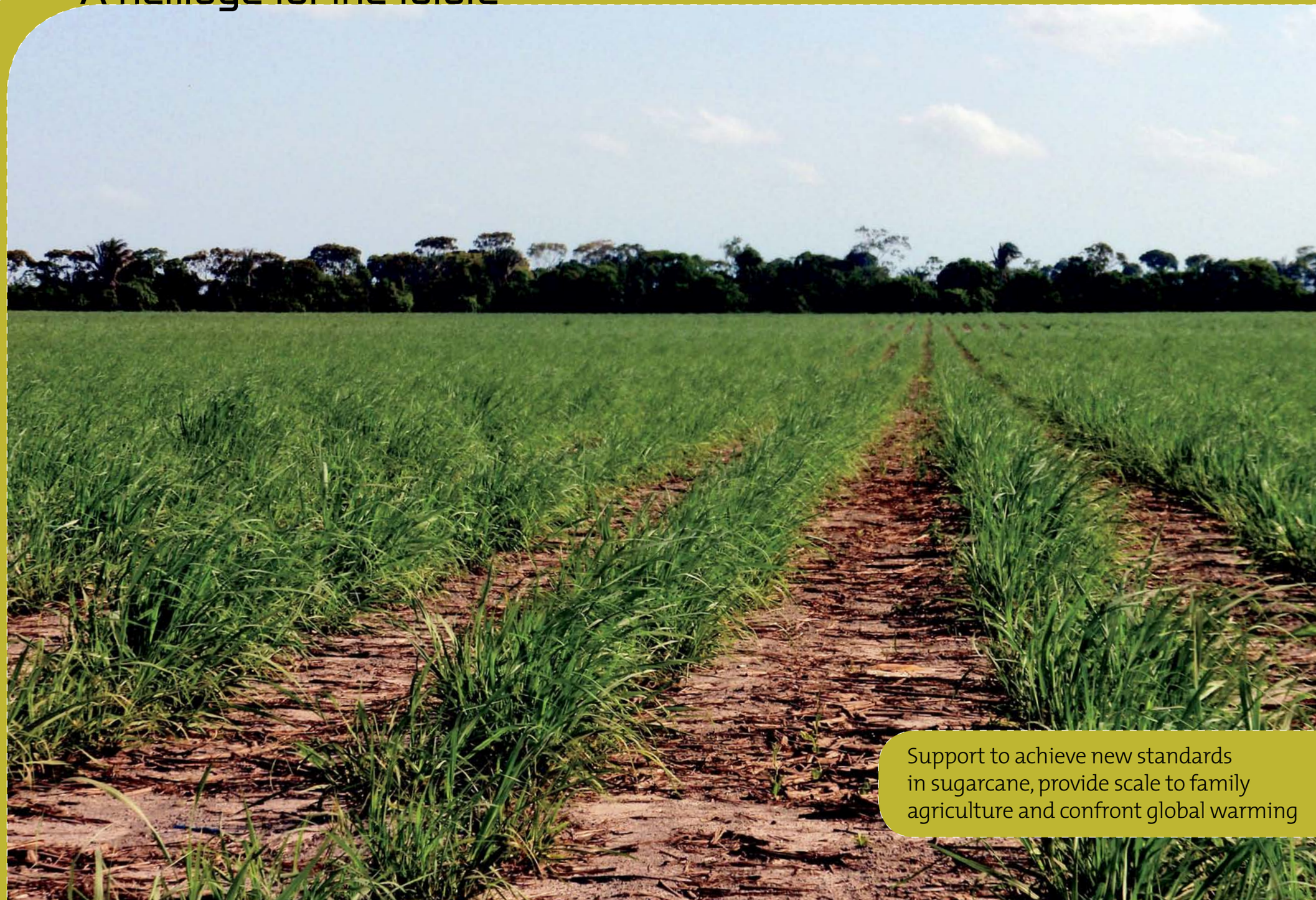
A heritage for the future



Support to achieve new standards in sugarcane, provide scale to family agriculture and confront global warming

When Albert Einstein revolutionized science with his theory of relativity, he said, ironically, "I never think about the future because it arrives very fast." And in fact, in regard to the planet's environmental problems, the future has already arrived. It poses challenges of an emergent nature for governments, companies, leaders and organizations that promote quality of life and sustainable development. It can be no different for Imaflora in its efforts to find solutions for the problems of the 21st century, which will be based on its experience in forestry and agriculture, what has learned from things that have gone well and that have not, its technical knowledge and the socio-environmental model that it has constructed over recent years.

Imaflora has gained skills in conducting dialogues, building consensus, mediating conflict and monitoring actions. It is able to see problems from various angles, without being dogmatic. It is able to look to the future in a responsible way that seeks to pioneer in strategic areas for the proper use of natural resources, within standards that combine economic viability, social justice and environmental protection. It is natural that this institution recognized in Brazil and abroad for social and environmental transformations achieved in forest and agricultural production should be on the front line at this historic time, when the world confronts the threat of climate change.

The work is continuous. Despite the quality gains, there is much to do and improve if we are to guarantee a healthy future for the generations to come. The most recent United Nations reports indicate that our task is urgent – it is a question of survival. The Millennium Ecosystem Evaluation, sponsored by the UN, revealed that 15 of the 24 vital services provided by ecosystems are in decline on our planet. If nothing changes, the mechanisms that sustain life on Earth will be incapable of guaranteeing clean water, food and a stable climate, among other things. Deforestation to harvest wood, open up cropland, create pastures and expand cities has reached a level that could soon become unsustainable. This would have serious regional and global effects on the environment, biodiversity and the population as a whole. One-third of humanity lives in countries where water is scarce. In many of these places, water is a source of conflict. This is a consequence of the excessive use of water resources, waste, pollution and improper land use. These problems complicate the goal of reducing hunger worldwide and require not only environmental controls but also social, economic and political ones. In summary, in the name of future generations, current production standards must be changed.

The planet's sustainability is at stake. This depends essentially on how we handle the century's most serious environmental problem: climate change. This is a challenging new field of activity for Imaflora. Since the Industrial Revolution in the 18th century, the increasing use of fossil fuels such as coal and petroleum, changing land use with deforestation, the indiscriminate use of fertilizers, the spread of cattle raising and the decomposition of urban waste in landfills have been releasing excessive quantities of greenhouse gases. Since the preindustrial era, the concentration of carbon dioxide has increased approximately 30% and the levels of methanol have more than doubled.

Over the last 100 years, there has been an increase of approximately 1°C in the Earth's average temperature. The Intergovernmental Climate Change Panel report released in Paris in February 2007 forecasts that, under the most optimistic scenario, the planet could be between 1.1 and 2.9°C warmer by 2100. In a domino effect, higher temperatures melt the polar ice caps, increase the sea level, and

change air humidity and wind and rain patterns. These changes affect living things and human activities, such as the agriculture that feeds us and the energy production that serves industry.

The Kyoto protocol, which was signed in 1997 with mandatory targets to reduce greenhouse gases emitted by industrialized countries by 2012, created instruments to achieve these goals in practice. Among them, the Clean Development Mechanism, which is the only one that provides for the participation of emerging countries, such as Brazil, in the effort to control greenhouse gases, stands out. It was the first international legal instrument to propose a market solution for a global environmental problem. It allows projects of developing nations to receive certificates that prove the reduction of greenhouse gases. These emissions reduction certificates, commonly known as carbon credits, can be sold to reduce the quotas of rich countries to reduce gases under the Kyoto protocol. In essence, each ton of carbon dioxide or methane that is not emitted or is taken out of the atmosphere in less developed economic regions can be traded on a global market under specific rules. Enterprises that create renewable energy resources or that replace pollution released into the atmosphere, among other initiatives, can sell their carbon credits on the market, making a profit and obtaining revenue to develop their businesses.

On the other hand, industrial plants and coal or oil-burning power plants in Europe or Japan, for example, that would find it difficult and expensive to change their energy source in the short term, pay for the operation of less polluting enterprises in countries that do not have to comply with the goals of the Kyoto Protocol. In this way, they also contribute to the sustainable development of these regions.

The Clean Development Mechanism rules were initially created to benefit projects that reduce the emission of pollution into the atmosphere, such as those that use substitutes for fossil fuels in industry, apply clean technologies, rationalize the use of energy and carry out reforestation projects, among other things. Although deforestation and the intentional burning of forests are important contributing factors to global warming, the mechanism did not include any tools to conserve natural forests. Changes are being negotiated so that forest projects aimed at the sustainable use and conservation of trees are also benefited in the new international agreement that will replace the Kyoto protocol in its second period (after 2012). In this way, the Reduction of Emissions from Deforestation and Degradation program has arisen as a strategy with the potential to mitigate climate change. Financial compensation for governments, private companies and owners of forest land that is well conserved could have profound consequences for the future of the Amazon and other biomes that are important for the equilibrium of the global climate, with effects on the population's quality of life.

Experience with forests and agricultural management gives us the credibility to make a difference in the promising carbon credit market

The high cost of implementing the projects and technical barriers that make it difficult to put an economic value on forests are being overcome. The advances reduce economic risks in this market and could increase the price paid per ton of carbon that is not emitted or is captured. They make it possible to eliminate uncertainties and methodological difficulties in calculating the volumes of carbon in vegetation and to define, among other things, whether the enterprises fit within the principles agreed to under the Kyoto Protocol. A knowledge bank is being built to audit and certify the efficiency of forest projects that wish to receive carbon credits, on a credible and international basis.

The Clean Development Mechanism, managed by governments within the framework of the United Nations, has shown itself to be insufficient to reduce emissions. Other instruments have therefore been created or are being designed. In the meantime, and until countries reach a new agreement and changes are made to create unofficial rules to support forest conservation, a voluntary carbon market is being developed that is parallel to the Kyoto Protocol. It is continuously expanding, and trading on it is conducted through contracts between companies, on exchanges and through other financial institutions, such as the World Bank. In 2008, this voluntary market had a turnover of $116 billion; a 75% increase from the previous year. This market has a number of enterprises that avoid the emission of greenhouse gases by conserving forests. On the voluntary market, certificates are sought by buyers under the "charismatic credit" concept, meaning they want certificates so that their products, services and industrial processes that contribute to climate equilibrium stand out. Projects can sell their credits once they have received approval from an independent certifying body.

Imaflora stands out in this situation in which there are opportunities involving the use of soil and its effects on climate change. Imaflora has experience and is recognized for its work in forest and agricultural certification under socio-environmental criteria. It applies its know-how now to seek innovative ways to conserve the planet's environmental services, ranging from climate equilibrium to supplying water to ecosystems and the human population. "The carbon market is a trend where we also want to make a difference," says Mauricio Voivodic of Imaflora. Imaflora is focusing its attention on promoting socio-environmental practices through the proper use of the funds obtained from carbon credits in the forest and agricultural sectors, working within the new opportunities opening up in relation to climate issues. Its strategy is to concentrate resources to broaden activities that minimize climate change and make them more effective. At the same time, it seeks to ensure the rights and benefits of traditional populations and to conserve biodiversity. With this goal, Imaflora is using its certification and field auditing experience to adapt existing mechanisms to broaden their effects. Two of these mechanisms are the voluntary carbon market and the Amazon Fund (which is a Brazilian government initiative modeled on the Reduction of Emissions from Deforestation and Degradation program). And new instruments are being developed.

Imaflora applies strict standards that involve social and environmental issues when it approves carbon credit projects

In its efforts to confront climate change, Imaflora is also sticking to its original calling: promoting changes and benefits that are not merely superficial touches for trade. "The idea is to localize standards to verify and validate carbon credits, making them more applicable in Brazil. This is one of our specialties and is similar to what we have done with forests and agricultural certification within a broad process of public hearings." In its first auditing efforts to validate carbon credit projects, which it conducted in 2008, Imaflora realized that this tool has a good chance of promoting environmental and social changes.

The potential for transformations is great when one considers that Brazil alone is responsible for 3% of the greenhouse gases produced by humanity. The main sources of these gases in Brazil are agriculture and changes in land use, rather than cars and factories, as is the case in rich countries. Deforestation and the intentional burning of forests, for example, accounted for 77% of the total of 1.03 billion

tons of carbon dioxide issued by Brazil in 1994, according to the Gas Emissions Inventory released by the Brazilian government in 2004. The largest part of this impact comes from the Amazon, where the original forest has shrunk by 18% since the 1970s as a result of destruction encouraged by the advance of agriculture and cattle raising, road construction and major hydroelectric projects, as well as by the lack of a sustainable development policy. In response to international pressure, in 2008 the Brazilian government launched the National Climate Change Plan, which includes targets to reduce deforestation. The goal is to decrease the annual rate of deforestation from 19,000 km² (the average over the last 10 years) to approximately 5,000 km² by 2017. By doing so, Brazil's carbon dioxide emissions would be reduced by 4.8 billion tons by 2017.

Most environmental organizations propose zero deforestation in the Brazilian Amazon by 2015, but recognize that the government's plan indicates a change in attitude and is a step toward Brazil doing its part against greenhouse gas emissions, instead of merely blaming rich countries for global warming. The position requires federal and state government policies that provide incentives for practical measures to conserve and restore forests. This opens up precious space for institutions that work with native plant management and sustainable land use. The carbon market, with all the potential it has in Brazil, is a frontier in which international confidence is an important factor. This is why Imaflora believes it is capable of facing the challenge, which is not the only one that stands out as we begin this new millennium.

Besides protecting and replanting forests, the fight against global warming requires that we replace nonrenewable energy sources that emit greenhouse gases, such as oil and coal. Europe has decided that by 2050 half of its energy will come from clean sources. In the Obama era, the subject should receive more attention in the coming years in the United States, which is responsible for 25% of all the energy consumed in the world. Between 2009 and 2030, according to European Union studies, worldwide demand for energy will increase approximately 1.8% a year. More than half of this increase will take place in developing countries. The market outlook for Brazilian ethanol, which is made from sugar cane, is good. According to data from the Brazilian Census Department, Brazil had approximately 7 million ha of sugarcane plantations in 2008, and half of this was being used to produce ethanol. This was a 6.7% increase in planted area from the previous year, and the forecast is for a 50% increase by 2015.

Biofuels bring socio-environmental commitments to sugarcane

Because of its recognized potential in biofuels, Brazil is at the center of international pressures to ensure that the advance of this agricultural monoculture to produce energy does not destroy forests or replace the cultivation of food. The Brazilian government claims there are 77 million ha of arable land in Brazil that are outside of the Amazon and have not yet been used. This area is nearly equal to the land mass of France and Germany combined. Additionally, there are 40 million ha of underused and degraded pastureland, part of which could be recovered and used for sugarcane production. In the middle of these doubts and requirements, socio-environmental certification presents itself as an efficient tool to guarantee traders that the product they are buying was raised according to good agricultural practices and standards that avoid environmental impact and degrading work conditions.

With an eye to the future, Imaflora has been at the forefront of mobilizing producers and implementing socio-environmental certification for sugarcane. Imaflora's goal is to position itself as an entity

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Imaflora exports certification technology to tea plantations in Argentina **[1]**. In the fight against global warming **[4]** Imaflora provides support for revenue from carbon credits being used for forest conservation **[2 and 3]** and other socio-environmental actions.

After Imaflora conducted a broad process of public hearings from 1996 through 1998, SAN created standards to certify sugarcane. The new standards are now being applied internationally, taking socio-environmental criteria to the production of ethanol.

that uses rigorous standards with greater capacity to add value to the product and generate benefits and transformations in the field. In this way, Imaflora is restarting an old project to put the socio-environmental seal on ethanol. This project was initially begun in 1996, when the Brazilian government announced a plan to revitalize the Pro-Alcohol Program. "Certification proved to be important in light of the social reality and the environmental impact of sugarcane fields, as well as the importance of this crop in Brazil's economy," Daniel Macedo points out. After two years of consultations, workshops and field tests, the first standards for sugarcane certification have been created. In addition to certification, the idea is that the standards can influence public policy. But there was not sufficient interest in the seal for Brazilian ethanol.

Sugarcane fields correct problems to receive the seal and gain market share

A decade later, things have changed. Agriculture has become an issue for environmental organizations. In light of global warming and the growth of biofuels as an energy solution, European buyers have begun requiring guarantees against environmental and social risks from this agricultural product. The seal guarantees Brazilian alcohol can enter the European market, and then also the markets of developing countries. This new situation has led Imaflora to renew its former sugarcane program. As a first step, broad public hearings were held in 2008 to broaden the SAN standards to allow certification of farms growing sugarcane and other crops. The process involves intensive discussions of hotly debated issues, such as legal conservation areas and workers' rights. In April 2009, after going through all the approval steps in Brazil and abroad, the addendum to the agricultural certification standards proposed by Brazil was officially recognized by the SAN for use worldwide. "We are ready to deal with complicated issues during field audits, such as the burning of sugarcane fields after harvest and employment relations based on seasonal migration for the sugarcane harvest," Imaflora's Ms. Macedo explains.

The certification procedures serve to improve the producers' images, facilitate customer purchasing decisions and reduce barriers to international trade. "We will have assured access to demanding markets, such as the European market," says Marcelo Vieira, of the Adecoagro Group. That company owns 50,000 ha of sugarcane fields to produce sugar and ethanol in the state of Mato Grosso do Sul, and plans to triple the size of its fields to meet worldwide demand for biofuels. Its farms have undergone a preliminary Imaflora diagnosis with the goal of receiving Rainforest Alliance Certified certification. "We already have experience with the seal we have received for the coffee we grow in the western part of the state of Bahia and we hope to achieve similar benefits with sugarcane, with the best management of our sustainability model, says Mr. Vieira.

The institution carried out public consultations to broaden criteria coverage and to certify sugar cane production globally

The businessman Leontino Balbo, from the company Native, in the city of Ribeirão Preto, state of São Paulo, agrees. He goes even further: "We need to say something more to the consumer at the supermarket shelf, and socio-environmental certification is a way to do this." The company's farms have a tradition of taking care of the environment and were pioneers in seeking ways to harvest sugar cane on a large scale without burning the fields afterwards. In 1997, the crops

received organic certification, which opened up the European market to them. "We still needed to reinforce the social side, so we sought out Imaflora to obtain the seal," says Mr. Balbo, explaining that he is interested in gaining new customers in Europe. He says that, "Certification follows clear and fair criteria, without discrimination. He also reveals his strategy: "We want visibility and the seal helps us communicate with the market and consumers in a more efficient way than sustainability reports full of fancy graphs and pretty photos."

Because of its importance in producing food and energy, agriculture has a broad outlook for promoting socio-environmental changes in the productive sector, involving the entire chain of production to the end consumer. In this area and the other areas in which it works, Imaflora is facing a challenge: "Dealing with the environment and the effect of globalization, and scaling up to be able to promote greater transformation," says Sérgio Esteves, chairperson of Imaflora's board of directors. Activities with a broader economic reach require balance to guarantee attention is also given to small producers – producers for whom the social benefits of sustainable practices are clear. Mr. Esteves says: "At this key time for environmental issues, we can't just sit on our hands."

From Argentina to Cameroon, technology is exported to various countries

A practical example of this change in scale is the internationalization of Imaflora's experience. The knowledge it has accumulated over the years regarding land use according to strict socio-environmental standards, is crossing frontiers. For example, it has reached the Missiones region of Argentina, where Imaflora's technicians are helping change the paradigm for growing and processing black tea. The tea plantations supply Unilever factories. Unilever is the largest tea processor in the world, and it has said all its suppliers must be Rainforest Alliance Certified by 2015. As an incentive, it pays a premium of up to $0.15 a kilogram for tea leaves delivered to its factories. This has been a significant motivating factor for its producers.

Because of Brazil's success with coffee, Imaflora has been invited to participate in this program in Argentina. The program in Argentina involves 200 producers and five factories that are near important remaining parts of the Atlantic Forests. The first pre-certification diagnosis of the properties in Argentina, which began in September 2007, found problems. "We encountered an agricultural culture that stood still in time, a situation typical of the old West," says Marina Piatto, an Imaflora agronomist. Rustic farmers, who are the descendents of German, Italian and Hungarian immigrants, did not have access to information and technology. "They drank water contaminated with fecal matter, their children played with garbage accumulated in the fields and the women had no voice," according to Ms. Piatto. She felt the effects of the macho culture when she – a woman – imposed herself to command the work of certifying the farms. "When I demanded changes, the producers were in a state of shock," Ms. Piatto says.

After seven months of changes, there were transformations. Women's bathrooms were built in the factories, where there had been none before. Producers and technicians received intensive training in subjects ranging from personal hygiene to more productive crop practices. New habits and values developed. Field workers came to be valued, the landscape came to be well cared for and water began to be treated and garbage was properly disposed of and empty agrochemical containers were returned to their manufacturers, as required by the standards. The area around springs and riverbanks were reforested and the soil was enriched with manure, which

has the potential to double its current productivity. "The benefits led to large-scale mobilization, which is a multiplier effect for certification," says Ms. Piatto. She notes that the plan for the first year of work was to grant the socio-environmental seal to 10% of the production of Argentinean tea. The Missiones region, which already has the advantage of being famous for producing an excellent tasting product, adds to this recognition for respecting the environment and the people who live there. There is now hope for a sustainable future for a product that is widely consumed, but that for centuries had its image marred by the use of child labor and other problems in various parts of the world. In addition to Argentina, the Brazilian program has also brought about transformations in Cameroon, Mozambique and Kenya.

With experience from coffee, Brazilians have taken transformations to tea plantations in Argentina, creating social, environmental and economic gains

In this way Imaflora stands out not only as a certification service provider, but as an agent of change. "When facing new challenges, we should reinforce the role of non-government organizations, doing things that involve innovation and risk and that neither governments nor the market normally do," says José Adalberto Veríssimo, who is a member of Imaflora's board of directors. In his analysis, certification of environmental services, as a project to mitigate the greenhouse effect, will be the main area justifying Imaflora's existence in the future, though it should continue with its traditional certification activities. "On the contrary, we need to participate more fully in public policies, expanding the socio-environmental seal in federal and state forest sustainable use concession programs and bringing it to the consumer at the end of the production chain," Mr. Veríssimo suggests. He believes what Imaflora has learned in the past will make the difference for it in the future. "We cannot rst on our laurels because our mission is not yet completed," he says. And he concludes: "We must seek out what is new and different and not merely always better."

Leadership, a critical attitude and visionary spirit are qualities for the future

Sustainability specialists often say that a pragmatic and visionary spirit, concern for the future, and a distrust of incomplete answers are the characteristics of institutions that take on leadership positions. Imaflora is a member of this club. In the 21st century, a new perception has emerged about humans' role in the planetary ecosystem, with its networks of interdependence, changes and cycles of transformation. Leadership is key to ensuring that the often talked about concept of sustainability does not become an empty expression; a mere bit of fashionable jargon or a marketing ploy. Proactive positioning irradiates innovation, creativity and inspiration to mobilize changes since the world needs ruptures not only in regard to technology, but also in the way we think and relate to one another. In this environment, the strategy to follow is working through networks, with new alliances and coalitions, within the participatory and independent tradition Imaflora has cultivated since its founding.

An example of this is Imaflora's participation in the Brazilian NGO and Social Movement Forum. Within this forum, and working together with Friends of the Earth-Brazilian Amazon, Imaflora has led debates about the expansion of soy in Brazil. This culminated in a letter being sent to the then president of the World Bank, who began considering socio-environmental issues when granting loans to cultivate soy in Brazil.

"The challenge now is to make small rural producers incorporate certification," says André Villas-Boas, who is from the Socio-environmental Institute and who is a founding board member of Imaflora. "Imaflora has the role of making this happen and creating alliances to bring about a new standard for family agriculture," says Mr. Villas-Boas. He emphasizes that this partnership should involve local politicians and municipalities so that small producers adapt their properties to socio-environmental standards. Imaflora, with its history, should promote regional pacts to help family agriculture work on a larger scale with positive impact on the land it occupies, allowing for a reduction in poverty.

With characteristics designed to balance forces and create dialogue among government, business and society, Imaflora is looking toward a future that is rapidly arriving. It uses its passion for the socio-environmental cause and its technical and scientific rigor to help people understand that ethical behavior leads to economic benefits rather than losses. And this is of fundamental importance at this time of new, pro-planet measures. The world is seeking solutions for serious threats, including climate change, and the emergence of a low-carbon economy and new energy sources at a global level. It is vital for organizations committed to sustainability to deepen the debate about these subjects and incorporate them into strategic plans. Imaflora, which conducts socio-environmental certification to promote sustainable development, is now working to defend and develop it and to ensure that it continues in the future.

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The socio-environmental challenges of the 21st Century have put our planet into check-mate. They demand changes in production and consumption. Using natural resources sustainably, using responsible agricultural methods, seeking clean sources of energy and fighting for the conditions of workers and people are urgent issues that will define the future for our coming generations. These are challenges that are milestones in Imaflora's history and of the socio-environmental changes that its teams have brought about. This is a work in progress. It is a unique task involving dialogues and agreements to unite communities, governments, NGOs, workers and companies. The aim: to secure a new way of thinking and acting to preserve our planet.

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